

CITY OF WILDOMAR

CORNERSTONE COMMUNITY CHURCH

CONSTRUCTION PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

SCH No. 2013111005



Lead Agency:

CITY OF WILDOMAR
23873 CLINTON KEITH ROAD, SUITE 201
WILDOMAR, CA 92595

JUNE 2014

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ES - EXECUTIVE SUMMARY

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15123, this section of the Draft Environmental Impact Report (DEIR; Draft EIR) provides a brief summary of the project, significant impacts, and proposed mitigation measures. The remainder of the document and technical appendices provide the discussion and support for the conclusions found here.

ES1 PURPOSE AND SCOPE OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

This Draft Environmental Impact Report (Draft EIR; DEIR) has been prepared by the City of Wildomar(City) to analyze the potential environmental effects associated with implementation of the proposed Cornerstone Community Church project, in Wildomar, California. DEIR analysis focuses on potential environmental impacts that could arise from implementation of the proposed project, as regulated and guided by the large number of federal, state, and local regulations, including ordinances, General Plan policies, and local resource plans. The DEIR is intended to provide a credible worst-case scenario of the impacts resulting from project implementation.

ES2 PROJECT SUMMARY

The proposed project includes a Planning Action (PA) to modify the existing PUP 778 for the Cornerstone Community Church. The modification will allow for the construction of a preschool, administrative office building, kitchen, and new parking lots at the existing church. The construction is anticipated to occur over two phases. As part of the project, a new approximately 1,900-lineal-foot sewer line will be constructed in Monte Vista Drive to connect to an existing Elsinore Valley Municipal Water District sewer manhole. By connecting to the sewer, the proposed project can abandon the existing on-site septic tanks.

ES3 PROJECT ALTERNATIVES SUMMARY

California Environmental Quality Act (CEQA) Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. Further, CEQA Guidelines Section 15126.6(e) requires that a “no project” alternative be evaluated in an EIR. Section 4.0, Project Alternatives, provides a detailed discussion and a qualitative analysis of the following scenarios:

- **Alternative 1 – No Project Alternative.** CEQA Guidelines Section 15126.6(e) requires that a No Project alternative be evaluated in an EIR. The No Project analysis must discuss the circumstance under which the project does not proceed. The comparison is that of the proposed project versus what can reasonably be expected to occur on the properties should the proposed project not be approved. The analysis allows decision-makers to compare the impacts of approving the project with the impacts of not approving the project (CEQA Guidelines Section 15126.6(e)(3)(B)).
- **Alternative 2 – Reduced Density Alternative.** This alternative would eliminate the upper parking lot as shown on **Figure 2.0-3A**. The intent of the alternative is to reduce the amount of grading and impervious surface added to the site and to eliminate the noise associated with vehicles using the access road behind the existing home at 34620 Via Carnaghi Lane. By eliminating the upper parking lot, the project would not add 274 new parking spaces or result in grading or construction of a new detention basin. The alternative assumes that the preschool, administrative office, maintenance building, Via Carnaghi Lane, and the maintenance building parking and the lower parking lots would be constructed as planned with the proposed project.

- **Alternative 3 – No Maintenance Building Parking Lot.** The maintenance building parking lot replaces an existing residential structure and landscape area that is being used as a maintenance and utility building. As proposed, a new parking lot would be constructed with 45 spaces and a new maintenance building. This would place cars adjacent to the northern property line of the home located at 34620 Via Carnaghi Lane, resulting in additional noise and disturbance from construction and operation of the parking lot. This alternative would eliminate the construction of a new parking lot but allow the maintenance building to be reconstructed.
- **Alternative 4 – Relocated Preschool.** This alternative would move the proposed preschool to the upper parking lot to remove it from the freeway noise and adjacent home at 34520 Monte Vista Drive. The alternative assumes that all other features of the project would be constructed as planned with the proposed project.

ES4 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The City of Wildomar was identified as the lead agency for the proposed project. In accordance with Section 15082 of the CEQA Guidelines, the City of Wildomar prepared and distributed a Notice of Preparation (NOP) for the proposed project that was circulated for public review on November 1, 2013. Concerns raised in response to the NOP were considered during the preparation of the EIR. A copy of each letter is provided in **Appendix 2.0** of this DEIR. Section 1.0, Introduction, provides a summary of issues and areas of concern related to the proposed project, as presented to the City by agencies and the public during the NOP review period. The complete text of the NOP and the NOP comments are included as **Appendix 2.0** to this Draft EIR.

ES5 SUMMARY OF ENVIRONMENTAL IMPACTS

Table ES-1 displays a summary of project impacts and proposed mitigation measures that would avoid or minimize potential impacts. In **Table ES-1**, the level of significance is indicated both before and after the implementation of each mitigation measure. For detailed discussions of all mitigation measures that would provide mitigation for each type of environmental impact addressed in this Draft EIR, refer to the appropriate environmental topic section (i.e., Sections 3.1 through 3.10).

The project proposes development on 63.41 acres of land totaling 20.37 acres of developed land (43.25 acres will be left undisturbed). This development, in combination with long-term, region-wide growth and development, has the potential to generate environmental impacts in a number of areas, including direct construction impacts on biological, cultural, and geological resources and hydrology and water quality, as well as indirect impacts associated with use of this built environment on areas such as aesthetics, noise, and transportation.

Of the potential environmental impacts discussed in Section 3.0 of the DEIR, project impacts to air quality are considered cumulatively considerable and significant and unavoidable. CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance.

ES6 AREAS OF NO IMPACT

The potential for the proposed project to result in certain impacts was not included in **Table ES-1** because the City of Wildomar determined that the proposed project could not result in an impact in these environmental areas for the following reasons. Impacts not included in **Table ES-1** include those pertaining to:

- **Agricultural Resources** – The proposed project site does not contain, and is not adjacent to, Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or any land subject to a Williamson Act contract.
- **Hazards and Hazardous Materials** – The proposed project will not impact a designated evacuation plan or produce hazardous materials or emissions. The proposed project site is not included on any list of hazardous materials sites, and it is located approximately 2 miles from the nearest airport, Skylark Field.
- **Population, Housing, and Employment** – The proposed project will include the removal of one single family home. However, the loss of a single housing unit is not significant to the number of housing units within the City of Wildomar and it will not result in the creation of additional housing units within the city. Additionally, the development of a preschool, which is anticipated to serve an estimated 180 students and 36 staff members would not influence the projected local or regional population necessitating the need for additional housing. Further, it is unlikely that each of the estimated 45 staff positions would be filled by individuals not living within proximity of the proposed project. However, if all 45 positions were filled by individuals needing to relocate to the City, even under the assumption that each person relocated with another family member, would only represent a .28 percent increase in population.
- **Public Services** – The proposed project is serviced by the Riverside County Library System. The incremental increase in population and staffing created by the proposed project would not necessitate the need for new facilities or staffing associated with the local library system.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<i>Aesthetics</i>				
Impact 3.1.1	The proposed project will have no impact on any scenic vista.	NI	None required	NI
Impact 3.1.2	While the proposed project will result in changes to the existing visual character of the project site, these changes will not lead to a significant degradation of the existing visual character of the area.	LS	None required	LS
Impact 3.1.3	The proposed project will include the installation of athletic field lighting and parking lot lighting, which will result in new source of nighttime light. Impacts will be less than significant with mitigation incorporated.	PS	MM 3.1.3 To prevent spillover lighting onto the residential property directly adjacent to and south of the maintenance building parking lot, the applicant shall install shielded, fully cutoff lighting at the southern boundary of the maintenance building parking lot and southwest boundary of the upper parking lot. The plan for the cut-off shielding shall be shown on the construction drawings and operational prior to use of the parking lot. The effectiveness of the cutoff shall be measured to ensure that lighting of the adjacent area does not exceed 0.6 horizontal foot candles. Additional modification of the lighting standards may include movement away from the property line, lowering in height, change of the type of light bulb or any other physical method necessary to reach this standard. <i>Timing/Implementation: Prior to operation of the maintenance building parking lot and the upper parking lot.</i>	LS

NI – No Impact

LS – Less Than Significant

PS – Potentially Significant

LSM – Less Than Significant with Mitigation

LCC – Less Than Cumulatively Considerable

CC – Cumulatively Considerable

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		<i>Enforcement/Monitoring: City of Wildomar Public Works Department</i>	
Impact 3.1.4 Implementation of the proposed project, in combination with the existing adjacent residences and Interstate 15, would result in a less than cumulatively considerable contribution to the alteration of the visual character of the region.	LCC	None required	LCC
<i>Air Quality</i>			
Impact 3.2.1 Construction-generated emissions would not contribute substantially to an existing or projected air quality violation. This impact is considered less than significant.	LS	None required.	LS
Impact 3.2.2 Subsequent land use activities associated with implementation of the proposed project will not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter.	LS	None required	LS
Impact 3.2.3 Land use activities associated with the proposed project would not conflict with or obstruct implementation of regional air quality management planning.	LS	None required	LS
Impact 3.2.4 The proposed project will not contribute to localized concentrations of carbon monoxide that would exceed applicable ambient air quality standards.	LS	None required	LS
Impact 3.2.5 The proposed project would not result in exposure of sensitive receptors to substantial toxic emissions.	LS	None required	LS

S – Significant CC – Cumulatively Considerable LS – Less Than Significant SU – Significant and Unavoidable NI – No Impact
 PS – Potentially Significant LCC – Less than Cumulatively Considerable CCU – Cumulatively Considerable and Unavoidable

ES EXECUTIVE SUMMARY

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.2.6 Development of the proposed project would not result in exposure of sensitive receptors to substantial odorous emissions.	LS	None required	LS
Impact 3.2.7 Construction of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the South Coast Air Basin, would not significantly contribute to cumulative increases in emissions of criteria air pollutants that could contribute to future concentrations of pollutants for which the region is currently designated nonattainment. This impact would be considered less than cumulatively considerable.	LCC	None required	LCC
Biological Resources			
Impact 3.3.1 Implementation of project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to special-status plant species, which would be considered a potentially significant impact.	PS	MM 3.3.1 Within two years of groundbreaking in undisturbed portions of the site, the applicant shall retain a qualified biologist to conduct a preliminary evaluation to determine if suitable habitat for white rabbit-tobacco and/or bottle liver occurs within the disturbance footprint. If suitable habitat is identified, focused surveys shall be conducted to determine the presence/absence of special-status plant species with potential to occur in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including new construction access routes. These surveys shall be conducted in accordance with CDFW <i>Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities</i> (2009). These guidelines	LS

S – Significant CC – Cumulatively Considerable

LS – Less Than Significant

SU – Significant and Unavoidable

NI – No Impact

PS – Potentially Significant

LCC – Less than Cumulatively Considerable

CCU – Cumulatively Considerable and Unavoidable

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods, and/or during appropriate developmental periods that are necessary to identify the plant species of concern. If any state- or federally listed CNPS List 1 or CNPS List 2 plant species are found in or adjacent to (within 100 feet) proposed impact areas during the surveys, these plant species shall be avoided to the greatest extent possible. Any special-status plant species that are identified adjacent to the PSA, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on project plans. If project-related impacts will result in the loss of greater than 10 percent of occupied habitat for a special-status species, then compensatory mitigation shall be required for all impacts that exceed the 10 percent threshold. For example, if 18 percent of occupied habitat will be impacted, then compensatory mitigation shall only be required for the 8 percent that exceeds the 10 percent threshold. Compensatory mitigation for permanent impacts to special-status plant species shall include the preservation of occupied habitat at a 1:1 ratio (i.e., one acre preserved for each acre impacted). Compensation for temporary	

S – Significant CC – Cumulatively Considerable

LS – Less Than Significant

SU – Significant and Unavoidable

NI – No Impact

PS – Potentially Significant

LCC – Less than Cumulatively Considerable

CCU – Cumulatively Considerable and Unavoidable

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		impacts shall include the preservation of occupied habitat at a 0.5:1 ratio. Preservation areas may include undisturbed areas of the site that will be preserved and managed in perpetuity, offsite mitigation lands, or a combination of both. The preserved habitat shall be of equal or greater habitat quality to the areas impacted in terms of soil features, extent of disturbance, vegetation structure, and contain extant populations of the same or greater size as the area impacted. A report of special-status plants observed during focused surveys, as well as avoidance, minimization, and mitigation measures to be implemented shall be prepared and submitted to the City of Wildomar Planning Department at the time of application for the City's review and approval. <i>Timing/Implementation: Prior to approval of grading permits</i> <i>Enforcement/Monitoring: City of Wildomar Planning Department</i>	
Impact 3.3.2 Implementation of project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to special-status wildlife species, which would be considered a potentially significant impact..	PS	MM 3.3.2a Per MSHCP Species-Specific Objective 6, preconstruction presence/absence surveys for burrowing owl within the survey area, where suitable habitat is present, will be conducted for all covered activities through the life of the building permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one-way doors and collapse of burrows) will occur when owls are present outside the nesting season. If construction is delayed or suspended for more than 30 days after the	LS

S – Significant CC – Cumulatively Considerable LS – Less Than Significant SU – Significant and Unavoidable NI – No Impact
 PS – Potentially Significant LCC – Less than Cumulatively Considerable CCU – Cumulatively Considerable and Unavoidable

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		survey, the area shall be resurveyed. Surveys shall be completed for occupied burrowing owl burrows within all construction areas and within 500 feet (150 meters) of the project work areas (where possible and appropriate based on habitat). All occupied burrows will be mapped on an aerial photo. <i>Timing/Implementation: Within 30 days prior to any vegetation removal or ground-disturbing activities</i> <i>Enforcement/Monitoring: City of Wildomar Planning and Public Works Departments</i> MM 3.3.2b If burrowing owls are identified during the survey period, the City shall require the project applicant to take the following actions to offset impacts prior to ground disturbance: Active nests within the areas scheduled for disturbance or degradation shall be avoided from February 1 through August 31, and a minimum 250-foot (75-meter) buffer shall be provided until fledging has occurred. Following fledging, owls may be passively relocated by a qualified biologist. If impacts on occupied burrows in the non-nesting period are unavoidable, on-site passive relocation techniques may be used if approved by the CDFW to encourage owls to move to alternative burrows outside of the impact area. However, no occupied burrows shall be disturbed during the nesting season. A qualified biologist must verify through noninvasive methods that the burrow is no longer occupied. If relocation of the owls is approved for the site	

S – Significant CC – Cumulatively Considerable

LS – Less Than Significant

SU – Significant and Unavoidable

NI – No Impact

PS – Potentially Significant

LCC – Less than Cumulatively Considerable

CCU – Cumulatively Considerable and Unavoidable

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		by the CDFW, the City shall require the developer to hire a qualified biologist to prepare a plan for relocating the owls to a suitable site. The relocation plan must include all of the following: • The location of the nest and owls proposed for relocation. • The location of the proposed relocation site. • The number of owls involved and the time of year when the relocation is proposed to take place. • The name and credentials of the biologist who will be retained to supervise the relocation. • The proposed method of capture and transport for the owls to the new site. • A description of site preparation at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term vegetation control). • A description of efforts and funding support proposed to monitor the relocation. If paired owls are present within 160 feet (50 meters) of a temporary project disturbance (e.g., parking areas), active burrows shall be protected with fencing/cones/flagging and monitored by a qualified biologist throughout construction to identify losses from nest abandonment and/or loss of reproductive effort. Any identified loss shall be reported to the CDFW.	

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		<i>Timing/Implementation:</i> Prior to any vegetation removal or ground-disturbing activities <i>Enforcement/Monitoring:</i> City of Wildomar Planning and Public Works Departments MM 3.3.2c Prior to any construction occurring in Riversidean sage scrub during the breeding season for the coastal California gnatcatcher (February 15 through August 30), a protocol-level survey shall be conducted by a USFWS-approved biologist. Surveys shall be conducted in accordance with the USFWS <i>Coastal California Gnatcatcher (Poliophtila californica californica) Presence/Absence Survey Guidelines</i> dated February 28, 1997. Surveys in which the species is not detected are considered valid for one year and should be repeated within one year of work commencing. If surveys document the absence of coastal California gnatcatcher, no additional avoidance or minimization measures are required. If surveys document the presence of this species, construction in Riversidean sage scrub shall be limited to the non-nesting season (September 1 through February 15). <i>Timing/Implementation:</i> Within 30 days prior to any vegetation removal or ground-disturbing activities affecting Riversidean sage scrub <i>Enforcement/Monitoring:</i> City of Wildomar Planning and Public Works Departments MM 3.3.2d Migratory Bird Surveys. If clearing and/or construction activities will occur, within	

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		undisturbed portions of the project site, during the migratory bird nesting season (March 15 through August 15), preconstruction surveys to identify active migratory bird nests shall be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area and a 200-foot buffer (if feasible). If active nest sites are identified within 200 feet of project activities, the applicant shall impose a limited operating period (LOP) for all active nest sites prior to commencement of any project construction activities to avoid construction- or access-related disturbances to migratory bird nesting activities. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur and will be imposed within 100 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of LOPs may be adjusted through consultation with the CDFW. <i>Timing/Implementation: Prior to the initiation of construction activities</i> <i>Enforcement/Monitoring: City of Wildomar Planning and Public Works Department</i>	

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Impact 3.3.3 Implementation of the proposed project could result in impacts to sensitive biological communities, including riparian habitat. This would be a potentially significant impact.	PS	MM 3.3.3 The project applicant shall ensure that there is no net loss of riparian vegetation. Mitigation can include on-site restoration or purchase of mitigation credits at a USACE approved or mitigation bank. Mitigation associated with regulatory permits issued through the CDFG, USACE, MSHCP, or the Water Resources Control Board may be applied to satisfy this measure. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project. <i>Timing/Implementation: Prior to project vegetation removal or ground-disturbing activities</i> <i>Enforcement/Monitoring: City of Wildomar Planning and Public Works Departments</i>	LS
Impact 3.3.4 Implementation of the proposed project may result in the loss of any jurisdictional waters of the United States, including wetlands. This would be a potentially significant impact.	PS	MM 3.3.4a Within two years prior to groundbreaking, project applicants shall retain qualified biologists to determine if potentially jurisdictional waters are present. If potentially jurisdictional features are identified, the project applicant shall submit a preliminary jurisdictional determination to the USACE for verification. The verified delineation will be submitted to the City for its records. <i>Timing/Implementation: Prior to approval of grading permits.</i> <i>Enforcement/Monitoring: City of Wildomar Planning Department</i> MM 3.3.4b Project applicant shall ensure that the project would result in no net loss of federally protected waters through impact avoidance,	LS

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		impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or a 1602 Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for each proposed project. Evidence of compliance with this mitigation measure shall be provided to the City prior to construction and grading activities for the proposed project. <i>Timing/Implementation: Prior to approval of grading permits.</i> <i>Enforcement/Monitoring: City of Wildomar Planning Department</i>	
Impact 3.3.5 Implementation of the proposed project could interfere with the movement of native resident or migratory fish or wildlife species. This is considered a less than significant impact	LS	None required	LS
Impact 3.3.6 Implementation of the proposed project would not conflict with any local policies or ordinances protecting biological resources.	NI	None required	NI
Impact 3.3.7 Implementation of the proposed project could conflict with the provisions of the Western Riverside County MSHCP.	PS	Implementation of MM 3.3.2a and 3.3.2b .	LS
Impact 3.3.8 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the immediate area of the proposed project, will result in the conversion of habitat and impact biological resources.	LCC	Implementation of MM 3.3.2a through MM 3.3.2d	LCC

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<i>Climate Change and Greenhouse Gases</i>			
Impact 3.4.1 Implementation of the proposed project will result in greenhouse gas emissions that would further contribute to significant impacts on the environment.	LCC	None required	LCC
Impact 3.4.2 Implementation of the proposed project could conflict with an applicable plan adopted for the purpose of reducing the emissions of greenhouse gases.	LCC	None required	LCC
Impact 3.4.3 Implementation of the proposed project could result in the inefficient, wasteful, and unnecessary consumption of energy during construction and operation.	LCC	None required	LCC
<i>Cultural Resources</i>			
Impact 3.5.1 Implementation of the proposed project would not cause a substantial adverse change in the significance of a known historical resource.	NI	None required	NI
Impact 3.5.2 Implementation of the proposed project could result in a substantial adverse change in the significance of an archaeological resource, as well as the potential disturbance of currently undiscovered cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features).	PS	MM 3.5.2a If during grading or construction activities cultural resources are discovered on the project site, work shall be halted immediately within 50 feet of the discovery and the resources shall be evaluated by a qualified archeologist and the Pechanga Tribe (Tribe). Any unanticipated cultural resources that are discovered shall be evaluated and a final report prepared by the qualified archeologist. The report shall include a list of the resources discovered, documentation of each site/locality, and interpretation of the resources identified, and	LS

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		the method of preservation and/or recovery for identified resources. In the event the significant resources are recovered and if the qualified archaeologist and the Tribe determines the resources to be historic or unique, avoidance and/or mitigation would be required pursuant to and consistent with CEQA Guidelines Sections 15064.5 and 15126.4 and Public Resources Code Section 21083.2 and the Cultural Resources Treatment and Monitoring Agreement required by mitigation measure CUL-2. This mitigation measure shall be incorporated in all construction contract documentation. <i>Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities</i> <i>Enforcement/Monitoring: City of Wildomar Building and Planning Departments</i> MM 3.5.2b At least 30 days prior to seeking a grading permit, the project applicant(s) shall contact the Pechanga Tribe to notify the Tribe of grading, excavation, and the monitoring program and to coordinate with the City of Wildomar and the Tribe to develop a Cultural Resources Treatment and Monitoring Agreement. The agreement shall include, but not be limited to, outlining provisions and requirements for addressing the treatment of cultural resources; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human	

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		remains discovered on the site; and establishing on-site monitoring provisions and/or requirements for professional Tribal monitors during all ground-disturbing activities. A copy of this signed agreement shall be provided to the Planning Director and Building Official prior to the issuance of the first grading permit <i>Timing/Implementation:</i> Prior to the issuance of a grading permit <i>Enforcement/Monitoring:</i> City of Wildomar Engineering and Planning Departments MM 3.5.2c If inadvertent discoveries of subsurface archaeological resources are discovered during grading, work shall be halted immediately within 50 feet of the discovery. The developer, the project archeologist, and the Tribe shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. If the developer and the Tribe cannot agree on the significance of or the mitigation for such resources, these issues will be presented to the City of Wildomar Planning Director. The Planning Director shall make the determination based on the provisions of CEQA with respect to archaeological resources and shall take into account the religious beliefs, customs, and practices of the Pechanga Tribe. Notwithstanding any other rights available under the law, the decision of the Planning Director shall be appealable to the City of Wildomar. In the event the significant resources are recovered and if the qualified archaeologist determines	

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		the resources to be historic or unique as defined by relevant state and local law, avoidance and mitigation would be required pursuant to and consistent with Public Resources Code Section 21083.2 and CEQA Guidelines Sections 15064.5 and 15126.4. <i>Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities</i> <i>Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments</i> MM 3.5.2d To address the possibility that cultural resources may be encountered during grading or construction, a qualified professional archeologist shall monitor all construction activities that could potentially impact archaeological deposits (e.g., grading, excavation, and/or trenching). However, monitoring may be discontinued as soon the qualified professional is satisfied that construction will not disturb cultural and/or paleontological resources. <i>Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities</i> <i>Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments</i>	
Impact 3.5.3 Implementation of the proposed project could directly or indirectly destroy a unique paleontological resource or site.	PS	MM 3.5.3a Prior to issuance of a grading permit for the proposed project, the project applicant shall retain a qualified paleontologist to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) to assess the potential for presence of paleontological resources and the potential for project construction to affect	LS

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		such resources, if present. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontologists (SVP). If it is determined, to the satisfaction of the City, that there is low potential for discovery or disturbance of paleontological resources, no further action shall be required. If potential for discovery is deemed moderate to high, the project applicant shall retain a qualified paleontologist to monitor all initial ground-disturbing activities in native soils or sediments. If the paleontologist, upon observing initial earthwork, determines there is low potential for discovery, no further action shall be required and the paleontologist shall submit a memo to the City confirming findings of low potential. Should any paleontological resources (i.e., fossils) be uncovered during project construction activities, all work within a 100-foot radius of the discovery site shall be halted or diverted to other areas on the site and the City shall be immediately notified. A qualified paleontologist shall evaluate the finds and recommend appropriate next steps to ensure that the resource is not substantially adversely impacted, including but not limited to avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. Further ground disturbance shall not resume within a 100-foot radius of the discovery site until an agreement has been reached between the project applicant, a qualified paleontologist, and the City as to the	

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		appropriate preservation or mitigation measures to ensure that the resource is not substantially adversely impacted. <i>Timing/Implementation: Prior to the issuance of a grading permit</i> <i>Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments</i> MM 3.5.3b A qualified paleontologist or paleontological monitor shall monitor all mass grading and excavation activities. Monitoring will be conducted in areas of grading or excavation in undisturbed formational sediments, as well as where over-excavation of surficial alluvial sediments will encounter these formations in the subsurface. Paleontological monitors shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediment that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined on exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources. <i>Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities</i> <i>Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments</i>	

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		MM 3.5.3c Any recovered paleontological specimens shall be identified to the lowest taxonomic level possible and prepared for permanent preservation, including screen-washing of sediments to recover small invertebrates and vertebrates shall occur if necessary. Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments MM 3.5.3d Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage shall occur at an institutional repository approved by the City of Wildomar. The paleontological program shall include a written repository agreement prior to the initiation of mitigation activities. Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments MM 3.5.3e A final monitoring and mitigation report of findings and significance shall be prepared, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location. The report, when submitted to and accepted by the City of Wildomar, shall signify satisfactory completion of the project program to mitigate impacts to any potential nonrenewable	

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		paleontological resources (i.e., fossils) that might have been lost or otherwise adversely affected without such a program in place. <i>Timing/Implementation: Following ground-disturbing activities, and implemented prior to the issuance of a building permit</i> <i>Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments</i>	
Impact 3.5.4 No human remains have been identified within the project site; however, implementation of the proposed project could result in the inadvertent disturbance of currently undiscovered human remains. Any discovery of human remains would trigger state law governing the treatment of human remains.	PS	MM 3.5.4a If human remains are encountered, California Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within a reasonable time frame. Subsequently, the Native American Heritage Commission shall identify the “most likely descendant” within 24 hours of receiving notification from the coroner. The most likely descendant shall then have 48 hours to make recommendations and engage in consultations concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. <i>Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities</i>	LS

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		<i>Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments</i> MM 3.5.4b All cultural materials, with the exception of sacred items, burial goods, and human remains, which will be addressed in the Cultural Resources Treatment and Monitoring Agreement required by mitigation measure 3.5.2b, that are collected during the grading monitoring program and from any previous archeological studies or excavations on the project site shall be curated according to the current professional repository standards. The collections and associated records shall be transferred, including title, to the Pechanga Tribe's curation facility, which meets the standards set forth in 36 CRF Part 79 for federal repositories. <i>Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities</i> <i>Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments</i> MM 3.5.4c All sacred sites, should they be encountered within the project site, shall be avoided and preserved as the preferred mitigation, if feasible as determined by a qualified professional in consultation with the Pechanga Tribe. To the extent that a sacred site cannot be feasibly preserved in place or left in an undisturbed state, mitigation measures shall be required pursuant to and consistent with Public Resources Code Section 21083.2 and CEQA Guidelines Sections 15064.5 and 15126.4.	

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		<i>Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities</i> <i>Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments</i>	
Impact 3.5.5 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features).	LCC	Non required	LCC
Geology and Soils			
Impact 3.6.1 The potential for the project site to be exposed to hazards associated with fault rupture is considered unlikely.	LS	None required.	LS
Impact 3.6.2 The project site is located in an area that may be subject to strong seismic ground shaking.	PS	MM 3.6.2 Prior to the issuance of any grading or building permit, the project applicant shall submit an updated geotechnical study to the City of Wildomar for review and approval. The geotechnical study shall be prepared by a qualified engineer and identify grading and building practices necessary to ensure stable building conditions. The project applicant shall incorporate the recommendations of the approved project-level geotechnical study into project plans as directed by the City Engineer. The project's building plans shall demonstrate that they incorporate all applicable recommendations of the geotechnical study and comply with all applicable requirements of the latest adopted version of the California Building Standards Code. A licensed professional engineer shall prepare the plans, including those that pertain to soil engineering, structural	LS

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		foundations, and installation. All on-site soil engineering activities shall be conducted under the supervision of a licensed geotechnical engineer or certified engineering geologist. <i>Timing/Implementation: Prior to grading and building activities</i> <i>Enforcement/Monitoring: City of Wildomar City Public Works and Building Department</i>	
Impact 3.6.3 The project site does not include soils that may be subject to seismic-related ground failure, including liquefaction and landslide..	LS	None required.	LS
Impact 3.6.4 The proposed project could result in substantial soil erosion or the loss of topsoil..	PS	MM 3.6.4a A keyway should be constructed at the toe of all fill slopes that are proposed on natural grades of 5:1 (horizontal to vertical) or steeper. Keyways should be a minimum of two (2) feet deep and fifteen (15) feet wide (equipment width) and tilted a minimum of two percent into the hillside. Keyways for transition slopes should tilt a minimum of five percent into the hillside. A series of level benches should be constructed into competent bedrock on natural grades of 5:1 (horizontal to vertical) or steeper prior to placing fill. <i>Timing/Implementation: During grading and building activities</i> <i>Enforcement/Monitoring: City of Wildomar City Public Works and Building Departments</i> MM 3.6.4b All fill slopes should be constructed at slope ratios no steeper than 2:1 (horizontal to vertical). All cut slopes should be inspected by the project geologist or engineer to verify stability. Cut slopes exposing adverse	LS

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		structural features or significant amounts of soil may be considered unstable. Unstable cut slopes may require flattening or buttressing. Additionally, the final grading plan for cut/fill of parking lot needs to be accompanied by structural soils analysis as no subsurface soils analysis was completed as part of the technical study. <i>Timing/Implementation:</i> During grading and building activities <i>Enforcement/Monitoring:</i> City of Wildomar City Public Works and Building Departments	
Impact 3.6.5 Soils testing indicates that the soils within the proposed project site are non-expansive. However, import soils or soils used near finish grade may have a different expansion index than what was tested.	PS	MM 3.6.5 All existing undocumented artificial fill, topsoil, Quaternary alluvium, and unsuitable upper intensely weathered Cretaceous granodiorite shall be over-excavated to underlying competent granodiorite within the areas of proposed structures, fill, or improvements. Anticipated removal depth ranges will be determined by the project engineer. Additionally, all slope wash and alluvium should be removed from the areas to be graded to competent bedrock, cleared of oversized rock, and may then be reused as fill material. Further, all exposed removal and over excavation bottoms should be inspected by the project geologist or his representative prior to placement of any fill. Lastly, the project applicant shall ensure that vegetation is removed from areas that will be graded, with slope ratios no steeper than 2:1 (horizontal to vertical). All on-site soil engineering activities shall be conducted under the supervision of a licensed geotechnical engineer or certified engineering	LS

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		geologist. The upper parking lot will require grading and redistribution of materials amounting to approximately 24,500 cubic yards. The material will be used within the project site, resulting in balanced soil excavation and fill for the project. <i>Timing/Implementation: During grading and building activities</i> <i>Enforcement/Monitoring: City of Wildomar City Public Works and Building Departments</i>	
Impact 3.6.6 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in Wildomar and nearby areas of Riverside County, would not contribute to cumulative geologic and soils impacts.	PS	MM 3.6.6a Slab on Grade. To prevent foundation damage associated with potentially expansive soils, the applicant shall ensure that concrete slabs are designed to minimize cracking as a result of shrinkage and joints (isolation, contraction, and construction) be placed in accordance with the American Concrete Institute (ACI) guidelines. Additionally, special precautions should be taken during placement and curing of all concrete slabs. Excessive slump (high water/cement ratio) of the concrete and/or improper curing procedures used during either hot or cold weather conditions could result in excessive shrinkage, cracking, or curling in the slabs. All concrete proportioning, placement, and curing will be performed in accordance with ACI recommendations and procedures. Slab-on-grade reinforcement and thickness should be provided by the structural engineer based on structural considerations. Final expansion testing at completion of grading could cause a change in the slab-on-grade recommendations.	LS

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		<i>Timing/Implementation:</i> Prior to the issuance of a grading permit <i>Enforcement/Monitoring:</i> City of Wildomar Engineering and Planning Departments MM 3.6.6b Exterior Slabs. All exterior concrete slabs cast on finish subgrade (patios, sidewalks, etc., with the exception of portland cement concrete (PCC) pavement) should be a minimum of 4 inches nominal in thickness. Reinforcing in the slabs and the use of a compacted sand or gravel base beneath the slabs should be according to the current local standards. Subgrade soils should be moisture conditioned to at least optimum moisture content to a depth of 12 inches immediately before placing the concrete. <i>Timing/Implementation:</i> Prior to the issuance of a grading permit <i>Enforcement/Monitoring:</i> City of Wildomar Engineering and Planning Departments	
Impact 3.6.7 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in Wildomar and nearby areas of Riverside County, would not contribute to cumulative geologic and soils impacts.	LCC	None required.	LCC
Hydrology and Water Quality			
Impact 3.7.1 Construction and operation of the proposed project could result in erosion or a degradation of downstream surface water and groundwater resources.	PS	MM 3.7.1 Prior to the approval of the grading permit for future development on the project site, the project applicant shall be required to prepare a stormwater pollution and prevention plan (SWPPP) consistent with the NPDES General Permit for Storm Water Discharges Associated	LS

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		with Construction and Land Disturbance Activities (Order No. 2010-0014-DWQ), which is to be administered through all phases of grading and project construction. The SWPPP shall incorporate best management practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. The SWPPP shall be submitted to the Regional Water Quality Control Board and to the City of Wildomar for review. A copy of the SWPPP must be kept accessible on the project site at all times. In addition, the project applicant will be required to submit, and obtain City approval of, a water quality management plan prior to the issuance of any building or grading permit for future development on the project site in order to comply with the Areawide Urban Runoff Management Program. The project shall implement site design BMPs, source control BMPs, and treatment control BMPs as identified in the water quality management plan. Site design BMPs shall include, but are not limited to, landscape buffer areas, on-site ponding areas, roof and paved area runoff directed to vegetated areas, and vegetated swales. Source control BMPs shall include, but are not limited to, education, landscape maintenance, litter control, parking lot sweeping, irrigation design to prevent overspray, and covered trash storage. Treatment control BMPs shall include vegetated swales and a detention basin or an infiltration device. The project will be	

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		responsible for maintenance of the basins. <i>Timing/Implementation:</i> Prior to the issuance of a grading permit <i>Enforcement/Monitoring:</i> City of Wildomar Engineering Department	
Impact 3.7.2 Development of the proposed project will alter the existing drainage pattern of the site and may impact stormwater runoff rates and volumes compared to existing conditions.	LS	None required.	LS
Impact 3.7.3 The proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the Santa Margarita watershed, could alter drainage conditions, rates, volumes, and water quality, which could result in potential erosion, flooding, and water quality impacts within the overall watersheds.	LCC	None required.	LCC
Noise			
Impact 3.8.1 The completed proposed project may expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	PS	MM 3.8.1a Prior to the issuance of grading permits, the project applicant shall submit a construction-related noise control plan to the City for review and approval. The plan shall: • Depict the location of construction equipment staging areas. • Require that construction contractors equip construction equipment (fixed or mobile) with properly operating and maintained mufflers consistent with manufacturers' standards. • Require that the construction contractor place stationary construction equipment so that emitted noise is directed away from	LS

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NI – No Impact

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		the noise-sensitive receptors nearest the project site. - Describe other noise control measures that will be implemented during project-related construction activities. - Specify that all construction activity, including staging and haul truck deliveries, is subject to the same hours specified for construction equipment (i.e., between the hours of 6 a.m. and 6 p.m. during the months of June through September, and between the hours of 7 a.m. and 6 p.m. during the months of October through May). Where alternative routes are available that would not substantially increase vehicle miles traveled, the plan shall denote haul routes that do not pass noise-sensitive land uses or residential dwellings. The construction-related noise control plan shall also incorporate any other restrictions imposed by City staff. - Indicate the location of frame-mounted temporary noise curtains. The noise curtains shall be installed near the noise-sensitive residential receiver locations to shield the neighboring homes from construction noise. Noise control curtains shall provide a minimum STC (Sound Transmission Class) rating of 20. The temporary noise curtains shall be installed without any gaps or openings on the project boundary between the	

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City of Wildomar**June 2014****Cornerstone Community Church****Draft Environmental Impact Report**

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		noise-sensitive receiver and the construction activities. The construction supervisor shall provide written notification of planned activities to the City of Wildomar and to each of the property owners located along Via Carnaghi Lane and the home at 34520 Monte Vista Drive 15 days prior to commencement of each phase of construction. The construction supervisor shall maintain a complaint log noting date, time, complainant's name, nature of the complaint, and any corrective action taken. A copy of the complaint log shall be provided to the City on a daily basis. The project manager shall publish and distribute to the potentially affected community, a phone number that is attended during active construction working hours for use by the disturbed public to register complaints. The construction supervisor shall ensure compliance with the noise control plan, and the City shall conduct periodic inspections at its discretion. <i>Timing/Implementation: During construction activities</i> <i>Enforcement/Monitoring: City of Wildomar Building and Planning Departments</i> MM 3.8.1b The project applicant shall provide a "windows closed" condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 30 for classrooms, libraries, and other noise-sensitive rooms in the preschool building.	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		<i>Timing/Implementation: Prior to a certificate of occupancy of the preschool (as part of building permit requirements)</i> <i>Enforcement/Monitoring: City of Wildomar Planning and Building Departments</i> MM 3.8.1c For the preschool building, the project applicant shall ensure that exterior walls have a minimum STC rating of 46. Typical walls with this rating will have 2x4 studs or greater, 16-inch o.c. with R-13 insulation, a minimum 7/8-inch exterior surface of cement plaster, and a minimum interior surface of 1/2-inch gypsum board. Interior wall finish shall be at least 1/2-inch-thick gypsum wallboard or plaster. Ceilings shall be finished with gypsum board or plaster that is at least 1/2 inch thick. The roof system should have minimum 1/2-inch plywood sheathing that is well sealed to form a continuous barrier with a minimum insulation of R-19. <i>Timing/Implementation: Prior to a certificate of occupancy of the preschool (as a part of building permit requirements)</i> <i>Enforcement/Monitoring: City of Wildomar Planning and Building Departments</i> MM 3.8.1d All window and door assemblies used throughout the preschool shall be free of cutouts and openings and shall be well fitted and well weather-stripped. <i>Timing/Implementation: Prior to a certificate of occupancy of the preschool (as a part of building permit requirements)</i> <i>Enforcement/Monitoring: City of Wildomar Planning and</i>	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		<i>Building Departments</i> MM 3.8.1e The project applicant shall prepare a final noise analysis prior to obtaining building permits for the preschool and submit the analysis to the City for review and approval. This analysis will finalize the noise requirements based on precise grading plans and actual building design specifications. If the noise analysis shows that the exterior noise levels at the preschool playground will exceed 70 dBA, the project applicant shall provide attenuation such as a noise barrier along the western property line, noise barrier or façade extensions along the southern face of the preschool building, or other measures recommended by the acoustical expert to ensure the outdoor play area noise level is below 70 dBA. <i>Timing/Implementation: Prior to occupancy of the preschool</i> <i>Enforcement/Monitoring: City of Wildomar Planning and Building Departments</i>	
Impact 3.8.2 Implementation of the proposed project may expose persons to or generate minimal, short-duration groundborne vibration or groundborne noise levels.	LS	None required.	LS
Impact 3.8.3 Completion of the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity.	NI	None required	NI
Impact 3.8.4 Construction of the proposed project may result in a temporary increase in ambient noise levels in the project vicinity.	SU	MM 3.8.4 Parking lot sweeping and landscape maintenance activities shall occur only between the hours of 7:00 a.m. and 10:00 p.m.	SU

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		<i>Timing/Implementation: Ongoing</i> <i>Enforcement/Monitoring: City of Wildomar Planning Department and Public Works Department</i>	
Impact 3.8.5 Implementation of the proposed project will not result in a substantial contribution to cumulative noise levels.	LCC	MM 3.8.5 Prior to completion of the upper parking lot, an access control gate shall be installed at the entrance to the lower parking area. The gate shall be operated and maintained by the church and be designed to prevent use or access to the parking area during times when the church is not in operation. The Planning Director or City Engineer may approve an alternative location for the gate if another area would serve the same purpose of denying access. A sign shall be placed on the gate, and at the entrance to each parking area, indicating a number that can be called should activity occur in the parking lot(s) when the church is not in operation. <i>Timing/Implementation: Prior to completion of the upper parking lot</i> <i>Enforcement/Monitoring: City of Wildomar Planning Department and Public Works Department</i>	LCC
Public Services, Utilities, Service Systems			
Impact 3.9.1.1 Implementation of the proposed project will not result in the need for additional fire protection and emergency services in order to maintain acceptable service levels. However, the proposed project may result in a slight increase in demand for fire protection and emergency medical services.	LS	None required	LS
Impact 3.9.1.2 While the proposed project is located in an area that is identified as being exposed to a very high	LS	None required	LS

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ES EXECUTIVE SUMMARY

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
risk of wildfire, it is more specifically located in an area that is developed and well served by fire prevention services. The close proximity to a fire station and the limited undeveloped land near the proposed project will result in a less than significant impact.			
Impact 3.9.1.3 While the implementation of the proposed project will result in the need for additional water supply, this additional need will not be sufficient to require the creation of additional water supply infrastructure. Implementation of the proposed project may result in additional need for water supply and infrastructure to provide adequate fire flows for fire protection. The provision of these facilities could cause environmental impacts.	LS	None required	LS
Impact 3.9.1.4 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the immediate area, may increase the demand for fire protection and emergency medical services. However, given the requirement for CEQA review of future development, any necessary infrastructure or facilities expansion will be reviewed for potential impacts.	LCC	None required	LCC
Impact 3.9.2.1 Implementation of the proposed project will not result in a significant increased demand for law enforcement services and will not result in the need for new or physically altered law enforcement facilities, the construction of which could cause significant environmental impacts.	LS	None required	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.9.2.2 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the RCSD service area, would increase the demand for law enforcement services.	LCC	None required	LCC
Impact 3.9.3.1 The proposed project will not result in increased enrollment in the local school district.	NI	None required	NI
Impact 3.9.3.2 The proposed project will not result in any population growth, nor will it result in population growth when developed in conjunction with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting.	LCC	None required	LCC
Impact 3.9.4.1 Implementation of the proposed project will slightly increase demand for water supply, which could result in effects on the physical environment. However, adequate water supply sources exist, and the proposed project's and the Elsinore Valley Municipal Water District's water conservation provisions would ensure adequate water service.	LS	None required	LS
Impact 3.9.4.2 Implementation of the proposed project would increase demand for water supply and thus require additional water supply infrastructure that could result in a physical impact to the environment.	LS	None required	LS
Impact 3.9.4.3 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative	LCC	None required	LCC

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ES EXECUTIVE SUMMARY

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
setting, would increase the cumulative demand for water supplies. However, this increased demand will not be sufficient to lead to a requirement for new water facilities and related infrastructure.			
Impact 3.9.5.1 Implementation of the proposed project will not result in wastewater discharge that would exceed the wastewater treatment requirements of the San Diego Regional Water Quality Control Board.	LS	None required	LS
Impact 3.9.5.2 Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would contribute to the cumulative demand for wastewater service. However, continued implementation of EVMWD standards would ensure adequate wastewater facilities are provided.	LCC	None required	LCC
Impact 3.9.6.1 While implementation of the proposed project will generate increased amounts of solid waste that will need to be disposed of in landfills or recycled, the proposed project is consistent with the current land use of the project site allowing for anticipation of the increased waste generation.	LS	None required	LS
Impact 3.9.6.2 Implementation of the proposed project would not fail to comply with federal, state, and local statutes and regulations related to solid waste.	LS	None required	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.9.6.3 Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would result in increased demand for solid waste services.	LCC	None required	LCC
Impact 3.9.7.1 Implementation of the proposed project would not result in any population increase or additional demand for city recreation facilities.	NI	None required	NI
Impact 3.9.7.2 Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would increase the use of existing parks and would require additional park and recreation facilities within the cumulative setting, the provision of which could have an adverse physical effect on the environment.	LCC	None required	LCC
Transportation and Traffic			
Impact 3.10.1 The proposed project would result in an increase in traffic under the existing plus project scenario that is substantial in relation to the existing traffic load and capacity of the street system or exceeds an established level of service standard (i.e., result in a substantial increase in either the volume-to-capacity ratio and/or the level of service at intersections).	PS	MM 3.10.1 The project applicant shall be required to pay the pro rata share of implementation of the following traffic improvements: <i>I-15 Southbound Ramps/Baxter Road (Intersection #2)</i> • Install a traffic signal. <i>I-15 Northbound Ramps/Baxter Road (Intersection #4)</i> • Install a traffic signal. <i>Monte Vista Drive/Bundy Canyon Road (Intersection #5)</i> • Install a traffic signal. <i>Monte Vista Drive/Baxter Road (Intersection #9)</i> • Install a traffic signal.	LS

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ES EXECUTIVE SUMMARY

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		<i>Timing/Implementation:</i> Prior to occupancy, or building permit as required by the DIF or TUMF programs <i>Enforcement/Monitoring:</i> City of Wildomar Public Works Department	
Impact 3.10.2 Implementation of the proposed project will not result in increased hazards due to a design feature or incompatible uses.	LS	None required	LS
Impact 3.10.3 Implementation of the proposed project could result in temporary blockages of Bundy Canyon Road and other roadways, causing an impact to emergency access.	PS	MM 3.10.3 The project applicant will prepare and implement a traffic management plan (TMP) to minimize the inconveniences during construction. Included among the provisions, the contractor will coordinate with the City of Wildomar, Riverside County, and local police, fire, and emergency medical service providers regarding construction scheduling and any other practical measures to maintain adequate access to properties and response times. The TMP may also limit construction activity that would impact traffic flow along Monte Vista Drive to occur outside of the typical weekday morning (7:00 AM to 9:00 AM) and weekday evening (4:00 PM to 6:00 PM) peak hours. The TMP will include contact information for the general public who may have questions concerning the project and access to their property. Two-way traffic through the construction zone will be maintained throughout the construction period. <i>Timing/Implementation:</i> Prior to filing of a final map <i>Enforcement/Monitoring:</i> City of Wildomar Public Works and Planning Departments	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.10.4 Implementation of the proposed project will not conflict with adopted policies, plans, or programs supporting alternative transportation.	LS	None required	LS
Impact 3.10.5 When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed project would contribute to cumulative traffic volumes in the region that result in significant impacts to level of service and operations.	CC	Implementation of MM 3.10.1	CC

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1.0 – INTRODUCTION

This Draft Environmental Impact Report (Draft EIR; DEIR) was prepared in accordance with and in fulfillment of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. An environmental impact report (EIR) is described in CEQA Guidelines Section 15121(a) as a public informational document that analyzes the significant environmental effects of a project, identifies ways to minimize the significant impacts, and describes reasonable alternatives to the project. Public agencies are charged with the duty to consider and minimize environmental impacts of proposed development, where feasible, and obligated to balance a variety of public objectives, including economic, environmental, and social factors. CEQA requires that an EIR be prepared by the agency with primary responsibility over the project (the lead agency).

1.1 PURPOSE OF THE EIR

CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. Therefore, pursuant to CEQA, the City of Wildomar (City), acting as the lead agency, has prepared this Draft EIR to provide the public and responsible and trustee agencies, as relevant, with information about the potential environmental effects of the proposed Cornerstone Community Church Construction Project (proposed project; project).

A “project” refers to the whole of an action that has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the proposed project, the City has determined that adoption and implementation of the proposed Cornerstone Community Church is a project within the CEQA definition.

1.2 KNOWN TRUSTEE AND RESPONSIBLE AGENCIES

The term “trustee agency” means a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California. In CEQA, the term “responsible agency” includes all public agencies other than the lead agency that may have discretionary actions associated with the proposed project. The following agencies have been identified as potential responsible or trustee agencies:

- California Department of Fish and Wildlife, Region 6 (CDFW)
- California Department of Transportation, District 8 (Caltrans)
- California Native American Heritage Commission (NAHC)
- San Diego Regional Water Quality Control Board, Region 9 (SDRWQCB)
- Lake Elsinore Unified School District (LEUSD)
- Elsinore Valley Municipal Water District (EVMWD)
- Riverside County Flood Control and Water Conservation District (RCFCWCD)
- South Coast Air Quality Management District (SCAQMD)
- US Army Corps of Engineers (USACE)

1.0 INTRODUCTION

1.3 TYPE OF DOCUMENT

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a project EIR pursuant to CEQA Guidelines Section 15161. The analysis associated with a project EIR focuses on the changes in the environment that would occur as a result of project implementation and examines all phases of the project (i.e., planning, construction, and operation).

1.4 INTENDED USE OF THE EIR

This Draft EIR, in accordance with CEQA Guidelines Section 15126, will be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the project. These actions include, but are not limited to, the following:

- Approval of encroachment permit(s) as necessary to construct roadways, driveways and the Elsinore Valley Municipal Water District sewer line extension in Monte Vista Road.
- Approval of site plan review, building and other construction permits as needed to construct the proposed project.

1.5 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, identification of significant irreversible environmental impacts, and growth-inducing and cumulative impacts. The environmental issues addressed in this Draft EIR were established through review of environmental documentation developed for the site, environmental documentation for nearby projects, and responses to the Notice of Preparation. Based on these comments, agency consultation, review of the project application, and comments made at a scoping meeting held by the City on November 18, 2013, the City determined the scope for this Draft EIR.

This Draft EIR is organized in the following manner:

ES – EXECUTIVE SUMMARY

This section provides a project narrative and identifies environmental impacts and mitigation measures in a summary table consistent with CEQA Guidelines Section 15123.

SECTION 1.0 – INTRODUCTION

Section 1.0 provides an introduction and overview of the project EIR.

SECTION 2.0 – PROJECT DESCRIPTION

This section provides a detailed description of the proposed project, including intended objectives, background information, and physical and technical characteristics.

SECTION 3.0 – ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Section 3.0 contains an analysis of environmental topic areas as identified below. Each subsection contains a description of the existing setting of the project area and of the regulatory environment, identifies standards of significance, and identifies project-related and cumulative impacts and recommends mitigation measures.

The major environmental topics are addressed in the following sections:

- 3.1 Aesthetics and Visual Resources
- 3.2 Air Quality
- 3.3 Biological and Natural Resources
- 3.4 Climate Change and Greenhouse Gases
- 3.5 Cultural and Paleontological Resources
- 3.6 Geology and Soils
- 3.7 Hydrology and Water Quality
- 3.8 Noise
- 3.9 Public Services and Utilities
- 3.10 Traffic and Circulation
- 3.11 Effects Determined Not to Be Significant

SECTION 4.0 – ALTERNATIVES

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project and avoid and/or substantially lessen any of the significant effects of the project. This section discusses alternatives to the proposed project, including the CEQA mandatory “No Project” alternative, that are intended to avoid or reduce significant environmental impacts of the proposed project.

SECTION 5.0 – OTHER CEQA ANALYSIS

This section contains discussions and analysis of various topical issues mandated by CEQA. These topics include significant environmental effects that cannot be avoided if the project is implemented, as well as growth-inducing impacts.

SECTION 6.0 – ACRONYMS AND ABBREVIATIONS

This section defines acronyms and abbreviations used throughout the EIR.

SECTION 7.0 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the EIR by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as all technical material prepared to support the analysis.

1.0 INTRODUCTION

1.6 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR involves the following procedural steps:

NOTICE OF PREPARATION

In accordance with Section 15082 of the CEQA Guidelines, the City prepared a Notice of Preparation (NOP) of an EIR for the project and circulated the document on October 28, 2013. The NOP was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. A scoping meeting was held on November 18, 2013, to solicit input from interested agencies and the public. Concerns raised at the scoping meeting in response to the NOP at the scoping meeting included:

- Traffic associated with the expanded church.
- Dust, noise, and lights from the new parking lots.
- Driveway impacts from the development of Via Carnaghi Lane.
- Cumulative impacts associated with the expansion of the church.

These comments were considered during preparation of the Draft EIR. The NOP comment period closed on December 2, 2013. The NOP and comments from interested parties are included as **Appendix 2.0** to this EIR.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. Upon completion of the Draft EIR, the City will file the Notice of Completion (NOC) with the California Office of Planning and Research to begin the public review period (Public Resources Code Section 21161).

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the City will provide public notice of the availability of the Draft EIR for public review and will invite comment from the general public, agencies, organizations, and other interested parties. Public comment on the Draft EIR will be accepted in written form via common carrier or in electronic mail (e-mail) form. Public comment will also be accepted orally at a public hearing to be held November 12, 2014, at 6:30 p.m. at Wildomar City Hall (address below). All comments or questions regarding the Draft EIR should be addressed to:

City of Wildomar
Cornerstone Community Church EIR
Planning Department
23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
Attention: Matthew C. Bassi, Planning Director
mbassi@cityofwildomar.org

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and contain any revisions to the Draft EIR.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Wildomar Planning Commission will review and consider the Final EIR and may certify the Final EIR if it finds that the EIR is adequate and complete. The rule of adequacy generally holds that the EIR can be certified if it shows a good faith effort at full disclosure of environmental information and provides sufficient analysis to allow decisions to be made regarding the project in contemplation of its environmental consequences. Note that certification of the EIR does not automatically result in project approval.

Upon review and consideration of the Final EIR, the Planning Commission may take action to approve, revise, or reject the proposed project. Any decision to approve the project will be accompanied by written findings in accordance with CEQA Guidelines Section 15091. If applicable, the Planning Commission may approve the project even with significant and unavoidable environmental impacts by adopting a statement of overriding considerations as outlined in CEQA Guidelines Section 15093. A Mitigation Monitoring and Reporting Program (MMRP), as described below, would also be adopted for mitigation measures that have been incorporated into or imposed on the project to reduce or avoid significant effects on the environment. The MMRP will be designed to ensure that these measures are carried out during project implementation.

MITIGATION MONITORING AND REPORTING PROGRAM

CEQA Section 21081.6(a) requires lead agencies to adopt a Mitigation Monitoring and Reporting Program to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific reporting or monitoring program required by CEQA is not required to be included in the EIR; however, it will be presented to the Planning Commission for adoption. Throughout the EIR, mitigation measures have been clearly identified and presented in language that will facilitate establishment of an MMRP. Any mitigation measures adopted by the City as conditions for approval of the project will be included in an MMRP to verify compliance.

1.7 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received several comment letters on the Notice of Preparation for the proposed project. A copy of the Notice of Preparation and a copy of each comment letter are provided in **Appendix 2.0** of this DEIR. The City received letters from the following federal, state, and local agencies and other interested parties.

- California Department of Transportation (Caltrans District 8)
- Jesse Munoz, Resident
- Mary Flores, Resident

The following summarizes issues raised in the comment letters as well as the author of the letter.

1.0 INTRODUCTION

DANIEL KOPULSKY, CALTRANS (DISTRICT 8)

- Traffic Study – Ensure the Traffic Study incorporates impacts and appropriate traffic analysis scenarios, indicates level of service with and without improvements, and the data used in the study is less than two years old.
- Encroachment Permit – Any work performed in the state right-of-way must have a valid encroachment permit.

JESSE MUNOZ, RESIDENT

Mr. Munoz has the following concerns, which could potentially have an impact on his property:

1. Mr. Munoz is requesting that the block walls proposed around the perimeter of his property match natural landscape.
2. Mr. Munoz is requesting landscaping for additional privacy.
3. Parking lot – Ensure that the lighting is not intrusive. The use of parking lots should be according to City standards.
4. Via Carnaghi Lane – Mr. Munoz is concerned that due to the paving of Via Carnaghi Lane, speed control may be needed to prevent excessive speed.
5. Equestrian Trails – Mr. Munoz is concerned that the new parking and roadway improvements will block access to trails on the church property that he uses to ride his horses.

MARY FLORES, RESIDENT

Ms. Flores has the following concerns associated with the proposed project:

1. Ms. Flores is concerned that the existing safety problem and traffic control situation on Monte Vista will be further amplified with the implementation of the proposed project.
2. Ms. Flores states that the development on the mountain behind the church was done without an erosion control plan, mitigation fees, flood and water control, Planning and Safety Department directive review or approval, mitigation fees, drainage fees, grading permits, compliance with NPDES, soils reports, or paleontological reports.
3. Ms. Flores requests the entire project footprint be made available.
4. Ms. Flores received a requested copy of the Grading Plan from the Planning Department. After reviewing the plan, she states that it is still unclear what will happen with the dirt on the sloped terrain.

2.0 – PROJECT DESCRIPTION

This section describes the entirety of the project, including all anticipated development and infrastructure needed to serve the project.

2.1 LOCAL AND REGIONAL SETTING

REGIONAL SETTING

The proposed project is located in the City of Wildomar, which is located in the southwestern portion of Riverside County (**Figure 2.0-1**). The city is generally bounded by the mountains of the Cleveland National Forest and rural residential uses to the west, the Cities of Lake Elsinore and Canyon Lake to the north and northwest, the City of Murrieta to the south and southeast, and rural residential uses to the east in the City of Menifee. The city's topography is generally rolling, with steeper terrain on the west and east and valley areas in the central portion of the city. Interstate 15 (I-15) aligns northwest to southeast through the center of the city and is the main transportation arterial. Existing land uses in the city consist of a variety of primarily residential, commercial, office, and industrial uses, as well as recreational, open space, and institutional uses.

PROJECT SETTING

Specifically, within Wildomar, the proposed project is located on the east side of Monte Vista Drive approximately 3,200 feet south of Bundy Canyon Road and 3,000 feet north of Baxter Road and includes Assessor's Parcel Numbers 367-210-008, -018, -034, -035, -039, -041, -043, and 367-140-008. Access to the proposed project site is also provided along Via Carnaghi Lane, a dirt roadway extending from Monte Vista Drive north and east terminating in church property. Via Carnaghi Lane provides access to three single-family homes located along the roadway. The proposed project site is developed with the Cornerstone Community Church buildings, landscaping, playing fields, access roads, and parking lots. The site slopes upward from Monte Vista Drive to the east.

2.2 PROJECT DESCRIPTION

PROJECT BACKGROUND

Cornerstone Community Church began as Public Use Permit 600 approved in 1988 as a single building. As shown in **Table 2.0-1**, the church has grown gradually and currently has six buildings totaling approximately 84,730 square feet on approximately 63.51 acres (see **Figure 2.0-2**). In addition to the buildings, the church campus also contains three parking lots with space for up to 435 cars, a sports field accommodating both baseball and football, a quadrangle in the center of the church buildings, and landscaping throughout the site.

TABLE 2.0-1
CORNERSTONE COMMUNITY CHURCH BUILDING CONSTRUCTION HISTORY

Year	Permit	Building Size in Square Feet	Building
1988	Public Use Permit 600	3,840	Church
1994			Cornerstone Community Church acquires existing church
1996	Public Use Permit 778	9,285	Sanctuary (small church)
1999	Public Use Permit 778	19,626	Education building

2.0 PROJECT DESCRIPTION

Year	Permit	Building Size in Square Feet	Building
2002	Public Use Permit 778	55,819	Main sanctuary
2014	Public Use Permit 778, Revised Permit, No. 5	42,597	Phase 1 - 2-story 17,135 sf Pre-school Building; 2,438 sf Maintenance Building. Phase 2 – 23, 024 sf Administration Building

EXISTING CHURCH VEHICLE ACCESS

Access to the site is from Monte Vista Drive, a north–south secondary highway with a planned right-of-way of 82 feet but with an existing right-of-way of 52 feet, and from Via Carnaghi Lane, an unpaved local roadway with a planned right-of-way of 60 feet and an existing graded section that varies in size. Primary access to the church is from Monte Vista Drive through two driveways, each of which has two lanes. The driveways allow for one-way traffic only, either ingress or egress from the facility. The ingress driveway is the southernmost of the driveways and leads to a one-way driveway loop that circles the church buildings in a counterclockwise fashion. This circular driveway also provides paved access to the parking areas east of the church as well as a connection to Via Carnaghi Lane. The Via Carnaghi Lane connection can be gated at the north end of the lane to prevent traffic entering the northernmost parking lot.

EXISTING CHURCH UTILITIES

The existing church receives water from the Elsinore Valley Municipal Water District (EVMWD) through an 8-inch water line in Monte Vista Drive. Wastewater is collected and treated on-site through a network of five septic tanks totaling 17,500 gallons and 26 leach pits. The design for the existing system was approved by Riverside County Environmental Health in October 2001. Power and telephone service is provided through overhead lines in Monte Vista Drive in front of the facility. All of the utilities are underground within the church property.

EXISTING CHURCH OPERATIONS

The church operates the Cornerstone Christian School, which is a pre-kindergarten through 12th grade school with approximately 240 students. School hours are typically 7:45 a.m. to 3:00 p.m. weekdays. In addition to the students, approximately 100 church and school employees are on-site on school days, including pastoral staff, church administrative staff, school office staff, teachers, coaches, and maintenance, landscaping, custodial, event, and production staff.

The church also has numerous other events that extend activities at the facilities until 9:00 p.m. on Monday through Thursday and up to 10:00 p.m. on Friday. Activities on Saturday and Sunday can start as early as 8:00 a.m. and are usually concluded by 8:30 p.m. With the exception of worship services on Saturday and Sunday, most of the activities have less than 250 people in attendance. The church holds two services on Saturday (5:00 p.m. and 6:30 p.m.) that typically draw up to 500 worshipers for each service. Three Sunday services are held (9:00 a.m., 10:20 a.m., and 11:40 a.m.) that typically draw a total of up to 1,000 worshipers for each service.

The church has sporting events that require lighting provided by portable task lighting with power generators.

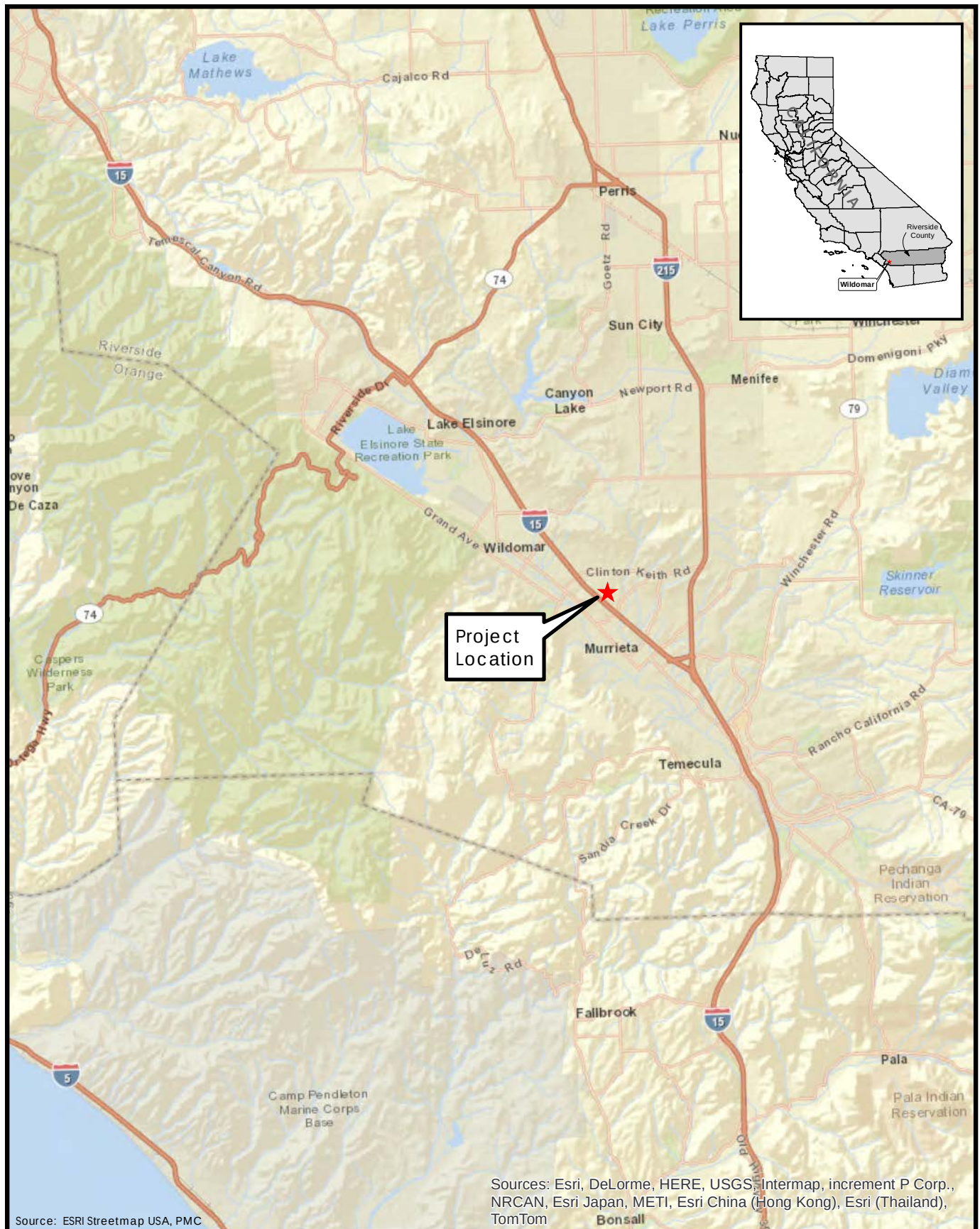


Figure 2.0-1
Regional Vicinity Map



Figure 2.0-2
Aerial Photograph

PROPOSED CONSTRUCTION

The proposed project will be constructed in at least two phases. While unlikely, it is possible that both phases would be built simultaneously or that more than two phases will be needed for construction.

PHASE 1

The church anticipates constructing Phase 1 beginning in 2014 and concluding in the winter of late 2014 or early spring of 2015.

New Preschool Building

A new single-story 22-foot-high, stand-alone 17,315-square-foot preschool building is proposed west of the existing sanctuary in the existing parking lot/sport court area (see **Figures 2.0-3A** through **2.0-3D**, **2.0-4A** and **2.0-4B**). As shown in **Figure 2.0-3B**, the preschool will have its own student drop-off and pickup area and secure playground areas. Two water quality basins will be constructed in the former paved parking area, and the on-site parking area and driveways will be reconfigured to accommodate the new building. The preschool is designed to accommodate a capacity of 180 new preschool students.

New Maintenance Building

The former home and outbuildings located south of the existing paved parking lot east of Via Carnaghi Lane will be demolished and a new 20-foot 5-inch single-story maintenance building of approximately 2,438 square feet will be constructed (see **Figures 2.0-3C** and **2.0-5**). The maintenance building will house lawn mowers, ladders, leaf blowers, tools, and other maintenance equipment needed for the church grounds. The building will also be used to construct sets for plays and performances at the church. The building will be located at the east end of a new paved parking area with access to Via Carnaghi Lane.

Additional Landscaping and Lighting

As part of the proposed construction in Phase 1, landscaping will be provided consistent with the existing landscape plan on the property. The proposed landscaping is shown in **Figures 2.0-6A** and **2.0-6B**. As part of the overall site improvements, pedestrian and safety lighting will be installed similar to the existing church. In addition, parking lot lighting will be provided.

Modification to Existing and Creation of New Parking Areas

Construction of the new preschool will result in the loss of 75 of the existing 435 parking spaces. Through reconfiguration of the drive aisles and striping of the pavement, 7 of the 75 spaces can be recovered, for a total loss of 68 spaces.

Two new parking areas are proposed and an existing unimproved parking area will be paved. The first is a new 274-stall “upper” parking lot that will be constructed east of the existing paved parking area at the northern end of Via Carnaghi Lane. Access to this new lot will be through the existing paved parking lot, as shown in **Figure 2.0-3A**, and through a separate drive to the existing unimproved parking area to the south. The second new parking lot will be constructed to the west of the new maintenance building and will provide 45 new spaces. An existing unimproved “lower” parking lot will be paved and will also provide drive access to the new upper parking lot. Improvements at the lower parking lot will result in 64 additional parking

2.0 PROJECT DESCRIPTION

spaces. When complete, the project will result in 390 new parking spaces resulting in a total number of 701 parking spaces on site.

Proposed Access

All vehicle access will be provided from the existing driveways on Monte Vista Drive and Via Carnaghi Lane. No roadway or driveway improvements are proposed for Monte Vista Drive. Via Carnaghi Lane will be paved to a local road standard; however, an exception to City of Wildomar Road Standard Number 105 has been requested. The modified Section D, as shown on **Figure 2.0-3A**, would result in two 12-foot travel lanes, but would not provide for on-street parking or sidewalks.

The project also includes approval of a modified street section for Monte Vista Drive along the property frontage. The proposed street section is modified by adapting Standards 94, Secondary Highway, Standard 109, Frontage, and Standard 405 multi-purpose trail. From Canyon to Bundy Canyon the Standard 94 can be met, except as modified by previously approved Tentative Maps. The proposed changes along the frontage of the church property keep the intent of providing a 4-lane secondary highway and a multi-purpose trail only within a narrower right of way. As proposed the right of way would be modified as follows:

- Eliminate 5' sidewalk and 9' landscape strip on west side.
- Redesign Street light spacing and lighting footprint to allow for all street lights along the street to be placed on the westerly side.
- Eliminate the 8' shoulder on the west side and east side and widen the 12' travel lane to 14' feet along curb side.
- Widen the easterly sidewalk from 5' per standards to 6'.
- Eliminate all landscaping on the easterly side within public street right of way. The right of way modification requires a condition of 10' minimum of landscaping as a buffer between the right of way and improvements on the private side.
- Reduce the multipurpose trail from 10' to 8'; place the split rail fence on the right of way and eliminate landscaping associated with the trail standard.

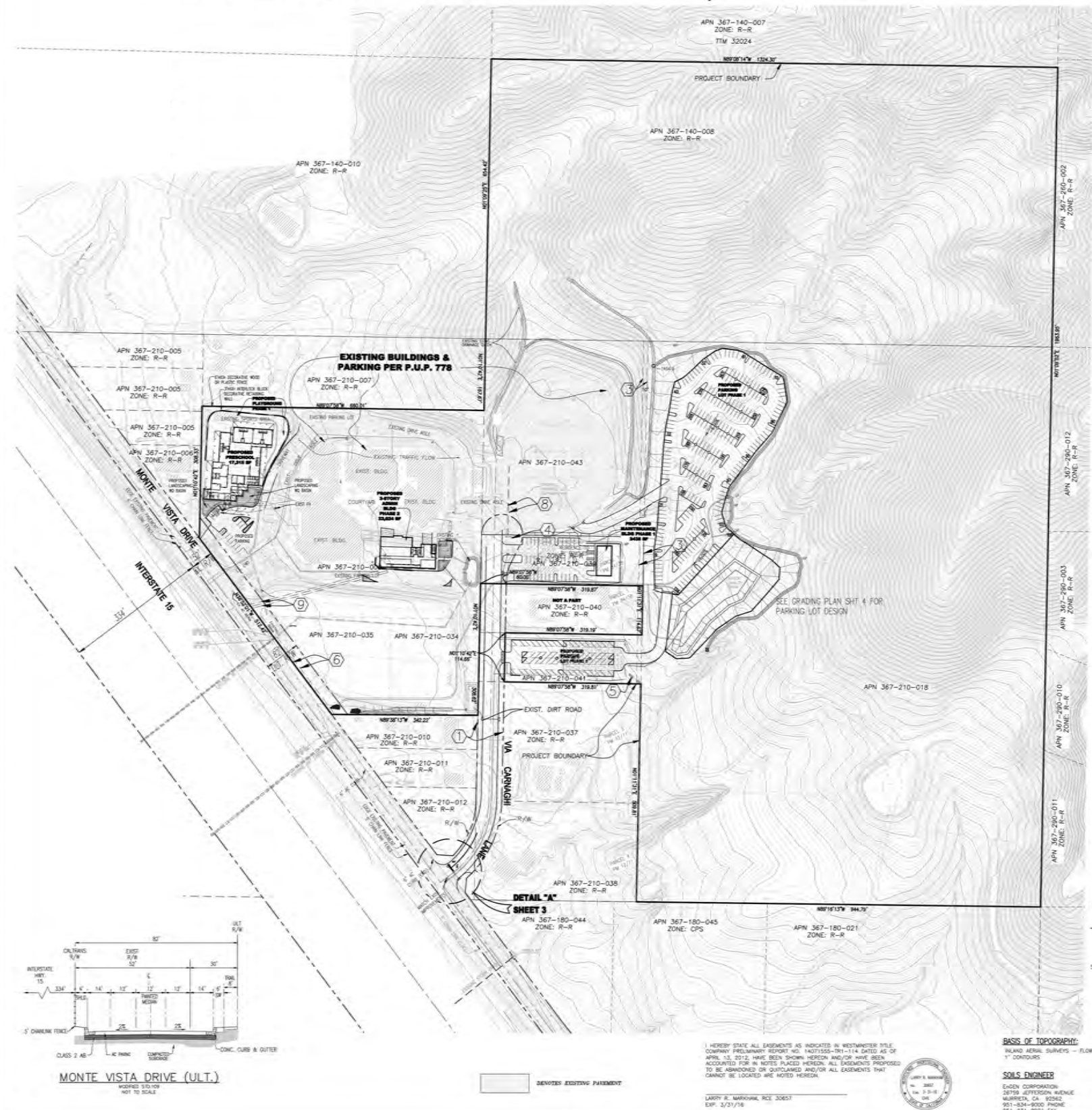
Proposed Water

All of the new development will be served from the existing water connection on Monte Vista Drive. Additional fire hydrants will be installed as required by code for fire flow and may be located in one or more of the parking lots. Water will be extended to the landscape areas as necessary. Water demand will increase slightly as a result of the construction and is anticipated to require an additional 16,000 gallons per day above the existing demand.

Proposed Wastewater

As noted above, the existing church is served through a series of five septic tanks. As a result of this project, a new sewer line will extend from the northern (egress) driveway to an existing manhole approximately 1,800 feet north on Monte Vista Drive. The 8-inch gravity sewer line will enable the church to abandon the septic tanks. On-site trenching will occur to connect the existing buildings to the new sewer line. The proposed project is anticipated to generate 8,000

WILDOMAR APPLICATION NO. 12-0194 (P.U.P. No. 778, REVISED PERMIT No. 5)



PROJECT AREA DATA		
1.08 AC.	BUILDING COVERAGE (ALL EXISTING BUILDINGS)	1.7%
13.06 AC.	DRIVES/PARKING, LANDSCAPING (EXIST. SITE)	20.6%
0.73 AC.	PROPOSED PRESHEDING AND PLAYGROUND*	0.0%
0.65 AC.	PROPOSED MAINTENANCE BLDG. AND MAINTENANCE PARKING LOT	0.9%
0.53 AC.	PROPOSED ADMIN BLDG. *	0.8%
0.12 AC.	PROPOSED LOWER PARKING	0.0%
2.57 AC.	PROPOSED UPPER PARKING	4.1%
1.04 AC.	PROPOSED SLOPES	1.6%
0.91 AC.	PROPOSED BASIN	1.3%
43.76 AC.	UNDISTURBED	68.9%
63.51 AC.		100%

[illegible]

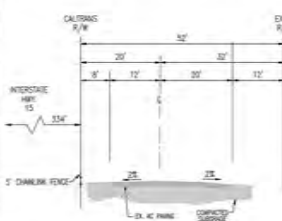
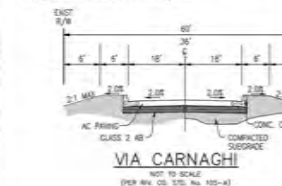
PARKING SPACE	EXISTING	LOST	GAINED	AVAILABLE
PRESHOOL LOT	80	-75	7	0
MAIN ENTRANCE LOT	19	0	0	0
DRIVE ASYLUM/ROUND BUILDING	116	-43	0	0
EAST LANE LOT	22	-4	0	0
PROPOSED LOT	0	-0	174	0
PROPOSED LOT	0	0	64	0
PROPOSED MAINTENANCE BUILDING LOT	0	-0	45	0
TOTAL	405	-124	286	0

EASEMENT NOTES

- ① A 60 FOOT WIDE EASEMENT IN FAVOR OF RIVERSIDE COUNTY FOR PUBLIC ROAD AND UTILITY PURPOSES, OVER AND ACROSS THAT CERTAIN TRACT OF LAND, BEING THE SE 1/4 OF SECTION 16, TOWNSHIP 12N, RANGE 12E, BOOK 12, PAGE 71, OF PUBLIC LANDS, RECORDS OF RIVERSIDE COUNTY, AS A "ROAD EASEMENT" FOR INTEREST, MAY BE RECOVERED AS INSTRUMENT NUMBER 2002-730508 ON DECEMBER 12, 2002. O.R.
- ② A 10 FOOT EASEMENT FOR TELEPHONE & ELECTRIC, IN FAVOR OF THE STATE OF CALIFORNIA ERECTED AND RECORDED SEPTEMBER 5, 1974 AS INSTRUMENT NUMBER 115360, O.R.
- ③ AN EASEMENT FOR PUBLIC ROADS AND UTILITY PURPOSES IN FAVOR OF THE STATE OF CALIFORNIA ERECTED AND RECORDED SEPTEMBER 5, 1974 AS INSTRUMENT NUMBER 2002-644822, OFFICIAL RECORDS OF RIVERSIDE COUNTY.
- ④ AN EASEMENT FOR POLE LINES, CONDUITS, OF UNDERGROUND FACILITIES AND INCIDENTAL PURPOSES RECORDED SEPT. 9, 1974, AS INSTRUMENT NUMBER 115350, O.R.
- ⑤ AN EASEMENT FOR POLE LINES, CONDUITS AND INCIDENTAL PURPOSES IN FAVOR OF CALIFORNIA WATER AND TELEPHONE COMPANY RECORDED MARCH 20, 1961, AS INSTRUMENT NO. 07141, O.R.
- ⑥ AN EASEMENT FOR PUBLIC ROADS AND UTILITY PURPOSES IN FAVOR OF THE STATE OF CALIFORNIA RECORDED MAY 24, 1977, AS INSTRUMENT NO. 8211, O.R. (CANNOT BE PLOTTED)
- ⑦ AN EASEMENT FOR WATER PIPELINES AND INCIDENTAL PURPOSES IN FAVOR OF THE STATE OF CALIFORNIA ERECTED AND RECORDED JULY 11, 1979, AS INSTRUMENT NO. 1434892, O.R.
- ⑧ AN EASEMENT FOR POLE LINES, CONDUITS AND INCIDENTAL PURPOSES IN FAVOR OF THE STATE OF CALIFORNIA RECORDED DECEMBER 24, 1982, AS INSTRUMENT NO. 210021, O.R.

GENERAL NOTES

1. LEGAL DESCRIPTION
A. THE SOUTHS HALF OF THE NORTH HALF OF THE
NORTHEAST QUARTER OF THE SOUTHWEST QUARTER
OF THE SOUTHEAST QUARTER, AND THE SOUTHS HALF
OF THE NORTHEAST QUARTER OF THE SOUTHWEST
QUARTER OF THE SOUTHWEST QUARTER OF SECTION 26,
T. 12S. R. 10E. S. 4E. BL. 200. T. 12S. R. 10E. S. 4E.
MEXICAN, RECORDS OF KENDRIDGE COUNTY, CALIFORNIA.
B. PARCEL 1, AS SHOWN ON PACE MAP 5096, AS
SHOWN BY MAP ON FILE IN BOOK 81 PAGE 71 OF
PACED MAPS, RECORDS OF KENDRIDGE COUNTY.
C. PARCELS 1 AND 4 TOGETHER WITH LITTELLS
LOT 4 OF PARCEL MAP 13070 ON FILE IN BOOK 81
PAGE 6 OF PACED MAPS, RECORDS OF KENDRIDGE
COUNTY.
2. TOTAL ACRES
63.12 ACRES-NET
14.14 ACRES (NET) - EXISTING IMPROVEMENTS (orig PUG 778)
10.00 ACRES - PROPOSED IMPROVEMENTS
49.02 ACRES - (UNDIVIDED)
2. PROPOSED RETRACTED ACRES (FRESHWATER, NTR)
0.00 NET ACRES
3. DEVELOPMENTS
NO DESIGN DEVELOPMENTS ARE PROPOSED, EXCEPT FOR MONTE VISTA DRIVE,
ACQUIRED SET 100) AS SHOWN REGION.
4. EXISTING ZONING
R-R
5. PROPOSED ZONING
R-R
6. EXISTING LAND USE
KINDERGARTEN, (F-12), & VACANT
7. EXISTING LAND USE DESIGNATION
CG, MDC, ESB-20
8. METHOD OF SEWAGE DISPOSAL
SEWER TO MONTE VISTA DRIVE
9. UTILITIES
WATER - KENDRIDGE VALLEY MUNICIPAL WATER DISTRICT
SEWER - KENDRIDGE VALLEY MUNICIPAL WATER DISTRICT
GAS - THE CITY COMPANY
ELECTRIC - SOUTHWEST CALIFORNIA ENERGY
TELEPHONE - VERIZON
CABLE - COMCAST
10. SCENIC DESIGN
LAND RESERVE IMPERIAL SCENIC DISTRICT
11. ADDITIONAL PAVED PARKING SPACES
367-370-10A, 11B, 374, 380, 395, 041, 042 & 367-106-008
12. TECHNICAL DESIGN GUIDE
2010 EDITION PAGE 697, CODES D-5
13. PLP PREPARATION DATE
APRIL 2012
14. ALL PROPOSED DRAINAGE FACILITIES SHALL BE DESIGNED TO
ACCOMMODATE 100 YEAR STORM FLOWS.
15. THIS IS A REVISED PUBLIC USE PERMIT DESIGNATION.
16. THIS PROJECT IS NOT WITHIN A SPECIAL PLAN.
17. THIS PROJECT IS WITHIN THE KENDRIDGE AREA PLAN.
18. THIS PROJECT IS WITHIN COMMUNITY SERVICE DISTRICT NO. 150A.
19. THIS SITE IS NOT WITHIN A SPECIAL STUDIES ZONE.
20. THIS PROJECT IS NOT SUBJECT TO LIAISONSHIP, OR OTHER COUNCIL
AGREEMENT, OR WITHIN A SPECIAL STUDY ZONE.
21. THIS PROJECT IS WITHIN FEMA FLOOD ZONE "X".
22. THE EXISTING STRUCTURES ON THIS SITE WILL REMAIN.
23. ALL MANUFACTURED STRUCTURES SHALL BE DEMOLISHED.
24. FINAL LANDSCAPE AND IRRIGATION PLANS WILL BE DEVELOPED
TO A LATER DATE.
25. ALL FURNISHABLE LACTING OR WASTE OIL ARE ON SITE
26. LACTATING OILS 8.64 (WAC)
- ESTIMATE OF EARTHWORKS:
CUT: 24,560 CY
FILL: 24,560 CY
IMPORT/EXPORT: 0 CY



NO.	DATE	REVISIONS	SHEET
			1
			OF 4

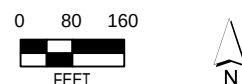


Figure 2.0-3a
Site Plan Sheet 1 of 4

T:\CS\Work\Wildomar, City of\Cornerstone Church\Figures

WILDOMAR APPLICATION NO. 12-0194 (P.U.P. No. 778, REVISED PERMIT No. 5)

SITE PLAN AND SECTIONS



Source: MDMG

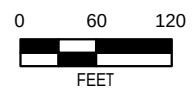
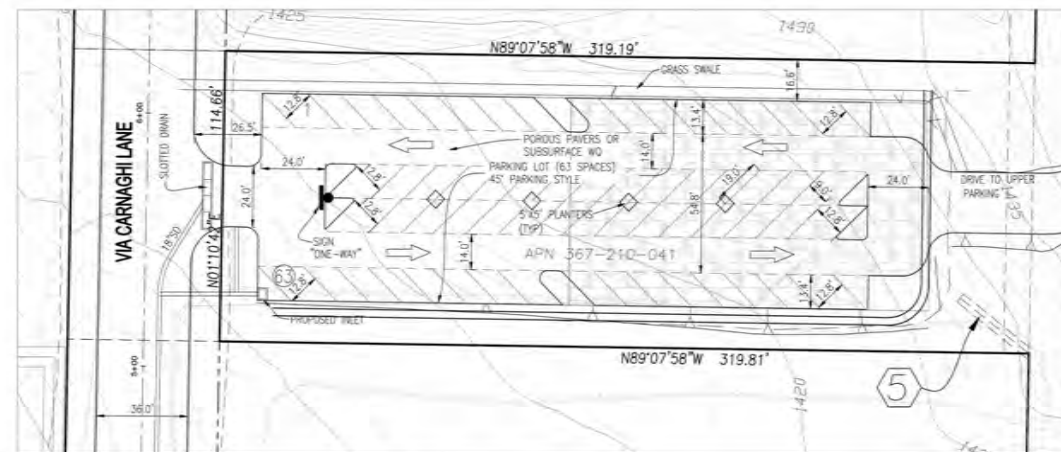


Figure 2.0-3b
Site Plan Sheet 2 of 4

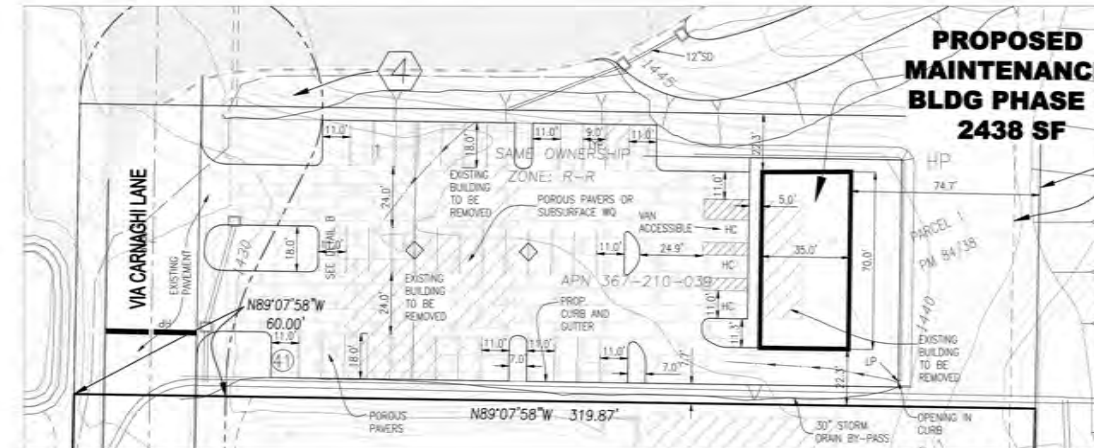
WILDOMAR APPLICATION NO. 12-0194 (P.U.P. No. 778, REVISED PERMIT No. 5)

DETAILS



DETAIL "B"
SCALE: 1" = 20'

STALL SIZE - 9'x19'
ISLE WIDTH - 14'
END STALL - 12.8x19'

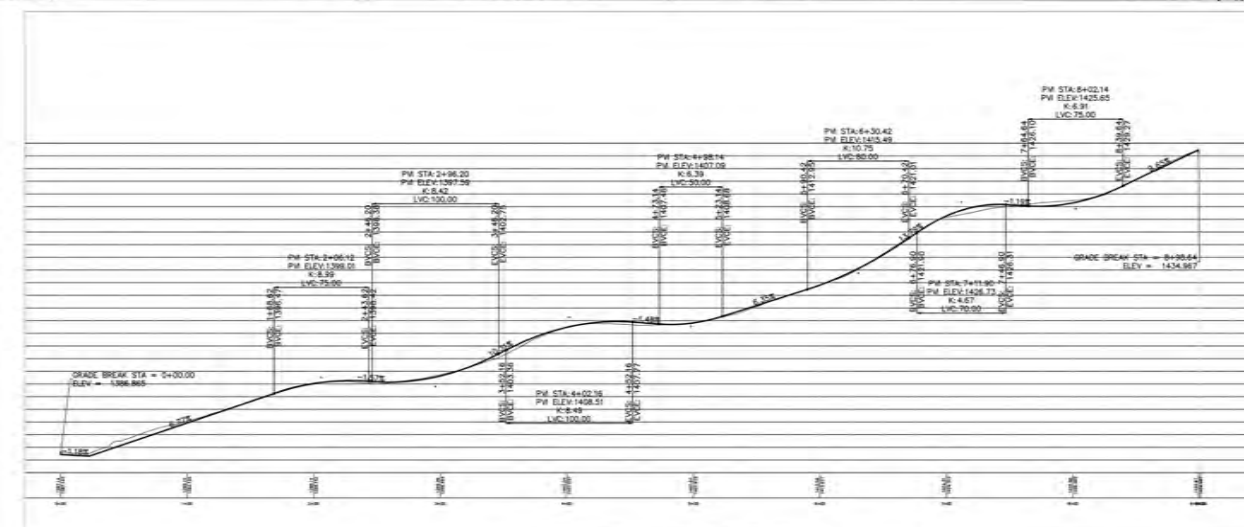


DETAIL "C"
SCALE: 1" = 20'

STALL SIZE - 9'x19'
ISLE WIDTH - 24'
END STALL - 11x18'



SEE CONTINUATION RIGHT



VIA CARNAGHI LANE PROFILE

SCALE: HORIZ 1" = 40'
VERT 1" = 8'

DETAIL "A"
SCALE: 1" = 30'



SEE CONTINUATION LEFT

OWNER/PLANT		NO.	DATE	REVISIONS	SHEET NO.
Cornerstone Community Church 34570 Monte Vista Rd. Wildomar, CA 92595 (951) 674-8661 Office (951) 674-9603 Fax		1	01/11/2011	ISSUED PERMITS, REVISED, BUILT, APPROVED, REVIEWED, etc.	
					3
					4

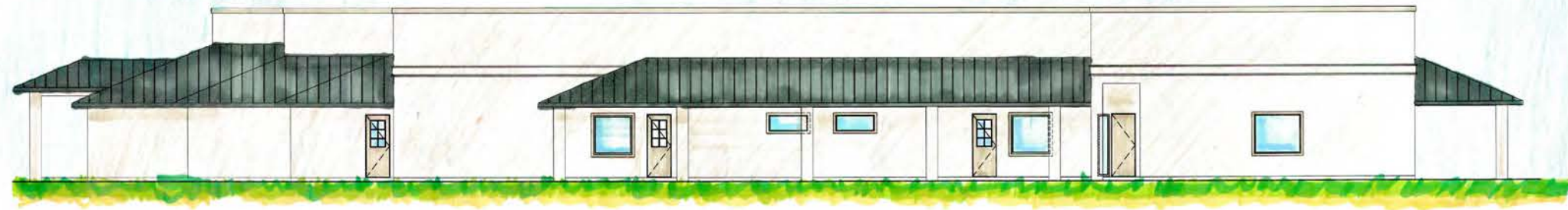
Source: MDMG

WILDOMAR APPLICATION NO. 12-0194 (P.U.P. No. 778, REVISED PERMIT No. 5)

CONCEPTUAL GRADING



Figure 2.0-3d
Site Plan Sheet 4 of 4
PMC®



EAST ELEVATION

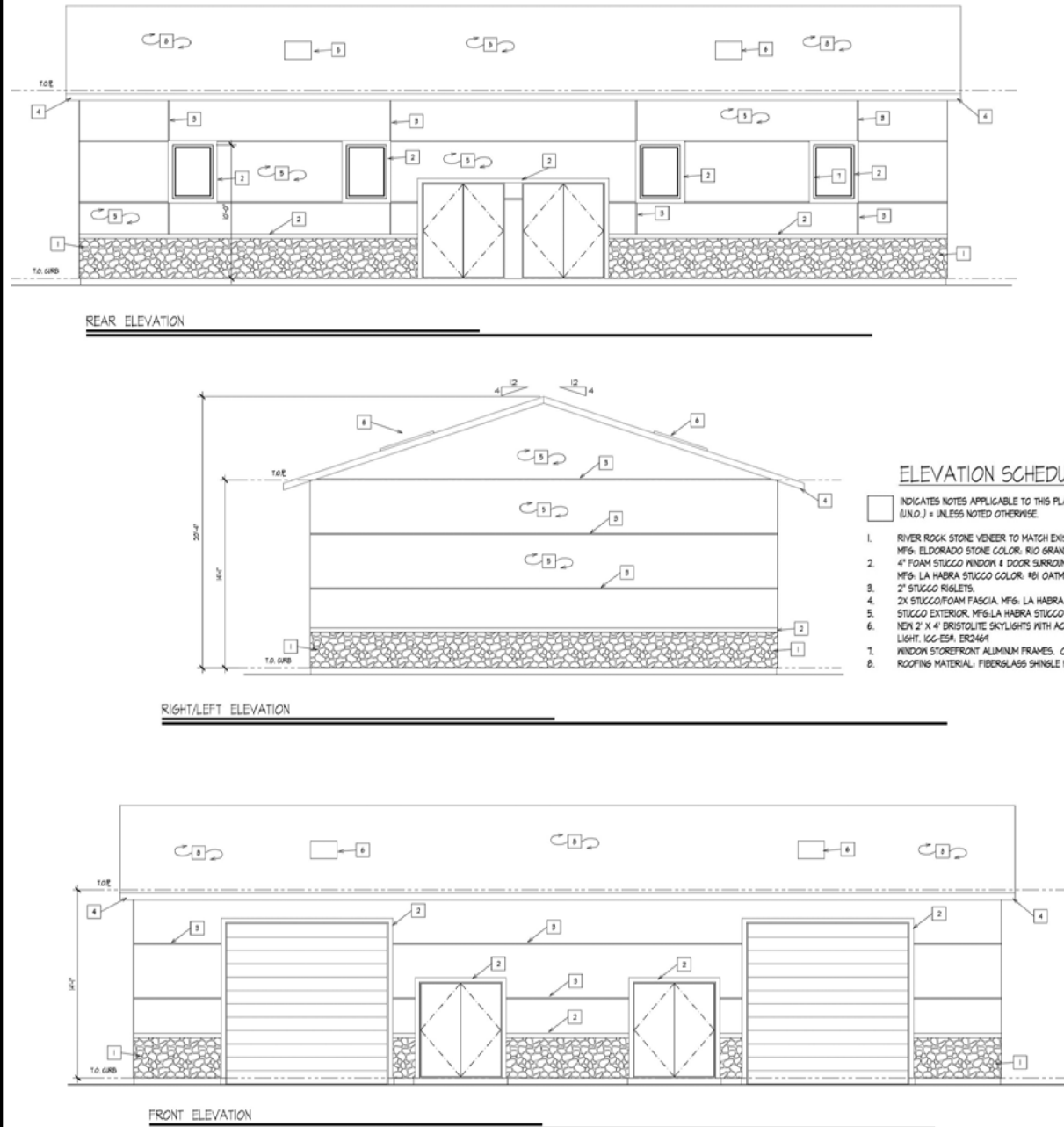


NORTH ELEVATION



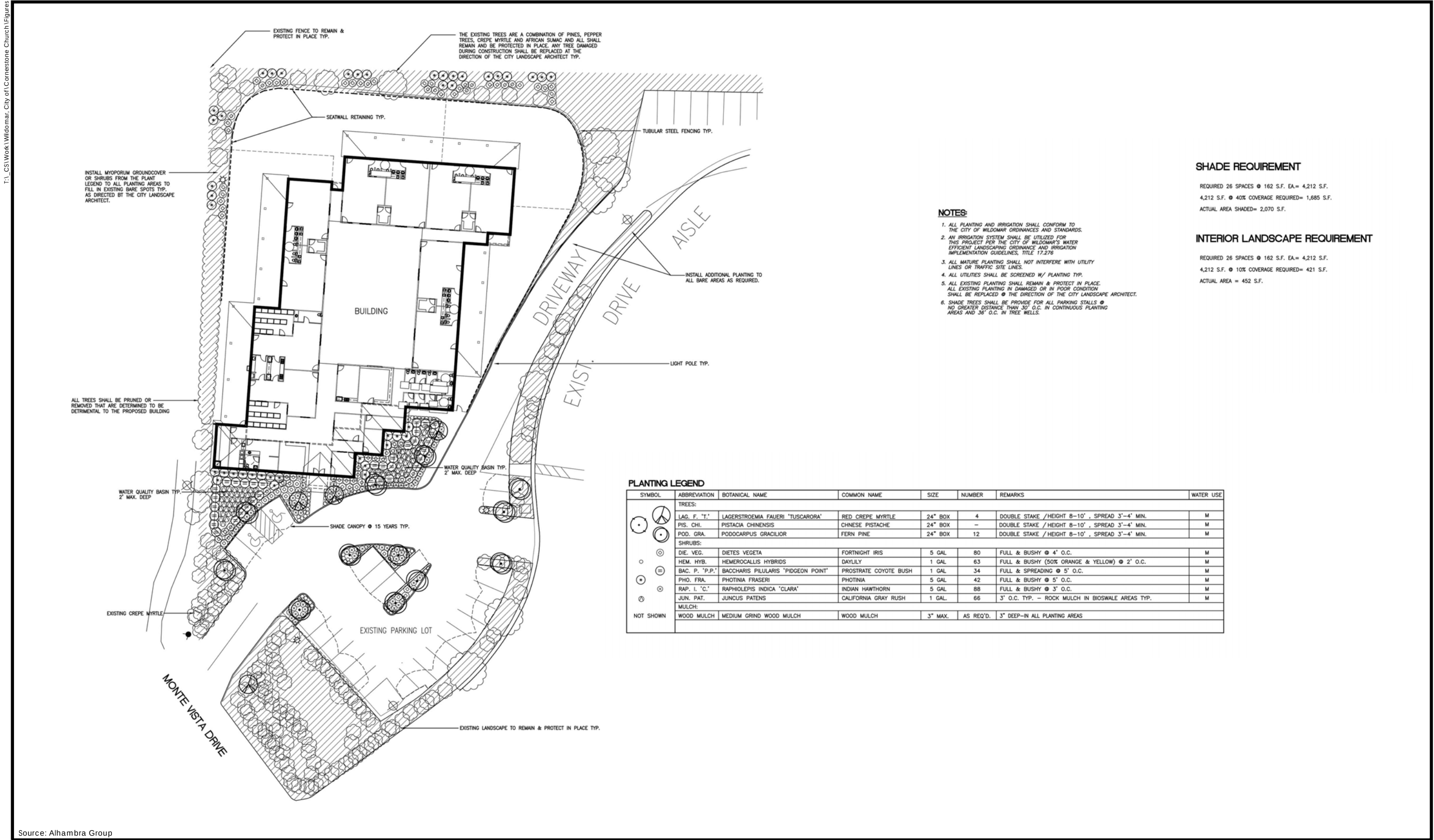
WEST ELEVATION

Source: Application Materials



Source: Dave Madden Architect

Figure 2.0-5
Building Elevation, Maintenance Building



Source: Alhambra Group

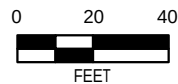
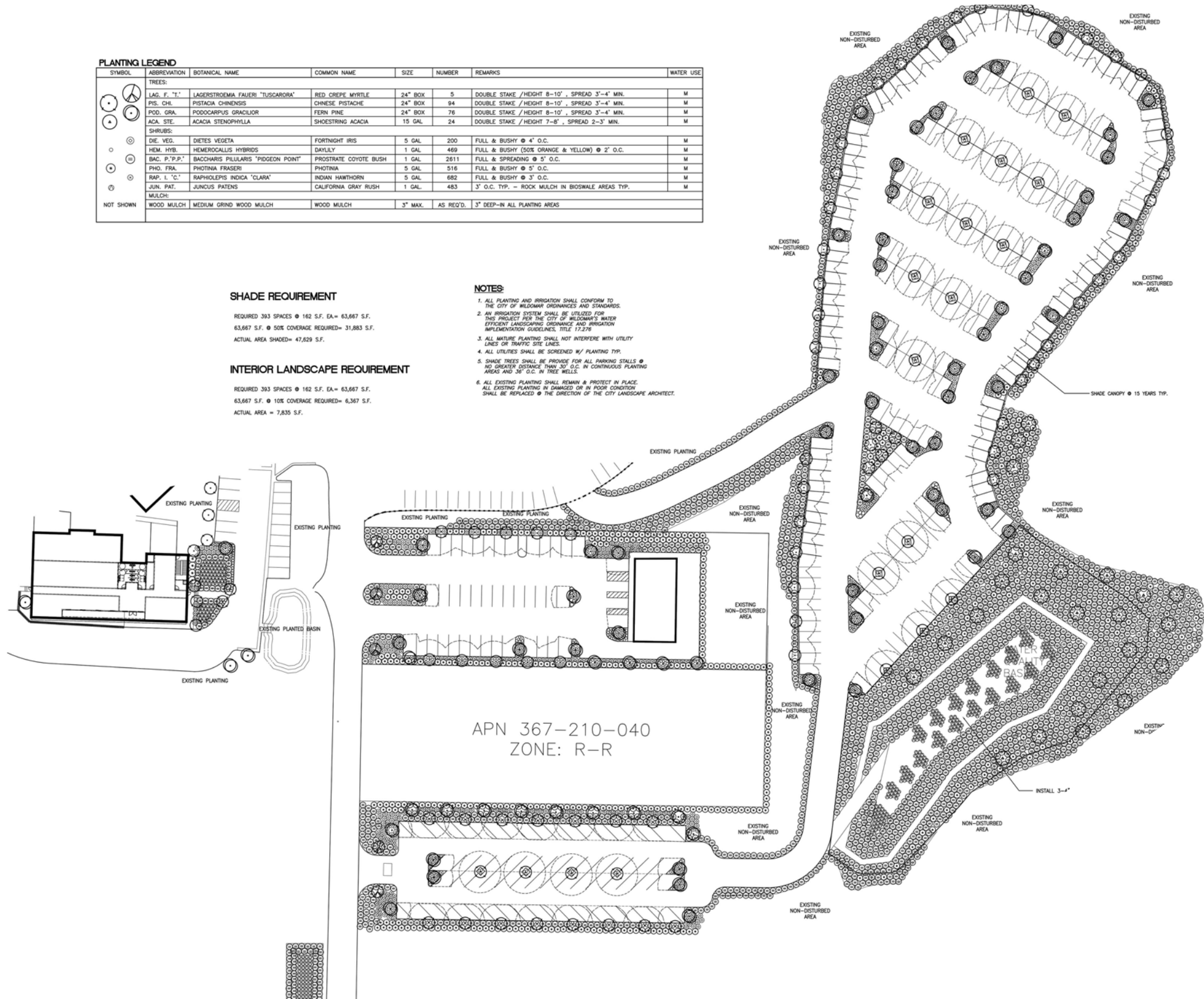


Figure 2.0-6a
Landscape Plan, Sheet 1 of 2
PMC



Source: Alhambra Group



Figure 2.0-6b
Landscape Plan, Sheet 2 of 2

gallons of wastewater per day above the existing demand. Once completed, the sewer line will be conveyed to the Elsinore Valley Municipal Water District. **Figure 2.0-7** shows the location of the proposed EVMWD line in Monte Vista Drive.

Proposed Storm Drainage

The existing facility is served by one storm drainage basin and a series of planned and impromptu channels that convey stormwater west toward I-15. The proposed project includes construction of landscaped areas¹ and two retention planters to collect runoff, two sand filter basins, a subsurface system, and porous pavers to treat for water quality treatment purposes and to mitigate flows of increased runoff. Additionally, the project site will utilize two existing septic systems to treat for water quality purposes. Collectively, these facilities will represent the operational BMPs of the proposed project (see **Figure 2.0-3A**). Additionally, as discussed in Section 3.7, Hydrology and Water Quality, flows within the south Via Carnaghi improvements do not require mitigation for increased runoff because these flows will be treated for water quality purposes using catch basin filter inserts.

Proposed Grading

Minimal grading will be required for the preschool construction; however, the existing asphalt will need to be removed and foundations constructed for the new building. In addition, landscaping and stormwater basin areas will also be excavated. Similarly, paving the lower parking lot will not require significant grading. The upper parking lot will require grading and redistribution of materials amounting to approximately 24,500 cubic yards. The material will be used within the project site, resulting in balanced soil excavation and fill for the project. The preliminary grading plan is shown in **Figure 2.0-3D**.

PHASE 2

Future Administration Building

A new three-story 50-plus-foot-high administration building of approximately 23,024 square feet will be constructed in the existing landscape and slope area south of the main sanctuary, courtyard, and classroom buildings (see **Figure 2.0-3A**). The building will be similar in design to the existing church buildings (see **Figures 2.0-8A** and **2.0-8B**). Construction of the new building will eliminate approximately 43 parking spaces along the drive that leads around the existing buildings. While the administration building will be three stories tall, because of the existing slope it will allow ground-level access from both the drive and the courtyard. In addition to administrative and storage functions, the new building will also accommodate a 1,365-square-foot institutional kitchen facility and a 4,586-square-foot dining room to serve the church.

New Lighting Associated with Proposed Parking Lot

The proposed parking lot and field will be lighted while in use. Lighting for both the field and the parking lot will be designed to focus light to specific areas, limit overspill of light, and conform to Wildomar Municipal Code Chapter 8.64, Light Pollution.

¹ A portion of the landscaping will be used as water quality basin(s) and will be integral to the stormwater collection and disposal system.

2.0 PROJECT DESCRIPTION

New Signage

A new pylon sign will be constructed perpendicular to Monte Vista Drive and will conform to Wildomar Municipal Code Chapter 17.252, Sign Regulations.

REQUESTED ENTITLEMENTS

The following applications are the requested City entitlements:

1. Public Use Permit 778, Revised Permit No. 5 – Amendment to the previously submitted PUP 778. The modification will allow for the construction of a preschool (17,135 sf), administrative office building (23,024 sf), maintenance building (2,438 sf), sports field lighting, signage, and new parking lots at the existing church
2. Grading Permit – A grading permit will need to be prepared for the property development. The proposed project estimates approximately 49,000 cubic yards of cut and fill, but does not anticipate the need for import or export of fill material.
3. Building Permit – Building permits will be needed to allow construction.
4. Encroachment Permit – Encroachment permits will be needed for any construction that will occur on public property or within publicly held easements.

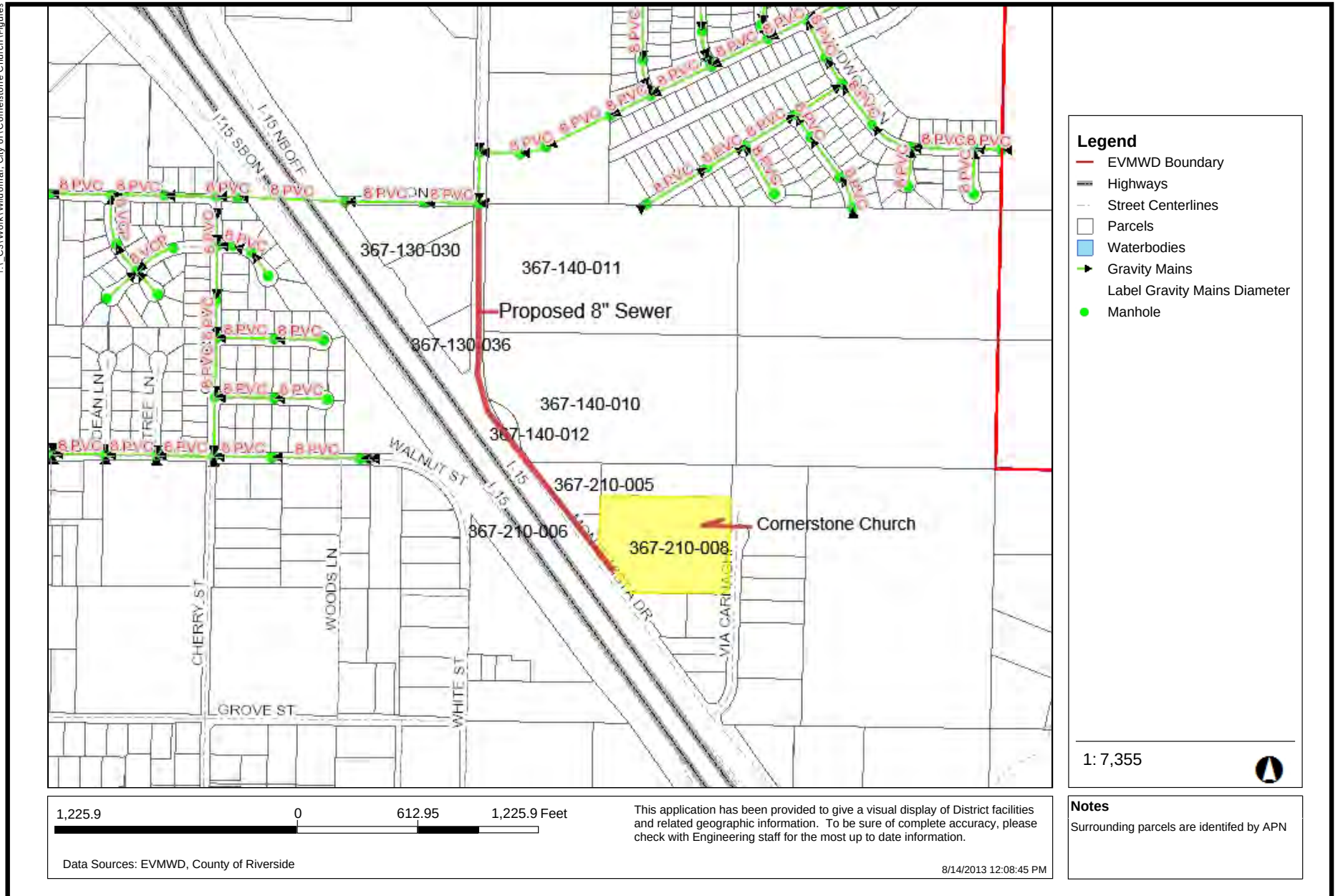
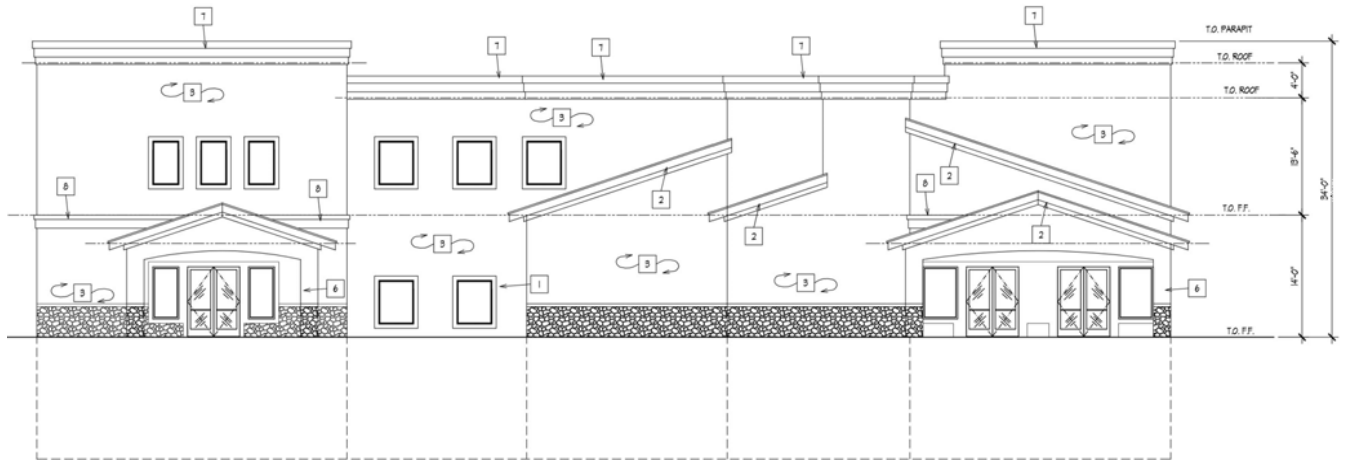


Figure 2.0-7
Proposed Monte Vista Road Sewer Line

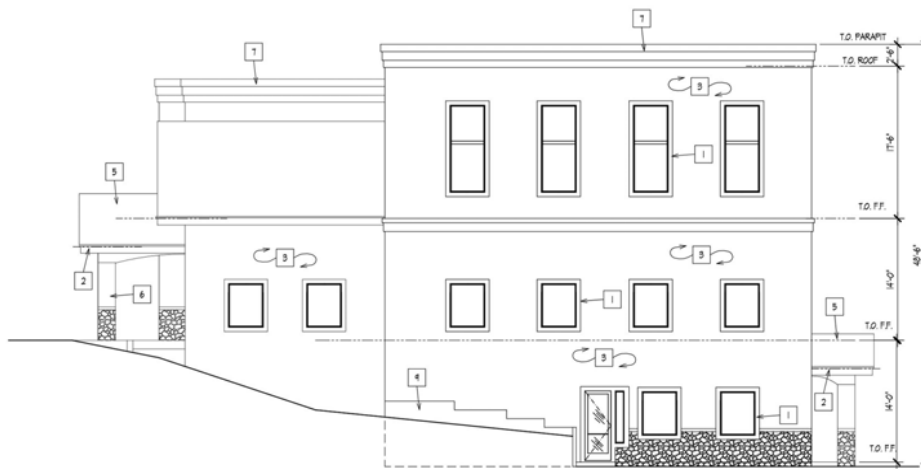
ELEVATION SCHEDULE

INDICATES NOTES APPLICABLE TO THIS PLAN ONLY
(U.N.O.) = UNLESS NOTED OTHERWISE.

1. 6" FOAM STUCCO WINDOW & DOOR SURROUNDS
MF6: LA HABRA STUCCO COLOR: #B1 OATMEAL
2. 2X STUCCO/FOAM FASCIA, MF6: LA HABRA STUCCO COLOR: #B1 OATMEAL
3. STUCCO EXTERIOR TO MATCH EXISTING, MF6: LA HABRA STUCCO
COLOR: #B30 CLAY
4. WINDOW STOREFRONT ALUMINUM FRAMES, COLOR: BLACK
5. ROOFING MATERIAL: FIBERGLASS SHINGLE ROOFING
6. 24" SQUARE COLUMNS, MF6: LA HABRA STUCCO COLOR: #B30 CLAY
7. 2'-8" FOAM STUCCO CAP, MF6: LA HABRA STUCCO COLOR: #B1 OATMEAL
8. 18" FOAM STUCCO BELLY BAND, MF6: LA HABRA STUCCO COLOR: #B1 OATMEAL
9. RETAINING WALL PER PLAN
10. RIVER ROCK STONE VENEER TO MATCH EXISTING
MF6: ELDORADO STONE COLOR: RIO GRANDE



REAR ELEVATION



LEFT ELEVATION

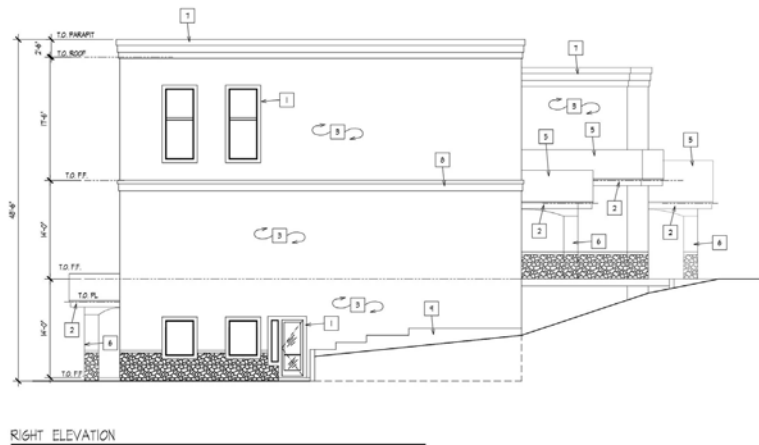
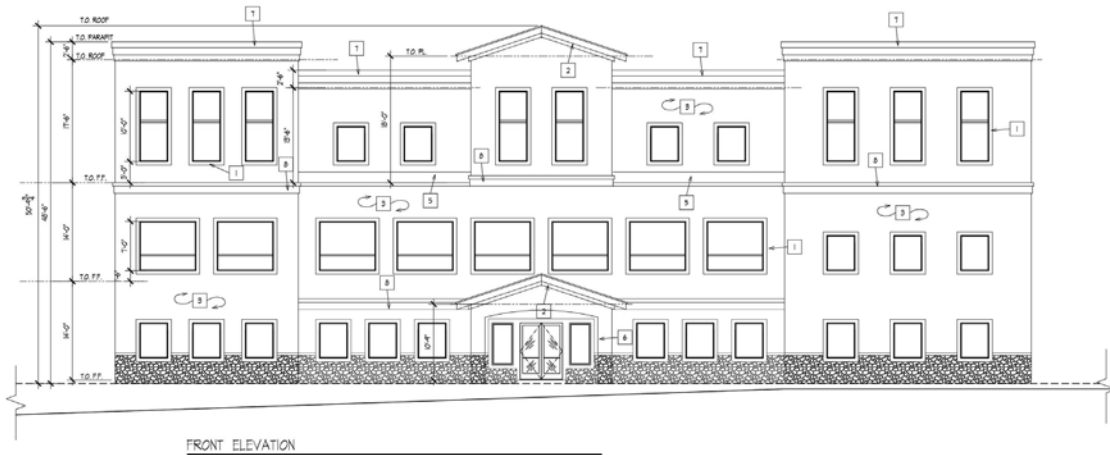
Source: Dave Madden Architect

Figure 8a
Building Elevations, Admin Building 1 of 2

ELEVATION SCHEDULE

☐ INDICATES NOTES APPLICABLE TO THIS PLAN ONLY!
(U.N.O.) = UNLESS NOTED OTHERWISE.

1. 6" FOAM STUCCO WINDOW & DOOR SURROUNDS.
MF6: LA HABRA STUCCO COLOR: #81 OATMEAL
2. 2X STUCCO/FOAM FASCIA. MF6: LA HABRA STUCCO COLOR: #81 OATMEAL.
3. STUCCO EXTERIOR TO MATCH EXISTING. MF6: LA HABRA STUCCO COLOR: #830 CLAY.
4. WINDOW STOREFRONT ALUMINUM FRAMES. COLOR: BLACK
5. ROOFING MATERIAL: FIBERGLASS SHINGLE ROOFING
6. 24" SQUARE COLUMNS. MF6: LA HABRA STUCCO COLOR: #830 CLAY
7. 2'-8" FOAM STUCCO CAP. MF6: LA HABRA STUCCO COLOR: #81 OATMEAL
8. 18" FOAM STUCCO BELLY BAND. MF6: LA HABRA STUCCO COLOR: #81 OATMEAL
9. RETAINING WALL PER PLAN.
10. RIVER ROCK STONE VENEER TO MATCH EXISTING.
MF6: ELDORADO STONE COLOR: RIO GRANDE



Source: Dave Madden Architect

Figure 8b
Building Elevations, Admin Building 2 of 2

2.3 PROJECT OBJECTIVES

The proposed project includes the following basic project objectives:

- Expand the existing school capabilities by adding a preschool building on the same site to take advantage of existing infrastructure.
- Expand and improve parking opportunities at the church to compensate for the loss of parking associated with construction of the preschool and ease on-site congestion between services.
- Eliminate the use of generator-powered field lighting by installing more efficient and quiet permanent field lighting.
- Provide for a future administration building to enable a more efficient configuration of school resources.
- Provide for a new campus maintenance structure.

2.4 REGULATORY REQUIREMENTS, PERMITS, AND APPROVALS POTENTIALLY REQUIRED FROM OTHER PUBLIC AGENCIES

Actions by other public agencies associated with the project include, but are not limited to, the following:

- *US Army Corps of Engineers (USACE)*: A disturbance to jurisdictional waters of the United States, such as through grading or filling, could potentially trigger the need for a Section 404 permit from the USACE.
- *California Department of Fish and Wildlife (CDFW)*: A 1602 Streambed Alteration Agreement may be required.
- *State Water Resources Control Board*: A Notice of Intent will be filed to obtain coverage under the General Construction Activity Storm Water Permit prior to project construction.
- *Regional Water Quality Control Board (RWQCB)*: Section 401 Water Quality Certification may be required as well as permitting associated with potential recycled water for irrigation use.
- *Elsinore Valley Municipal Water District (EVMWD)*: Either the proposed project or EVMWD will construct an 1,800-foot sewer line that will extend from the project site along Monte Vista Drive to an existing manhole. The new sewer line will allow the existing septic tanks to be abandoned.

3.0 – INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS AND ASSUMPTIONS USED

The following is an introduction to the environmental analysis for the proposed project, including a cumulative analysis and a discussion of general assumptions used in the environmental analysis. The reader is referred to the individual technical sections of the Draft Environmental Impact Report (Draft EIR or DEIR) (Sections 3.1 through 3.10) for further information on the specific assumptions and methodologies used in the analysis for each particular technical subject.

3.1 ANALYSIS ASSUMPTIONS USED TO EVALUATE THE PROPOSED PROJECT

BASELINE ENVIRONMENTAL CONDITIONS ASSUMED IN THE DRAFT EIR

Section 15125(a) of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) include a description of the physical environmental conditions in the vicinity of a project as they exist at the time the Notice of Preparation (NOP) is published and the environmental analysis is begun. The CEQA Guidelines also specify that this description of the physical environmental conditions is to normally serve as the baseline physical conditions by which a lead agency determines whether impacts of a project are considered significant.

The environmental setting of the proposed project is described in detail in the individual technical sections of the Draft EIR (see Sections 3.1 through 3.10). In general, these sections describe the setting of the City of Wildomar as it existed when the NOP for the proposed project was filed on October 28, 2013.

STRUCTURE OF THE ENVIRONMENTAL IMPACT ANALYSIS

Sections 3.1 through 3.10 of this Draft EIR contain a detailed description of current setting conditions (including the applicable regulatory setting) and an evaluation of the direct and indirect environmental effects resulting from implementation of the proposed project. Each section of the DEIR that identifies mitigation measures will also identify whether significant environmental effects of the project would remain after application of the feasible mitigation measures. Each of the EIR sections includes the following information:

Existing Setting

This subsection includes a description of the physical environmental conditions associated with the technical area of discussion, consistent with CEQA Guidelines Section 15125. As previously identified, the existing setting is based on conditions as they existed when the NOP for the proposed project was released.

Regulatory Framework

This subsection identifies applicable federal, state, regional, and local plans, policies, laws, and regulations that apply to the technical area of discussion.

Impacts and Mitigation Measures

This subsection identifies direct and indirect environmental effects associated with implementation of the proposed project. Thresholds of significance are identified and used to determine whether the environmental effects are considered significant and require the application of mitigation measures. Each environmental impact analysis is identified numerically.

3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS AND ASSUMPTIONS USED

Mitigation measures are developed through a review of the environmental effects of the proposed project by consultants with technical expertise as well as by environmental professionals. When a precise mitigation measure is not possible, or if the extent of the mitigation is dependent on future action(s), the text of the mitigation measure identifies performance standards that identify clear requirements that would avoid or minimize significant environmental effects. The use of performance standard mitigation is allowed under CEQA Guidelines Section 15126.4(a). In some instances, the environmental impacts of the proposed project will be fully mitigated through compliance with existing federal, state, and local laws. When this occurs, the law will be identified and a brief explanation of how compliance with the law will mitigate the environmental impact will be provided. It is important to note that mitigation strategy deals only with the impacts associated with the proposed project. Mitigation measures cannot be used to address existing system deficiencies.

APPROACH TO THE CUMULATIVE IMPACT ANALYSIS

CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's effect is considered cumulatively considerable. Each technical section in the Draft EIR considers whether the project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (CEQA Guidelines Section 15065[a][3]). The determination of whether the project's impact on cumulative conditions is considerable is based on a number of factors, including consideration of applicable public agency standards, consultation with public agencies, and expert opinion. The environmental effects of the proposed project are incorporated in the cumulative impact analysis contained in each technical section.

Definition of Cumulative Setting

The cumulative setting conditions considered in this Draft EIR are based on:

- **Local Adopted General Plans.** The existing land use plans in the region consist of those of the Cities of Wildomar, Lake Elsinore, Menifee, and Murrieta and the County of Riverside.
- **Large-Scale Development Projects.** This includes current large-scale proposed and approved development projects in the region.
- **Effect of Regional Conditions.** The cumulative setting considers background traffic volumes and patterns on regional and state roadways. Additionally, physical conditions in the region pertinent to each environmental issue area are also considered in the cumulative setting. Those topics are discussed in Sections 3.1 through 3.10.

Each technical section of the Draft EIR includes a description of the cumulative setting's geographic extent based on the characteristics of the environmental issue under consideration as set forth in Section 15130(b) of the CEQA Guidelines.

3.2 COMMON TERMINOLOGY USED IN THE DRAFT EIR

This Draft EIR uses the following terminology to describe the environmental effects of the proposed project:

Less Than Significant Impact: A less than significant impact would cause no substantial change in the physical condition of the environment (no mitigation would be required for project effects found to be less than significant).

Significant Impact and Potentially Significant Impact: A significant impact would cause (or would potentially cause) a substantial adverse change in the physical conditions of the environment. Significant impacts are identified through the evaluation of project effects using specified standards of significance provided in each technical section of the DEIR. Identified significant impacts are those where the project would result in an impact that can be measured or quantified, while identified potentially significant impacts are those impacts where an exact measurement of the project's effects cannot be made but substantial evidence indicates that the impact would exceed applicable standards of significance. A potentially significant impact may also be an impact that may or may not occur and where a definite determination cannot be foreseen. Mitigation measures and/or project alternatives are identified to avoid or reduce project effects to the environment to a less than significant level.

Significant and Unavoidable Impact: A significant and unavoidable impact would result in a substantial negative change in the environment that cannot be avoided or mitigated to a less than significant level if the project is implemented.

Less Than Cumulatively Considerable Impact: A less than cumulatively considerable impact would cause no substantial change in the physical condition of the environment under cumulative conditions.

Cumulatively Considerable Impact: A cumulatively considerable impact would result when the incremental effects of an individual project result in a significant adverse physical impact on the environment under cumulative conditions.

Project Site: The proposed project boundaries as shown in **Figure 2.0-2** constitute the project site.

Project Area/Project Study Area (PSA): The project area/project study area (the project study area for Section 3.3, Biological Resources, is defined as the location where work described in Chapter 2.0, Project Description, may be performed, plus the maximum survey buffer area for the project area) includes the project site and off-site improvements necessary for the proposed project as shown in **Figure 2.0-5**.

Standards of Significance: A set of significance criteria to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this DEIR includes the CEQA Guidelines; factual or scientific information; regulatory performance standards of local, state, and federal agencies; and City goals, objectives, and policies. These are noted in each section and referred to in the analysis.

3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS AND ASSUMPTIONS USED

3.3 ENVIRONMENTAL IMPACT REPORTS UTILIZED IN THIS DRAFT EIR

This Draft EIR utilizes technical information and analyses from previously prepared EIRs that are relevant to the consideration of environmental effects of the proposed project, which is supported by the CEQA Guidelines (see Sections 15148 [Citation] and 15150 [Incorporation by Reference]). In addition to materials cited, the following EIRs have been utilized in this Draft EIR:

- Riverside County Integrated Project Final Program Environmental Impact Report (EIR) (State Clearinghouse No. 2002051143)

By utilizing provisions of the CEQA Guidelines, the City, in preparing this Draft EIR, has been able to make maximum feasible and appropriate use of the technical information in the EIR. This Draft EIR and other referenced materials are available for review on request at the City of Wildomar Planning Department:

23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
Phone: 951-677-7751
Fax: 951-698-1463

Business hours: Monday through Thursday, 8:00 a.m.–5:00 p.m.
(closed Fridays)

3.1 AESTHETICS AND VISUAL RESOURCES

3.1 AESTHETICS AND VISUAL RESOURCES

This section describes the existing visual resources of the City of Wildomar, summarizes its landscape characteristics, and discusses the impacts associated with implementation of the proposed project. The analysis focuses on the anticipated alteration of the landscape characteristics and potential visual resource impacts in the city. Key issues addressed in this section include alteration of existing scenic resources (potential degradation of scenic resources or views of scenic resources), visual character, and urban lighting characteristics (increased nighttime light and daytime glare).

3.1.1 EXISTING SETTING

EXISTING CONDITIONS

The proposed project site currently contains six buildings, three parking lots, and an athletic field. Land to the north and east of the project site is currently undeveloped, while residential development occurs on land to the south. To the west, Interstate 15 runs along adjacent to Monte Vista Drive.

The project site consists of relatively gently rolling hillside terrain with elevations generally decreasing from north to south-southwest, ranging from approximately 1,347 feet above mean sea level (amsl) to approximately 1,282 feet amsl for a total relief of approximately 65 feet (EnGEN 2006). On-site vegetation includes landscaping associated with the current developed use of the site, while chaparral and other native shrubs and grasses occur to the north and west of the project site. In addition, scattered trees occur in some of the drainage channels surrounding the project site.

While views from the project site to the north and east are blocked by the hills immediately bordering the project site, the Santa Ana Mountains may be seen beyond Interstate 15 to the west and south of the project site. Overhead power lines run along Monte Vista Drive as it borders the project site. Interstate 15 includes several illuminated overhead directional signs. **Table 3.1-1** provides a summary of the visual resources within the project site.

Interstate 15 as it travels through western Riverside County is eligible to be designated as a state scenic highway, though it is not currently recognized as such. The City of Wildomar General Plan does not identify any portion of the proposed project area as a designated state or county scenic resource, and the site is not identified as being eligible for such designation.

TABLE 3.1-1
SUMMARY OF VISUAL RESOURCES

Visual Resource	Description
Open space	Open space is a scenic feature present to the north and east of the project site.
Vistas of distant mountains	Views from the project site offer vistas of the Santa Ana Mountains spanning from the west to the south.

Viewer groups of the project area currently include motorists traveling along Interstate 15 and motorists and occasional cyclists traveling along Monte Vista Drive. Of the existing residential homes adjacent to the proposed project site, a home to the north of the project site and homes to the south of the project site will continue to be occupied following the completion of the proposed project. The existing homes currently feature fences and vegetation that visually shield the homes from all directions.

3.1 AESTHETICS AND VISUAL RESOURCES

Potential sources of daytime glare resulting from direct beam sunlight and reflections from windows, architectural coatings, glass, and other shiny reflective surfaces also currently exist at the project site and on land to the south and east.

NIGHTTIME LIGHTING CONDITIONS

Lighting conditions in the area consist of typical suburban low light conditions found in semi-rural areas and existing street lighting along portions of Monte Vista Drive and Interstate 15.

The current operation of the church includes the use of existing parking lot and landscape lighting as well as the lighting of the athletic field for sporting and special events. A summary of these events are include in **Table 3.1-2**. There is a large sign on the main church building that is also illuminated at night.

Mobile nighttime light from automobile headlights is also broadcast from traffic along Monte Vista Drive.

TABLE 3.1-2
SUMMARY OF EXISTING EVENTS REQUIRING FIELD LIGHTING

Activity	Approximate Number of Occurrences	Approximate Duration
Football Games	7: Weekly football games from September to November	7:00 p.m. to 10:00 p.m.
Football Practice	65: Weekday evenings from September to November	4:30 p.m. to 6:30 p.m.
Vacation Bible School Festival	One: Single night in July	Sunset to 9:00 p.m.
Harvest Festival	One: October 31	Sunset to 10:00 p.m.
Overflow Parking	Two: Christmas Eve and Easter	Sunset to 10:00 p.m.
Approximate total number of evenings the field is illuminated	81	

Source: Information provided by project applicant on March 7, 2014

3.1.2 REGULATORY FRAMEWORK

STATE

State Scenic Highway Program

In 1963, the California legislature created the Scenic Highway Program to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to state highways. The state regulations and guidance governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. A highway may be designated scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. A scenic corridor is the land generally adjacent to and visible from the highway and is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. There are no state designated scenic highways in the project area.

Nighttime Sky – Title 24 Outdoor Lighting Standards

The California legislature passed a bill in 2001 requiring the California Energy Commission (CEC) to adopt energy efficiency standards for outdoor lighting for both the public and private sectors. In November 2003, the CEC adopted changes to Title 24, Parts 1 and 6, Building Energy Efficiency Standards. These standards became effective on October 1, 2005, and included changes to the requirements for outdoor lighting for residential and nonresidential development. The new standards will likely improve the quality of outdoor lighting and help to reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying areas by lighting zone. The classification is based on population figures of the 2000 Census. Areas can be designated as LZ1 (dark), LZ2 (rural), or LZ3 (urban).

LOCAL

Wildomar General Plan

The City of Wildomar General Plan contains several policies pertaining to visual resources; those policies relevant to the proposed project are listed below under the Methodology subheading of subsection 3.1.3, Impacts and Mitigation Measures.

Regulating Light Pollution (Mount Palomar Nighttime Lighting Policy)

Light pollution is regulated by Wildomar Municipal Code Chapter 8.64. The proposed project site is located approximately 29.5 miles northwest of the Mount Palomar Observatory, which places the project site within Zone B of the Mount Palomar Nighttime Lighting Policy Area. As shown below, Zone B restricts the use of certain light fixtures that emit undesirable light rays into the night sky, which may have a detrimental effect on astronomical observation and research at the Mount Palomar Observatory. Development within this zone requires that the project maintain preservation of the night sky.

TABLE 3.1-3
LAMP TYPE AND SHIELDING REQUIREMENTS PER FIXTURE FROM ORDINANCE 8.88 REGULATING LIGHT POLLUTION

Lamp Type	Zone A	Zone B
Class I – Color Rendition Important		
Low pressure sodium	Allowed	Allowed
Others above 4050 lumens	Prohibited	Allowed if fully shielded
Others 4050 lumens & below	Allowed*	Allowed
Class II – Parking Lots, Walkways, Security		
Low pressure sodium	Allowed	Allowed
Others above 4050 lumens	Prohibited	Prohibited
Others 4050 lumens & below	Prohibited	Allowed
Class III – Decorative		
Low pressure sodium	Prohibited	Allowed
Others above 4050 lumens	Prohibited	Prohibited
Others 4050 lumens & below	Prohibited	Allowed

Source: Wildomar 2008b

*Maximum of 8,100 total lumens per acre or per parcel if under 1 acre.

3.1 AESTHETICS AND VISUAL RESOURCES

All lighting allowed by the ordinance must be fully shielded if feasible and partially shielded in all other cases, and must be focused to minimize spill light into the night sky and onto adjacent properties. The ordinance defines “fully shielded” as outdoor light fixtures shielded or constructed so that light rays emitted by the fixtures are projected below the horizontal plane passing through the lowest point on the fixture from which light is emitted. “Partially shielded” means outdoor light fixtures designed or constructed so that 90 percent of the light rays emitted by the fixture are projected below the horizontal plane passing through the lowest point of the shield (Wildomar Municipal Code, Section 8.64.040).

3.1.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

An aesthetic or visual resource impact is considered significant if implementation of the project would result in any of the following:

- 1) Have a substantial adverse effect on a scenic vista.
- 2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- 3) Substantially degrade the existing visual character or quality of the site and its surroundings.
- 4) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

METHODOLOGY

The visual resource analysis is based on field review of the project site and review of topographic conditions, as well as anticipated changes from implementation of the proposed project and other anticipated development in the area.

In addition, the following General Plan Policies were considered when analyzing the proposed project for aesthetic impacts:

- LU 13.1 Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.
- LU 13.2 Incorporate riding, hiking, and bicycle trails and other compatible public recreational facilities within scenic corridors.
- LU 13.3 Ensure that the design and appearance of new landscaping, structures, equipment, signs, or grading within Designated and Eligible State and County scenic highway corridors are compatible with the surrounding scenic setting or environment.
- LU 13.4 Maintain at least a 50-foot setback from the edge of the right-of-way for new development adjacent to Designated and Eligible State and County Scenic Highways.

LU 13.5 Require new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and County Scenic Highways, to be placed underground.

LU 13.6 Prohibit offsite outdoor advertising displays that are visible from Designated and Eligible State and County Scenic Highways.

LU 13.7 Require that the size, height, and type of on-premise signs visible from Designated and Eligible State and County Scenic Highways be the minimum necessary for identification. The design, materials, color, and location of the signs shall blend with the environment, utilizing natural materials where possible.

LU 13.8 Avoid the blocking of public views by solid walls.

As discussed in subsection 3.1.1, Existing Setting, there are no adopted scenic highways in the project area, so this impact (Standard of Significance 2) will not be further considered in this Draft EIR.

PROJECT IMPACTS AND MITIGATION MEASURES

Have a Substantial Adverse Effect on a Scenic Vista (Standard of Significance 1)

Impact 3.1.1 The proposed project will have **no impact** on any scenic vista.

While Interstate 15, directly to the west of the project site, is eligible to be designated as a state scenic highway, it has not yet been recognized as such (Caltrans 2014). In addition, there is no other federal, state, or local designation recognizing the project site or any land adjacent to the project site as a scenic resource or vista. The proposed project will result in **no impact** to any scenic vista.

Mitigation Measures

None required.

Substantially Damage Scenic Resources or Visual Character of the Area and Surroundings (Standards of Significance 2 and 3)

Impact 3.1.2 While the proposed project will result in changes to the existing visual character of the project site, these changes will not lead to a significant degradation of the existing visual character of the area. This impact is **less than significant**.

Construction of the proposed school building, administration building, maintenance building, and parking lots will alter the existing visual character of the area by potentially requiring the removal of some existing trees and naturally occurring vegetation and by creating new buildings that will be seen from Interstate 15, Monte Vista Drive, and some adjacent properties. However, the construction of these facilities will not require the removal of any tree, rock outcropping, or historic building that has been recognized as a scenic resource, and the proposed buildings will not block any scenic view or resource.

The proposed school, administration building, and maintenance buildings will be architecturally consistent with the existing facilities currently in use by the church. In addition, adherence to the

3.1 AESTHETICS AND VISUAL RESOURCES

City of Wildomar Planning Department design review process will ensure that any impact is **less than significant**.

Mitigation Measures

None required.

Create a New Source of Substantial Light or Glare (Standard of Significance 4)

Impact 3.1.3 The proposed project will include the installation of athletic field lighting and parking lot lighting which will result in a new source of nighttime light. Impacts are **potentially significant**.

A source of glare during the nighttime hours is artificial light. Sources of new and increased nighttime lighting and illumination include, but are not limited to, new residential development, lighting from commercial uses, lights associated with vehicular travel (e.g., car headlights), street lighting, parking lot lights, and security-related lighting. Light pollution is regulated by Chapter 8.64 of the Wildomar Municipal Code.

As noted in the Regulatory Framework subsection above, the City's Light Pollution Ordinance establishes limits on the types of fixtures and size of bulbs for aspects of the development. Compliance with the ordinance will result in a less than significant impact on nighttime light pollution. However, there will still be new light associated with the proposed project, including athletic field lighting, parking lot lighting, security lighting, landscape lighting, and automobile headlights. Each of these lighting impacts currently exists as a component or due to the operation of the church facilities and the occupation of the homes surrounding the project area. In addition to the existing nighttime light features, the proposed project includes the installation of seven lighting poles that will include between three to six lights per pole. Four of the proposed lighting poles will be 60 feet tall and the remaining three lighting poles will be 70 feet tall. All of the lighting poles will be placed within the existing athletic field. A summary of the proposed lighting poles and their location within the athletic field are included in **Appendix 3.1**.

The intensity of the proposed athletic field lighting was predicted on a photometric plan prepared for the proposed project and attached to the draft EIR as **Appendix 3.1**. The photometric plan was conducted based on the assumption that each of the proposed lighting poles will be fully shielded and directed to specifically illuminate only the athletic fields. Considering the attributes of the proposed lighting, the photometric plan demonstrates that the operation of the field lighting will result in an increase constant nighttime illumination along Monte Vista Drive (between 0.1 to 2.9 horizontal foot-candles), no other area outside of the boundaries of the proposed project will be affected (Musco 2014). The proposed field lighting will be in use for the same number of days and for the same duration as portable field lighting currently in use at the site allowing any impact to be **less than significant**.

The intensity of the proposed lighting associated with the parking lots were also predicted using a separate photometric lighting plan (see **Appendix 3.1**). According to the photometric plan, the maintenance building parking lot is anticipated to result in an illumination increase between 2.0 and 5.7 horizontal footcandles along its southern boundary, which is directly adjacent to the northern boundary of a residential property, located at 34620 Via Carnaghi Lane. Additionally, the proposed upper parking lot is anticipated to result in an illumination increase of 3.2 horizontal footcandles along its southwest boundary, which is adjacent to the eastern boundary of the same residential property. Therefore, the proposed project would result in **potentially significant** impacts to the residential property directly adjacent to and south of the maintenance building parking lot.

Mitigation Measures

MM 3.1.3 To prevent spillover lighting onto the residential property directly adjacent to and south of the maintenance building parking lot, the applicant shall install shielded, fully cutoff lighting at the southern boundary of the maintenance building parking lot and southwest boundary of the upper parking lot. The plan for the cut-off shielding shall be shown on the construction drawings and operational prior to use of the parking lot. The effectiveness of the cutoff shall be measured to ensure that lighting of the adjacent area does not exceed 0.6 horizontal foot candles. Additional modification of the lighting standards may include movement away from the property line, lowering in height, change of the type of light bulb or any other physical method necessary to reach this standard.

Timing/Implementation: Prior to operation of the maintenance building parking lot and the upper parking lot.

Enforcement/Monitoring: City of Wildomar Public Works Department

By adhering to the City's Light Pollution Ordinance, which establishes the types of fixtures and size of bulbs for lighting fixtures and also by installing shielded and fully cutoff lighting to prevent light from being emitted above the horizontal plane, and toward the dwelling at 34620 Via Carnaghi Lane, impacts from lighting will be reduced to **less than significant** levels.

3.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative impact analysis focuses on whether the proposed project's contribution to regional visual resource impacts would result in a cumulatively considerable environmental impact. The project's impact would be cumulatively considerable if, when considered with other existing, approved, proposed, and reasonably foreseeable development in the region, it would result in substantial alteration of the visual character of the region, significant impacts to scenic vistas, or substantial increases in daytime glare and nighttime lighting.

Other regionally existing, approved, proposed, or reasonably foreseeable projects that could be a factor in the proposed project's contribution to any increase in daytime glare or nighttime lighting would include Interstate 15 and the existing residences adjacent to the project site.

A proposed project within the surrounding area, the proposed Baxter Village mixed-use housing development at Baxter Road and Central Street, was not considered for cumulative analysis because any light or glare emitted from the proposed project would occur from across the expanse of the freeway.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Scenic Resources, Existing Visual Character, and Light and Glare

Impact 3.1.4 Implementation of the proposed project, in combination with the existing adjacent residences and Interstate 15, would result in a less than cumulatively considerable contribution to the alteration of the visual character of the region. This impact is considered **less than cumulatively considerable**.

3.1 AESTHETICS AND VISUAL RESOURCES

While the proposed project will result in a less than significant production of glare and nighttime light, as an expansion of an existing use, the proposed project will not represent a significant new source of glare or nighttime light. When considering the surrounding residences, Interstate 15, and the proposed project, any impact to the nighttime sky or to daytime glare will be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

- Caltrans (California Department of Transportation). 2014. California Scenic Highway Mapping System, Riverside County. Accessed January 6.
http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm.
- EnGEN Corporation. 2006. *Geotechnical Feasibility Study: Cornerstone Community Church – Parking Lot and Ball Fields*.
- Musco. 2014. *Illumination Summary*.
- Wildomar, City of. 2008a. *City of Wildomar General Plan*.
- . 2008b. Municipal Code (Chapter 8.64 – Light Pollution Ordinance).

3.2 AIR QUALITY

This section includes a description of existing air quality conditions, a summary of applicable regulations, a description of existing air quality conditions, and an analysis of potential air quality impacts associated with the proposed Cornerstone Community Church project. Mitigation measures are recommended, as necessary, to reduce significant air quality impacts. This air quality analysis and the associated modeling were conducted by Urban Crossroads in 2013 (see **Appendix 3.2**).

3.2.1 EXISTING SETTING

SOUTH COAST AIR BASIN

South Coast Air Basin Characteristics

The project site is located in the South Coast Air Basin (SCAB), a 6,745-square-mile region that includes portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The SCAB is located within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards.

Regional Climate

The regional climate significantly influences the air quality in the SCAB. The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit (F)). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately 9 inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB, with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year, there are approximately 10 hours of possible sunshine, and on the longest day of the year, there are approximately 14.5 hours of possible sunshine.

3.2 AIR QUALITY

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed “Santa Anas” each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over Southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the “Catalina Eddy,” a low-level cyclonic (counterclockwise) flow centered over Santa Catalina Island that results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, two distinct temperature inversion structures control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing, which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxide and carbon monoxide from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

Wind Patterns and Project Location

The distinctive climate of the project area and the SCAB is determined by its terrain and geographical location. The air basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light, although the speed is somewhat greater during the dry summer months than during the rainy winter season.

Existing Air Quality

Existing air quality is measured based on ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) currently in effect are shown in **Table 3.2-1**.

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in **Table 3.2-1**. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and particulate matter (PM₁₀ and PM_{2.5}) are not equaled or exceeded at any time in any consecutive three-year period, and the federal standards (other than O₃, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O₃ standard is attained when the fourth highest 8-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 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

TABLE 3.2-1
STATE AND NATIONAL CRITERIA POLLUTANT STANDARDS

Pollutant	Averaging Time	California Standards	National Standards
Ozone	8 Hour	0.070 ppm (137 µg/m ³)	0.075 ppm
	1 Hour	0.09 ppm (180 µg/m ³)	–
Carbon Monoxide	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)
Nitrogen Dioxide	1 Hour	0.18 ppm (339 µg/m ³)	100 ppb
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	53 ppb (100 µg/m ³)
Sulfur Dioxide	24 Hour	0.04 ppm (105 µg/m ³)	N/A
	3 Hour	–	N/A
	1 Hour	0.25 ppm (665 µg/m ³)	75 ppb
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	N/A
	24 Hour	50 µg/m ³	150 µg/m ³
Particulate Matter – Fine (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³
	24 Hour	N/A	35 µg/m ³
Sulfates	24 Hour	25 µg/m ³	N/A
Lead	Calendar Quarter	N/A	1.5 µg/m ³
	30 Day Average	1.5 µg/m ³)	N/A
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	N/A
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 µg/m ³)	N/A
Visibility-Reducing Particles	8 Hour (10:00 to 18:00 PST)	–	N/A

Source: Urban Crossroads 2013a

Notes: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter

3.2 AIR QUALITY

Regional Air Quality

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations throughout the air district. In 2010, state standards were exceeded on one or more days for O₃ and PM₁₀, and federal standards were exceeded on one or more days for O₃ and PM_{2.5} at most monitoring locations. No areas of the SCAB exceeded federal or state standards for NO₂, SO₂, CO, sulfates, or lead. See **Table 3.2-2** for attainment designations for the SCAB.

TABLE 3.2-2
ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN

Pollutant	State	Federal
1-hour Ozone (O ₃)	Nonattainment	No Standard
8-hour Ozone (O ₃)	Nonattainment	Extreme Nonattainment ¹
Coarse Particulate Matter (PM ₁₀)	Nonattainment	Serious Nonattainment
Fine Particulate Matter (PM _{2.5})	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment/Maintenance
Nitrogen Dioxide (NO ₂)	Nonattainment ²	Attainment/Maintenance
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead	Attainment/Nonattainment ³	Attainment ⁴
All Others	Attainment/Unclassified	Attainment/Unclassified

Source: Urban Crossroads 2013a

¹ The EPA approved redesignation from Severe 17 to Extreme Nonattainment on May 5, 2010, to be effective June 4, 2010.

² The SCAB was reclassified from attainment to nonattainment for nitrogen dioxide on March 25, 2010.

³ Los Angeles County was reclassified from attainment to nonattainment for lead on March 25, 2010; the remainder of the SCAB is in attainment of the state standard.

⁴ The Los Angeles County portion of the SCAB is classified as nonattainment; the remainder of the SCAB is in attainment of the state standard.

Local Air Quality

The nearest long-term air quality monitoring in relation to the project for O₃, CO, and NO₂ is carried out by the SCAQMD at the Lake Elsinore monitoring station located in Source Receptor Area 25 (SRA 25). Data for coarse particulates (PM₁₀) was obtained from the Perris Valley monitoring station located in SRA 24. Data for ultrafine particulates (PM_{2.5}) was obtained from the Metropolitan Riverside County 2 monitoring station, located in SRA 23. It should be noted that the Perris Valley and Metropolitan Riverside County monitoring stations were utilized in lieu of the Lake Elsinore monitoring station only where data was not available from the nearest monitoring site. The three years of data in **Table 3.2-3** show the number of days standards were exceeded for the study area. Additionally, data for SO₂ has been omitted, as attainment is regularly met in the SCAB and few monitoring stations measure SO₂ concentrations.

**TABLE 3.2-3
PROJECT AREA AIR QUALITY MONITORING SUMMARY 2010–2012**

Pollutant	Standard	Year		
		2010	2011	2012
Ozone (O ₃) – nonattainment for state and federal standards ¹				
Maximum 1-Hour Concentration (ppm)	–	0.107	0.133	0.111
Maximum 8-Hour Concentration (ppm)	–	0.091	0.106	0.089
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	15	19	10
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	42	45	29
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	0	1	0
Number of Days Exceeding Federal 8-Hour Standard	> 0.075 ppm	24	28	17
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO) – attainment for state and federal standards ²				
Maximum 1-Hour Concentration (ppm)	–	1.0	2.7	2.7
Maximum 8-Hour Concentration (ppm)	–	0.6	0.7	0.7
Number of Days Exceeding Federal/State 8-Hour Standard	> 9.0 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	> 20 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	> 35 ppm	0	0	0
Nitrogen Dioxide (NO ₂) – nonattainment for state standard, attainment for federal standard ¹				
Maximum 1-Hour Concentration (ppm)	–	0.0512	0.0413	0.0483
Annual Arithmetic Mean Concentration (ppm)	–	0.0101	0.0096	0.0102
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Respirable Particulate Matter (PM ₁₀) ² – nonattainment for state and federal standards ²				
Maximum 24-Hour Concentration (µg/m ³)	–	51	65	62
Number of Samples	–	61	60	60
Number of Samples Exceeding State Standard	> 50 µg/m ³	1	3	1
Number of Samples Exceeding Federal Standard	> 150 µg/m ³	0	0	0
Fine Particulate Matter (PM _{2.5}) ³ – nonattainment for state and federal standards ³				
Maximum 24-Hour Concentration (µg/m ³)	–	43.7	51.6	30.2
Annual Arithmetic Mean (µg/m ³)	–	11.0	11.8	11.4
Number of Samples Exceeding Federal 24-Hour Standard	> 35µg/m ³	2	2	0

Source: Urban Crossroads 2013a

Notes: µg/m³ = micrograms per cubic meter; ppm = parts per million

1. Lake Elsinore (SRA 25) monitoring station used unless otherwise noted.

2. Perris Valley (SRA 24) monitoring station used.

3. Metropolitan Riverside County 2 (SRA 23) monitoring station used.

Criteria pollutants are pollutants that are regulated through the development of human health-based and/or environmentally based criteria for setting permissible levels. Examples of sources and effects of the criteria pollutants are identified below.

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- **Carbon Monoxide (CO):** A colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood.
- **Sulfur Dioxide (SO₂):** A colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant, mainly as a result of burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfates. Collectively, these pollutants are referred to as sulfur oxides (SO_x).
- **Ozone (O₃):** A highly reactive and unstable gas formed when reactive organic gases (ROGs) and nitrogen oxides (NO_x), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
 - o **Reactive Organic Gases (ROG):** While not a criteria air pollutant, reactive organic gases (ROG) are precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer-chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. Reactive organic gases are a criteria pollutant since they are a precursor to ozone, which is a criteria pollutant.
- **Nitrogen Oxides (oxides of nitrogen, or NO_x):** Consist of nitric oxide (NO), nitrogen dioxide (NO₂), and nitrous oxide (N₂O) and formed when nitrogen combines with oxygen. Their life span in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. NO₂ is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO₂ is the most abundant in the atmosphere. Because ambient concentrations of NO₂ are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO₂ than those indicated by regional monitors.
- **PM₁₀ (particulate matter less than 10 microns):** A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM₁₀ also causes visibility reduction.
- **PM_{2.5} (particulate matter less than 2.5 microns):** A similar air pollutant consisting of tiny solid or liquid particles that are 2.5 microns or smaller (which are often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO₂ release from power plants and industrial facilities and nitrates that are formed from NO_x release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions.
- **Lead:** A heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the proposed project is not anticipated to generate a quantifiable amount of lead emissions.

HEALTH EFFECTS OF AIR POLLUTANTS

Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants which includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin. Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to carbon monoxide, resulting in carboxyhemoglobin levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM₁₀ and PM_{2.5}) levels and an increase in mortality rates, respiratory infections, the number and severity of asthma attacks, and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life span, and increased mortality from lung cancer.

Daily fluctuations in PM_{2.5} concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and

3.2 AIR QUALITY

adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with preexisting respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM₁₀ and PM_{2.5}.

Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO₂ at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. An increase in resistance to air flow and airway contraction is observed after short-term exposure to NO₂ in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these subgroups.

In animals, exposure to levels of NO₂ considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and nitrogen dioxide.

Sulfur Dioxide

A few minutes of exposure to low levels of SO₂ can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increases in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to sulfur dioxide. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO₂.

Animal studies suggest that despite SO₂ being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. In these studies, efforts to separate the effects of SO₂ from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Lead poisoning can cause anemia, lethargy, seizures, and death, although it appears there are no direct effects of lead on the respiratory system. Lead can be stored in the bone from early age environmental exposure, and elevated blood lead levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland), and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can

be exposed to higher levels of lead because of their mothers' previous environmental lead exposure.

TOXIC AIR CONTAMINANTS

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity, including compounds such as benzene, ethylene dibromide, hexavalent chromium, cadmium, and vinyl chloride. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

To date, the California Air Resources Board (CARB) has designated nearly 200 compounds as toxic air contaminants. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds, one of the most important in Southern California being particulate matter from diesel-fueled engines. In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a toxic air contaminant. Previously, the individual chemical compounds in the diesel exhaust were considered as TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

In 2008, the SCAQMD updated a study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the air toxics risk (SCAQMD 2008).

ODORS

The science of odor as a health concern is still new. Merely identifying the hundreds of gaseous compounds that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eyes, nose, and throat, which can reduce respiratory volume. Second, some of the gases that cause odors, such as reactive organic gases, can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

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3.2.2 REGULATORY FRAMEWORK

FEDERAL

The US Environmental Protection Agency (EPA) is responsible for setting and enforcing the national ambient air quality standards for the criteria pollutants O₃, CO, NO_x, SO₂, PM₁₀, and lead. The EPA has jurisdiction over emissions sources that are under the authority of the federal government, including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet CARB's stricter emission requirements.

The federal Clean Air Act (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 the federal air quality standards and the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions), as opposed to other sections of the act such as Title II (Aircraft Emissions Standards) and Title III (Vapor Recovery for Small Business Marketers of Petroleum Project), which are not applicable to the proposed project.

Title I provisions were established with the goal of attaining the national ambient air quality standards for the following criteria pollutants: O₃, NO₂, SO₂, PM₁₀, CO, PM_{2.5}, and lead. The NAAQS were amended in July 1997 to include an additional standard for O₃ and to adopt a standard for PM_{2.5}. **Table 3.2-1** (previously presented) provides the NAAQS within the South Coast Air Basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_x. NO_x is a collective term that includes all forms of nitrogen oxides (NO, NO₂, NO₃), which are emitted as byproducts of the combustion process.

STATE

The California Air Resources Board, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the California ambient air quality standards for all pollutants for which the federal government has national ambient air quality standards and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS.

Local air quality management districts, such as the SCAQMD, regulate air emissions from commercial and light industrial facilities. All air pollution control districts have been formally designated as attainment or nonattainment for each CAAQS.

Serious nonattainment areas are required, pursuant to the Clean Air Act, to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to 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 permitted sources of emissions.
- Implementation of reasonably available transportation control measures and assurances of a substantial reduction in growth rate of vehicle trips and miles traveled.
- Significant use of low emissions vehicles by fleet operators.
- Sufficient control strategies to achieve a 5 percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROG_s, NO_x, CO, and PM₁₀. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5 percent per year under certain circumstances.

AIR QUALITY MANAGEMENT PLANNING

Currently, the national ambient air quality standards and California ambient air quality standards for O₃, PM₁₀, PM_{2.5}, and NO₂ are exceeded in most parts of the South Coast Air Basin. In response, the SCAQMD has adopted a series of air quality management plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and project consistency with the AQMP is provided below.

South Air Quality Management District Rules and Regulations

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the South Coast Air Basin. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The following is a list of noteworthy SCAQMD rules that are required of the proposed project during construction activities:

3.2 AIR QUALITY

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement Best Available Control Measures for all sources and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM₁₀ suppression techniques are summarized below.
 - a. Portions of the construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized in a manner acceptable to the City.
 - b. All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
 - c. All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
 - d. The area disturbed by clearing, grading, earth moving, or excavation operations will be minimized at all times.
 - e. Where vehicles leave the construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.
- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

3.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines, air quality impacts are considered significant if implementation of the proposed project would:

- 1) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- 2) Conflict with or obstruct implementation of an applicable air quality plan.
- 3) Expose sensitive receptors to substantial pollutant concentrations.
- 4) Create objectionable odors affecting a substantial number of people.

- 5) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The SCAQMD has developed regional and localized significance thresholds for regulated pollutants, as summarized at **Table 3.2-4**. The SCAQMD's CEQA Air Quality Significance Thresholds (March 2009) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3.2-4
MAXIMUM DAILY EMISSIONS THRESHOLDS

Pollutant	Construction	Operational
NO _x	100 lbs/day	55 lbs/day
ROG	75 lbs/day	55 lbs/day
PM ₁₀	150 lbs/day	150 lbs/day
PM _{2.5}	55 lbs/day	55 lbs/day
SO _x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

Source: Urban Crossroads 2013a

Furthermore, based on the SCAQMD's *CEQA Air Quality Handbook* (1993), project impacts would be significant if they exceed the following California standards for localized CO concentrations:

- 1-hour CO standard of 20.0 parts per million (ppm)
- 8-hour CO standard of 9.0 ppm

The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as localized significance thresholds (LSTs). The significance of localized emissions impacts depends on whether ambient levels in the vicinity of the project are above or below state standards. In the case of CO and NO₂, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM₁₀ and PM_{2.5}, both of which are nonattainment pollutants.

The SCAQMD established localized significance thresholds in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. Localized significance thresholds represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that a lead agency can use the localized significance thresholds as another indicator of significance in its air quality impact analyses.

3.2 AIR QUALITY

METHODOLOGY

In July 2013, the SCAQMD in conjunction with the California Air Pollution Control Officers Association released the latest version of the California Emissions Estimator Model (CalEEMod) v2013.2. The purpose of this model is to more accurately calculate construction-source and operational-source criteria pollutant (NO_x, ROG, PM₁₀, PM_{2.5}, SO_x, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources, and to quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod has been used for this project to determine construction and operational air quality impacts. Output from the model runs for both construction and operational activity are provided in **Appendix 3.2**.

IMPACTS AND MITIGATION MEASURES

Air Quality Standard or Air Quality Violation: Short-Term Construction Emissions (Standard of Significance 1)

Impact 3.2.1 Construction-generated emissions would not contribute substantially to an existing or projected air quality violation. This impact is considered **less than significant**.

Construction associated with the proposed project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include ozone-precursor pollutants (i.e., ROG and NO_x) and PM₁₀. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

Construction results in the temporary generation of emissions ensuing from site grading and excavation, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water. While construction activities may vary depending on contractors, the following assumptions concerning construction activities will be used in the environmental analysis for the proposed project. Construction-related emissions are expected from demolition, site preparation, grading, building construction, paving, architectural coatings, and construction workers commuting.

The estimate for construction duration was entered for the duration of specific construction activity, and CalEEMod model defaults for the number and type of equipment that would be used were utilized. Please refer to specific detailed modeling inputs/outputs contained in **Appendix 3.2**. A detailed summary of construction equipment assumptions by phase is provided in **Table 3.2-5**. This construction schedule represents a “worst-case” analysis scenario should construction occur anytime after these respective dates since emission factors for construction equipment decrease as the analysis year increases.

**TABLE 3.2-5
CONSTRUCTION EQUIPMENT ASSUMPTIONS**

Demolition Equipment	
Description	Number
Concrete/Industrial Saws	2
Rubber-Tired Dozer	2
Excavator	3
Site Preparation Equipment	
Description	Number
Rubber-Tired Dozer	3
Tractor/Loader/Backhoe	4
Grading Equipment	
Description	Number
Rubber-Tired Dozer	1
Tractor/Loader/Backhoe	3
Excavator	1
Grader	1
Building Construction Equipment	
Description	Number
Tractor/Loader/Backhoe	3
Forklifts	3
Cranes	1
Generator Sets	1
Welders	1
Asphalt Paving Equipment	
Description	Number
Cement and Mortar Mixers	2
Pavers	1
Tractor/Loader/Backhoe	1
Paving Equipment	2
Rollers	2
Painting Equipment	
Description	Number
Air Compressor	1

Source: Urban Crossroads 2013a

3.2 AIR QUALITY

Dust is typically a major concern during rough grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions.” Emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). The CalEEMod model was used to calculate fugitive dust emissions resulting from this phase of activity. Construction emissions for construction worker vehicles traveling to and from the project site, as well as vendor trips (construction materials delivered to the project site) are estimated using the CalEEMod model.

Construction-Related Regional Air Quality Impacts

The estimated maximum daily construction emissions are summarized in **Table 3.2-6**. (Please refer to specific detailed modeling inputs/outputs contained in **Appendix 3.2**.)

TABLE 3.2-6
CONSTRUCTION-RELATED CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (WITHOUT MITIGATION)
(POUNDS PER DAY)

Source	Reactive Organic Gases (Ozone Precursor)	Nitrogen Oxide (Ozone Precursor)	Carbon Monoxide (CO)	Sulfur Dioxide (SO ₂)	Coarse Particulate Matter (PM ₁₀)	Fine Particulate Matter (PM _{2.5})
Year 2014 Construction	6.73	57.72	44.24	0.05	21.41	12.87
Year 2015 Construction	37.46	33.71	27.10	0.05	3.32	2.36
Maximum Daily Emissions	37.46	57.72	44.24	0.05	21.41	12.87
SCAQMD Regional Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: Urban Crossroads 2013a. See Appendix 3.2 for the CalEEMod output files and additional calculations for the estimated emissions.

As shown in **Table 3.2-6**, emissions resulting from project construction will not exceed any applicable thresholds. Construction-related regional air quality impacts are considered less than significant.

Construction-Related Localized Air Quality Impacts

As previously stated, the SCAQMD has established that impacts to air quality are significant if there is a potential to contribute to or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as localized significance thresholds (LSTs), which represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor.

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of the project are above or below state standards. In the case of CO and NO₂, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. In the case of PM₁₀ and PM_{2.5}, project emissions are considered significant if they increase ambient concentrations by a measurable amount.

The SCAQMD established localized significance thresholds in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the localized significance thresholds as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted localized significance thresholds that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the SCAQMD Final Localized Significance Threshold Methodology.

The SCAQMD issued guidance on applying CalEEMod to localized significance thresholds. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, **Table 3.2-7** should be used to determine the maximum daily disturbed-acreage for comparison to LSTs.

TABLE 3.2-7
EQUIPMENT-SPECIFIC GRADING RATES

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Grading	Crawler Tractor	3	0.5	8	1.5
	Graders	1	0.5	8	0.5
	Rubber-Tired Dozers	1	0.5	8	0.5
Total Acres Graded per Day					2.5
Applicable LST Mass Rate Look-Up Table					2.5 acres

Source: Urban Crossroads 2013a

For this project, the appropriate source receptor area (SRA) for the localized significance thresholds is the Lake Elsinore area (SRA 25) since this area includes the project site. Localized significance thresholds apply to CO, NO₂, PM₁₀, and PM_{2.5}. The SCAQMD produced look-up tables for projects that disturb less than or equal to 5 acres in size.

The SCAQMD's methodology clearly states that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest existing sensitive receptor to the development boundaries may be located adjacent to the proposed development. However, the methodology explicitly states, "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters." As such, LSTs for receptors at 25 meters are utilized in this analysis.

Table 3.2-8 presents the results of localized emissions during construction activity.

3.2 AIR QUALITY

TABLE 3.2-8
LOCALIZED SIGNIFICANCE SUMMARY – CONSTRUCTION (WITHOUT MITIGATION)
(POUNDS PER DAY)

Activity	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions (on-site)	41.10	26.75	8.92	5.55
SCAQMD Localized Threshold	256.83	1,244.17	8.00	4.67
Significant?	No	No	Yes	Yes

Source: Urban Crossroads 2013a. See Appendix 3.2 for the CalEEMod output files for the estimated emissions.

As shown, emissions of PM₁₀ and PM_{2.5} exceed localized significance thresholds for construction activity and thus represent a potentially significant impact. However, City of Wildomar's (2008) General Plan Air Quality Policy 4.9 requires compliance with SCAQMD Rules 403 and 403.1 in order to reduce fugitive dust emanating from construction sites. As previously stated, SCAQMD Rule 4.03 requires fugitive dust sources to implement Best Available Control Measures for all sources and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce particulate matter emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. Particulate matter suppression techniques are summarized below.

- Portions of the construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized in a manner acceptable to the City.
- All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earth moving, or excavation operations will be minimized at all times.
- Where vehicles leave the construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

The required implementation of SCAQMD Rule 403 would reduce PM₁₀ and PM_{2.5} emissions during construction. **Table 3.2-9** identifies the Rule 403-controlled localized impacts at the nearest receptor location in the vicinity of the project site.

TABLE 3.2-9
LOCALIZED SIGNIFICANCE SUMMARY – CONSTRUCTION (WITH SCAQMD RULE 403)
(POUNDS PER DAY)

Activity	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions (on-site)	41.06	26.73	4.92	3.49
SCAQMD Localized Threshold	256.83	1,244.17	8.00	4.67
Significant?	No	No	No	No

Source: Urban Crossroads 2013a. See Appendix 3.2 for the CalEEMod output files for the estimated emissions.

As shown in **Table 3.2-9**, emissions resulting from project construction will not exceed any applicable LSTs, with impacts that are considered less than significant.

For the reasons identified, construction-related air quality impacts are considered to be **less than significant**.

Mitigation Measures

None required.

Air Quality Standard or Air Quality Violation: Long-Term Operational Emissions (Standard of Significance 1)

Impact 3.2.2 Subsequent land use activities associated with implementation of the proposed project will not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter. This impact is considered to be **less than significant**.

Operational activities associated with the proposed project will result in emissions of ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. Operational emissions would be expected from the following primary sources: vehicles, combustion emissions associated with natural gas and electricity, fugitive dust related to vehicular travel, landscape maintenance equipment, emissions from consumer products, and architectural coatings.

Vehicles

Project operational (vehicular) impacts are dependent on both overall daily vehicle trip generation and the effect of the project on peak-hour traffic volumes and traffic operations in the vicinity of the project. The project-related operational air quality impact centers primarily on the vehicle trips generated by the project. Trip characteristics available from the traffic impact analysis prepared for the project were utilized in this analysis. The estimated emissions resulting from vehicle operations are summarized in **Table 3.2-10**.

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and the consumption of natural gas. However, because electricity-generating facilities for the project area are either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from off-site generation of electricity is excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod. The estimated combustion emissions are provided in **Table 3.2-10** (detailed emission calculations are provided in **Appendix 3.2**).

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust. The emissions estimates for travel on paved roads were calculated using CalEEMod, as it is assumed that all project roadways would be paved as part of the construction of these roads. The estimated PM₁₀ and PM_{2.5} emissions from vehicles for fugitive dust are summarized in **Table 3.2-10**, and details are provided in **Appendix 3.2**.

3.2 AIR QUALITY

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawn mowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain project landscaping. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod. The estimated landscape maintenance emissions are provided in **Table 3.2-10**, and detailed model outputs are presented in **Appendix 3.2**.

Emissions for Consumer Products and Fireplaces

Consumer products include, but are not limited to, detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds that when released in the atmosphere can react to form ozone and other photochemically reactive pollutants.

Architectural Coatings

Over a period of time, the buildings that are part of this project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of project maintenance. The emissions associated with architectural coatings were calculated using CalEEMod. The estimated architectural coating emissions are provided in **Table 3.2-10**, and detailed model outputs are presented in **Appendix 3.2**.

Operational-Related Regional Air Quality Impacts

The project-related operational-related regional emissions burdens, along with a comparison of SCAQMD-recommended significance thresholds, are shown in **Table 3.2-10**.

TABLE 3.2-10
OPERATIONAL-RELATED CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (MAXIMUM EMISSIONS)
(POUNDS PER DAY)

Source	Reactive Organic Gases (Ozone Precursor)	Nitrogen Oxide (Ozone Precursor)	Carbon Monoxide (CO)	Sulfur Dioxide (SO ₂)	Coarse Particulate Matter (PM ₁₀)	Fine Particulate Matter (PM _{2.5})
Summer Emissions						
Area Source Emissions ¹	4.24	0.00	0.06	0.00	0.00	0.00
Energy Source Emissions ²	0.03	0.27	0.23	0.00	0.02	0.02
Mobile Emissions ³	11.63	11.60	44.04	0.10	6.80	1.92
Maximum Daily Emissions	15.90	11.88	44.33	0.10	6.82	1.94
Significant Impact Threshold (pounds per day)	55	55	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Winter Emissions						
Area Source Emissions ¹	4.24	0.00	0.06	0.00	0.00	0.00
Energy Source Emissions ²	0.03	0.27	0.23	0.00	0.02	0.02
Mobile Emissions ³	12.49	12.04	43.18	0.09	6.81	1.92
Maximum Daily Emissions	16.75	12.31	43.46	0.10	6.83	1.94
Significant Impact Threshold (pounds per day)	55	55	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No

Source: Urban Crossroads 2013a

Notes: Please refer to Appendix 3.2 for the CalEEMod output files and additional supporting information for the estimated emissions.

1. Includes emissions of landscape maintenance equipment and architectural coatings emissions.

2. Includes emissions of natural gas consumption.

3. Includes emissions of vehicle emissions and fugitive dust related to vehicular travel.

As shown in **Table 3.2-10**, emissions resulting from project operations will not exceed the SCAQMD regional criteria pollutant thresholds for operational activity. As a result, this impact would be considered less than significant.

Operational-Related Localized Air Quality Impacts

The proposed project involves the construction and operation of a new 17,315-square-foot preschool/day care building. In addition, the proposed project would include a 23,024-square-foot administrative building, a 2,438-square-foot maintenance building, and a 389-space parking lot along the east side of the property. According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The proposed project does not include such uses. Thus, due to the lack of stationary source emissions, no long-term localized significance threshold analysis is needed, as there would be no impact.

For the reasons identified, operations-related air quality impacts are considered to be **less than significant**.

3.2 AIR QUALITY

Mitigation Measures

None required.

Regional Air Quality Management Planning (Standard of Significance 2)

Impact 3.2.3 Land use activities associated with the proposed project would not conflict with or obstruct implementation of regional air quality management planning. This impact is **less than significant**.

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the project site is located within the South Coast Air Basin, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the air basin is in nonattainment. In order to reduce such emissions, the SCAQMD drafted the 2012 Air Quality Management Plan. The 2012 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2012 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and the Southern California Association of Governments' (SCAG) latest growth forecasts (SCAQMD 2011). (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.)

Criteria for determining consistency with the AQMP are defined by the following indicators:

- Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP or increments based on the years of the project buildout phase.

The violations to which Consistency Criterion No. 1 refer are the California ambient air quality standards (CAAQS) and the national ambient air quality standards (NAAQS). As evaluated under **Impacts 3.2.1** and **3.2.2** above, the project would not exceed the construction or operational standards and therefore would not violate air quality standards. Therefore the impact is less than significant.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The proposed

project is consistent with the land use designation and development density presented in the City of Wildomar's (2008) General Plan and therefore would not exceed the population or job growth projections used by the SCAQMD to develop the Air Quality Management Plan. Therefore the proposed project would result in no impact to the second criterion.

This impact is **less than significant**.

Mitigation Measures

None required.

Substantial Carbon Monoxide Pollutant Concentrations (Standard of Significance 3)

Impact 3.2.4 The proposed project will not contribute to localized concentrations of carbon monoxide that would exceed applicable ambient air quality standards. This is considered to be a **less than significant** impact.

A CO "hot spots" analysis is needed to determine whether the change in the level of service (LOS) of an intersection as a result of the proposed project would have the potential to result in exceedances of the California or national ambient air quality standards (CAAQS or NAAQS).

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the project vicinity have steadily declined.

Accordingly, with the steadily decreasing carbon monoxide emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for carbon monoxide exceedances in the air basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The analysis in the 1992 CO Plan did not result in a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic.

3.2 AIR QUALITY

At buildout of the project, the highest number of average daily trips would be 28,900 for Bundy Canyon Road between Interstate 15 and Monte Vista Drive (Urban Crossroads 2013b). This highest project-area average daily traffic is lower than the values studied in the 1992 CO Plan. Consequently at buildout of the project, none of the intersections in the vicinity of the proposed project site would have peak-hour traffic volumes exceeding those at the intersections modeled in the 2003 AQMP according to the traffic impact analysis (Urban Crossroads 2013b), nor would there be any reason unique to project area meteorology to conclude that this intersection would yield higher CO concentrations if modeled in detail. As a result, the SCAB has been designated as attainment for carbon monoxide since 2007 and even very busy intersections do not result in exceedances of the CO standard.

Potential impacts resulting from carbon monoxide pollutant concentrations would be **less than significant**.

Mitigation Measures

None required.

Toxic Air Contaminants (Standard of Significance 3)

Impact 3.2.5 The proposed project would not result in exposure of sensitive receptors to substantial toxic emissions. This impact is considered **less than significant**.

The potential impact of project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child-care centers, and athletic facilities can also be considered sensitive receptors.

Potential sensitive receptors in the project vicinity include existing adjacent land uses. As discussed in the LST analysis previously presented, for analysis purposes, potential impacts to sensitive receptors were analyzed accounting for a distance of 25 meters from the project boundary, as a conservative measure. Results of the LST analysis indicate that the proposed project will not exceed the SCAQMD localized significance thresholds (after mitigation), and a less than significant impact is expected during construction activity. Therefore, sensitive receptors would not be subject to a significant air quality impact during project construction.

The proposed project would not result in a significant CO “hot spot” as a result of project-related traffic during ongoing operations. Thus, a less than significant impact to sensitive receptors during operational activity is expected.

There are no other potential sources of air toxics in the vicinity of the project. Toxic air contaminant impacts to sensitive receptors are considered to be **less than significant**.

Mitigation Measures

None required.

Exposure of Sensitive Receptors to Odorous Emissions (Standard of Significance 4)

Impact 3.2.6 Development of the proposed project would not result in exposure of sensitive receptors to substantial odorous emissions. This impact is considered to be **less than significant**.

The potential for the project to generate objectionable odors has been considered. Land uses generally associated with odor complaints include agricultural uses (livestock and farming), wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities.

The project does not contain land uses typically associated with emissions of objectionable odors. Potential odor sources associated with the proposed project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities, and the temporary storage of typical solid waste (refuse) associated with the proposed project's (long-term operational) uses. It should be noted that any construction odor emissions generated would be temporary, short term, and intermittent in nature and would cease on completion of the respective phase of construction activity and are thus considered less than significant. It is expected that project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed project construction and operations would be **less than significant**.

Mitigation Measures

None required.

3.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for air quality includes the entirety of the South Coast Air Basin. The SCAB is currently designated nonattainment for O₃, NO₂, PM₁₀, and PM_{2.5} under state standards and for O₃, PM₁₀, and PM_{2.5} under federal standards. Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Contribution to Nonattainment Criteria Pollutants (Standard of Significance 5)

Impact 3.2.7 Construction of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the South Coast Air Basin, would not significantly contribute to cumulative increases in emissions of criteria air pollutants that could contribute to future concentrations of pollutants for which the region is currently designated nonattainment. This impact would be considered **less than cumulatively considerable**.

The SCAQMD's approach to assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and California Clean Air Acts. As discussed earlier, the proposed project would be consistent with the Air Quality Management Plan, which is intended to bring the SCAB into attainment for all criteria pollutants, since the project-specific evaluation of emissions presented in the preceding analysis demonstrates that the project would not result in exceedances of any applicable thresholds which are designed to assist the region in attaining the applicable state and national ambient air quality standards. Furthermore, the project would comply with

3.2 AIR QUALITY

SCAQMD's Rule 403 (fugitive dust control) during construction, as well as all other adopted AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements would also be imposed on all projects basin-wide, which would include all related projects. As such, cumulative impacts would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

- SCAQMD (South Coast Air Quality Management District). 1992. *1992 Federal Attainment Plan for Carbon Monoxide*.
- . 1993. *CEQA Air Quality Handbook*.
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- . 2011. *2012 Air Quality Management Plan (AQMP)*.
<http://www.aqmd.gov/aqmp/2012aqmp/index.htm>.
- Urban Crossroads. 2013a. *Cornerstone Pre-School Expansion Air Quality Impact Analysis (Revised)*.
- . 2013b. *Cornerstone Pre-School Expansion Traffic Impact Analysis (Revised)*.
- Wildomar, City of. 2008. *City of Wildomar General Plan*.

3.3 BIOLOGICAL AND NATURAL RESOURCES

3.3 BIOLOGICAL AND NATURAL RESOURCES

This section describes the existing biological resources, including special-status species and sensitive habitat known to occur and/or have the potential to occur in the project study area (PSA). In addition, the section includes a summary of the regulations and programs that provide protective measures to special-status species, an analysis of impacts to biological resources that could result from project implementation, and a discussion of mitigation measures necessary to reduce impacts to a less than significant level, where feasible.

Much of the information in this section is based on the report prepared by Principe and Associates in 2013 titled *Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis, Public Use Permit 778, Revised Permit 5, Wildomar Planning Application 12-0194*. This report can be found in **Appendix 3.3**.

3.3.1 EXISTING SETTING

Several steps were taken to characterize the environmental setting in the project vicinity. First, project-related documentation was reviewed to collect site-specific data regarding habitat suitability for special-status species, as well as the identification of potentially jurisdictional waters. Additional information was obtained from a variety of outside data sources and can be found in the reference list. Lastly, preliminary database searches were performed on the following websites to identify special-status species with the potential to occur in the area:

- US Fish and Wildlife Service (USFWS) Information Planning and Conservation (IPaC) System (2013a)
- USFWS Critical Habitat Portal (2013b)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (2013a)
- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (2013)
- Riverside County Integrated Project (RCIP) Conservation Summary Report Generator (2013)

The USFWS IPaC System was queried to identify special-status species within USFWS jurisdiction that have the potential to occur within the project study area. In addition, the USFWS Critical Habitat Portal was queried to identify designated critical habitat within 1 mile of the PSA. A query of the CNDDDB provided a list of known occurrences for special-status species within a 1- and 5-mile radius of the PSA. Lastly, the CNPS database was queried to identify special-status plant species with the potential to occur within the Wildomar, California, US Geological Survey (USGS) 7.5-minute quadrangle. Raw data from the database queries is provided in **Appendix 3.3**. Please see the Listed and Special-Status Plant and Animal Species subsection below for a summary of the database search results and conclusions regarding the potential for each species to be impacted by project-related activities.

REGIONAL SETTING

The PSA is located within the Southern California Mountains and Valleys ecological section of the American Semidesert and Desert ecological province (McNab et al. 2007). This province is characterized by long, hot summers and mild winters with a small amount of precipitation. The landscape consists of plains from below sea level to low mountain ranges with sparse vegetation of dwarf-shrubland, along with scattered occurrences of shrubland and woodland at higher

3.3 BIOLOGICAL AND NATURAL RESOURCES

elevations (McNab et al. 2007). Within the Southern California Mountains and Valleys section, the terrain consists of narrow ranges and broad fault blocks, alluviated lowlands, and dissected westward-sloping granitic lowlands. Soils are derived from sedimentary and granitic rocks as well as alluvial deposits. The vegetation is characterized by chaparral shrubland, oak woodland, and at higher elevations fir and pine cover types (McNab et al. 2007).

PHYSICAL SETTING

The PSA is associated in the Sedco Hills. Topography of the site is varied, ranging from relatively flat-lying areas with gentle slopes to moderately steep sloping hillside. There is a 250-foot gain in elevation between the west and east side of the PSA (1,390–1,640 feet). The main campus on the west side of the PSA is situated on gently sloping terrain, while the steepest sloping terrain is confined to the northeast corner. There are four ephemeral drainages in the southern portion of the site at the base of the foothills.

BIOLOGICAL SETTING

Based on the Habitat Accounts in Volume 2 of the *Western Riverside County Multiple Species Habitat Conservation Plan* (MSHCP) (Riverside County 2003), the PSA comprises a mix of Riversidean sage scrub and developed/disturbed land (**Figure 3.3-1**). Uses associated with the developed/disturbed areas include roads and landscaped areas, as well as the structures, sports field, and parking lots associated with the main campus.

Riversidean Sage Scrub

Riversidean sage scrub is a subassociation of the coastal sage scrub community. Other subassociations include Diegan coastal sage and undifferentiated coastal scrub. Coastal sage scrub occupies approximately 159,000 acres (12 percent) of the MSHCP Plan Area. Riversidean sage scrub is the dominant sage scrub subassociation, occupying approximately 10.3 percent (132,278 acres) of the MSHCP Plan Area.

Coastal sage scrub is characterized by low-statured, aromatic, drought-deciduous shrub species. This community is associated with extremely dry, well-drained soils. Coastal sage scrub is often found in patchy distributions as a mosaic with other plant communities such as grasslands and chaparral. Riversidean sage scrub is growing throughout the eastern portion of the PSA. The sage scrub gradually takes on the structure and species composition of chaparral as the elevation increases in the hills. These higher elevation areas house a mix drought-deciduous sage scrub species and woody chaparral species. Characteristic species of these higher elevation areas include chamise (*Adenostoma fasciculatum*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), spiny redberry (*Rhamnus crocea*), and chaparral yucca (*Yucca whipplei*).

At the lower elevations, interior California buckwheat (*Eriogonum fasciculatum* ssp. *foliolosum*) is the primary overstory species. Other characteristic sage scrub species include coastal sagebrush (*Artemisia californica*), valley cholla (*Cylindropuntia californica*), brittlebush (*Encelia farinosa*), long-stemmed golden yarrow (*Eriophyllum confertiflorum* var. *confertiflorum*), coastal deerweed (*Lotus scoparius* ssp. *scoparius*), white sage (*Salvia apiana*), Mexican elderberry (*Sambucus mexicana*), and foothill needlegrass (*Stipa lepida*).

Understory species include common fiddleneck (*Amsinckia menziesii*), shortpod mustard (*Brassica geniculata*), brome grasses (*Bromus diandrus* and *B. madritensis* ssp. *rubens*), splendid Mariposa lily (*Calochortus splendens*), finger-leaved morning-glory (*Calystegia macrostegia* ssp.

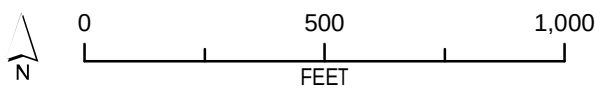
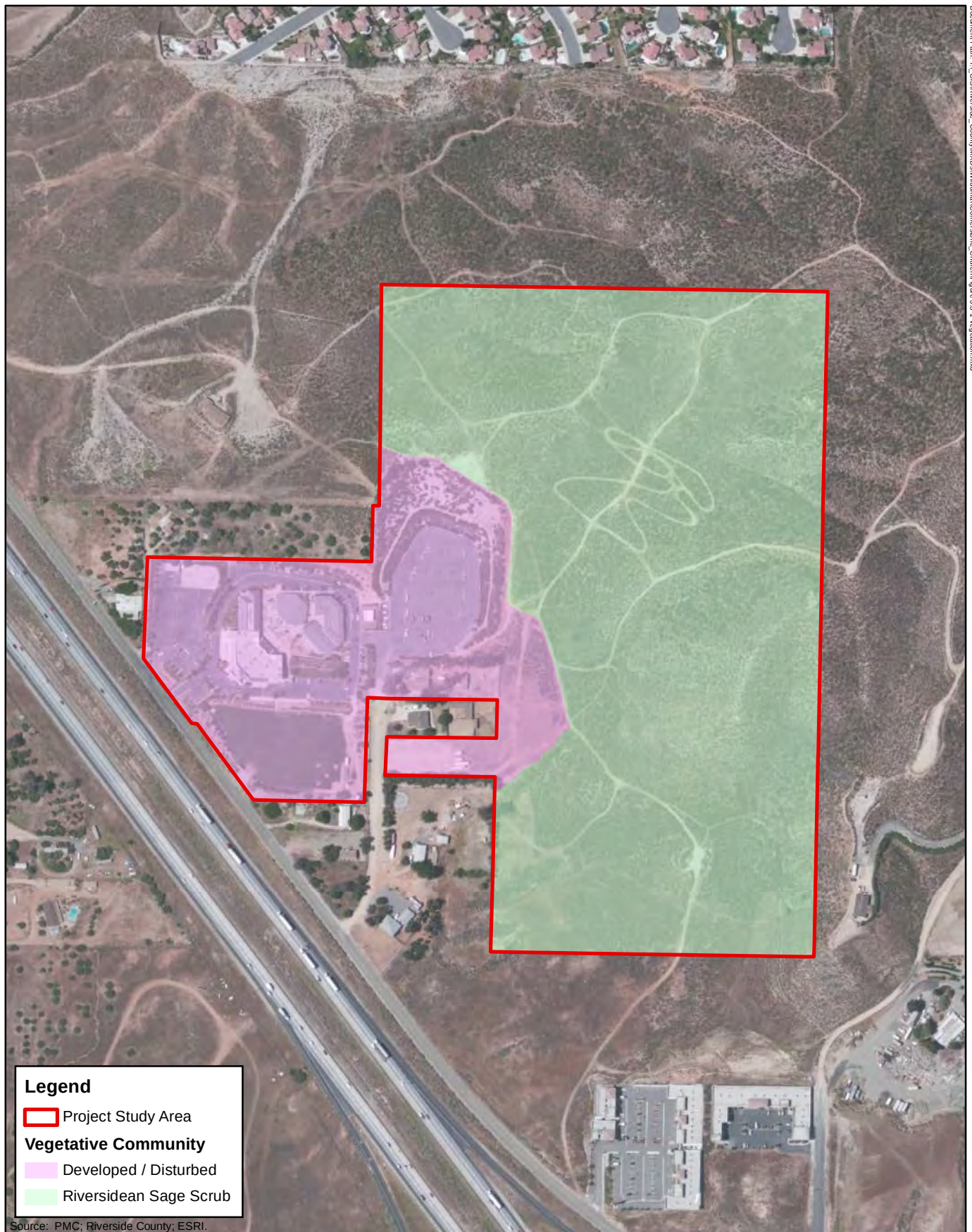


Figure 3.3-1
Vegetative Communities

arida), tocalote (*Centaurea melitensis*), sand pygmy-stonecrop (*Crassula connata*), common cryptantha (*Cryptantha intermedia*), California witch's hair (*Cuscuta californica*), sapphire woolly-star (*Eriastrum sapphirinum*), California everlasting (*Gnaphalium californicum*), slender sunflower (*Helianthus gracilentus*), valley lessingia (*Lessingia glandulifera* var. *glandulifera*), wild cucumber (*Marah macrocarpus* var. *macrocarpus*), California wishbone bush (*Mirabilis laevis*), caterpillar phacelia (*Phacelia cicutaria* ssp. *hispida*), chia (*Salvia columbariae*), and virgate wreath-plant (*Stephanomeria virgata* ssp. *virgata*).

Species observed during previous site visits include the western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), California quail (*Callipepla californica*), American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), western kingbird (*Tyrannus verticalis*), northern rough-winged swallow (*Stelgidopteryx serripennis*), bushtit (*Psaltirparus minimus*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), California ground squirrel (*Spermophilus beecheyi*), and desert cottontail (*Sylvilagus audubonii*). In addition, a pair of federally threatened coastal California gnatcatchers (*Poliophtila californica californica*) was observed and heard calling in the sage scrub.

Developed/Disturbed Land

Approximately 17.3 percent (218,260 acres) of the MSHCP Plan Area consists of developed and disturbed lands. Developed and disturbed lands are characterized by areas that have been disced, cleared, or otherwise altered. Developed lands may include existing buildings, roadways, and other structures. Disturbed areas may include ornamental plantings for landscaping, escaped exotics, or ruderal vegetation dominated by non-native, weedy annual species.

Most of the plant species associated with the landscaped areas are ornamentals and include Aleppo pine (*Pinus halepensis*), Peruvian pepper trees (*Schinus molle*), waxleaf privet (*Ligustrum* sp.), summer red (*Leucadendron salignum*), rosemary (*Rosemarinus officinalis*), and bank catclaw (*Acacia redolens*). Ruderal species found growing along the side of roads and on the proposed parking lot site include shortpod mustard (*Brassica geniculata*), tocalote (*Centaurea melitensis*), common horseweed (*Conyza canadensis*), slender sunflower (*Helianthus gracilentus*), Russian thistle (*Salsola tragus*), common groundsel (*Senecio vulgaris*), and London rocket (*Sisymbrium irio*).

Because of the high degree of disturbance, developed areas generally have a low habitat value for wildlife; however, a number of species adapted for disturbed conditions can utilize these areas. Special-status burrowing owls (*Athene cunicularia*) are known to inhabit disturbed areas.

JURISDICTIONAL FEATURES

Jurisdictional waters of the state and United States, along with isolated wetlands, provide a variety of functions for plants and wildlife. Wetlands and other water features provide habitat, foraging, cover, and migration and movement corridors for both special-status and common species. In addition to habitat functions, these features provide physical conveyance of surface water flows capable of handling large stormwater events. Large storms can produce extreme flows that cause bank cutting and sedimentation of open waters and streams. Jurisdictional waters can slow these flows and lessen the effects of these large storm events, protecting habitat and other resources.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Four ephemeral drainages are located in the southern portion of the site, at the base of the foothills. Natural drainage courses are no longer present on the main campus. Stormwater in the PSA gravity flows southwest down the hill into the ephemeral drainages where it is directed through culverts beneath Monte Vista Drive and Interstate 15. Stormwater runoff from the main campus is either directed to the culverts or flows onto the large grass-covered sports fields located at the south end of campus where some of it percolates into the ground. No other aquatic features are present.

SENSITIVE HABITATS

Sensitive habitats include areas of special concern to resource agencies, areas protected under the California Environmental Quality Act (CEQA), areas designated as sensitive natural communities by the CDFW, areas outlined in Section 1600 of the California Fish and Game Code, areas regulated under Section 404 of the Clean Water Act (CWA), areas protected under Section 401 of the CWA, and areas protected under local regulations and policies.

The USFWS defines critical habitat as a specific area that is essential for the conservation of a federally listed species and that may require special management considerations or protection. There are no designated critical habitat areas within the PSA; however, critical habitat for the coastal California gnatcatcher is immediately east of the PSA. At this time, no development is proposed on the eastern portion of the PSA, adjacent to the designated critical habitat. While the site does not support any specific sensitive habitat types, it is within:

- The Stephens' Kangaroo Rat Mitigation Fee Area (Riverside County Ordinance 663).
- The MSHCP Mitigation Fee Area (Riverside County Ordinance 810.2).
- The Burrowing Owl Survey Area (Figure 6-4 of the MSHCP). A nesting season survey following the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* was prepared by Principe and Associates (2013b) and is available in **Appendix 3.3**.

WILDLIFE CORRIDORS

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to (a) sustain species with specific foraging requirements, (b) preserve a species' distribution potential, and (c) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

Much of the PSA has been disturbed by development and off-road vehicles; however, the undisturbed portions of sage scrub habitat on the east side of the PSA could facilitate wildlife movement through the lower foothills of the Sedco Hills. Available data on movement corridors and linkages was accessed via the CDFW BIOS 5 Viewer (2013c). Data reviewed included the Essential Connectivity Areas [ds623] layer and the Missing Linkages in California [ds420] layer. The PSA does not overlap an Essential Connectivity Area, nor does it overlap a Missing Linkages layer.

LISTED AND SPECIAL-STATUS PLANT AND ANIMAL SPECIES

Candidate, sensitive, or special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area, or across their native habitat. These species have been identified and assigned a status ranking by governmental agencies such as the CDFW, the USFWS, and private organizations such as the CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

Listed, proposed, or candidates for listing under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.11 – listed; 61 Federal Register [FR] 7591, February 28, 1996 candidates)

Listed or proposed for listing under the California Endangered Species Act (CESA) (FGC 1992 Section 2050 et seq.; 14 California Code of Regulations [CCR] Section 670.1 et seq.)

Designated as Species of Special Concern by the CDFW

Designated as Fully Protected by the CDFW (FGC Sections 3511, 4700, 5050, 5515)

Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380) including CNPS List Rank 1b and 2

The results of the USFWS, CDFW, and CNPS database queries identified several special-status species with the potential to be impacted by project-related activities. **Table 3.3-1** provides a summary of all special-status species identified in the database results. All special-status species returned from the CNPS and USFWS IPaC query, as well as those returned from the 5-mile CNDDB query, are analyzed in **Table 3.3-1**, which provides a description of the habitat requirements for each species and conclusions regarding the potential for each species to be impacted by project components. The CNDDB results within 1 mile of the project are depicted on **Figure 3.3-2**. In addition, the query of the USFWS Critical Habitat Portal revealed that the PSA is not within any designated critical habitat; however, designated critical habitat for coastal California gnatcatcher (*Poliophtila californica californica*) does occur adjacent to the PSA (**Figure 3.3-3**).

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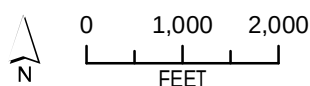
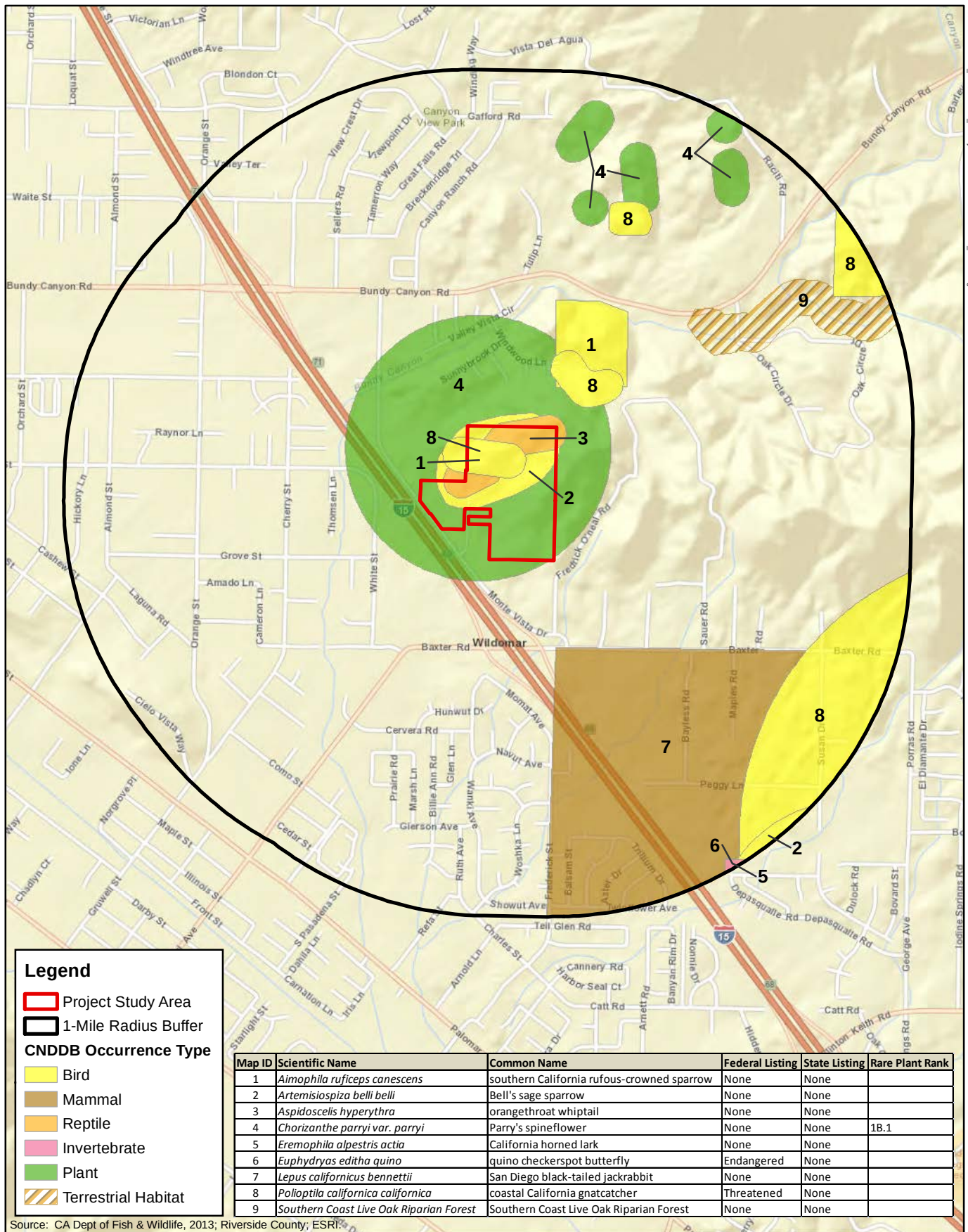


Figure 3.3-2
Previously Recorded Occurrences of Special-Status Species
Within 1-Mile of Project Study Area

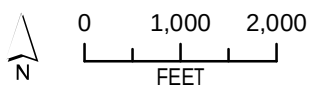
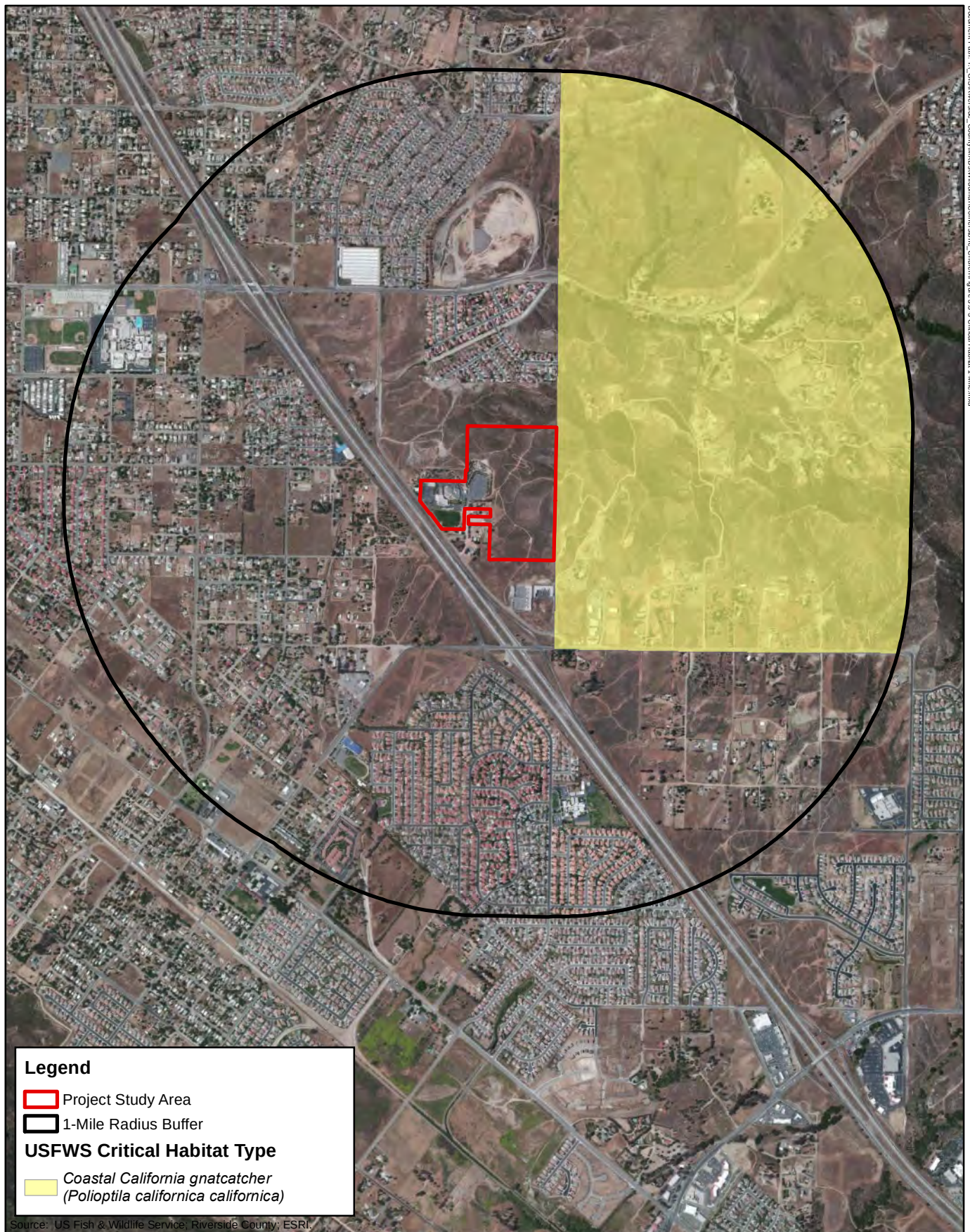


Figure 3.3-3
Critical Habitat Within 1-Mile of Project Study Area

3.3 BIOLOGICAL AND NATURAL RESOURCES

TABLE 3.3-1
SPECIAL-STATUS SPECIES OCCURRENCE DATA

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
Plants								
<i>Allium munzii</i>	Munz's onion	FE	ST	1B.1	Mesic clay soils in chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, as well as valley and foothill grassland. Elev: 980–3,531 feet. Blooms: Mar–May (CNPS 2013).	Yes	A	No effect. Mesic clay soils not present. Soils in PSA are all sandy-loam type.
<i>Arctostaphylos rainbowensis</i>	rainbow manzanita	–	–	1B.1	Chaparral. Elev: 675–2,210 feet. Blooms: Dec–Mar (CNPS 2013).	Yes	A	No effect. Suitable habitat not present.
<i>Ayenia compacta</i>	California ayenia	–	–	2B.3	Rocky soils in Mojavean desert scrub and Sonoran desert scrub. Elev: 495–3,610 feet. Blooms Mar–Apr (CNPS 2013).	No	A	No effect. Suitable habitat not present.
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT	SE	1B.1	Prefers clay soils in chaparral openings, cismontane woodland, coastal scrub, playas, vernal pools, valley and foothill grasslands. Elev: 82.5–3,696 feet. Blooms: Mar–June (CNPS 2013).	Yes	A	No effect. Suitable soils not present. Soils in PSA are all sandy-loam type.
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	–	–	1B.1	Mesic clay, sometimes serpentinite soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, as well as vernal pools. Elev: 99–5,583 feet. Blooms: May–Jul (CNPS 2013).	Yes	A	No effect. Suitable habitat and soils not present.
<i>Brodiaea santarosae</i>	Santa Rosa basalt brodiaea	–	–	1B.2	Basaltic soils in valley and foothill grassland. Elev: 1,864.5–3,448.5 feet. Blooms: May–Jun (CNPS 2013).	No	A	No effect. Basaltic soils not present,

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Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>California macrophylla</i>	round-leaved filaree	–	–	1B.1	Clay soils in cismontane woodland, valley and foothill grassland. Elev: 49.5–3,960 feet. Blooms: Mar–May (CNPS 2013).	Yes	A	No effect. Suitable habitat and soils not present.
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa-lily	–	–	1B.2	Rocky, calcareous soils in chaparral, coastal scrub, as well as valley and foothill grassland. Elev: 346.5–2,821.5 feet. Blooms: May–Jul (CNPS 2013).	No	A	No effect. Suitable soils not present. Soils in PSA are all sand-loam type.
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	–	–	1B.1	Alkaline soils in meadows, seeps, playas, chenopod scrub, riparian woodland, valley and foothill grassland. Elev: 0–2,112 feet. Blooms: Apr–Sep (CNPS 2013).	Yes	A	No effect. Suitable habitat and soils not present.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	–	–	1B.1	Sandy or rocky soils in openings in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Elev: 907.5–4,026 feet. Blooms: Apr–Jun (CNPS 2013).	Yes	P	May affect. Suitable habitat present.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	–	–	1B.2	Found on clay soils in the following series: Altamont, Auld, Bosanko, Claypit, and Porterville (Riverside County 2003). Chaparral, coastal scrub, meadows, seeps, vernal pools and foothill and valley grassland. Elev: 99–5,049 feet. Blooms: Apr–Jul (CNPS 2013).	Yes	A	No effect. Suitable soil types/series not present.
<i>Clinopodium chandleri</i>	San Miguel savory	–	–	1B.2	Rocky, gabbroic, or metavolcanic soils in chaparral, cismontane woodland, coastal scrub, riparian woodland, as well as valley and foothill grassland. Elev: 396–3,547.5 feet. Blooms: Mar–Jul (CNPS 2013).	Yes	A	No effect. Suitable soils not present. Soils in PSA are all sandy-loam type.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE	SE	1B.1	Potential habitat includes mature alluvial scrub habitat, preferably along a terrace or bench that receives overbank deposits every 50 to 100 years (Riverside County 2003). Sandy soils in chaparral, cismontane woodland, and alluvial fan coastal scrub. Elev: 656–2,493 feet. Blooms: April–June (CNPS 2013).	Yes	A	No effect. Suitable habitat not present.
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE	SE	1B.1	Mesic soils in coastal scrub, valley and foothill grassland, as well as vernal pools. Elev: 66–2,046 feet. Blooms: Apr–June (CNPS 2013).	Yes	A	No effect. Mesic soils not present.
<i>Geothallus tuberosa</i>	Campbell's liverwort	–	–	1B.2	On soil in vernal pools and mesic coastal scrub. Elev: 33–1,969 feet (CNPS 2013).	No	A	No effect. Suitable mesic habitat not present.
<i>Hesperocyparis forbesii</i>	Tecate cypress	–	–	1B.1	Clay, gabbroic or metavolcanic soils in chaparral and closed-cone coniferous forest. Elev: 262–4,921 feet (CNPS 2013).	No	A	No effect. Suitable habitat and soils not present.
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	–	–	1B.2	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, as well as vernal pools. Elev: 990–6,732 feet. Blooms: Apr–Jul (CNPS 2013).	No	A	No effect. Suitable habitat not present.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	–	–	1B.1	Coastal salt marshes and swamps, playas and vernal pools. Elev: 3.3–4,026 feet. Blooms: Feb–Jun (CNPS 2013).	Yes	A	No effect. Suitable habitat not present.
<i>Lilium parryi</i>	lemon lily	–	–	1B.2	Mesic areas in meadows, seeps, riparian forest, lower and upper montane coniferous forests. Elev: 4,003–9,006 feet. Blooms: July–Aug (CNPS 2013).	Yes	A	No effect. Suitable habitat not present and elevation range higher than PSA (1,390–1,640 feet).

3.3 BIOLOGICAL AND NATURAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>Limnanthes alba</i> ssp. <i>parishii</i>	Parish's meadowfoam	–	SE	1B.2	Vernally mesic areas in lower montane coniferous forest, meadows and seeps, and vernal pools. Elev: 1,969-6,562 feet. Blooms: April–June (CNPS 2013).	Yes	A	No effect. Suitable habitat not present and elevation range higher than PSA (1,390–1,640 feet).
<i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	intermediate monardella	–	–	1B.3	Usually understory in chaparral, cismontane woodland and sometimes lower montane coniferous forest. Elev: 1,312–4,101 feet. Blooms: April–Sept (CNPS 2013).	No	A	No effect. Suitable habitat not present.
<i>Navarretia fossalis</i>	spreading navarretia	FT	–	1B.1	Assorted shallow freshwater marshes and swamps, vernal pools, playas and chenopod scrub. Elev: 99–2,161.5 feet. Blooms: Apr–Jun (CNPS 2013).	Yes	A	No effect. Suitable habitat not present.
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	–	–	1B.1	Mesic soils in coastal scrub, vernal pools, meadows and seeps, as well as alkaline valley and foothill grasslands. Elev: 49.5–3,993 feet. Blooms: Apr–Jul (CNPS 2013).	Yes	A	No effect. Suitable habitat not present.
<i>Orcuttia californica</i>	California Orcutt grass	FE	SE	1B.1	Vernal pools. Elev: 49.5–2,178 feet. Blooms: Apr–Aug (CNPS 2013).	Yes	A	No effect. Suitable habitat not present.
<i>Pseudognaphalim leucocephalum</i>	white rabbit-tobacco	–	–	2B.2	Sandy, gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland. Elev: 0–6,930 feet. Blooms: Jul–Dec (CNPS 2013).	No	P	May affect. Suitable habitat present.
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern mountains skullcap	–	–	1B.2	Mesic soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elev: 1,402.5–6,600 feet. Blooms: Jun–Aug (CNPS 2013).	No	A	No effect. Suitable habitat not present.

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Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>Sibaropsis hammittii</i>	Hammitt's clay-cress	–	–	1B.2	Clay soils in chaparral openings, and valley and foothill grassland. Elev: 2,362–3,494 feet. Blooms: Mar–Apr (CNPS 2013).	Yes	A	No effect. Suitable soils not present. Soils in PSA are all sandy-loam type.
<i>Sphaerocarpos drewei</i>	bottle liverwort	–	–	1B.1	Soil openings in chaparral and coastal scrub. Elev: 297–1,980 feet (CNPS 2013).	No	P	May affect. Suitable habitat present.
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	–	–	1B.2	Near ditches, streams, and springs in coastal scrub, cismontane woodland, lower montane coniferous forest, marshes, meadows, seeps, swamps, and vernal mesic valley and foothill grasslands. Elev: 6.6–6732 feet. Blooms: Jul–Nov (CNPS 2013).	No	A	No effect. Suitable habitat not present.
Invertebrates								
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	–		Found only in vernal pools and vernal pool-like habitats (USFWS 2007).	Yes	A	No effect. Suitable habitat not present.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	FE	–		Inhabit grasslands, remnant forbland, juniper woodland, and open scrub and chaparral communities. Host plants include dwarf plantain (<i>Plantago erecta</i>) and white snapdragon (<i>Antirrhinum coulterianum</i>) (USFWS 2003),	Yes	A	No effect. Host plant species not observed growing in PSA (Principe and Associates 2013a).
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE	–		Restricted to vernal pools and non-vegetated ephemeral pools deeper than 12 inches. Inland areas of Riverside, Orange, and San Diego counties. Coastal areas of San Diego County and northwestern Baja California (USFWS 2008).	Yes	A	No effect. Suitable habitat not present.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
Amphibians								
<i>Anaxyrus californicus</i>	arroyo toad	FE	SSC		Breeding habitat = slow-moving streams with shallow pools, nearby sandbars, and adjacent stream terraces. Often breed in shallow, sandy pools bordered by sand/gravel flood terraces. Inhabit upland habitats when not breeding, such as sycamore-cottonwood woodlands, oak woodlands, coastal sage scrub, chaparral, and grassland (USFWS 2009a).	Yes	A	No effect. Suitable habitat not present.
<i>Rana draytonii</i>	California red-legged frog	FT	SSC		Occurs in various aquatic, riparian and upland habitats. They need aquatic habitats to breed, whether they be natural or artificial, such as stock ponds (USFWS 2002a). Ponds/streams in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover in lowlands or foothills. Breeding habitat = permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. From sea level to 5,000 feet (Nafis 2013).	Yes	A	No effect. Suitable habitat not present.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>Spea hammondi</i>	western spadefoot	–	SSC		Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rain pools that do not contain bullfrogs, fish, or crayfish are necessary for breeding (Nafis 2013).	Yes	A	
<i>Taricha torosa</i>	Coast Range newt	–	SSC		Found near aquatic features in wet forests, oak forests, chaparral, and rolling grasslands. In Southern California, drier chaparral, oak woodland, and grassland are used (Nafis 2013).	Yes	A	No effect. Suitable habitat not present.
Reptiles								
<i>Aspidoscelis hyperythra</i>	orangethroat whiptail	–	SSC		Semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral (Nafis 2013).	Yes	P	May affect. Suitable habitat present.
<i>Crotalus ruber</i>	red-diamond rattlesnake	–	SSC		Inhabits chaparral, woodland, and arid desert habitats in rocky areas and dense vegetation (Nafis 2013).	Yes	A	No effect. Suitable habitat not present.
<i>Emys marmorata</i>	western pond turtle	–	SSC		Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking (Nafis 2013).	Yes	A	No effect. Suitable habitat not present.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>Phrynosoma blainvillii</i>	coast horned lizard	–	SSC		Occurs in valley-foothill hardwood, conifer, pine-cypress, juniper, annual grassland, and riparian habitats. Distributed throughout the Central and Southern California coast, and the Sierra Nevada foothills (CDFW 2013c).	Yes	P	May affect. Suitable habitat present.
<i>Thamnosma hammondi</i>	two-striped garter snake	–	SSC		Found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest (Nafis 2013).	No	A	No effect. Suitable habitat not present.
Birds								
<i>Athene cunicularia</i>	burrowing owl	–	SSC		Nesting habitat includes open areas with mammal burrows, including rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and human disturbed lands. Soils must be friable for burrows (Bates 2006).	Yes	P	May affect. Suitable habitat present; however, focused surveys have not found owls.
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT	SSC		Barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or saline lakes, reservoirs, and ponds (Cornell 2013).	No	A	No effect. Suitable habitat not present.
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE	SE		Dense riparian forest and scrub habitats associated with rivers, swamps, wetlands, lakes and reservoirs (USFWS 2002b).	Yes	A	No effect. Suitable habitat not present.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>Lanius ludovicianus</i>	loggerhead shrike	–	SSC		Breed in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. Require tall shrubs, trees, fences, or power lines for hunting perches; open areas for hunting; and large shrubs or trees for nests. Also need impaling sites for prey manipulation (Shuford and Gardali 2008).	Yes	P	May affect. Suitable habitat present.
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	FT	SSC		Scrub-dominated plant communities strongly associated with sage scrub. Distribution ranges from southern Ventura County down through Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties (USFWS 1997).	Yes	P	May affect. Riversidean sage scrub in PSA provides suitable habitat. Critical habitat adjacent to PSA.
Mammals								
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	–	SSC		Sandy herbaceous areas in coastal scrub, chaparral, sagebrush, desert scrub and washes, and annual grassland (CDFW 2013c).	Yes	P	May affect. Suitable habitat present.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	MSHCP Covered Species	Habitat Present/Absent	Rationale
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE	ST		Often found in transition areas between grassland and coastal sage scrub habitat where perennial vegetation is covering less than 50% of the ground, including disturbed areas. Deep, friable soil is needed for burrowing. Plants commonly associated with suitable habitat are chamise, buckwheat, brome grass, and filaree (RCHCA 2003).	Yes	P	May affect. Suitable habitat present.
<i>Eumops perotis californicus</i>	western mastiff bat	–	SSC		Occurs in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting (CDFW 2013c).	No	A	No effect. Suitable roosting sites not present.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	–	SSC		Herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats (CDFW 2013c).	Yes	P	May affect. Suitable habitat present.

Key	
Federal & State Status	CNPS Rare Plant Rank
(FE) Federal Endangered	<i>Rareness Ranks</i>
(FT) Federal Threatened	(1A) Presumed Extinct in California
(FC) Federal Candidate	(1B) Rare, Threatened, or Endangered in California and Elsewhere
(FD) Federally Delisted	(2B) Rare, Threatened, or Endangered in California, But More Common Elsewhere
(SE) State Endangered	<i>Threat Ranks</i>
(ST) State Threatened	(0.1) Seriously threatened in California
(SSC) State Species of Special Concern	(0.2) Fairly threatened in California
(FP) Fully Protected	(0.3) Not very threatened in California

3.3 BIOLOGICAL AND NATURAL RESOURCES

Special-Status Plant Species

Based on database search results, three special-status plant species have the potential to occur in the PSA. Each special-status plant species that is considered in the impact analysis is described below based on the data obtained from the CNPS Inventory of Rare, Threatened, and Endangered Plants of California (2013).

Bottle Liverwort (*Sphaerocarpos drewei*)

Bottle liverwort is an ephemeral liverwort with a CNPS rare plant rank of 1B.1 and no federal or state listing. This species is found growing on soil in chaparral and coastal scrub openings at elevations ranging from 295 to 1,969 feet (90–600 meters). Much of the species' historic habitat has been lost to urbanization.

Bottle liverwort is known through one CNDDDB occurrence in the last 20 years. This occurrence is approximately 5 miles south of the PSA. From aerial photo analysis, it appears this occurrence was observed in significantly different habitat than what is present in the PSA (Google Earth 2013). The area appears to be more mesic, have flat terrain, and have much denser shrub and tree cover than the PSA. However, the lack of occurrence data for this species results in the determination that there is some potential for this species to be impacted by project-related activities due to the presence of suitable habitat.

Parry's Spineflower (*Chorizanthe parryi* var. *parryi*)

Parry's spineflower is an annual herb endemic to California. It has a CNPS rare plant rank of 1B.1 and no federal or state listing. This species blooms from April to June and can be found at elevations ranging from 907.5 to 4,026 feet (275–1,220 meters) above mean sea level (amsl). Parry's spineflower is associated with sandy or rocky soils and is found in a variety of habitats, including chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. This species is threatened by altered flood regimes, development, mining, non-native plants, and vehicles

This species was documented on the hillsides of the PSA in 2006 (CNDDDB; Occurrence #52). There are a total of eight CNDDDB occurrences of this species within 5 miles of the PSA. The presence of suitable habitat and previous documentation of this species being present within the PSA results in the potential for this species to be impacted by project-related activities. Parry's spineflower is covered under the MSHCP.

White Rabbit-Tobacco (*Pseudognaphalium leucocephalum*)

White rabbit-tobacco is a perennial herb with a CNPS rank of 2.2 and no state or federal listing. This species blooms from July to December and can be found at elevations ranging from sea level to 6,890 feet (0–2,100 meters) amsl. White rabbit-tobacco is associated with sandy, gravelly substrate and is found in a variety of habitats, including chaparral, cismontane woodland, coastal scrub, and riparian woodland.

There is one CNDDDB record of this species within 5 miles of the PSA. The ephemeral drainages in the southern portion of the PSA may provide suitable habitat for this species. The remainder of the PSA lacks the preferred sand-gravel substrate. As a result, implementation of project-related activities may result in adverse impacts to this species.

Special-Status Wildlife Species

Based on database search results, eight special-status wildlife species have the potential to occur in the PSA. Each species that is considered in the impact analysis is described below based on the data obtained from CDFW's California Wildlife Habitat Relationships System Life History Accounts and Range Maps (2013d) as well as other published data sources, as cited.

Burrowing Owl (*Athene cunicularia*)

The burrowing owl is a California species of special concern and is federally protected under the Migratory Bird and Treaty Act and as a bird of prey under the Raptor Recovery Act. Burrowing owls prefer nesting in mammal burrows in open areas of dry, open, rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub with gullies, washes, and arroyos, and along the edges of human-disturbed lands. This species can also be found inhabiting golf courses, airports, cemeteries, vacant lots, and road embankments with friable soils for nesting. The elevation range for this species extends from 200 feet (60 meters) below mean sea level to 12,000 feet (3,636 meters) amsl at the Dana Plateau in Yosemite (Bates 2006).

Focused surveys for this species were conducted by Principe and Associates in April and May of 2013 (**Appendix 3.3**). No burrowing owls or their sign were observed during these surveys; however, the presence of suitable habitat and the presence of six CNDDDB records within 5 miles of the PSA results in the potential for this species to be impacted by project-related activities should they become established in the future. This species is covered under the MSHCP.

Coast Horned Lizard (*Phrynosoma blainvillii*)

The coast horned lizard is a California species of special concern. Typical vegetative associations include valley-foothill hardwood, conifer, and riparian habitat as well as pine-cypress, juniper, and annual grassland. The current known distribution is in the Sierra Nevada foothills from Butte County south to Kern County and throughout the Central and Southern California coast. This species is typically found below 2,000 feet (606 meters) amsl in the north and 3,000 feet amsl in the south; however, the range may extend up to 4,000 feet (1,212 meters) amsl in the Sierra Nevada foothills and 6,000 feet (1,818 meters) amsl in the Southern California mountain ranges.

There are 11 CNDDDB records of this species within 5 miles of the PSA. Due to the presence of suitable habitat for this species in portions of the PSA, there is the potential for this species to be affected by project-related activities. This species is covered under the MSHCP.

Coastal California Gnatcatcher (*Polioptila californica californica*)

The coastal California gnatcatcher is a non-migratory California species of special concern and is federally listed as threatened. Coastal California gnatcatchers are strongly associated with sage scrub habitats. This species is distributed from Ventura County to Baja California and limited to lower elevations (below 1,640 feet amsl) south and west of the Transverse and Peninsular ranges (Mock 2004).

There are five CNDDDB records of this species within 1 mile of the PSA and a total of 30 occurrences within 5 miles. One of these occurrences was documented in the PSA in 2001. In addition, a pair of gnatcatchers was observed and songs were heard during focused surveys for burrowing owl in 2013 (Principe and Associates 2013b). The presence of suitable habitat and the on-site documentation of this species in 2001 and 2013 results in the potential for coastal

3.3 BIOLOGICAL AND NATURAL RESOURCES

California gnatcatcher to be impacted by project-related activities. This species is covered under the MSHCP.

Loggerhead Shrike (*Lanius ludovicianus*)

The loggerhead shrike is a California species of special concern. This species can be either a yearlong resident or a winter visitor in California. Loggerhead shrikes frequent open habitats in lowlands and foothills throughout California. The highest densities of this species occur in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. Suitable habitat is open with sparse trees or shrubs or other suitable perches and low or sparse herbaceous cover. Nests are built in shrubs or trees with dense foliage.

There is one CNDDDB record of this species within 5 miles of the PSA. The Riversidean sage scrub in the PSA provides marginal habitat for this species. Though it is unlikely this species occurs in the PSA, there is still the potential for loggerhead shrike to be impacted by project-related activities. This species is covered under the MSHCP.

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)

The northwestern San Diego pocket mouse is a California species of special concern and a common resident of herbaceous areas, often in association with rocks or coarse gravel. This species is typically associated with coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland habitats. This species is distributed throughout San Diego County and in parts of Riverside and San Bernardino counties. It can be found at elevations ranging from sea level to 4,500 feet (1,350 meters) amsl.

The Riversidean sage scrub within the PSA provides suitable habitat for northwestern San Diego pocket mouse. The presence of suitable habitat and the two CNDDDB records within 5 miles of the PSA result in the potential for this species to be impacted by project-related activities. This species is covered under the MSHCP.

Orange-Throated Whiptail (*Aspidoscelis hyperythra*)

The orange-throated whiptail is a California species of special concern and a common resident of Orange, Riverside, and San Diego counties west of the crest of the Peninsular Ranges, as well as in southwestern San Bernardino County. It is typically associated with low-elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats. This species is found at elevations ranging from near sea level to 3,410 feet (1,040 meters) amsl. Preferred habitat is characterized by washes and other sandy areas with patches of brush and rocks.

There are 11 CNDDDB records within 5 miles of the PSA, one of which is within a 1-mile radius. The Riversidean sage scrub provides suitable habitat for this species. The presence of suitable habitat and the 11 CNDB occurrences within 5 miles of the PSA result in the potential for this species to be impacted by project-related activities. This species is covered under the MSHCP.

San Diego Black-Tailed Jackrabbit (*Lepus californicus bennettii*)

The San Diego black-tailed jackrabbit is a California species of special concern. It occurs in open habitats, including grassland, desert scrub, Riversidean sage scrub, chaparral, Great Basin

sagebrush, and juniper and oak woodlands. This species is typically not found in dense brush or high grass. San Diego black-tailed jackrabbits use shrubs for cover and will sometimes use large burrows to escape predators (Riverside County 2003). There are six CNDDDB records of this species within 5 miles of the PSA. The presence of suitable habitat and the occurrences in the vicinity of the PSA result in the potential for this species to be impacted by project-related activities. This species is covered under the MSHCP.

Stephens' Kangaroo Rat (*Dipodomys stephensi*)

Stephens' kangaroo rat is federally listed as endangered and state listed as threatened. This species ranges from the City of Riverside in Riverside County to the vicinity of the City of Vista in San Diego County. Stephens' kangaroo rat is typically associated with areas characterized by sparse perennial vegetation with firm soil in grassland, coastal scrub, sagebrush, and disturbed habitats. This species is often found in transition areas between grassland and coastal sage scrub where perennial vegetation cover is less than 50 percent (RCHCA 2003). Preferred plant associates include buckwheat, chamise, brome grass, and filaree. This species usually nests in pocket gopher burrows; however, they have been known to excavate their own burrows in suitable conditions.

There are 12 CNDDDB records of this species within 5 miles of the PSA. The Riversidean sage scrub and the disturbed areas, and especially the intergrade between them, provide suitable habitat for Stephens' kangaroo rat. The presence of suitable habitat and the 12 CNDDDB records within 5 miles of the PSA result in the potential for this species to be impacted by project-related activities. This species is covered under the MSHCP; furthermore, the project is in the Stephens' Kangaroo Rat Mitigation Fee Area (Riverside County Ordinance 663).

3.3.2 REGULATORY FRAMEWORK

This section identifies environmental review and consultation requirements, as well as permits and approvals that must be obtained from local, state, and federal agencies before implementation of the project.

FEDERAL

Endangered Species Act

The Endangered Species Act of 1973 (ESA), as amended, provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code (USC) Sections 1531–1544). The ESA defines “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Title 50, Part 222, of the Code of Federal Regulations (50 CFR Section 222) further defines “harm” to include “an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering.”

ESA Section 7(a)(1) requires federal agencies to utilize their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with the USFWS or the National Marine Fisheries Service (NMFS) if a federal agency undertakes, funds, permits, or authorizes (termed the federal nexus) any action that may affect endangered or threatened species, or designated critical habitat. For projects that may result in the incidental “take” of threatened or endangered species, or critical habitat, and that lack a federal nexus, a Section 10(a)(1)(b) incidental take permit can be obtained from the USFWS and/or the NMFS.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Clean Water Act

The basis of the Clean Water Act (CWA) was established in 1948; however, it was referred to as the Federal Water Pollution Control Act. The act was reorganized and expanded in 1972 (33 USC Section 1251), and at that time the Clean Water Act became the act's commonly used name. The basis of the CWA is the regulation of pollutant discharges into waters of the United States, as well as the establishment of surface water quality standards.

Section 404

CWA Section 404 (33 USC Section 1344) established the program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Under this regulation, certain activities proposed within waters of the United States require the obtainment of a permit prior to initiation. These activities include, but are not limited to, placement of fill for the purposes of development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and bridges), and mining operations.

The primary objective of this program is to ensure that the discharge of dredged or fill material is not permitted if a practicable alternative to the proposed activities exists that results in less impact to waters of the United States or the proposed activity would result in significant adverse impacts to these waters. To comply with these objectives, a permittee must document the measures taken to avoid and minimize impacts to waters of the United States and provide compensatory mitigation for any unavoidable impacts.

The US Environmental Protection Agency (EPA) and the USFWS are assigned roles and responsibilities in the administration of this program; however, the USACE is the lead agency in the administration of day-to-day activities, including issuance of permits. The agencies will typically assert jurisdiction over the following waters: (1) traditional navigable waters (TNW); (2) wetlands adjacent to TNWs; (3) relatively permanent waters (RPW) that are non-navigable tributaries to TNWs and have relatively permanent flow or seasonally continuous flow (typically three months); and (4) wetlands that directly abut RPWs. Case-by-case investigations are usually conducted by the agencies to ascertain their jurisdiction over waters that are non-navigable tributaries and do not contain relatively permanent or seasonal flow, wetlands adjacent to the aforementioned features, and wetlands adjacent to but not directly abutting RPWs (USACE 2007). Jurisdiction is not generally asserted over swales or erosional features (e.g., gullies or small washes characterized by low-volume/short-duration flow events) or ditches constructed wholly within and draining only uplands that do not have relatively permanent flows.

The extent of jurisdiction within waters of the United States that lack adjacent wetlands/ is determined by the ordinary high water mark, which is defined in 33 CFR Section 328.3(e) as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." Wetlands are further defined under 33 CFR Section 328.3 and 40 CFR Section 230.3 as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" and typically include "swamps, marshes, bogs, and similar areas." The *Corps of Engineers Wetland Delineation Manual* (1987 Manual) sets forth a standardized methodology for delineating the extent of wetlands under federal jurisdiction (USACE 1987).

The 1987 Manual outlines three parameters that all wetlands, under normal circumstances, must contain positive indicators for to be considered jurisdictional. These parameters include (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils (USACE 1987). In 2006, the USACE issued a series of regional supplements to address regional differences that are important to the functioning and identification of wetlands. The supplements present “wetland indicators, delineation guidance, and other information” that is specific to the region. The USACE requires that wetland delineations submitted after June 5, 2007, be conducted in accordance with both the 1987 Manual and the applicable supplement.

Section 401

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit and/or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants or waives CWA Section 401 certification. CWA Section 401 provides states or tribes with the ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit/license to be issued and remain consistent with any conditions set forth in the CWA Section 401 certification. Denial of the certification prohibits the issuance of the federal license or permit, and waiver allows the permit/license to be issued without state or tribal comment. Decisions made by states or tribes are based on the proposed project's compliance with EPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board is the primary regulatory authority for CWA Section 401 requirements (additional details below).

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Section 21). The majority of birds found in the project vicinity would be protected under the MBTA.

Bald and Golden Eagle Protection Act

The bald eagle and golden eagle are federally protected under the Bald and Golden Eagle Protection Act (16 USC Sections 668–668c). Under the act, it is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export, or import at any time or in any manner a bald or golden eagle, alive or dead; or any part, nest or egg of these eagles unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

Executive Order 13112 – Invasive Species

This executive order directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, the USFWS and the USACE would issue permits and therefore would be responsible for ensuring that the proposed action complies with Executive Order 13112 and does not contribute to the spread of invasive species.

3.3 BIOLOGICAL AND NATURAL RESOURCES

Fish and Wildlife Coordination Act of 1958 (16 USC 661 et seq.)

The Fish and Wildlife Coordination Act requires that whenever any body of water is proposed or authorized to be impounded, diverted, or otherwise controlled or modified, the lead federal agency must consult with the USFWS, the state agency responsible for fish and wildlife management, and the National Marine Fisheries Service. Section 662(b) of the act requires the lead federal agency to consider the recommendations of the USFWS and other agencies. The recommendations may include proposed measures to mitigate or compensate for potential damages to wildlife and fisheries associated with a modification of a waterway.

Executive Order 11990 Protection of Wetlands (42 FR 26961, May 25, 1977)

Executive Order 11990 requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support for new construction located in wetlands unless (1) no practicable alternative exists and (2) all practical measures have been taken to minimize harm to wetlands.

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC Section 2070). The CDFW also maintains a list of “candidate species,” which are species formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of “species of special concern,” which serve as a species “watch lists.”

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. “Take” of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from the CDFW would be in the form of an incidental take permit.

California Fish and Game Code

Streambed Alteration Agreement (FGC Sections 1600–1607)

State and local public agencies are subject to FGC Section 1602, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as waters of the state by the CDFW. Under FGC Section 1602, a discretionary Streambed Alteration Agreement must be issued by the CDFW to the project proponent prior to the initiation of construction activities on lands under CDFW jurisdiction. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

Native Plant Protection Act

The Native Plant Protection Act (FGC Sections 1900–1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by the CDFW). An exception in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give that state agency at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (FGC Section 1913). Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

Birds of Prey

Under FGC Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

“Fully Protected” Species

California statutes also afford “fully protected” status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be “taken,” even with an incidental take permit. FGC Section 3505 makes it unlawful to take “any egret or egret, osprey, bird of paradise, gaura, numidi, or any part of such a bird. FGC Section 3511 protects from take the following fully protected birds: (a) American peregrine falcon (*Falco peregrinus anatum*); (b) brown pelican (*Pelecanus occidentalis*); (c) California black rail (*Laterallus jamaicensis coturniculus*); (d) California clapper rail (*Rallus longirostris obsoletus*); (e) California condor (*Gymnogyps californianus*); (f) California least tern (*Sterna albifrons browni*); (g) golden eagle; (h) greater sandhill crane (*Grus canadensis tabida*); (i) light-footed clapper rail (*Rallus longirostris levipes*); (j) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); (k) trumpeter swan (*Cygnus buccinator*); (l) white-tailed kite (*Elanus leucurus*); and (m) Yuma clapper rail (*Rallus longirostris yumanensis*).

FGC Section 4700 identifies the following fully protected mammals that cannot be taken: (a) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); (b) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (subspecies *Ovis canadensis nelsoni*); (d) Guadalupe fur seal (*Arctocephalus townsendi*); (e) ring-tailed cat (genus *Bassariscus*); (f) Pacific right whale (*Eubalaena sieboldi*); (g) salt-marsh harvest mouse (*Reithrodontomys raviventris*); (h) southern sea otter (*Enhydra lutris nereis*); and (i) wolverine (*Gulo gulo*).

FGC Section 5050 protects from take the following fully protected reptiles and amphibians: (a) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); (b) San Francisco garter snake (*Thamnophis sirtalis tetrataenia*); (c) Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); (d) limestone salamander (*Hydromantes brunus*); and (e) black toad (*Bufo boreas exsul*).

FGC Section 5515 identifies certain fully protected fish that cannot lawfully be taken, even with an incidental take permit. The following species are protected in this fashion: (a) Colorado River squawfish (*Ptychocheilus lucius*); (b) thicktail chub (*Gila crassicauda*); (c) Mohave chub (*Gila mohavensis*); (d) Lost River sucker (*Catostomus luxatus*); (e) Modoc sucker (*Catostomus microps*); (f) shortnose sucker (*Chasmistes brevirostris*); (g) humpback sucker (*Xyrauchen texanus*); (h) Owens River pupfish (*Cyprinodon radiosus*); (i) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and (j) rough sculpin (*Cottus asperimus*).

3.3 BIOLOGICAL AND NATURAL RESOURCES

California Wetlands and Other Waters Policies

The California Resources Agency and its various departments do not authorize or approve projects that fill or otherwise harm or destroy coastal, estuarine, or inland wetlands. Exceptions may be granted if all of the following conditions are met:

- The project is water-dependent.
- No other feasible alternative is available.
- The public trust is not adversely affected.
- Adequate compensation is proposed as part of the project.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The requirements of the act are implemented at the state level by the State Water Resources Control Board and at the local level by the Regional Water Quality Control Board (RWQCB). The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The act provides for waste discharge requirements and a permitting system for discharges to land or water. Certification is required by the RWQCB for activities that can affect water quality.

Clean Water Act, Section 401 Water Quality Certification

CWA Section 401 (33 USC Section 1341) requires that any applicant for a federal license or permit, which may result in a pollutant discharge to waters of the United States, obtain a certification that the discharge will comply with EPA water quality standards. The state or tribal agency responsible for issuance of the Section 401 certification may also require compliance with additional effluent limitations and water quality standards set forth in state/tribal laws. In California, the RWQCB is the primary regulatory authority for CWA Section 401 requirements.

The Santa Ana and San Diego RWQCBs are responsible for enforcing water quality criteria and protecting water resources in the PSA. In addition, both Regional Water Quality Control Boards are responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements (WDR) or commonly by issuing conditional waivers to WDRs. The RWQCB requires that a project proponent obtain a CWA Section 401 water quality certification for CWA Section 404 permits issued by the USACE. A request for water quality certification (including WDRs) by the RWQCB and an application for a General Permit for Storm Water Discharges Associated with Construction Activities are prepared and submitted following completion of the CEQA environmental document and submittal of the wetland delineation to the USACE.

Delegated Permit Authority

California has been delegated permit authority for the National Pollutant Discharge Elimination System (NPDES) permit program, including stormwater permits for all areas except tribal lands. Issuance of CWA Section 404 dredge and fill permits remains the responsibility of the USACE; however, the state actively uses its CWA Section 401 certification authority to ensure CWA Section 404 permits are in compliance with state water quality standards.

State Definition of Covered Waters

Under California state law, waters of the state means “any surface water or groundwater, including saline waters, within the boundaries of the state.” Therefore, water quality laws apply to both surface water and groundwater. After the US Supreme Court decision in *Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers*, the Office of Chief Counsel of the State Water Resources Control Board released a legal memorandum confirming the state’s jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act (Porter-Cologne), discharges to wetlands and other waters of the state are subject to state regulation, and this includes isolated wetlands. In general, the Board regulates discharges to isolated waters in much the same way as they do for waters of the United States, using Porter-Cologne rather than Clean Water Act authority.

NONGOVERNMENTAL AGENCY

California Native Plant Society

The California Native Plant Society is a nongovernmental agency that classifies native plant species according to current population distribution and threat level in regard to extinction. These data are utilized by the CNPS to create/maintain a list of native California plants that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2013). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

The following identifies the definitions of the CNPS listings:

List 1A: Plants believed to be extinct

List 1B: Plants that are rare, threatened, or endangered in California and elsewhere

List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

All of the plant species on List 1 and 2 meet the requirements of the Native Plant Protection Act Section 1901, Chapter 10, or FGC Section 2062 and Section 2067 and are eligible for state listing. Plants appearing on List 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered “significant.” Classifications for plants on List 3 (plants about which we need more information and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions or impact analysis was performed on species with these classifications.

LOCAL

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multijurisdictional habitat conservation plan (HCP) focusing on conservation of species and their associated habitats in western Riverside County. This plan is one of several large, multijurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP will allow Riverside County and its cities to better control

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local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal endangered species acts. The MSHCP serves as a habitat conservation plan pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act (16 USC 1531 et seq.), as well as a natural community conservation plan (NCCP) under the NCCP Act of 2001 (Fish and Game Code, Section 2800 et seq.). The MSHCP allows the participating jurisdictions to authorize “take” of plant and wildlife species identified within the plan area. The USFWS and the CDFW have authority to regulate the take of threatened, endangered, and rare species. Under the MSHCP, the wildlife agencies have granted “take authorization” for otherwise lawful actions, such as public and private development that may incidentally take or harm individual species or their habitat outside of the MSHCP conservation area, in exchange for the assembly and management of a coordinated MSHCP conservation area. The MSHCP is a criteria-based plan and does not rely on a hardline preserve map. Instead, within the MSHCP Plan Area, the MSHCP reserve will be assembled over time from a smaller subset of the Plan Area referred to as the Criteria Area. The Criteria Area consists of Criteria Cells (Cells) or Cell Groupings, and flexible guidelines (criteria) for the assembly of conservation within the Cells or Cell Groupings. Cells and Cell Groupings also may be included within larger units known as Cores, Linkages, or Non-Contiguous Habitat Blocks.

City of Wildomar

General Plan

The General Plan includes the following policies to address effects of prospective development on biological resources. The policies directly or indirectly address the direct mortality of individuals of listed, proposed, or candidate species or loss of habitat occupied by such species.

Open Space Policy 5.1: Substantially alter floodways or implement other channelization only as a “last resort,” and limit the alteration to: (a) that necessary for the protection of public health and safety only after all other options are exhausted; (b) essential public service projects where or other feasible construction method or alternative project location exists; or (c) projects where primary function is improvement of fish and wildlife habitat.

Open Space Policy 5.2: If substantial modification to a floodway is proposed, design it to reduce adverse environmental effects to the maximum extent feasible, considering the following factors: (a) stream scour; (b) erosion protection and sedimentation; (c) wildlife habitat and linkages; (d) groundwater recharge capability; (e) adjacent property; (f) design (a natural effect, examples could include soft riparian bottoms and gentle bank slopes, wide and shallow floodways, minimization of visible use of concrete, and landscaping with native plants to the maximum extent possible). A site-specific hydrologic study may be required.

Open Space Policy 5.3: Based upon site-specific study, all development shall be set back from the floodway boundary a distance adequate to address the following issues:

- a) Public safety;
- b) Erosion;
- c) Riparian or wetland buffer;
- d) Wildlife movement corridor or linkage; and
- e) Slopes.

Open Space Policy 5.5: Development shall preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses. Incentives shall be utilized to the maximum extent possible.

Open Space Policy 5.6: Identify and, to the maximum extent feasible, conserve remaining upland habitat adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with those wetland and riparian areas.

Open Space Policy 5.7: Where land is prohibited from development due to its retention as natural floodways, floodplains and water courses, incentives should be available to the owner of such the land including density transfer and other mechanisms as may be adopted. These incentives will be provided for the purpose of encouraging the preservation of natural watercourses without creating undue hardship on the owner of properties following these policies.

Open Space Policy 6.1: During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.

Open Space Policy 6.2: Preserve buffer zones around wetlands where feasible and biologically appropriate.

Open Space Policy 8.1: Cooperate with federal and state agencies to achieve the sustainable conservation of forest land as a means of providing open space and protecting natural resources and habitat lands included in the MSHCPs.

Open Space Policy 9.3: Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes.

Open Space Policy 17.1: Enforce the provisions of applicable MSHCPs, if adopted, when conducting review of development applications.

Open Space Policy 17.2: Enforce the provisions of applicable MSHCPs, if adopted, when developing transportation or infrastructure projects that have been designated as covered activities in the applicable MSHCPs.

Open Space Policy 17.3: Enforce the provisions of applicable MSHCPs, if adopted, when conducting review of possible general plan amendments and/or zoning changes.

Open Space Policy 18.1: Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs, if adopted.

Open Space Policy 18.2: Provide incentives to landowners that will encourage the protection of significant resources in the County beyond the preservation and/or conservation required to mitigate project impacts.

3.3 BIOLOGICAL AND NATURAL RESOURCES

3.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance:

- 1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS.
- 2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or the USFWS.
- 3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (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 a tree preservation policy or ordinance.
- 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.
- 7) Reduce the number or restrict the range of an endangered, rare, or threatened plant or animal species or biotic community, thereby causing the species or community to drop below self-sustaining levels.

METHODOLOGY

The impact assessment below discusses impacts from implementation of project activities. The impact assessment was based on the project description (Section 2.0), the report produced by Principe and Associates (2013a) (see **Appendix 3.3**), information described in the environmental setting, and the standards of significance described above. In addition, the impact analysis is organized by the significance criteria noted above: special-status plant and wildlife species, sensitive vegetation communities, federally protected wetlands, wildlife movement corridors, and compliance with local plans and policies or existing habitat conservation plans. Each impact category includes a description of the specific potential impacts as well as avoidance, minimization, and mitigation measures that can potentially reduce and mitigate potentially significant impacts. The reader is referred to Section 2.0, Project Description, for specific details on the project.

PROJECT IMPACTS AND MITIGATION MEASURES

Impacts to Candidate, Sensitive, or Special-Status Species (Standards of Significance 1 and 7)

Impact 3.3.1 Implementation of project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to special-status plant species, which would be considered a **potentially significant** impact.

Suitable habitat for Parry's spineflower, white rabbit-tobacco, and bottle liverwort occur within the PSA. Parry's spineflower is covered under the MSHCP; therefore, project compliance with the MSHCP will ensure that direct, indirect, and cumulative impacts to this species are less than significant. White rabbit-tobacco and bottle liverwort are not covered by the MSHCP. In order to reduce potential impacts to a **less than significant** level, implementation of mitigation measure **MM 3.3.1** is recommended.

Mitigation Measures

MM 3.3.1 Within two years of groundbreaking in undisturbed portions of the site, the applicant shall retain a qualified biologist to conduct a preliminary evaluation to determine if suitable habitat for white rabbit-tobacco and/or bottle liver occurs within the disturbance footprint. If suitable habitat is identified, focused surveys shall be conducted to determine the presence/absence of special-status plant species with potential to occur in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including new construction access routes. These surveys shall be conducted in accordance with *CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods, and/or during appropriate developmental periods that are necessary to identify the plant species of concern.

If any state- or federally listed CNPS List 1 or CNPS List 2 plant species are found in or adjacent to (within 100 feet) proposed impact areas during the surveys, these plant species shall be avoided to the greatest extent possible. Any special-status plant species that are identified adjacent to the PSA, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on project plans.

If project-related impacts will result in the loss of greater than 10 percent of occupied habitat for a special-status species, then compensatory mitigation shall be required for all impacts that exceed the 10 percent threshold. For example, if 18 percent of occupied habitat will be impacted, then compensatory mitigation shall only be required for the 8 percent that exceeds the 10 percent threshold. Compensatory mitigation for permanent impacts to special-status plant species shall include the preservation of occupied habitat at a 1:1 ratio (i.e., one acre preserved for each acre impacted). Compensation for temporary impacts shall include the preservation of occupied habitat at a 0.5:1 ratio. Preservation areas may

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include undisturbed areas of the site that will be preserved and managed in perpetuity, offsite mitigation lands, or a combination of both. The preserved habitat shall be of equal or greater habitat quality to the areas impacted in terms of soil features, extent of disturbance, vegetation structure, and contain extant populations of the same or greater size as the area impacted.

A report of special-status plants observed during focused surveys, as well as avoidance, minimization, and mitigation measures to be implemented shall be prepared and submitted to the City of Wildomar Planning Department at the time of application for the City's review and approval.

Timing/Implementation: *Prior to approval of grading permits*

Enforcement/Monitoring: *City of Wildomar Planning Department*

Impact 3.3.2 Implementation of project-related activities could result in substantial adverse effects, either directly or through habitat modifications, to special-status wildlife species, which would be considered a **potentially significant** impact.

Suitable habitat for orangethroat whiptail, coast horned lizard, burrowing owl, loggerheaded shrike, coastal California gnatcatcher, northwestern San Diego pocket mouse, Stephen's kangaroo rat, and San Diego black-tailed jackrabbit exists within the PSA. All of these species are covered under the MSHCP. The MSHCP and the Stephen's Kangaroo Rat Habitat Conservation Plan have been analyzed under CEQA. Project compliance with these plans fully mitigates impacts for these covered species. Furthermore, with the project's consistency with the MSHCP, with coverage afforded by the MSHCP, and with the mitigation measures specified herein, direct, indirect, and cumulative impacts to biological resources will be **less than significant**.

To ensure compliance with the requirements of the MSHCP, additional surveys are required for burrowing owl and coastal California gnatcatcher. Therefore, mitigation measures **MM 3.3.2a** through **MM 3.3.2c** shall be implemented to ensure MSHCP compliance.

The PSA may also provide nesting and/or foraging habitat for migratory birds not identified in **Table 3.3-1**. All native breeding birds (except game birds during the hunting season), regardless of their listing status, are protected under the MBTA. Vegetation clearing within undisturbed portions of the PSA, during the nesting season, could result in direct impacts to nesting birds should they be present. Furthermore, noise and other human activity may result in nest abandonment if nesting birds are present within 200 feet of a work site. Due to the presence of suitable habitat for these species, implementation of project-related activities may result in adverse impacts should they be present in areas proposed for disturbance. In order to reduce potential impacts to a **less than significant** level, mitigation measure **MM 3.3.2d** shall be implemented.

MM 3.3.2a Per MSHCP Species-Specific Objective 6, preconstruction presence/absence surveys for burrowing owl within the survey area, where suitable habitat is present, will be conducted for all covered activities through the life of the building permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one-way doors and collapse of burrows) will occur when owls are present outside the nesting season. If construction is delayed or suspended for more than 30 days after the survey, the area shall be resurveyed.

Surveys shall be completed for occupied burrowing owl burrows within all construction areas and within 500 feet (150 meters) of the project work areas (where possible and appropriate based on habitat). All occupied burrows will be mapped on an aerial photo.

Timing/Implementation: *Within 30 days prior to any vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Wildomar Planning and Public Works Departments*

MM 3.3.2b

If burrowing owls are identified during the survey period, the City shall require the project applicant to take the following actions to offset impacts prior to ground disturbance:

Active nests within the areas scheduled for disturbance or degradation shall be avoided from February 1 through August 31, and a minimum 250-foot (75-meter) buffer shall be provided until fledging has occurred. Following fledging, owls may be passively relocated by a qualified biologist.

If impacts on occupied burrows in the non-nesting period are unavoidable, on-site passive relocation techniques may be used if approved by the CDFW to encourage owls to move to alternative burrows outside of the impact area. However, no occupied burrows shall be disturbed during the nesting season. A qualified biologist must verify through noninvasive methods that the burrow is no longer occupied.

If relocation of the owls is approved for the site by the CDFW, the City shall require the developer to hire a qualified biologist to prepare a plan for relocating the owls to a suitable site. The relocation plan must include all of the following:

- The location of the nest and owls proposed for relocation.
- The location of the proposed relocation site.
- The number of owls involved and the time of year when the relocation is proposed to take place.
- The name and credentials of the biologist who will be retained to supervise the relocation.
- The proposed method of capture and transport for the owls to the new site.
- A description of site preparation at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term vegetation control).
- A description of efforts and funding support proposed to monitor the relocation.

If paired owls are present within 160 feet (50 meters) of a temporary project disturbance (e.g., parking areas), active burrows shall be protected with fencing/cones/flagging and monitored by a qualified biologist throughout

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construction to identify losses from nest abandonment and/or loss of reproductive effort. Any identified loss shall be reported to the CDFW.

Timing/Implementation: Prior to any vegetation removal or ground-disturbing activities

Enforcement/Monitoring: City of Wildomar Planning and Public Works Departments

MM 3.3.2c

Prior to any construction occurring in Riversidean sage scrub (**Figure 3.3-1**) during the breeding season for the coastal California gnatcatcher (February 15 through August 30), a protocol-level survey shall be conducted by a USFWS-approved biologist. Surveys shall be conducted in accordance with the USFWS *Coastal California Gnatcatcher (Poliophtila californica californica) Presence/Absence Survey Guidelines* dated February 28, 1997. Surveys in which the species is not detected are considered valid for one year and should be repeated within one year of work commencing.

If surveys document the absence of coastal California gnatcatcher, no additional avoidance or minimization measures are required. If surveys document the presence of this species, construction in Riversidean sage scrub shall be limited to the non-nesting season (September 1 through February 15).

Timing/Implementation: Within 30 days prior to any vegetation removal or ground-disturbing activities affecting Riversidean sage scrub

Enforcement/Monitoring: City of Wildomar Planning and Public Works Departments

MM 3.3.2d

Migratory Bird Surveys. If clearing and/or construction activities will occur, within undisturbed portions of the project site, during the migratory bird nesting season (March 15 through August 15), preconstruction surveys to identify active migratory bird nests shall be conducted by a qualified biologist within 14 days of construction initiation. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area and a 200-foot buffer (if feasible).

If active nest sites are identified within 200 feet of project activities, the applicant shall impose a limited operating period (LOP) for all active nest sites prior to commencement of any project construction activities to avoid construction- or access-related disturbances to migratory bird nesting activities. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur and will be imposed within 100 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of LOPs may be adjusted through consultation with the CDFW.

Timing/Implementation: Prior to the initiation of construction activities

Enforcement/Monitoring: City of Wildomar Planning and Public Works Department

Impacts to Sensitive Biological Communities, Including Riparian Habitat (Standard of Significance 2)

Impact 3.3.3 Implementation of the proposed project could result in impacts to sensitive biological communities, including riparian habitat. This would be a **potentially significant** impact.

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under the MSHCP, CEQA, Section 1600 of the FGC, and Section 404 of the CWA. Four ephemeral drainages were identified by Principe and Associated in the southern portion of the PSA. One ephemeral drainage appears to be located in the immediate vicinity of the proposed new parking lot in the eastern portion of the PSA. As a result, project grading may result in the loss of riparian habitat from proposed vegetation disturbance or removal. A 1602 Streambed Alteration Agreement for removal of or disturbance to riparian habitat and waters of the State (e.g., stream, lake, or river) from the CDFG may be required for the proposed project. This agreement would include measures to minimize impacts and restore riparian habitat.

Mitigation Measures

MM 3.3.3 The project applicant shall ensure that there is no net loss of riparian vegetation. Mitigation can include on-site restoration or purchase of mitigation credits at a USACE approved or mitigation bank. Mitigation associated with regulatory permits issued through the CDFW, USACE, MSHCP, or the Water Resources Control Board may be applied to satisfy this measure.

Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project.

Timing/Implementation: Prior to project vegetation removal or ground-disturbing activities

Enforcement/Monitoring: City of Wildomar Planning and Public Works Departments

Impacts to Jurisdictional Wetlands (Standard of Significance 3)

Impact 3.3.4 Implementation of the proposed project may result in the loss of any jurisdictional waters of the United States, including wetlands. This would be a **potentially significant** impact.

The southern portion of the PSA contains four ephemeral drainages. One ephemeral drainage appears to be located in the immediate vicinity of the proposed new parking lot in the eastern portion of the PSA. A jurisdictional delineation has not been conducted to date; therefore, the extent of USACE jurisdiction over the ephemeral drainages is unknown. The onsite ephemeral drainages do appear to be hydrologically connected to Murrieta Creek, which is subject to USACE jurisdiction; as a result, the onsite drainages may meet the definition of waters of the US. In order to ensure that project-related activities do not result in the loss of federally protected wetlands, mitigation measure **MM 3.3.4a** and **MM 3.3.4b** shall be implemented.

Mitigation Measures

MM 3.3.4a Within two years prior to groundbreaking, project applicants shall retain qualified biologists to determine if potentially jurisdictional waters are present.

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If potentially jurisdictional features are identified, the project applicant shall submit a preliminary jurisdictional determination to the USACE for verification. The verified delineation will be submitted to the City for its records.

Timing/Implementation: *Prior to approval of grading permits.*

Enforcement/Monitoring: *City of Wildomar Planning Department*

MM 3.3.4b

Project applicant shall ensure that the project would result in no net loss of federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or a 1602 Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for each proposed project.

Evidence of compliance with this mitigation measure shall be provided to the City prior to construction and grading activities for the proposed project.

Timing/Implementation: *Prior to approval of grading permits*

Enforcement/Monitoring: *City of Wildomar Planning Department*

Impacts to the Movement of Native Resident or Migratory Fish or Wildlife Species or within Established Migratory Corridor (Standard of Significance 4)

Impact 3.3.5 Implementation of the proposed project could interfere with the movement of native resident or migratory fish or wildlife species. This is considered a **less than significant** impact.

The Riversidean sage scrub habitat on the east side of the PSA (**Figure 3.3-1**) may provide a wildlife movement corridor for migrations, foraging, and movement along the lower foothills of the Sedco Hills. As proposed, the project will avoid the majority of the Riversidean sage scrub community. The only planned development within the Riversidean sage scrub habitat is adjacent to the existing campus and includes an upper parking lot and a stormwater basin, totaling approximately 3.5 acres. This will leave approximately 42 acres of Riversidean sage scrub untouched in the PSA. Thus, interference with wildlife movement will be minimal, and this impact will be **less than significant**.

Mitigation Measures

None required.

Conflict with Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance (Standard of Significance 5)

Impact 3.3.6 Implementation of the proposed project would not conflict with any local policies or ordinances protecting biological resources. There would be **no impact**.

Upon city incorporation, the City of Wildomar adopted County Ordinance 559, as amended, regulating the removal of trees. The ordinance regulates tree removal above 5,000-foot elevation. The project site is site below 1,640 feet. Therefore, the proposed project would not

conflict with any local policies or ordinances protecting biological resources, including the City of Wildomar General Plan. As such, **no impact** is anticipated.

Mitigation Measures

None required.

Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan (Standard of Significance 5)

Impact 3.3.7 Implementation of the proposed project could conflict with the provisions of the Western Riverside County MSHCP. This would be considered a **potentially significant** impact.

The MSHCP protects and preserves certain habitats and species in the region. The MSHCP delineates particular areas of concern through the identification of specific areas known as Criteria Cells. Areas identified as Criteria Cells typically contain certain restrictions on development and land alterations. The PSA is not within a Criteria Cell or any other special conservation area. A full analysis of the proposed project's consistency with the MSHCP can be found in **Appendix 3.3**.

The proposed project is located within the Burrowing Owl Survey Area (Figure 6-4 of the MSHCP). A nesting season survey was conducted and a report was prepared, following the guidelines provided in the MSHCP (**Appendix 3.3**).

A final component of the MSHCP is Mitigation Fee Areas, which are land areas that occur within the MSHCP and require a fee for development activities to occur. These fees are utilized to fund the minimization to certain endemic species. The proposed project is located within the MSHCP Mitigation Fee Area (Riverside County Ordinance 810.2) and the Stephens' Kangaroo Rat Mitigation Fee Area (Riverside County Ordinance 663). A standard condition for the proposed project includes the payment of these fees to comply with the overlying habitat conservation plan (the MSHCP).

As demonstrated in the analysis by Principe and Associates (2013a) (see **Appendix 3.3**), the proposed project is consistent with the MSHCP. With adherence to the standard conditions and requirements, any impacts will be less than significant with mitigation incorporated. In addition, implementation of mitigation measures **MM 3.3.2a** and **MM 3.3.2b** included above will result in the project having **no impact** with regard to the MSHCP.

Standard Conditions and Requirements

The project applicant shall submit fees to the City in accordance with the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Mitigation Fee Areas, including the MSHCP Mitigation Fee and the Stephens' Kangaroo Rat Mitigation Fee.

Mitigation Measures

Implement mitigation measures **MM 3.3.2a** and **MM 3.3.2b**.

3.3 BIOLOGICAL AND NATURAL RESOURCES

3.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting includes the project site as well as the still-undeveloped areas surrounding the proposed project site where the impacts of urbanization and threats to biological diversity and sensitive biological resources are considered most serious. The impacts on biological resources are primarily the result of urbanization of the area, habitat fragmentation, water pollution, and conversion of natural land to residential, commercial, and recreational use.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Biological Resources

Impact 3.3.8 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the immediate area of the proposed project, will result in the conversion of habitat and impact biological resources. This impact is considered **less than cumulatively considerable**.

The City, along with other jurisdictions in western Riverside County, participates in the MSHCP. The MSHCP is designed to protect over 150 species and conserve over 500,000 acres in western Riverside County. Project compliance with the MSHCP and the Stephens' Kangaroo Rat Habitat Conservation Plan fully mitigates for impacts on covered species and ensures large segments of natural communities in western Riverside County will be preserved.

Adherence to the standards and conditions, and implementation of mitigation measures **MM 3.3.2.a** and **MM 3.3.2.b**, ensure the project will be compliant with the MSHCP. In addition, implementation of mitigation measures **MM 3.3.2.c** and **MM 3.3.2.d** ensures that impacts to coastal California gnatcatchers and other nesting birds are minimized. Though the development of the proposed project will continue the urbanization of the area, participation in and implementation of the MSHCP will effectively reduce the project's contribution to cumulative impacts to a **less than cumulatively considerable** level.

Mitigation Measures

Implement mitigation measures **MM 3.3.2a** through **MM 3.3.2d**.

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3.3 BIOLOGICAL AND NATURAL RESOURCES

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3.4 CLIMATE CHANGE AND GREENHOUSE GASES

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

This section includes a description of the proposed project's contribution of greenhouse gas (GHG) emissions and the associated effects of climate change. The reader is referred to Section 3.2, Air Quality, for a discussion of project impacts associated with air quality. This section is based on the analysis and the associated modeling conducted by Urban Crossroads in 2013 (see **Appendix 3.4**).

3.4.1 EXISTING SETTING

INTRODUCTION TO GLOBAL CLIMATE CHANGE

Global climate change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. GCC is currently one of the most controversial environmental issues in the United States. Some data suggests that GCC has occurred in the past over the course of thousands or millions of years. These historical changes to the earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the earth's atmosphere, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of GHG emissions resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed project cannot generate enough GHG emissions to effect a discernible change in global climate. However, the proposed project may participate in the potential for GCC by its incremental contribution of GHG emissions combined with the cumulative increase of all other sources of GHG emissions, which when taken together constitute potential influences on global climate change.

EXISTING CLIMATE SETTING

Global

Worldwide anthropogenic (man-made) GHG emissions are tracked by the Intergovernmental Panel on Climate Change for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions data for Annex I nations are available through 2009. Man-made GHG emissions data for Non-Annex I nations are available through 2007. For the year 2009, the sum of these emissions totaled approximately 40,084 million metric tons of carbon dioxide equivalents (MMT CO₂e). Emissions from the top five countries and the European Union accounted for approximately 65 percent of the total global GHG emissions, according to the most recently available data (see **Table 3.4-1**).

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

TABLE 3.4-1
TOP GHG PRODUCER COUNTRIES AND EUROPEAN UNION

Emitting Countries	GHG Emissions (MMT CO ₂ e)
China	6,703
United States	6,608
European Union	8,338
Russia Federation	2,159
India	1,410
Japan	1,209
Total	26,427

Source: *Urban Crossroads 2013*

United States

As noted in **Table 3.4-1**, the United States was the number two producer of GHG emissions in 2009. The primary greenhouse gas emitted by human activities in the United States was CO₂, representing approximately 83 percent of total GHG emissions. CO₂ from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 78 percent of the GHG emissions.

State of California

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on the 2008 GHG inventory data (i.e., the latest year for which data is available) for the 2000–2008 GHG emissions inventory, California emitted 474 MMT CO₂e including emissions resulting from imported electrical power in 2008. Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the United States (Texas is number one) with emissions of 417 MMT CO₂e excluding emissions related to imported power.

GREENHOUSE GASES

For the purposes of this analysis, emissions of CO₂, CH₄, and N₂O were evaluated because these gases are the primary contributors to global climate change from development projects. Although other substances such as fluorinated gases also contribute to GCC, sources of fluorinated gases are not well defined, and no accepted emissions factors or methodology exist to accurately calculate these gases. GHG emissions have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. CO₂ is utilized as the reference gas for global warming potential and thus has a GWP of 1. **Table 3.4-2** shows the GWPs for different greenhouse gases for a 100-year time horizon.

TABLE 3.4-2
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIME OF SELECT GREENHOUSE GASES

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon dioxide	50–200	1
Methane	12 ± 3	21
Nitrous oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: tetrafluoromethane (CH ₄)	50,000	6,500
PFC: hexafluoroethane (C ₂ F ₆)	10,000	9,200
Sulfur hexafluoride (SF ₆)	3,200	23,900

Source: Urban Crossroads 2013

Carbon Dioxide

CO₂ is an odorless and colorless GHG. Outdoor levels of CO₂ are not high enough to result in negative health effects. CO₂ is emitted from natural and man-made sources. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood. CO₂ is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.

Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO₂ concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of CO₂ in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources.

Methane

CH₄ is an extremely effective absorber of radiation, though its atmospheric concentration is less than CO₂ and its lifetime in the atmosphere is brief (10–12 years), compared to other greenhouse gases. No health effects are known to occur from exposure to methane. CH₄ has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH₄. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

Nitrous Oxide

N₂O, also known as laughing gas, is a colorless GHG. N₂O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's lesions (brain damage). Concentrations of N₂O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). N₂O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, e.g., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. Nitrous oxide is used in rocket engines and in race cars. N₂O can be transported into the stratosphere, deposited on the earth's surface, and converted to other compounds by chemical reaction.

EFFECTS OF GLOBAL CLIMATE CHANGE

The California Environmental Protection Agency (CalEPA) published a report entitled *Scenarios of Climate Change in California: An Overview* (climate scenarios report) in February 2006 (California Climate Change Center 2006) that, while not adequate for a California Environmental Quality Act (CEQA) project-specific or cumulative analysis, is generally instructive about the statewide impacts of global warming (Urban Crossroads 2013).

The climate scenarios report uses a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the twenty-first century: lower warming range (3.0–5.5°F), medium warming range (5.5–8.0°F), and higher warming range (8.0–10.5°F). The climate scenarios report then presents an analysis of future climate in California under each warming range that while uncertain, presents a picture of the impacts of global climate change trends in California.

In addition, most recently on August 5, 2009, the California Natural Resources Agency released a public review draft of its California Climate Adaptation Strategy report that details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts, and precipitation changes. This report responds to Governor's Executive Order S-13-2008 that called on state agencies to develop California's strategy to identify and prepare for expected climate impacts.

According to the reports, substantial temperature increases arising from increased GHG emissions potentially could result in a variety of impacts to the people, economy, and environment of California associated with a projected increase in extreme conditions, with the severity of the impacts depending on actual future emissions of GHGs and associated warming. Under the emissions scenarios of the climate scenarios report, the impacts of global warming in California have the potential to include, but are not limited to, those discussed below.

Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25–35 percent under the lower warming range to 75–85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become difficult to meet local air quality standards. Air

quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The climate scenarios report indicates that large wildfires could become more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and above 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from Northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If GHG emissions continue unabated, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. The amount of snowpack that could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The state's water supplies are also at risk from rising sea levels. An influx of salt water could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water in the southern edge of the Sacramento/San Joaquin River Delta, a major supply of fresh water.

Agriculture

Increased temperatures could cause widespread changes to the agriculture industry, reducing the quantity and quality of agricultural products statewide. California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher CO₂ levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species, while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in Northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity in the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of global climate change.

3.4.2 REGULATORY FRAMEWORK

The adoption of recent legislation has provided a clear mandate that climate change must be included in an environmental review for a project subject to CEQA. Several GHG emission-related laws and regulations are provided below.

STATE REGULATION

California has adopted various administrative initiatives and also enacted a variety of legislation relating to climate change, much of which sets aggressive goals for GHG emissions reductions within the state. However, none of this legislation provides definitive direction regarding the treatment of climate change in the environmental review documents prepared under CEQA. In particular, the amendments to the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or thresholds of significance and do not specify greenhouse gas reduction mitigation measures. Instead, the CEQA amendments continue to rely on lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. In addition, no state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating any significant effects in CEQA documents. Thus, lead agencies exercise their discretion determining how to analyze greenhouse gases.

The discussion below provides a brief overview of CARB and Office of Planning and Research (OPR) documents and of the primary legislation relating to climate change that may affect the emissions associated with the proposed project. It begins with an overview of the primary regulatory acts that have driven GHG regulation and analysis in California.

Executive Order S-3-05 (Statewide GHG Targets)

California Executive Order S-03-05 (June 1, 2005) mandates a reduction of GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Although the 2020 target has been incorporated into legislation (AB 32), the 2050 target remains only a goal of the Executive Order.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

The California Global Warming Solutions Act of 2006 (AB 32) 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) was signed into law in September 2006 after considerable study and expert testimony before the legislature. The law instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The act directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020 (1990 levels have been estimated to equate to 15 percent below 2005 emission levels). Based on CARB's calculation of 1990 baseline emissions levels, California must reduce GHG emissions by approximately 29 percent below "business-as-usual" predictions of year 2020 GHG emissions to achieve this goal.

The bill required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. CARB accomplished the key milestones set forth in AB 32, including the following:

- June 30, 2007. Identification of discrete early action GHG emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures. These were later supplemented by adding six other discrete early action measures.
- January 1, 2008. Identification of the 1990 baseline GHG emissions level, approval of a statewide limit equivalent to that level, and adoption of reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline.
- January 1, 2009. Adoption of a scoping plan for achieving GHG emission reductions. On December 11, 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan), discussed in more detail below.
- January 1, 2010. Adoption and enforcement of regulations to implement the "discrete" actions. Several early action measures have been adopted and became effective on January 1, 2010.
- January 1, 2011. Adoption of GHG emissions limits and reduction measures by regulation. On October 28, 2010, CARB released its proposed cap-and-trade regulations, which would cover sources of approximately 85 percent of California's GHG emissions (CARB 2010). CARB's board ordered CARB's executive director to prepare a final regulatory package for cap and trade on December 16, 2010.

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

- January 1, 2012. GHG emissions limits and reduction measures adopted in 2011 became enforceable.

AB 32 Scoping Plan

As noted above, on December 11, 2008, CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business as usual"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations will occur through the end of year 2013. The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions.
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, heavy-duty truck measures, and the Low Carbon Fuel Standard.
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In 2009, a coalition of special interest groups brought a challenge to the Scoping Plan alleging that it violated AB 32 and that the environmental review document (called a "Functional Equivalent Document") violated CEQA by failing to appropriately analyze alternatives to the proposed cap-and-trade program. On May 20, 2011, the San Francisco Superior Court entered a final judgment ordering that CARB take no further action with respect to cap-and-trade rulemaking until it complies with CEQA. While CARB disagreed with the trial court finding and appealed the decision on May 23, 2011, in order to remove any doubt about the matter and in keeping with CARB's interest in public participation and informed decision-making, CARB revisited the alternatives. The revised analysis includes the five alternatives included in the original environmental analysis: a "no project" alternative (that is, taking no action at all); a plan relying on a cap-and-trade program for the sectors included in a cap; a plan relying more on source-specific regulatory requirements with no cap-and-trade component; a plan relying on a carbon fee or tax; and a plan relying on a variety of proposed strategies and measures. The public hearing to consider approval of the AB 32 Scoping Plan Functional Equivalent Document and the AB 32 Scoping Plan was held on August 24, 2011. On this date, CARB re-approved the Scoping Plan.

In August 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relies on emissions projections updated in light of current economic forecasts which account for the economic downturn since 2008 as well as reduction measures already approved and put in place. This reduced the projected 2020 emissions from 596 million metric tons (MMT) CO₂e to 545 MMT CO₂e. The reduction in projected 2020 emissions means that the revised business-as-usual (BAU) reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now only 21 percent.

Assembly Bill 1493

AB 1493 requires CARB to develop and adopt the nation's first greenhouse gas emission standards for automobiles. The legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in California. Further, the legislature stated that technological solutions to reduce greenhouse gas emissions would stimulate the California economy and provide jobs.

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards in 2004. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961) and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks in various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016.

California Building Energy Efficiency Standards

Energy conservation standards for new residential and commercial buildings were originally adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations [CCR]). In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). Part 11 establishes voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Some of these standards have become mandatory in the 2013 edition of the Part 11 code. Current mandatory standards include:

- Twenty (20) percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35, and 40 percent reductions
- Separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

- Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies
- Low-pollutant-emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard

The California Energy Commission has opened a public process and rulemaking proceeding for the adoption of changes to the 2013 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1 (collectively referred to here as the standards). The proposed amended standards will be adopted in 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction. The standards, which took effect on January 1, 2014, will offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

LOCAL

South Coast Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, South Coast Air Management District (SCAQMD) staff is convening an ongoing GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that provide input to SCAQMD staff on developing the significance thresholds. On October 8, 2008, the SCAQMD released the Draft AQMD Staff CEQA GHG Significance Thresholds. These thresholds have not been finalized and continue to be developed through the working group.

On September 28, 2010, SCAQMD Working Group Meeting #15 considered use of the 6.6 metric tons per service population metric as a threshold for plan-level analysis, though it has not adopted any thresholds for the land use sector to date. Thus, it is only a concept that has been discussed at the staff level and is not a SCAQMD recommendation at this time. Furthermore, SCAQMD's staff concept (as indicated in the September 28, 2010, working group presentation) is that the service population metric is only employed for significance determination after considering whether a CEQA plan or project is consistent with a climate action plan.

As of SCAQMD staff's meeting on September 28, 2010, the draft tiered threshold provides the following guidance:

Tier 1: Is the project exempt from CEQA? If yes, the project is not significant and no further analysis is required.

Tier 2: Is the project consistent with an approved regional climate action plan? If yes, the project is not significant and no further analysis is required.

Tier 3: Would the project result in emissions below the screening level criteria? If yes, the project is not significant and no further analysis is required.

- Propose 10,000 metric tons (MT) per year CO₂e per year industrial project threshold for use by all lead agencies.

- Propose 3,000 MT per year CO₂e for all residential and commercial land use types.
- Threshold value by land use type acceptable if used consistently.
- Residential: 3,500 MT per year CO₂e
- Commercial: 1,400 MT per year CO₂e
- Mixed use: 3,000 MT per year CO₂e
- Both options based on review of the Office of Planning Research (OPR) database (711 CEQA projects) using the 90 percent capture rate approach

Tier 4: Would the project comply with certain performance-based standards? If yes, the project is not significant and no further analysis is required.

- Option #1: Percent Emission Reduction Target
- No recommendation at this time.
- Option #2: Early Implementation of Applicable AB 32 Scoping Plan Measures
- Incorporated in Option #3.
- Option #3: SCAQMD Efficiency Target
- 2020 Targets – 4.8 MT/year CO₂e per service population for project-level threshold (land use employment only)
- 2035 Targets – 3.0 MT/year CO₂e per service population for project-level threshold

The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the Governing Board. The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions; however, these rules are currently applicable only to boilers and process heaters, forestry, and manure management projects.

3.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Per Appendix F and G of the CEQA Guidelines, impacts related to climate change are considered significant if implementation of the proposed project would:

- 1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- 2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.
- 3) Inefficient, wasteful, and unnecessary consumption of energy from project energy requirements for project construction and operation/maintenance, including the effects of the project on local and regional energy supplies and on requirements for additional capacity, as well as the effects of the project on energy resources and transportation energy use.

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

In order to assess the significance of a proposed project's environmental impacts, it is necessary to identify quantitative or qualitative thresholds which, if exceeded, would constitute a finding of significance. As discussed above, while project-related GHG emissions can be estimated, the direct impacts of such emissions on climate change and global warming cannot be determined on the basis of available science. There is no evidence at this time which would indicate that the emissions from a project the size of the proposed project would directly affect global climate change. The SCAQMD and other air quality agencies concur that GHG and climate change should be evaluated as a potentially significant cumulative rather than project-specific impact.

AB 32 states, in part, that "global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." Because global warming is the result of GHG emissions and GHGs are emitted by innumerable sources worldwide, global climate change is considered to be a significant cumulative impact. GHG emissions from the project would contribute to cumulative GHG emissions in California and to the potential adverse environmental impacts of climate change.

Based on the information set forth above, for the purposes of this analysis, implementation of the proposed project may have a significant adverse impact on GHG emissions if it would exceed the SCAQMD's interim threshold of 3,000 MT CO₂e per year and/or is shown to be inconsistent with AB 32's Scoping Plan and related measures.

METHODOLOGY

CEQA Guidelines 15064.4(b)(1) states that a lead agency may use a model or methodology to quantify GHGs emissions associated with a project. On July 26, 2013, the SCAQMD in conjunction with the California Air Pollution Control Officers Association released the latest version of the California Emissions Estimator Model (CalEEMod) v2013.2. The purpose of this model is to more accurately calculate GHG emissions from direct and indirect sources and quantify applicable GHG reductions achieved from mitigation measures. As such, the July 2013 CalEEMod was used by Urban Crossroads for this project (see **Appendix 3.4**). The CalEEMod model includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, and water.

IMPACTS AND MITIGATION MEASURES

Generate Greenhouse Gas Emissions That May Have a Significant Impact on the Environment (Standard of Significance 1)

Impact 3.4.1 Implementation of the proposed project will result in greenhouse gas emissions that would further contribute to significant impacts on the environment. This is considered a **less than cumulatively considerable** impact.

Construction GHG Emissions

The proposed project would result in direct emissions of GHGs from construction. The approximate quantity of daily GHG emissions generated by construction equipment utilized to build the proposed project is depicted in **Table 3.4-3**.

TABLE 3.4-3
CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS – METRIC TONS PER YEAR

Construction	Carbon Dioxide (CO ₂)	Methane (CH ₄)	Nitrous Oxide (N ₂ O)	CO ₂ e
Construction	536	0.09	0.00	538

Source: Urban Crossroads 2013 (see **Appendix 3.4**)

As shown, project construction would result in the generation of approximately 538 MT CO₂e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. In accordance with the SCAQMD guidance, projected GHGs from construction have been quantified and amortized over the life of the project (30 years). The amortized construction emissions are added to the annual average operational emissions.

Operational GHG Emissions

As shown in **Table 3.4-4**, the unmitigated long-term operations of the proposed project would produce 997.47 metric tons of CO₂e annually.

TABLE 3.4-4
UNMITIGATED PROJECT GREENHOUSE GAS EMISSIONS – PROJECT OPERATION (METRIC TONS PER YEAR)

Emissions Source	Carbon Dioxide (CO ₂)	Methane (CH ₄)	Nitrous Oxide (N ₂ O)	CO ₂ e
Construction Amortized over 30 Years	17.87	0.003	–	17.94
Energy	218.55	8.61e-3	2.55e-3	219.53
Mobile	664.86	0.02	–	665.34
Waste	36.13	2.14	–	80.96
Water	12.51	0.04	1.06e-3	13.70
Total	949.92	2.20	3.61e-3	997.47
SCAQMD Significance Threshold (MT CO ₂ e Annually)				3,000
Significant?	No			

Source: Urban Crossroads 2013 (see **Appendix 3.4**)

As shown in **Table 3.4-4**, the proposed project would not surpass the project threshold of 3,000 MT CO₂e annually. As a result, this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

Conflict with Applicable Plan Adopted to Reduce GHG Emissions (Standard of Significance 2)

Impact 3.4.2 Implementation of the proposed project could conflict with an applicable plan adopted for the purpose of reducing the emissions of greenhouse gases. This impact is **less than cumulatively considerable**.

AB 32 requires California to reduce its GHG emissions by approximately 29 percent below business as usual. CARB identified reduction measures to achieve this goal as set forth in the

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

CARB Scoping Plan. Thus, projects that are consistent with the CARB Scoping Plan are also consistent with the 29 percent reduction below business as usual required by AB 32.

The proposed project would generate GHG emissions from a variety of sources such as vehicles. GHGs could also be indirectly generated by incremental electricity consumption and waste generation from the proposed project.

Table 3.4-4 presents the 39 Recommended Actions (qualitative measures) identified by CARB in its Climate Change Proposed Scoping Plan. Of the 39 Recommended Actions identified, those that would be considered to be applicable to the proposed project would primarily be those actions related to transportation, electricity and natural gas use, green building design, and industrial uses. Consistency of the proposed project with these Recommended Actions is evaluated by each source-type measure below. **Table 3.4-4** identifies which CARB-Recommended Actions apply to the project and of those, whether the project is consistent therewith.

TABLE 3.4-4
RECOMMENDED ACTIONS FOR CLIMATE CHANGE PROPOSED SCOPING PLAN

ID#	Sector	Strategy Name	Applicable to Project?	Will Project Conflict with Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	Yes	No
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	Yes	No
T-3	Transportation	Regional Transportation-Related GHG Targets	Yes	No
T-4	Transportation	Vehicle Efficiency Measures	Yes	No
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	No	No
T-6	Transportation	Goods-Movement Efficiency Measures	No	No
T-7	Transportation	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	No	No
T-8	Transportation	Medium- and Heavy-Duty Vehicle Hybridization	No	No
T-9	Transportation	High-Speed Rail	No	No
E-1	Electricity and Natural Gas	Increased Utility Energy Efficiency Programs More Stringent Building and Appliance Standards	Yes	No
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000 GWh	No	No
E-3	Electricity and Natural Gas	Renewables Portfolio Standard	No	No
E-4	Electricity and Natural Gas	Million Solar Roofs	No	No
CR-1	Electricity and Natural Gas	Energy Efficiency	No	No
CR-2	Electricity and Natural Gas	Solar Water Heating	No	No
GB-1	Green Buildings	Green Buildings	Yes	No

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ID#	Sector	Strategy Name	Applicable to Project?	Will Project Conflict with Implementation?
W-1	Water	Water Use Efficiency	Yes	No
W-2	Water	Water Recycling	No	No
W-3	Water	Water System Energy Efficiency	No	No
W-4	Water	Reuse Urban Runoff	No	No
W-5	Water	Increase Renewable Energy Production	No	No
W-6	Water	Public Goods Charge (Water)	No	No
I-1	Industry	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	No	No
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	No	No
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	No	No
I-4	Industry	Refinery Flare Recovery Process Improvements	No	No
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	No	No
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	No	No
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	No	No
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	No	No
F-1	Forestry	Sustainable Forest Target	No	No
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	No	No
H-2	High Global Warming Potential Gases	SF ₆ Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	No	No
H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	No	No
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action; adopted June 2008)	No	No
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	No	No
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	No	No

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ID#	Sector	Strategy Name	Applicable to Project?	Will Project Conflict with Implementation?
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	No	No
A-1	Agriculture	Methane Capture at Large Dairies	No	No

A detailed discussion of the applicability of each measure and whether the project conflicts with its implementation follows.

Transportation

CARB's Scoping Plan identifies nine transportation-related Recommended Actions. Action T-1 concerns improvements to light-duty vehicle technology for the purposes of reducing GHG emissions. This action focuses on legislating improved controls for vehicle manufacturers and would not generally be considered applicable to the proposed project. Vehicles traveling to the proposed project would be subject to the Pavley standards, as applicable, and would be consistent with and not conflict with this Recommended Action.

Action T-2 concerns implementation of a low carbon fuel standard. To reduce the carbon intensity of transportation fuels, CARB has developed a Low Carbon Fuel Standard (LCFS), which is estimated to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The LCFS incorporates compliance mechanisms that provide flexibility to fuel providers in how they meet the requirements to reduce GHG emissions. While implementation of such a standard is not within the purview of a development project, a land use such as the proposed project would result in the consumption of fuels by the congregants it serves. Projects such as the proposed project would be required to participate with the use of low carbon fuels as they are made available through purchase of fuels. Therefore, the proposed project would not conflict with measures concerning the use of low carbon fuels.

Action T-3 addresses regional transportation targets for reducing GHG emissions. Senate Bill (SB) 375 requires CARB to develop, in consultation with metropolitan planning organizations (MPOs), passenger vehicle GHG emissions reduction targets for 2020 and 2035. It sets forth a collaborative process to establish these targets, including the appointment by CARB of a Regional Targets Advisory Committee to recommend factors to be considered, and methodologies for setting GHG emissions reduction targets. SB 375 also provides incentives—relief from certain CEQA requirements for development projects that are consistent with regional plans that achieve the targets. For the Southern California Association of Governments (SCAG) region in which the project is located, the targets are set at 8 percent below 2005 per capita emissions levels by 2020 and 13 percent below 2005 per capita emissions levels by 2035.

On April 4, 2012, the SCAG Regional Council adopted the 2012--2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS sets forth a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement). The RTP/SCS is meant to provide individual jurisdictions with growth strategies that, when taken together, achieve the regional GHG emission reduction targets. The proposed project is not regionally significant per CEQA Guidelines Section 15206 and as such is not expected to conflict with the SCAG RTP/SCS and associated SB 375 targets, since those targets were established and are applicable on a regional level.

Action T-4 is concerned with vehicle efficiency measures. The California Department of Resources Recycling and Recovery (CalRecycle) with various partners continues to conduct a public awareness campaign to promote sustainable tire practices. CARB is pursuing a regulation to ensure that tires are properly inflated when vehicles are serviced. In addition, the California Energy Commission (CEC) in consultation with CalRecycle is developing an efficient tire program focusing first on data gathering and outreach, then on potential adoption of minimum fuel-efficient tire standards, and lastly on the development of consumer information requirements for replacing tires. CARB is also pursuing ways to reduce engine load via lower friction oil and reducing the need for air conditioner use. CARB is actively engaged in the regulatory development process for the tire inflation component of this measure. While implementation of such a standard is not within the purview of a development project, a land use such as that proposed would generate vehicle miles traveled (VMT) and be subject to any applicable adopted standards and would therefore not conflict with the Recommended Action.

Action T-5 addresses electrification of ships at ports and is not applicable to the proposed project. Therefore, the proposed project would not conflict with this measure.

Action T-6 also primarily addresses port operations and is not applicable to the proposed project. Therefore, the proposed project would not conflict with this measure.

Action T-7 requires existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology. Implementation of such a standard is not within the purview of the proposed project since various trucks may access the site. Therefore, the proposed project would not conflict with this measure.

Action T-8 focuses on hybridization of medium- and heavy-duty vehicles. The implementation approach to Action T-8 is to adopt a regulation and/or incentive program that reduces GHG emissions by encouraging hybrid technology as applied to vocational applications that have significant urban, stop-and-go driving, idling, and power take-off operations in their duty cycle. Such applications include parcel delivery trucks and vans. Implementation of such a standard is not within the purview of the proposed project. Therefore, the proposed project would not conflict with this measure.

Action T-9 concerns implementation of a high-speed rail system. A high-speed rail system is part of the statewide strategy to provide more mobility choice and reduce GHG emissions. This measure supports implementation of plans to construct and operate a HSR system between Northern and Southern California. As planned, the HSR is a 700-mile-long rail system capable of speeds in excess of 200 miles per hour on dedicated, fully grade-separated tracks with state-of-the-art safety, signaling, and automated rail control systems. The system would serve the major metropolitan centers of California in 2030 and is projected to displace between 86 and 117 million riders from other travel modes in 2030. The proposed project would not conflict with implementation of a high-speed rail system.

Electricity and Natural Gas

Action E-1, together with Action GB-1 (Green Building), aims to reduce electricity demand by increased efficiency of utility energy programs and adoption of more stringent building and appliance standards. Elements of this action include encouraging construction of zero net energy buildings and implementation of passive solar design. In addition to employing on-site electricity generation, a zero net energy building must either replace natural gas with renewable energy for space and water heating or compensate for natural gas use by generating surplus electricity for sale on the state's electricity grid. The proposed project is required to comply with

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

the most recent Title 24 Energy Efficiency Standards and applicable green building standards. Therefore, the proposed project would not conflict with this measure.

Action E-2 encourages an increase in the use of combined heat and power use, or cogeneration, facilities. California has supported combined heat and power for many years, but market and other barriers continue to keep combined heat and power from reaching its full market potential. Increasing the deployment of efficient combined heat and power will require a multi-pronged approach that includes addressing significant barriers and instituting incentives or mandates where appropriate. Implementation of such a standard is not within the purview of the proposed project; therefore, the proposed project would not conflict with this measure.

Action E-3 concerns Renewables Portfolio Standards for utilities and does not apply directly to development projects. Therefore, the proposed project would not conflict with this Recommended Action.

Action E-4 strives to promote solar-generated electricity. The Million Solar Roofs initiative is not within the purview of any one individual project. Therefore, the proposed project would not conflict with this Recommended Action.

Water Use

Implementation of all but two of the Recommended Actions listed in **Table 3.4-4** above are related to water use and are not within the purview of the proposed project. The two that apply to the proposed project include W-1 (Water Use Efficiency) and W-3 (Water System Energy Efficiency). The project will be required to comply with the City's landscape ordinance that implements policy W-1 and W-3 which ensures that the project will not obstruct the implementation of the Recommended Actions.

Industrial Use

The proposed project is not an industrial use; therefore, these measures do not apply to the project.

Conclusion

The proposed project is consistent with or otherwise not in conflict with the CARB Scoping Plan Recommended Actions. As such, a qualitative assessment of the project impacts based on consistency with the CARB Scoping Plan supports the conclusion that the project's GHG emissions are **less than cumulatively considerable**.

Mitigation Measures

None required.

Result in the inefficient, wasteful or unnecessary consumption of energy. (Standard of Significance 3)

Impact 3.4.3 Implementation of the proposed project could result in the inefficient, wasteful, and unnecessary consumption of energy during construction and operation. This impact is **less than cumulatively considerable**.

Electricity

In 2008, California used over 285,574 gigawatts of electricity (CEC 2009)¹. California's electricity generation system currently generates over 290,000 gigawatt hours of electricity each year, which is transported over California's 32,000 miles of transmission lines (CEC 2007). By 2020, electricity consumption in the state is projected to reach almost 320,000 gigawatts (CEC 2009). In 2008, this electricity was produced from power plants fueled by natural gas (45.7 percent), hydrologic sources (11.0 percent), coal (18.2 percent), nuclear (14.4 percent), and renewable methods (10.6 percent). Approximately 68.1 percent of the electricity was generated within California, with the balance imported from other states, Canada, and Mexico (CEC 2009). Overall electricity use in California is projected to grow by 1.2 percent annually (CEC 2009). However, peak demand is growing at a rate of 1.30 percent (850 megawatts) per year (CEC 2009). This increase in peak demand is the result of a population that is moving inland to the warmer areas of the state, prompting higher demand for electricity for air conditioning.

Electric service within Wildomar is provided by Southern California Edison. (SCE). According to their website, SCE provides electric service to approximately 14 million people throughout a 50,000-square-mile service area in central, coastal and Southern California. Electricity purchased from SCE by local customers in Jackson is generated and transmitted to the area by a statewide network of power plants and transmission lines. Various transmission and distribution lines traverse Amador County, serving to carry electrical power from power plants both inside and outside the county to electrical substations where power is converted to voltages suitable for distribution to end users.

Natural Gas

As a state, California is the second largest natural gas consumer in the United States, representing more than 10 percent of national natural gas consumption. Customers in the residential and commercial sectors, referred to as "core" customers, accounted for 29 percent of the state's natural gas demand in 2008 (CEC 2009). Large consumers such as electricity generators and the industrial sector, referred to as "noncore" customers, accounted for about 71 percent of demand in the same year. California remains heavily dependent on natural gas to generate electricity, which accounted for more than 40 percent of natural gas demand in 2008 (CEC 2009). Approximately 13.5 percent of the natural gas produced in 2006 was within California, with the balance imported via pipeline from other states and Canada (CEC 2007). California is at the farthest end of those pipelines, forcing it to compete with other states that are located closer to generation plants in Canada for supplies.

Natural gas is provided within the City of Wildomar by the Southern California Gas Company (SCG). According to their website, SCG is the nation's largest natural gas distribution utility, providing safe and reliable energy to 20.9 million consumers through 5.8 million meters in more than 500 communities. The company's service territory encompasses approximately 20,000 square miles in diverse terrain throughout Central and Southern California, from Visalia to the Mexican border.

¹ Energy usage is typically quantified using the British thermal unit (BTU). As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWhr) of electricity are 124,884 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively.

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Construction

Implementation of the proposed project would involve construction activities that would require the use of gasoline, diesel fuel, and other fuels in order to be completed. Energy usage during construction typically involves the use of motor vehicles both for transportation of workers and equipment and for direct construction actions such as the use of cranes or lifts. Additional energy usage would occur as power for tools and equipment used on-site, including but not limited to gas generators, air compressors, air handlers and filters, and other typical direct construction energy uses.

The proposed project would use gasoline, diesel and natural gas as a short-term consequence of project construction. Construction of the proposed improvements would be similar in the consumption level of gas as any project of this size. However, this energy demand would not result in the need for new or altered facilities given the temporary nature of construction. Furthermore, construction activities involve known techniques of grading, trenching and paving and are not anticipated to result in an inefficient use of energy. As construction contractors would purchase their own gasoline and diesel fuel from local suppliers they have an incentive to make the most efficient use of supplies to minimize costs to the project.

Operations

Energy consumption, in therms for natural gas and kWh for electricity, resulting from operations of the proposed project were calculated using the CalEEMod Model and are summarized in **Table 3.4-5**.

**TABLE 3.4-5
PROPOSED PROJECT ENERGY CONSUMPTION**

Average Year Scenario	
Natural Gas Consumption	1,005,716 kBTU
Electricity Consumption	576,185 kWh

Source: *Urban Crossroads*, 2014. See **Appendix 3.4**

While the proposed project would require more energy, it is unlikely that these providers would need to increase their power supplies to serve the project. In 2012, SCE sold 75,597 gigawatt-hours (GWh) of electricity (75,591,000,000 kWh) (CPUC February 2014). The Southern California Gas Company's net flow purchase of natural gas from September 2012 through August 2013 was 1,938,981,487 kBTU (CPUC, March 2014).

The proposed project would increase electricity and natural gas consumption, but not at a level that would be considered substantial in relation to regional energy supplies. The projected increase in the electricity demand for the project would be approximately 0.001 percent of SCE's total electricity annual usage, and the projected natural gas demand of the project would be approximately 0.052 percent of the Southern California Gas Company's total natural gas demand. As such, the project would not result in energy demands that would require the development of new energy sources or affect service to existing customers.

The proposed project will be constructed to meet the standards of the 2013 CBC that includes energy conservation measures in the form of insulation, fixture types and windows. Compliance with the building code for all structures will ensure that the energy usage will be typical for a preschool, administrative office and maintenance building. The parking lot lighting and sports

field lighting will similarly be designed to be efficient in order to reduce the cost(s) of operating the facility. Overall, Impacts associated with the potential for inefficient, wasteful, and unnecessary consumption of energy are considered **less than cumulatively considerable**.

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

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3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section considers and evaluates the potential impacts of the proposed project on historical, cultural, and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, or religious reasons. Paleontological resources include fossil remains, as well as fossil localities and formations that have produced fossil material. This section is based on a technical report provided by Jean Keller, PhD, for the project site in 2014 and is contained in **Appendix 3.5**.

CONCEPTS AND TERMINOLOGY FOR EVALUATION OF CULTURAL RESOURCES

For analysis purposes, cultural resources may be categorized into four groups: archaeological resources (prehistoric and historical); historic properties, buildings, and districts; areas of importance to Native Americans; and paleontological resources (fossilized remains of plants and animals). Cultural resource impacts include those to existing historic resources (i.e., historic districts, landmarks, etc.) and to archaeological and paleontological resources.

The following definitions are common terms used to discuss the regulatory requirements and treatment of cultural resources:

Cultural resources is the term used to describe several different types of properties: prehistoric and historic archaeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans.

Historic properties is a term defined by the National Historic Preservation Act (NHPA) as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property.

Historical resource as described in CEQA includes buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance and is eligible for listing or is listed in the California Register of Historical Resources (CRHR) or a local register of historical resources. The CRHR includes resources listed in, or formally determined eligible for listing in, the NRHP, as well as some California State Landmarks and Points of Historical Interest.

Paleontological resource is defined as including fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. A unique paleontological site would include a known area of fossil-bearing rock strata.

3.5.1 EXISTING SETTING

The following summary of the history and ethnographic setting of the project area is taken from the *Phase I Cultural Resources Assessment of Public Use Permit 778, Revised Permit No. 5*, prepared for Cornerstone Community Church. Text citations to these source documents are not included in individual paragraphs. The report may be viewed at Wildomar City Hall, 23873 Clinton Keith Road, Suite 201, during normal business hours.

PREHISTORY

On the basis of currently available archeological research, occupation of Southern California by human populations is believed to have begun at least 10,000 years ago. The earliest established tradition in Southern California is accepted to be the San Dieguito Tradition. The San Dieguito

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

people were nomadic large-game hunters whose tool assemblage included large domed scrapers, leaf-sharpened knives and projectile points, stemmed projectile points, chipped stone crescentics, and hammerstones.

Throughout southwestern California, the La Jolla Complex followed the San Dieguito Tradition. The La Jolla Complex is recognized primarily by the presence of millingstone assemblages in shell middens. Characteristic cultural resources of the La Jolla Complex include basined millingstones, unshaped manos, flaked stone tools, shell middens, and a few Pinto-like projectile points. Flexed inhumations under stone cairns, with heads pointing north, are also present. The La Jolla Complex existed from 5500 to 1000 BC.

The Pauma Tradition may be an inland variant of the La Jolla Complex, exhibiting a shift to a hunting and gathering economy, rather than one based on shellfish gathering. Implications of this shift are an increase in the number and variety of stone tools and a decrease in the amount of shell.

The late period is represented by the San Luis Rey Complex, divided into two periods: San Luis Rey I (AD 1400–1750) and San Luis Rey II (AD 1750–1850). The San Luis Rey I type component includes cremations, bedrock mortars, millingstones, small triangular projectile points with concave bases, bone awls, stone pendants, *Olivella* shell beads, and quartz crystals. The San Luis Rey II assemblage is the same as San Luis Rey I, but with the addition of pottery vessels, cremation urns, tubular pipes, stone knives, steatite arrow straighteners, red and black pictographs, and such non-aboriginal items as metal knives and glass beads. Inferred San Luis Rey subsistence activities include hunting and gathering with an emphasis on acorn harvesting.

ETHNOGRAPHY

The project area was included in the known territory of the Shoshonean-speaking Luiseño Indians during both prehistoric and historic times. The name Luiseño is Spanish in origin and was used in reference to those aboriginal inhabitants of Southern California associated with the Mission San Luis Rey.

The territory of the Luiseño was extensive, encompassing over 1,500 square miles of coastal and inland Southern California. Known territorial boundaries extended on the coast from Aliso Creek on the north to Agua Hedionda Creek on the south, then inland to Santiago Peak, across to the eastern side of the Elsinore Valley, southward to the east of Palomar Mountain, and finally, around the southern slope of the Valley of San Jose. Their habitat included every ecological zone from sea level to 6,000 feet above sea level.

Territorial boundaries of the Luiseño were shared with the Gabrieliño and Serrano to the north, the Cahuilla to the east, and the Cupeño and Ipai to the south. With the exception of the Ipai, these tribes shared similar cultural and language traditions. Although the social structure and philosophy of the Luiseño were similar to that of the neighboring tribes, they had a greater population density and correspondingly, a more rigid social structure.

HISTORIC CONTEXT

In the general project area, the Colonial Spanish-Mission Period (AD 1769–1830) first represents historical occupation. Although earlier European explorers had traveled throughout Southern California, it was not until the 1769 “Sacred Expedition” of Captain Gaspar de Portola and Franciscan Father Junipero Serra that there was actual contact with aboriginal inhabitants of the region (“Indians”). The intent of the expedition, which began in San Blas, Baja California, was

to establish missions and presidios along the California coast, thereby serving the dual purpose of converting Indians to Christianity and expanding Spain's military presence in the "New World."

In addition, historian Phillip Rush credits Captain Juan Pablo Grijalva and his party with the first European discovery of the region in 1795. The first Europeans of record to enter the region were Father Juan Norberto de Santiago and Captain Pedro Lisalde. In 1797 their expedition party, comprising seven soldiers and five Indians (probably Juaneños from the Mission San Juan Capistrano), stopped briefly near Temecula on their journey to find another mission site. Upon leaving the valley, Fr. Santiago remarked in his journal that the expedition had encountered an Indian village called Temecula.

In 1798 on the site Santiago had selected, the Mission San Luis Rey de Francia was founded, and all aboriginals living within the mission's realm of influence became known as the Luiseño. Within a 20-year period, under the guidance of Fr. Antonio Peyro, the mission prospered to a degree that it was often referred to as the "King of the Missions." During this period, the Mission San Luis Rey de Francia claimed the entire region that is now western Riverside County and northern San Diego County as a cattle ranch, although records of the Mission San Juan Capistrano show this region as part of their holdings.

By 1818, the greater Temecula Valley had become the Mission San Luis Rey's principle producer of grain and was considered one of the mission's most important holdings. It was at approximately this time that a granary, chapel, and majordomo's home were built in Temecula. These were the first structures built by Europeans within the boundaries of Riverside County. The buildings were constructed at the original Indian village of Temecula on a high bluff at the southern side of Temecula Creek where it joins Murrieta Creek to form the Santa Margarita River. This entire area continued to be an abundant producer of grain, as well as horses and cattle, for the thriving Mission San Luis Rey until the region became part of Mexico on April 11, 1822. Following this event, the Spanish missions and mission ranches began a slow decline.

During the Mexican Ranch-Pastoral/Landless Indian period (AD 1830–1860), the first of the Mexican ranchos were established following the enactment of the Secularization Act of 1833 by the Mexican government. Mexican governors were empowered to grant vacant land to "contractors (*empresarios*), families, or private citizens, whether Mexicans or foreigners, who may ask for them for the purpose of cultivating or inhabiting them." Mexican governors granted approximately 500 ranchos during this period.

Throughout the 1840s and 1850s, thousands of settlers and prospectors traveled through the project area on the Emigrant Trail en route to various destinations in the West. The southern portion of the trail ran from the Colorado River to Warner's Ranch and then westward to Aguanga, where it split into two roads. The main road continued westward past Aguanga and into the valley north of the Santa Ana Mountains. This road was alternately called the Colorado Road, Old Temescal Road, or Fort Yuma Road, and what is now State Route 79 generally follows its alignment. The second road, known as the San Bernardino Road, split off northward from Aguanga and ran along the base of the San Jacinto Mountains.

In the final period of historic occupation, the American Developmental/Indian Reservation Era (AD 1860–current), the first major changes in the project area took place as a result of the land issues addressed in the previous decade. Settlement of the region began in earnest as a direct result of the Homestead Act of 1862, although many of the settlers actually obtained their land through other avenues. This region was considered especially desirable by settlers due to the abundance of flat land with good soil, relatively dependable sources of water, and the proximity to major transportation corridors.

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On March 17, 1882, the California Southern Railroad (San Bernardino and Temecula Line) was opened, extending from National City near the Mexican border in San Diego County, northerly through Temecula and Murrieta, across the Perris valley, down Box Springs Grade, and on to the city of San Bernardino. As a result, the entire region anticipated a boom in industry and population. L. Menifee Wilson, a 20-year-old man from Kentucky, came to the area and located what appears to be the first gold quartz mine in this part of Southern California.

As news of his find spread, miners flocked to the region to try their luck. Hundreds of gold mining claims were subsequently filed in the region around Menifee's mine, and this area became known as Menifee and the Menifee Valley. Gold quartz discoveries in the Wildomar, Winchester, Perris, Lakeview, and Murrieta areas further fueled the belief that the entire region was one of unsurpassed mineral wealth.

Wilson was one the major proponents of this belief and in addition to his original mine, he claimed several others in the general area. From the time of Wilson's first gold discovery in the early 1880s, gold production through hard rock mining in western Riverside County increased considerably, reaching its peak in 1895. At that time the value of gold produced was reported in the *Mining and Scientific Press* (Vol. 85) as being \$285,106. Although the gold value was still relatively high in 1896 (\$262,800), from that point on production decreased substantially every year, until in 1917, the value of gold produced was reported as being zero.

On September 24, 1883, approximately 18 months after the opening of the California Southern Railroad, Franklin H. Herald, Donald M. Graham, and William Collier purchased the 12,832-acre La Laguna Rancho for \$12,000. It was renamed Elsinore and subdivided into town lots and small acreages for sale. However, in 1885 the partnership was dissolved and the unsold land within the rancho was divided. Collier and Graham took as their share the land that lay southeasterly of Corydon Street and platted a town site with the name "Wildon" on the land. In November of 1886, a second plat for the new town was recorded with the name "Wildomar." This final name comprised letters of each partner's first name, plus letters from the first name of Margaret Collier, who was Graham's sister and Collier's wife.

On April 16, 1886, Wildomar's first post office was established, and when Riverside County incorporated in 1893, Wildomar was designated as one of the original 40 election precincts and the Wildomar school district as one of the original 52 accepted school districts. As the aforementioned gold boom began to subside in the late 1890s, the local economy's emphasis on mining began to give way to a far greater emphasis on the agricultural potential of the region. This shift in industry led to a less dramatic population growth for the region and allowed for the rural setting of western Riverside County to persist until the late twentieth century.

KNOWN CULTURAL RESOURCES IN THE PROJECT AREA

The records search indicated no previously recorded cultural resources within the project area. However, the records search also indicated that the project area had not been included in any previous cultural resources study and that no sites of either prehistoric or historic origin had been recorded within its boundaries.

KNOWN PALEONTOLOGICAL RESOURCES IN THE PROJECT AREA

Paleontology is defined as a science dealing with the life of past geological periods as known from fossil remains. Paleontological resources include fossil remains, as well as fossil localities and formations that have produced fossil material. Such locations and specimens are important

nonrenewable resources. CEQA offers protection for these sensitive resources and requires that they be addressed during the environmental impact report process.

3.5.2 REGULATORY FRAMEWORK

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act (NHPA) requires that the federal government list significant historic resources on the National Register of Historic Places, which is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a historic district can also be included in the NRHP.¹ The criteria for listing in the NRHP include resources that:

- a) Are associated with events that have made a significant contribution to the broad patterns of 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 likely yield information important in prehistory or history.

STATE

California Register of Historical Resources

The State Historical Resources Commission has designed the California Register of Historic Resources for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The CRHR is the authoritative guide to the state's significant historical and archeological resources. This program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and affords certain protections under CEQA.

¹ A [historic] district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development (National Park Service 2013).

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California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both “historical resources” and “unique archaeological resources.” Pursuant to Public Resources Code (PRC) Section 21084.1, a “project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

Historical resource is a term with a defined statutory meaning (PRC Section 21084.1; determining significant impacts to historical and archaeological resources is described in CEQA Guidelines Section 15064.5[a], [b]). Under CEQA Guidelines Section 15064.5(a), historical resources include the following:

- 1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC Section 5024.1).
- 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), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 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 may be considered to be a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing in the California Register of Historical Resources (PRC Section 5024.1), including the following:
 - a) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - b) Is associated with the lives of persons important in our past;
 - c) 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
 - d) Has yielded, or may be likely to yield, information important in prehistory or history.
- 4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

Historic resources are usually 45 years old or older and must meet at least one of the criteria for listing in the CRHR, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC Section 5024.1 and California Code of Regulations (CCR), Title 14, Section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

For historic structures, CEQA Guidelines Section 15064.5(b)(3) indicates that a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995) shall be considered as mitigating impacts to a less than significant level.

As noted above, CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. PRC Section 21083.2(g) states:

"Unique archaeological resource" means 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 that 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.*
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

Treatment options under PRC Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource).

Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered, as follows:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

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CEQA Guidelines Section 15064.5(e) requires that excavation activities stop whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5(f), these provisions should include “an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.”

Paleontological resources are classified as non-renewable scientific resources. PRC Section 5097.5 et seq. makes it a misdemeanor for anyone to knowingly disturb any archaeological, paleontological, or historical features situated on public lands. No state or local agencies have specific jurisdiction over paleontological resources. No state or local agency requires a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earth-moving on state or private land in a project site.

LOCAL

The Open Space Element of the City of Wildomar General Plan includes the following policies that are applicable to the proposed project regarding the protection of cultural and paleontological resources:

- OS 19.2: Review all proposed development for the possibility of archaeological sensitivity.
- OS 19.3: Employ procedures to protect the confidentiality and prevent inappropriate public exposure of sensitive archaeological resources when soliciting the assistance of public and volunteer organizations.
- OS 19.4: Require a Native American Statement as part of the environmental review process on development projects with identified cultural resources.
- OS 19.8: Whenever existing information indicates that a site proposed for development may contain biological, paleontological, or other scientific resources, a report shall be filed stating the extent and potential significance of the resources that may exist within the proposed development and appropriate measures through which the impacts of development may be mitigated.
- OS 19.9: This policy requires that when existing information indicates that a site proposed for development may contain paleontological resources, a paleontologist shall monitor site grading activities, with the authority to halt grading to collect uncovered paleontological resources, curate any resources collected with an appropriate repository, and file a report with the Planning Department documenting any paleontological resources that are found during the course of site grading.

The Open Space Element also includes additional policies regarding the protection and identification of historical (OS 19.5, 19.6, and 19.7) and paleontological (OS 19.10) resources, which do not specifically apply to the proposed project because the City does not classify it as a major project.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Following Public Resources Code Sections 21083.2 and 21084.1, and Section 15064.5 and Appendix G of the CEQA Guidelines, cultural resource impacts are considered to be significant if implementation of the project considered would result in any of the following:

- 1) Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5.
- 2) Cause a substantial adverse change in the significance of an archaeological resource as defined in Public Resources Code Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5.
- 3) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.
- 4) Disturb any human remains, including those interred outside of formal cemeteries.

State CEQA Guidelines Section 15064.5 defines “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

CEQA Guidelines Section 15064.5(b)(2) defines “materially impaired” for purposes of the definition of substantial adverse change as follows:

The significance of an historical resource is materially impaired when a project:

- (A) *Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or*
- (B) *Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or*
- (C) *Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.*

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CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources and unique archaeological resources;
- Evaluate the eligibility of historical resources; and
- Evaluate the effects of the project on eligible historical resources.

METHODOLOGY

Prior to commencement of the Phase I Cultural Resources Assessment field survey, a records search was conducted by staff at the California Archaeological Inventory/California Historical Resources Information System, Eastern Information Center, located at the University of California, Riverside. The research included a review of all site maps, site records, survey reports, and mitigation reports relevant to the study area. A request for a Sacred Lands File search was submitted to the Native American Heritage Commission, and project scoping letters were sent to 13 tribal representatives listed as being interested in project development in the Temecula area.

Following the records and Sacred Lands File searches, a literature search of available published references to the study area was undertaken. Reference material included all available photographs, maps, books, journals, historical newspapers, registers, and directories at the Riverside Public Library Local History Collection and at the libraries of the University of California, Riverside. Cartographic research was conducted at the Science Library Map Collection of the University of California, Riverside. Archival research relating to the original ownership of the subject property was conducted using the General Land Office records currently maintained by the California Office of the Bureau of Land Management. The following maps were consulted:

- 1854–1880, General Land Office Plats of Township No. 6 South, Range No. 4 West, San Bernardino Meridian
- 1901 Elsinore, California, 30-minute USGS Topographic Map
- 1942 Murrieta, California, 15-minute U.S. Army Corps of Engineers Topographic Map
- 1959 Santa Ana, California, 1:250,000 USGS Topographic Map
- 1953 Wildomar, California, 7.5-minute USGS Topographic Map
- 1973 Wildomar, California, 7.5-minute USGS Topographic Map
- 1980 Santa Ana, California, 1:250,000 USGS Topographic Map
- 1988 (photorevised) Wildomar, California, 7.5-minute USGS Topographic Map

Subsequent to the literature, archival, and cartographic research, Jean Keller conducted a comprehensive on-foot field survey of the subject property on February 8 and 15, 2014. The survey was accomplished by first generally dividing the property into developed and undeveloped sections of land, with roughly 20 acres of developed land in the western portion of the property and 44 acres of undeveloped land in the eastern portion. The western portion of

the property was surveyed, beginning at its northwestern corner, in parallel transects at 15-meter intervals when possible. It proceeded in a generally north-south, south-north direction following the existing land contours. Since Cornerstone Community Church occupies most of this part of the subject property, the majority of the land is covered by existing structures, paving, landscaping, material storage, and vehicles, leaving little actual land accessible for survey. The two areas proposed for parking lots were, however, generally clear and could be surveyed using standard survey methods. Ground surface visibility of accessible land in the western portion of PUP 788, Rev. 5 was approximately 80 percent. The eastern portion of the subject property was surveyed, beginning at its northeastern corner, in parallel transects at 15 meter intervals when possible. The survey proceeded in a generally east-west, west-east direction following the existing land contours. In areas with extremely steep topography, the transects sometimes varied in spacing and direction to allow for safe traversal, but still maintained an average interval of 15 meters. Special attention was given to bedrock outcrops for evidence of milling features, rock art, and shelter opportunities. Ground surface visibility in the undeveloped portion of the property ranged from 25 percent where ground cover was most dense, to 100 percent on numerous roads and trails, with an average ground surface visibility of approximately 65 percent.

The impact analysis provided below is based primarily on the cultural resources assessment survey conducted by Jean Keller in 2004 and 2009 (**Appendix 3.5**). The potential impacts of the proposed project on cultural resources have been evaluated by considering both construction activities and operational impacts of the proposed project, and mitigation has been identified for each significant impact in this section. The City of Wildomar also works with the Pechanga Tribe to develop the wording and approach for mitigation.

PROJECT IMPACTS AND MITIGATION MEASURES

Impacts to Historical Resources (Standard of Significance 1)

Impact 3.5.1 Implementation of the proposed project would not cause a substantial adverse change in the significance of a known historical resource. Therefore, **no impact** would occur.

The Phase I Cultural Resources Assessments (Keller 2004, 2009) performed for the proposed project (included in **Appendix 3.5**) did not identify any historic structures within the project site. Additionally, results of the records search conducted by staff at the Eastern Information Center indicated that the subject property had not been included in any previous cultural resources studies and that no sites of either prehistoric or historic origin had been recorded within its boundaries. Therefore, the proposed project will have **no impact** on any historical resource.

Mitigation Measures

None required.

Impacts to Archeological Resources (Standard of Significance 2)

Impact 3.5.2 Implementation of the proposed project could result in a substantial adverse change in the significance of an archaeological resource, as well as the potential disturbance of currently undiscovered cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features). This impact is considered **potentially significant**.

Because the project site is already developed, it is unlikely that any potential archaeological resources at the project site would currently be buried. As a result, the project site has not been

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

investigated by a professional archaeologist. However, excavations could occur in association with development of the proposed project that could affect archaeological resources buried within the project site. Therefore, it is possible that project-related ground-disturbing activities could uncover previously unknown archaeological resources within project boundaries. Unanticipated and accidental archaeological discoveries during project implementation have the potential to affect archaeological resources.

Mitigation Measures

MM 3.5.2a If during grading or construction activities cultural resources are discovered on the project site, work shall be halted immediately within 50 feet of the discovery and the resources shall be evaluated by a qualified archeologist and the Pechanga Tribe (Tribe). Any unanticipated cultural resources that are discovered shall be evaluated and a final report prepared by the qualified archeologist. The report shall include a list of the resources discovered, documentation of each site/locality, and interpretation of the resources identified, and the method of preservation and/or recovery for identified resources. In the event the significant resources are recovered and if the qualified archaeologist and the Tribe determines the resources to be historic or unique, avoidance and/or mitigation would be required pursuant to and consistent with CEQA Guidelines Sections 15064.5 and 15126.4 and Public Resources Code Section 21083.2 and the Cultural Resources Treatment and Monitoring Agreement required by mitigation measure CUL-2.

This mitigation measure shall be incorporated in all construction contract documentation.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Building and Planning Departments

MM 3.5.2b At least 30 days prior to seeking a grading permit, the project applicant(s) shall contact the Pechanga Tribe to notify the Tribe of grading, excavation, and the monitoring program and to coordinate with the City of Wildomar and the Tribe to develop a Cultural Resources Treatment and Monitoring Agreement. The agreement shall include, but not be limited to, outlining provisions and requirements for addressing the treatment of cultural resources; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered on the site; and establishing on-site monitoring provisions and/or requirements for professional Tribal monitors during all ground-disturbing activities. A copy of this signed agreement shall be provided to the Planning Director and Building Official prior to the issuance of the first grading permit

Timing/Implementation: Prior to the issuance of a grading permit

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

MM 3.5.2c If inadvertent discoveries of subsurface archaeological resources are discovered during grading, work shall be halted immediately within 50 feet of the discovery. The developer, the project archeologist, and the Tribe shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. If the developer and the Tribe cannot agree on the significance of or the mitigation for such resources, these issues will be presented to the City of Wildomar Planning Director. The Planning Director shall make the determination based on the provisions of CEQA with respect to archaeological resources and shall take into account the religious beliefs, customs, and practices of the Pechanga Tribe. Notwithstanding any other rights available under the law, the decision of the Planning Director shall be appealable to the City of Wildomar. In the event the significant resources are recovered and if the qualified archaeologist determines the resources to be historic or unique as defined by relevant state and local law, avoidance and mitigation would be required pursuant to and consistent with Public Resources Code Section 21083.2 and CEQA Guidelines Sections 15064.5 and 15126.4.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

MM 3.5.2d To address the possibility that cultural resources may be encountered during grading or construction, a qualified professional archeologist shall monitor all construction activities that could potentially impact archaeological deposits (e.g., grading, excavation, and/or trenching). However, monitoring may be discontinued as soon the qualified professional is satisfied that construction will not disturb cultural and/or paleontological resources.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

Following implementation of mitigation measures **MM 3.5.2a** and **MM 3.5.2d**, impacts will be **less than significant**.

Impacts to Paleontological Resources (Standard of Significance 3)

Impact 3.5.3 Implementation of the proposed project could directly or indirectly destroy a unique paleontological resource or site. This impact is considered **potentially significant**.

Because the project site is already developed, it is unlikely that any potential paleontological resources at the project site would currently be buried. Therefore, the project site has not been investigated by a professional paleontologist. However, excavations could occur in association with development of the proposed project that could affect paleontological resources buried

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

within the project site. Therefore, it is possible that project-related ground-disturbing activities could uncover previously unknown paleontological resources within project boundaries. Unanticipated and accidental paleontological discoveries during project implementation have the potential to affect significant paleontological resources. Mitigation measure **MM 3.5.3a** requires the City to retain a qualified paleontologist to prepare a standard Paleontological Resources Impact Mitigation Program (PRIMP). This program would include excavation monitoring and specimen recovery, including screen washing, preparation, identification, and curation of collected specimens into a museum repository. A final report would provide details of monitoring and curation methods, fossil identification, and discussion, cataloging, and repository arrangements.

Mitigation Measures

MM 3.5.3a

Prior to issuance of a grading permit for the proposed project, the project applicant shall retain a qualified paleontologist to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) to assess the potential for presence of paleontological resources and the potential for project construction to affect such resources, if present. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontologists (SVP). If it is determined, to the satisfaction of the City, that there is low potential for discovery or disturbance of paleontological resources, no further action shall be required.

If potential for discovery is deemed moderate to high, the project applicant shall retain a qualified paleontologist to monitor all initial ground-disturbing activities in native soils or sediments. If the paleontologist, upon observing initial earthwork, determines there is low potential for discovery, no further action shall be required and the paleontologist shall submit a memo to the City confirming findings of low potential.

Should any paleontological resources (i.e., fossils) be uncovered during project construction activities, all work within a 100-foot radius of the discovery site shall be halted or diverted to other areas on the site and the City shall be immediately notified. A qualified paleontologist shall evaluate the finds and recommend appropriate next steps to ensure that the resource is not substantially adversely impacted, including but not limited to avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. Further ground disturbance shall not resume within a 100-foot radius of the discovery site until an agreement has been reached between the project applicant, a qualified paleontologist, and the City as to the appropriate preservation or mitigation measures to ensure that the resource is not substantially adversely impacted.

Timing/Implementation: *Prior to the issuance of a grading permit*

Enforcement/Monitoring: *City of Wildomar Engineering and Planning Departments*

MM 3.5.3b

A qualified paleontologist or paleontological monitor shall monitor all mass grading and excavation activities. Monitoring will be conducted in areas of grading or excavation in undisturbed formational sediments, as well as where over-excavation of surficial alluvial sediments will encounter these formations

in the subsurface. Paleontological monitors shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediment that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined on exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

MM 3.5.3c Any recovered paleontological specimens shall be identified to the lowest taxonomic level possible and prepared for permanent preservation, including screen-washing of sediments to recover small invertebrates and vertebrates shall occur if necessary.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

MM 3.5.3d Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage shall occur at an institutional repository approved by the City of Wildomar. The paleontological program shall include a written repository agreement prior to the initiation of mitigation activities.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

MM 3.5.3e A final monitoring and mitigation report of findings and significance shall be prepared, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location. The report, when submitted to and accepted by the City of Wildomar, shall signify satisfactory completion of the project program to mitigate impacts to any potential nonrenewable paleontological resources (i.e., fossils) that might have been lost or otherwise adversely affected without such a program in place.

Timing/Implementation: Following ground-disturbing activities, and implemented prior to the issuance of a building permit

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

Implementation of mitigation measures **MM 3.5.3a** through **MM 3.5.3e** would ensure that any paleontological resources inadvertently discovered during project construction activities would be protected consistent with the recommendations of a qualified paleontologist. Impacts would be reduced to a **less than significant** level.

Impacts to Human Remains (Standard of Significance 4)

Impact 3.5.4 No human remains have been identified within the project site; however, implementation of the proposed project could result in the inadvertent disturbance of currently undiscovered human remains. Any discovery of human remains would trigger state law governing the treatment of human remains. Therefore, this impact is considered to be **potentially significant**.

Although no human remains have been identified within the project site, implementation of the proposed project would include ground-disturbing construction activities that could result in the inadvertent disturbance of currently undiscovered human remains. Procedures of conduct following the discovery of human remains on non-federal lands are mandated by Health and Safety Code Section 7050.5, by Public Resources Code Section 5097.98, and by CEQA in California Code of Regulations Section 15064.5(e). According to these provisions, should human remains be encountered, all work in the immediate vicinity of the burial must cease, and any necessary steps to ensure the integrity of the immediate area must be taken. The remains are required to be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. The Riverside County Coroner would be immediately notified, and the coroner would then determine whether the remains are Native American. If the coroner determines the remains are Native American, the coroner has 24 hours to notify the Native American Heritage Commission, which will in turn notify the person identified as the most likely descendant (MLD) of any human remains. Further actions would be determined, in part, by the desires of the MLD, who has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 24 hours, the owner is required, with appropriate dignity, to reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendant may request mediation by the Native American Heritage Commission. Any discovery of human remains within the project site would be subject to these procedural requirements, which would reduce impacts associated with the discovery/disturbance of human remains to a **less than significant** level.

Mitigation Measures

MM 3.5.4a If human remains are encountered, California Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within a reasonable time frame. Subsequently, the Native American Heritage Commission shall identify the "most likely descendant" within 24 hours of receiving notification from the

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

coroner. The most likely descendant shall then have 48 hours to make recommendations and engage in consultations concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

MM 3.5.4b All cultural materials, with the exception of sacred items, burial goods, and human remains, which will be addressed in the Cultural Resources Treatment and Monitoring Agreement required by mitigation measure 3.5.2b, that are collected during the grading monitoring program and from any previous archeological studies or excavations on the project site shall be curated according to the current professional repository standards. The collections and associated records shall be transferred, including title, to the Pechanga Tribe's curation facility, which meets the standards set forth in 36 CRF Part 79 for federal repositories.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

MM 3.5.4c All sacred sites, should they be encountered within the project site, shall be avoided and preserved as the preferred mitigation, if feasible as determined by a qualified professional in consultation with the Pechanga Tribe. To the extent that a sacred site cannot be feasibly preserved in place or left in an undisturbed state, mitigation measures shall be required pursuant to and consistent with Public Resources Code Section 21083.2 and CEQA Guidelines Sections 15064.5 and 15126.4.

Timing/Implementation: As a condition of project approval, and implemented during ground-disturbing construction activities

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

With implementation of mitigation measure **MM 3.5.4a through MM 3.5.4c**, the provisions of state law regarding the accidental discovery of human remains will be followed, ensuring that impacts are reduced to a **less than significant** level.

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting associated with the proposed project includes approved, proposed, planned, and other reasonably foreseeable projects and development in Wildomar. Developments and planned land uses, including the proposed project, would cumulatively contribute to impacts to known and unknown cultural resources and paleontological resources in the area. The Existing Setting subsection provides an overview of cultural resources and the history of the region.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Cultural and Paleontological Resources

Impact 3.5.5 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features). This contribution would be considered **less than cumulatively considerable**.

As mitigated, the direct impacts associated with the proposed project will be reduced to a less than significant level. While it is possible that grading and development will result in the accidental discovery of paleontological and cultural resources, mitigation measures and state and federal laws already in place will set in motion actions designed to mitigate these potential impacts. The proposed project is adjacent to existing development that has disturbed the soil and likely already affected any cultural or paleontological resources. As a result of surrounding development, mitigation proposed in this section, and existing federal and state laws, this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

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http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_4.htm.

Wildomar, City of. 2008. *City of Wildomar General Plan – Open Space Element*.

3.6 GEOLOGY AND SOILS

This section describes the current geologic and soil conditions of the proposed Cornerstone Community Church project site and general vicinity and analyzes issues such as potential exposure of people and property to seismic and geologic hazards such as ground rupture, settlement, and landslides. The types of soils that have been identified on the project site and their properties as they relate to the proposed project are also discussed. Impacts associated with erosion during construction and operation of the proposed project are discussed in Section 3.7, Hydrology and Water Quality, of this Draft EIR. This section is based on the geotechnical feasibility study prepared by EnGEN Corporation (2006) for the Cornerstone Community Church, included as **Appendix 3.6**.

3.6.1 EXISTING SETTING

REGIONAL GEOLOGY

Wildomar is located regionally within the Peninsular Ranges Geomorphic Province of California. Characterized by steep, elongated valleys that trend west to northwest, the topography of the northwest-trending Peninsular Ranges is controlled by the Elsinore fault zone, which extends from the San Gabriel River Valley southeasterly to the United States-Mexico border.

The mountainous regions of the Peninsular Ranges Geomorphic Province are underlain by Pre-Cretaceous, metasedimentary and metavolcanic rocks, and Cretaceous plutonic rocks of the Southern California Batholith. Tertiary and Quaternary rocks generally comprise non-marine sediments consisting of sandstone, mudstones, conglomerates, and occasionally volcanic units.

Local Geologic Setting

The site is located in the Northern Peninsular Range on the southern sector of the structural unit known as the Perris Block. It is bounded on the northeast by the San Jacinto fault zone, on the southwest by the Elsinore fault zone, and on the north by the Cucamonga fault zone. The southern boundary of the Perris Block is not as distinct but is believed to coincide with a complex group of faults trending southeast from the Murrieta area (EnGEN 2006). The Peninsular Range is characterized by large Mesozoic age intrusive rock masses flanked by volcanic metasedimentary and sedimentary rocks. Various thicknesses of alluvial and colluvial sediments derived from the erosion of elevated portions of the region fill the low-lying areas.

Topography

Topography on the project site area ranges from 1,390-feet to 1,490-feet above mean sea level (AMSL). The project site has been substantially altered and graded to support the construction of the existing church, parking lots, playing field and access roadways.

SOILS

The earth materials on the site are primarily composed of Quaternary alluvium and granodiorite. The location of each of these underlying geologic types is included in **Appendix 3.6**, and a general description of the soil and bedrock materials observed on the site follows.

- **Quaternary Alluvium (map symbol Qal):** Quaternary alluvium was encountered in the drainage channels throughout the site. This alluvial unit consists predominantly of brown to red brown silty sand to poorly graded sand. This unit is generally moist and loose to medium dense in condition.

3.6 GEOLOGY AND SOILS

- **Granodiorite (map symbol Kgd):** Cretaceous age intrusive igneous rock similar to granite, but contains more plagioclase than potassium feldspar. This rock unit underlies the other units at varying depths. The exposed portion of the bedrock (in the cut slopes of the existing parking lot) was found to be massive, with no discernible joint pattern. It is moderately to intensely weathered, consisting of silty coarse-grained sand.

Collapsible and Expansive Soils

Soil permeability is the property of the soil to transmit water and air. The more permeable the soil, the greater the seepage (FAO 2013), resulting in higher rates of infiltration. Pore size and number of pores closely relate to soil texture and structure, and also influence permeability (FAO 2013). Soils that transmit water faster (such as sandy soils) and have higher permeability will have less shrink-swell potential because less water retention occurs with these types of soils.

Conversely, soils that transmit water at a slower rate (such as soils with high clay content) have lower permeability and therefore higher shrink-swell potential and the potential for significant expansion. Expansive clay minerals include smectite, bentonite, montmorillonite, beidellite, vermiculite, attapulgite, nontronite, illite, and chlorite. When structures are located on expansive soils, foundations have the tendency to rise during the wet season and shrink during the dry season. This movement can create new stresses on various sections of the foundation and connected utilities and can lead to structural failure and damage to infrastructure. Cracked foundations, floors, and basement walls are typical types of damage done by swelling soils. Damage to the upper floors of the building can occur when motion in the structure is significant. According to the Preliminary Expansion Index testing, the project site has very low expansion potential (EnGEN 2006).

Subsidence refers to the sudden sinking or gradual downward settling and compaction of soil and other surface material with little or no horizontal motion. It may be caused by a variety of human and natural activities, including earthquakes. According to the City's existing General Plan, Wildomar is located in a susceptible subsidence zone.

FAULTING AND SEISMICITY

Earthquakes are the result of an abrupt release of energy stored in the earth. This energy is generated from the forces that cause the continents to change their relative position on the earth's surface, a process called "continental drift." The earth's outer shell is composed of a number of relatively rigid plates that move slowly over the comparatively fluid molten layer below. The boundaries between plates are where the more active geologic processes take place. Earthquakes are an incidental product of these processes.

Ground Shaking

In populated areas, the greatest potential for loss of life and property damage could come as a result of ground shaking from a nearby earthquake. The degree of damage depends on many interrelated factors. Among these are the Richter magnitude, focal depth, distance from the causative fault, source mechanism, duration of shaking, high rock accelerations, type of surficial deposits or bedrock, degree of consolidation of surficial deposits, presence of high groundwater, topography, and design, type, and quality of building construction.

Ground shaking is the byproduct of an earthquake and is the energy created as rocks break and slip along a fault (Christenson 1994). The amount of ground shaking that an area may be subject to during an earthquake is related to the proximity of the area to the fault, the depth of the

hypocenter (focal depth), location of the epicenter, and the size (magnitude) of the earthquake. Soil type also plays a role in the intensity of shaking. Bedrock or other dense or consolidated materials are less prone to intense ground shaking than soils formed from alluvial deposition.

The strength of an earthquake is generally expressed in two ways: magnitude and intensity. The magnitude is a measure that depends on the seismic energy radiated by the earthquake as recorded on seismographs. The intensity at a specific location is a measure that depends on the effects of the earthquake on people or buildings and is used to express the severity of ground shaking. Although there is only one magnitude for a specific earthquake, there may be many values of intensity (damage) for that earthquake at different sites.

The most commonly used magnitude scale today is the moment magnitude (M_w) scale. Moment magnitude is related to the physical size of fault rupture and the movement (displacement) across the fault, and it is therefore a more uniform measure of the strength of an earthquake. The seismic moment of an earthquake is determined by the resistance of rocks to faulting multiplied by the area of the fault that ruptures and by the average displacement that occurs across the fault during the earthquake. The seismic moment determines the energy that can be radiated by an earthquake and hence the seismogram recorded by a modern seismograph (CGS 2002).

The most commonly used scale to measure earthquake intensities (ground shaking and damage) is the Modified Mercalli Intensity Scale, which measures the intensity of an earthquake's effects in a given locality and is based on observations of earthquake effects at specific places. On the Modified Mercalli Intensity Scale, values range from I to XII (see **Table 3.6-1**). While an earthquake has only one magnitude, it can have various intensities, which decrease with distance from the epicenter (CGS 2002).

Table 3.6-1 provides descriptions of the effects of ground shaking intensities along with a general range of moment magnitudes that are often associated with those intensities. Additionally, corresponding averages for peak ground velocity and peak acceleration are also provided.

3.6 GEOLOGY AND SOILS

**TABLE 3.6-1
MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES**

Richter Magnitude Scale	Modified Mercalli Scale	Effects of Intensity	Average Peak Ground Velocity (centimeters/second)	Average Peak Acceleration ^a
0.1–0.9	I	Not felt except by a very few under especially favorable circumstances.	—	—
1.0–2.9	II	Felt by only a few persons at rest, especially on upper floors of buildings.	—	—
3.0–3.9	III	Felt quite noticeably in doors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing cars may rock slightly. Vibration like passing a truck.	—	0.0035–0.007 g
4.0–4.5	IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing cars rocked noticeably.	1–3	0.015–0.035 g
4.6–4.9	V	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.	3–7	0.035–0.07 g
5.0–5.5	VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.	7–20	0.07–0.15 g
5.6–6.4	VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.	20–60	0.15–0.35 g
6.5–6.9	VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.	60–200	0.35–0.7 g
7.0–7.4	IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.	200–500	0.7–1.2 g
7.5–7.9	X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.	≥ 500	> 1.2 g
8.0–8.4	XI	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.	—	—
8.5+	XII	Damage total. Lines of sight and level are distorted. Objects thrown into the air.	—	—

Source: USGS 2012

^a Peak acceleration is expressed in “g” (the acceleration due to earth’s gravity, equivalent to g-force).

An “active” fault is one that shows displacement within the last 11,000 years and therefore is considered more likely to generate a future earthquake. The 1994 Alquist-Priolo Earthquake Fault Zoning Act requires the California State Geologist to establish regulatory zones (now known as Earthquake Fault Zones; prior to January 1, 1994, these zones were known as Special Earthquake Study Zones) around the surface traces of active faults that pose a risk of surface ground rupture and to issue appropriate maps in order to mitigate the hazard of surface faulting to structures for human occupancy.

The proposed project site is located in tectonically active Southern California and within proximity to the Glen Ivy North, Wildomar, and Elsinore faults. As such, the project site will likely experience some effects from earthquakes associated with these faults. The Elsinore and Wildomar faults are Alquist-Priolo faults, meaning that they pose a risk of surface ground rupture as evidenced by previous visible and documented surface fault ruptures along portions of the faults (CGS 1978a, 1978b, 1979). However, no faulting was observed during site reconnaissance conducted by EnGEN (2006). **Figure 3.6-1** illustrates faults in proximity to the project site.

Liquefaction

Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Earthquake waves cause water pressures to increase in the sediment and the sand grains to lose contact with each other, leading the sediment to lose strength and behave like a liquid. The soil can lose its ability to support structures, flow down even very gentle slopes, and erupt to the ground surface to form sand boils. Many of these phenomena are accompanied by settlement of the ground surface, usually in uneven patterns that damage buildings, roads, and pipelines (USGS 2009).

Three factors are required for liquefaction to occur: (1) loose, granular sediment (typically “made” land and beach and stream deposits that are young enough (late Holocene) to be loose); (2) saturation of the sediment by shallow groundwater (water fills the spaces between sand and silt grains); and (3) strong shaking. Liquefaction causes three types of ground failure: lateral spreads, flow failures, and loss of bearing strength. In addition, liquefaction enhances ground settlement and sometimes generates sand boils (fountains of water and sediment emanating from the pressurized liquefied zone). According to the geotechnical feasibility study conducted by EnGEN (2006), due to the dense nature of the underlying bedrock, the potential for liquefaction at the site is considered very low.

Landslides and Slope Failure

Landslides and other forms of slope failure form in response to the long-term geologic cycle of uplift, mass wasting, and disturbance of slopes. Mass wasting refers to a variety of erosional processes from gradual downhill soil creep to mudslides, debris flows, landslides, and rockfall—processes that are commonly triggered by intense precipitation, which varies according to climatic shifts. Often, various forms of mass wasting are grouped together as landslides, which are generally used to describe the downhill movement of rock and soil.

Geologists classify landslides into several different types that reflect differences in the type of material and type of movement. The four most common types of landslides are translational, rotational, earth flow, and rockfall. Debris flows are another common type of landslide similar to earth flows, except that the soil and rock particles are coarser. Mudslide is a term that appears in nontechnical literature to describe a variety of shallow, rapidly moving earth flows.

3.6 GEOLOGY AND SOILS

Review of geologic literature and geologic mapping did not indicate the presence of landslides on or adjacent to the site. The potential for the existence of landslides is considered insignificant since the site is underlain by hard to very hard and dense granitic bedrock, which is generally not susceptible to landslides (EnGEN 2006).

Seiches and Tsunamis

There is no potential for seiche or tsunami at the proposed project site since no large surface water bodies (lakes, reservoirs, etc.) are located nearby. The Federal Emergency Management Agency's (FEMA) National Flood Insurance Program designates the proposed project site within Zone X, which indicates minimal flooding potential. This subject is further discussed and analyzed in Section 3.6, Hydrology and Water Quality.

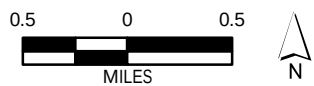
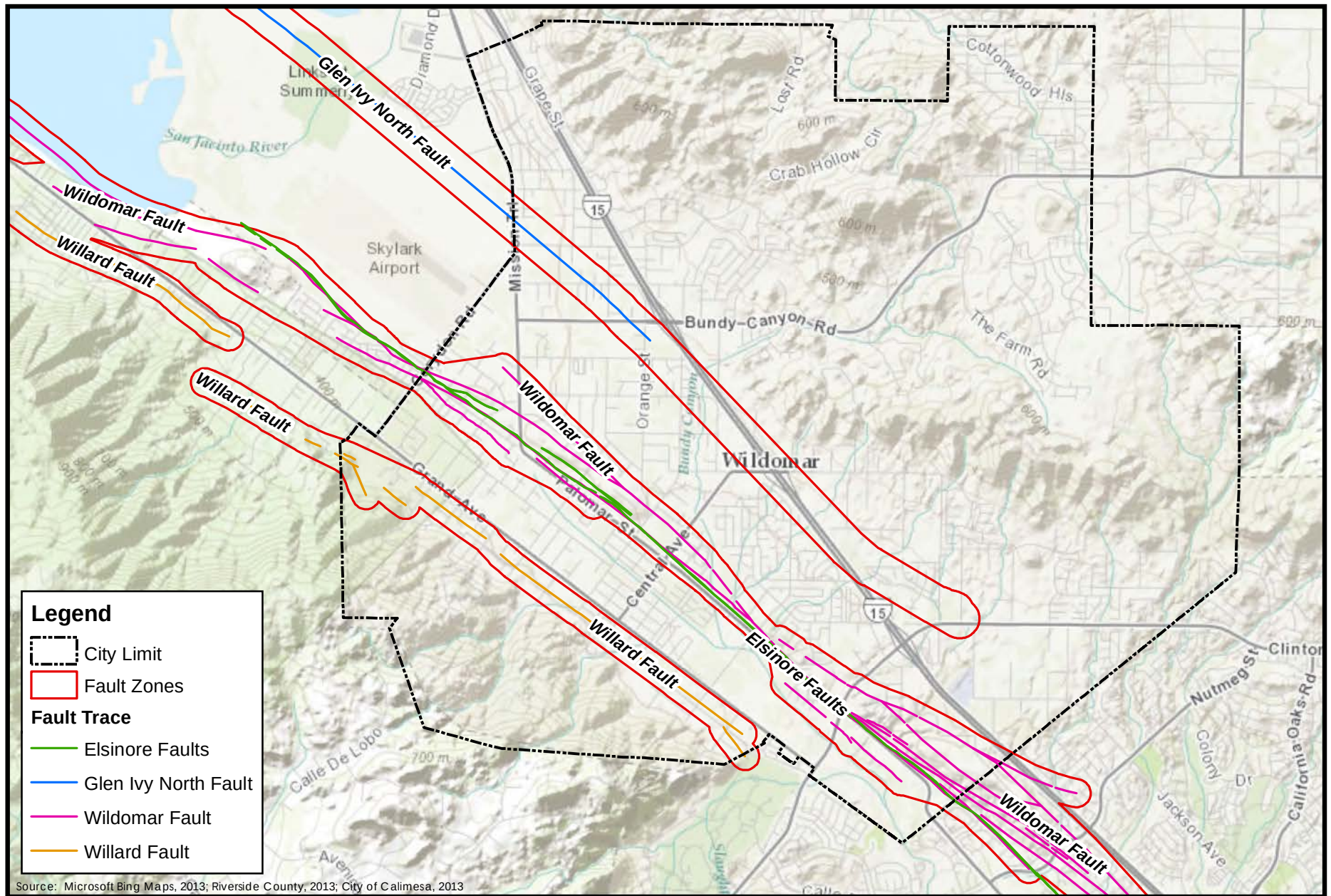


Figure 3.6-1

Fault Zones

3.6.2 REGULATORY FRAMEWORK

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 (originally enacted as the Alquist-Priolo Special Studies Zones Act and renamed in 1994) and is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as earthquake fault zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. There are no earthquake fault zones subject to the Alquist-Priolo Earthquake Fault Zoning Act in the area of the project site (EnGEN 2006).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act addresses nonsurface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. Passed by the California legislature in 1990, this law was codified in the California Public Resources Code as Division 2, Chapter 7.8A, and became operative in April 1991. The Seismic Hazards Mapping Act resulted in a mapping program that is intended to reflect areas that have the potential for liquefaction, landslide, strong earth ground shaking, or other earthquake and geologic hazards. In Riverside County, only Murietta has an official seismic-hazard zone map. Wildomar is shown as a planned mapping area as of the date of the map in 2008 (DOC 2012b).

California Building Standards Code

The State of California provides minimum standards for building design through the California Building Code (CBC) (California Code of Regulations, Title 24). The CBC is based on the Uniform Building Code (UBC), which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for conditions in California. State regulations and engineering standards related to geology, soils, and seismic activity in the UBC are reflected in the CBC requirements. Through the CBC, the State of California provides a minimum standard for building design and construction. The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control. Wildomar enforces the CBC through its Municipal Code. The City's Building Code (Wildomar Municipal Code, Title 8) incorporates the CBC, including recent changes.

LOCAL

City of Wildomar General Plan

The Public Safety Element of the General Plan (2003) introduces safety considerations into the planning and decision-making processes of the City to reduce the risk of injury, loss of life, property damage, and economic and social dislocation resulting from natural and man-made hazards. Within the Public Safety Element, specific programs, objectives, and implementing policies address geology and seismic safety.

3.6 GEOLOGY AND SOILS

City of Wildomar Development Standards

The City requires that all grading conform to the California Building Code and to City of Wildomar Ordinance 457 governing grading in the city. The City also requires a grading permit before any grading can occur that involves 50 or more cubic yards. As part of the grading permit process, dust control measures are identified and incorporated into the permit requirements and monitored by the City Public Works Department. The grading permit also requires control-landscape plans for manufactured slopes greater than 3 feet in vertical height signed by a registered landscape architect and bonded per the requirements of Ordinance 457. The grading permit must be accompanied by a geotechnical soils reports to the City Engineer for review and approval prior to issuance.

Additionally, Chapter 15.76 codifies the report and application requirements of the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621, et seq.) and the adopted policies and criteria of the State Mining and Geology Board.

3.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a geology and soils impact is considered significant if project implementation would result in any of the following:

- 1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:
 - i) 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 (formerly Division of Mines and Geology) Special Publication 42.
 - ii) Strong seismic ground shaking.
 - iii) Seismic-related ground failure, including liquefaction.
 - iv) Landslides.
- 2) Result in substantial soil erosion or the loss of topsoil.
- 3) 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.
- 4) 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.
- 5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Because the existing septic system will be removed as part of the project, impacts associated with soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems will not affect the project site. Therefore, Standard of Significance 5 from the above list will not be addressed in the Draft EIR.

METHODOLOGY

The analysis in this section is based on review of the geotechnical feasibility study (EnGEN 2006). The purpose of the investigation was to evaluate the pertinent geotechnical conditions at the site and to provide geotechnical design criteria for, but not limited to, grading, construction, foundation design, retaining walls, pavement design, and other relevant aspects relative to the proposed development of the site. For the initial report done by EnGEN in 2006, no subsurface exploration was conducted.

PROJECT IMPACTS AND MITIGATION MEASURES

Impacts Associated with Fault Rupture (Standards of Significance 1a)

Impact 3.6.1 The potential for the project site to be exposed to hazards associated with fault rupture is considered unlikely. Therefore, this impact is considered **less than significant**.

Southern California, including the project area, is subject to the effects of seismic activity due to the active faults that traverse the area. Active faults are defined as those that have experienced surface displacement within Holocene time (approximately the last 11,000 years) and/or are in a State-designated Alquist-Priolo Earthquake Fault Zone. As discussed in the Existing Setting subsection above, there are no known active faults in the vicinity of the project site nor are there any Alquist-Priolo Special Earthquake Study Zones on or near the site (EnGEN 2006). As a result, the potential for fault surface rupture on the site is very unlikely (EnGEN 2006). Therefore, impacts would be **less than significant**.

Mitigation Measures

None required.

Impacts Associated with Strong Seismic Ground Shaking (Standard of Significance 1b)

Impact 3.6.2 The project site is located in an area that may be subject to strong seismic ground shaking. This impact is considered **potentially significant**.

Southern California has numerous active seismic faults subjecting people to potential earthquake and seismic-related hazards. Seismic activity poses two types of potential hazards for people and structures, categorized either as primary or secondary hazards. Primary hazards include ground rupture, ground shaking, ground displacement, subsidence, and uplift from earth movement. Primary hazards can also induce secondary hazards such as ground failure (lurch cracking, lateral spreading, and slope failure), liquefaction, water waves (seiches), movement on nearby faults (sympathetic fault movement), dam failure, and fires.

According to the geotechnical study (EnGEN 2006), the project site is located in a seismically active area and could experience ground shaking associated with an earthquake along the faults within proximity to the proposed project site. The type or severity of seismic hazards affecting the site is mainly dependent upon the distance to the causative fault, the intensity of the seismic event, and the soil characteristics. The seismic hazard may either be primary or secondary, as described above. Although some structural damage is typically not avoidable during a large earthquake, the proposed project components would be constructed to meet existing construction ordinances and the CBC in order to protect against building collapse and major injury during a seismic event. The CBC includes specific design measures intended to maximize structural stability in the event of an earthquake.

3.6 GEOLOGY AND SOILS

A *Geotechnical Feasibility Study: Cornerstone Community Church – Parking Lot and Ball Fields*, was prepared for a similar construction project on this site in 2006 (**Appendix 3.6**). This study included recommendations such as the installation and maintenance of drainage devices to prevent slope failure and planting vegetation on slopes to minimize or prevent erosion. Other recommendations included that the project be designed with seismic design parameters due to the proximity of the project site to the Elsinore Fault; building foundation guidelines; and parking lot design. The proposed project is currently designed to meet the recommended parameters through the grading features directing flow around the slope shown on Figure 2.0-3d and landscaping shown on **Figure 2.0-6b**. The City will also require compliance with the CBC. The previous study covered the area of the proposed project, including the upper parking area and the ball fields; however, the current geotechnical report is not specific to the design of the project as proposed and does not reflect changes to the CBC that have occurred since 2006. As some of the proposed project features, such as construction of the upper parking lot, will involve cutting into the hillside, an update to the geotechnical report is necessary to ensure that the best management practices for slope stabilization are considered. The details of construction, soil stabilization methods, building footing sizes and construction materials are unique to each construction project and are often not known until the final building or grading plans are submitted to the City for review and approval. The City considers the previous report adequate to determine that construction of the proposed project is feasible, but will need to approve an update to the geotechnical report prior to issuance of a grading or building permit. The update will be specific to the design of the project as proposed. Mitigation measure **MM 3.6.2** requires an update to the 2006 geotechnical report.

Mitigation Measures

MM 3.6.2 Prior to the issuance of any grading or building permit, the project applicant shall submit an updated geotechnical study to the City of Wildomar for review and approval. The geotechnical study shall be prepared by a qualified engineer and identify grading and building practices necessary to ensure stable building conditions. The project applicant shall incorporate the recommendations of the approved project-level geotechnical study into project plans as directed by the City Engineer. The project's building plans shall demonstrate that they incorporate all applicable recommendations of the geotechnical study and comply with all applicable requirements of the latest adopted version of the California Building Standards Code. A licensed professional engineer shall prepare the plans, including those that pertain to soil engineering, structural foundations, and installation. All on-site soil engineering activities shall be conducted under the supervision of a licensed geotechnical engineer or certified engineering geologist.

Timing/Implementation: Prior to grading and building activities

Enforcement/Monitoring: City of Wildomar City Public Works and Building Departments

Implementation of mitigation measure **MM 3.6.2** will ensure that the design and construction of the project, including the upper parking lot, is consistent with the requirements of the CBC and best practices for slope and soil stability, reducing this impact to **less than significant**.

Exposure to Seismic-Related Ground Failure, Including Liquefaction and Unstable Soils (Standards of Significance 1c and 1d)

Impact 3.6.3 The project site does not include soils that may be subject to seismic-related ground failure, including liquefaction and landslide. This impact is considered **less than significant**.

Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Liquefaction is characterized by a loss of shear strength in the affected soil layers, thereby causing the soils to behave as a viscous liquid. Susceptibility to liquefaction is based on geologic data. River channels and floodplains are considered most susceptible to liquefaction, while alluvial fans have a lower susceptibility. As stated in Subsection 3.1, Existing Setting, due to the dense nature of the underlying bedrock, the potential for liquefaction to occur at the project site is very low (EnGEN 2006).

A review of geologic literature and geologic mapping did not include the presence of landslides on or adjacent to the site. As noted in the geotechnical feasibility study (EnGEN 2006) (see **Appendix 3.6**), the proposed project is underlain by very hard granitic bedrock, which is generally not susceptible to landslides. As such, the potential for liquefaction or landslide is considered **less than significant**.

Mitigation Measures

None required.

Soil Erosion or Loss of Topsoil (Standard of Significance 2)

Impact 3.6.4 The proposed project could result in substantial soil erosion or the loss of topsoil. Therefore, impacts are **potentially significant**.

The proposed project site is currently partially developed. The site of the proposed preschool is an existing paved parking lot located at the westernmost boundary of the project site. Minimal grading will be required for the preschool construction; however, the existing asphalt will need to be removed and foundations constructed for the new building. In addition, landscaping and stormwater basin areas will also be excavated. Similarly, paving the lower parking lot will not require significant grading. The upper parking lot will require grading and redistribution of materials amounting to approximately 24,500 cubic yards. The material will be used within the project site, resulting in balanced soil excavation and fill for the project. The former home and outbuildings located south of the existing paved parking lot east of Via Carnaghi Lane will be demolished and a new maintenance building will be constructed (see **Figures 2.0-3C** and **2.0-5**). The building will be located at the east end of a new paved parking area with access to Via Carnaghi Lane. The preliminary grading plan is shown in **Figure 2.0-3D**.

The administration building will be constructed in the existing landscape and slope area south of the main sanctuary, courtyard, and classroom buildings. Construction of the new building will eliminate approximately 43 parking spaces along the drive that leads around the existing buildings. While the administration building will be three stories tall, because of the existing slope, it will allow ground-level access from both the drive and the courtyard. Additionally, as a result of this project, a new sewer line will extend from the northern (egress) driveway to an existing manhole approximately 1,900 feet north on Monte Vista Drive. On-site trenching will occur to connect the existing buildings to the new sewer line. Via Carnaghi Lane, a dirt roadway extending from Monte Vista Drive, will be paved to local road standard. Some level of grading will be required to achieve this.

3.6 GEOLOGY AND SOILS

Grading and excavation activities associated with the proposed project would expose soils to potential short-term erosion by wind and water. Some slope areas on the project site do not have exposed granodiorite bedrock and therefore could result in soil erosion. All demolition and construction activities related to the proposed project would be subject to compliance with the CBC. Additionally, all allowed development associated with the proposed project would be subject to compliance with the requirements set forth in the NPDES Storm Water General Construction Permit for construction activities (discussed in further detail in Section 3.7, Hydrology and Water Quality, of this DEIR). Compliance with the CBC and the NPDES would minimize effects from erosion and ensure consistency with the Water Quality Control Plans of the San Diego Regional Water Quality Control Board (1994) and the Santa Ana Regional Water Quality Control Board (1995). As part of the approval process, prior to grading plan approval, the project applicant will be required to comply with Chapter 13.12, Stormwater and Drainage System Protection, of the City of Wildomar Municipal Code (see Section 3.7, Hydrology and Water Quality, for a discussion of this chapter of the Municipal Code).

Further, a Storm Water Pollution Prevention Plan (SWPPP) would be required as part of the grading permit submittal package. The SWPPP provides a schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule. The SWPPP would consider the full range of erosion control best management practices including any additional site-specific and seasonal conditions. Erosion control best management practices include, but are not limited to, the application of straw mulch, hydroseeding, the use of geotextiles, plastic covers, silt fences, and erosion control blankets, as well as construction site entrance/outlet tire washing. The State General Permit also requires that those implementing SWPPPs meet prerequisite qualifications that would demonstrate the skills, knowledge, and experience necessary to implement SWPPPs. NPDES requirements would significantly reduce the potential for substantial erosion or topsoil loss to occur in association with new development. Water quality features intended to reduce construction-related erosion impacts will be clearly denoted on the grading plans for implementation by the construction contractor. Finally, implementation of mitigation measures **MM 3.6.4a** and **MM 3.6.4b** would require the construction of a keyway at natural grades of 5:1 (horizontal to vertical) or steeper to help further prevent any potential project related erosion.

Mitigation Measures

MM 3.6.4a A keyway should be constructed at the toe of all fill slopes that are proposed on natural grades of 5:1 (horizontal to vertical) or steeper. Keyways should be a minimum of 2 feet deep and 15 feet wide (equipment width) and tilted a minimum of 2 percent into the hillside. Keyways for transition slopes should tilt a minimum of 5 percent into the hillside. A series of level benches should be constructed into competent bedrock on natural grades of 5:1 (horizontal to vertical) or steeper prior to placing fill.

Timing/Implementation: During grading and building activities

Enforcement/Monitoring: City of Wildomar City Public Works and Building Departments

MM 3.6.4b All fill slopes should be constructed at slope ratios no steeper than 2:1 (horizontal to vertical). All cut slopes should be inspected by the project geologist or engineer to verify stability. Cut slopes exposing adverse structural features or significant amounts of soil may be considered unstable. Unstable cut slopes may require flattening or buttressing. Additionally, the final grading

plan for cut/fill of parking lot needs to be accompanied by structural soils analysis as no subsurface soils analysis was completed as part of the technical study.

Timing/Implementation: *During grading and building activities*

Enforcement/Monitoring: *City of Wildomar City Public Works and Building Departments*

The implementation of mitigation measures **MM 3.6.4a** and **MM 3.6.4b**, compliance with Wildomar Municipal Code Chapter 13.12 and NPDES requirements, and the implementation of a SWPPP would help to reduce soil erosion associated with the proposed project. As such, a **less than significant impact** would result with regard to this issue area.

Unstable Soils (Standard of Significance 3)

Impact 3.6.5 The proposed project could 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. Therefore, impacts are considered **potentially significant**.

Subsidence refers to the sudden sinking or gradual downward settling and compaction of soil and other surface material with little or no horizontal motion. Subsidence may be caused by a variety of human and natural activities, including earthquakes. As discussed in the Existing Setting subsection above, Wildomar is located in a susceptible subsidence zone. However, any potential future development associated with the proposed project would be designed in accordance with CBC requirements. Additionally, as discussed in the Existing Settings subsection above, existing literature and mapping indicate that soils in Wildomar generally have low shrink-swell potential because they are generally sandy. However, soils developed on older alluvium have varying amounts of silt and clay. Soils with higher clay content and density could have more shrink-swell potential. According to the Preliminary Expansion Index testing conducted by EnGEN Corporation (2006), the project site has very low expansion potential (EnGEN 2006). Further, the proposed project site is located in an area of shallow alluvium underlain by hard to very hard and dense granitic bedrock, which is generally not susceptible to landslides (EnGEN 2006). The earth materials on the site are composed of Quaternary alluvium and granodiorite. According to the geotechnical study conducted by EnGEN, the areas of alluvium and artificial fill on the project site are not suitable to support the structures of the proposed project. As such, mitigation measure **MM 3.6.5** would require over excavation to expose more stable substrate that is more suitable to support structures.

Mitigation Measures

MM 3.6.5 All existing undocumented artificial fill, topsoil, Quaternary alluvium, and unsuitable upper intensely weathered Cretaceous granodiorite shall be over-excavated to underlying competent granodiorite within the areas of proposed structures, fill, or improvements. Anticipated removal depth ranges will be determined by the project engineer. Additionally, all slope wash and alluvium should be removed from the areas to be graded to competent bedrock, cleared of oversized rock, and may then be reused as fill material. Further, all exposed removal and over excavation bottoms should be inspected by the project geologist or his representative prior to placement of

3.6 GEOLOGY AND SOILS

any fill. Lastly, the project applicant shall ensure that vegetation is removed from areas that will be graded, with slope ratios no steeper than 2:1 (horizontal to vertical). All on-site soil engineering activities shall be conducted under the supervision of a licensed geotechnical engineer or certified engineering geologist. The upper parking lot will require grading and redistribution of materials amounting to approximately 24,500 cubic yards. The material will be used within the project site, resulting in balanced soil excavation and fill for the project.

Timing/Implementation: *During grading and building activities*

Enforcement/Monitoring: *City of Wildomar City Public Works and Building Departments*

Adherence to CBC requirements addressing structural seismic safety and the implementation of mitigation measure **MM 3.6.5** which requires exposing more stable substrate will reduce this impact to **less than significant**.

Expansive Soils (Standard of Significance 4)

Impact 3.6.6 Soils testing indicates that the soils within the proposed project site are non-expansive. However, import soils or soils used near finish grade may have a different expansion index than what was tested. As such, impacts associated with this issue area are **potentially significant**.

Soils tested on-site are classified to have very low expansion potential (Expansion Potential yield of 3). However, import soils or soils used near finish grade may have a different Expansion Index (EI). Therefore, soils with higher expansion potential could be present on-site. As such, mitigation measures **MM 3.6.6a** and **MM 3.6.6b** which includes requirements for development consistent with the soil conditions found on the project site and are based upon a very low expansion potential for the supporting material as determined by Chapter 18 of the CBC. The City also requires that site-specific soils reports accompany a building permit application request, which ensures that the type of building proposed is consistent with the actual soils present on the proposed building location. Additionally, the City evaluates each foundation plan separately using information from the building permit and site-specific soils analysis.

Further, in addition to requirements outlined in mitigation measures **MM 3.6.6a** and **MM 3.6.6b**, numerous other methods may also be applied after consultation with the City and soils engineers. The precise method will be determined based on building and soils type and approved by the City as part of the building permit process. Compliance with development requirements specific to soil conditions found on site, as detailed in mitigation measures **MM 3.6.6a** and **MM 3.6.6b** and further consultation with the City and soils engineers will result in a **less than significant** impact regarding expansive soils.

Mitigation Measures

MM 3.6.6a **Slab on Grade.** To prevent foundation damage associated with potentially expansive soils, the applicant shall ensure that concrete slabs are designed to minimize cracking as a result of shrinkage and joints (isolation, contraction, and construction) be placed in accordance with the American Concrete Institute (ACI) guidelines. Additionally, special precautions should be taken during placement and curing of all concrete slabs. Excessive slump (high

water/cement ratio) of the concrete and/or improper curing procedures used during either hot or cold weather conditions could result in excessive shrinkage, cracking, or curling in the slabs. All concrete proportioning, placement, and curing will be performed in accordance with ACI recommendations and procedures. Slab-on-grade reinforcement and thickness should be provided by the structural engineer based on structural considerations. Final expansion testing at completion of grading could cause a change in the slab-on-grade recommendations.

Timing/Implementation: Prior to the issuance of a grading permit

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

MM 3.6.6b **Exterior Slabs.** All exterior concrete slabs cast on finish subgrade (patios, sidewalks, etc., with the exception of portland cement concrete (PCC) pavement) should be a minimum of 4 inches nominal in thickness. Reinforcing in the slabs and the use of a compacted sand or gravel base beneath the slabs should be according to the current local standards. Subgrade soils should be moisture conditioned to at least optimum moisture content to a depth of 12 inches immediately before placing the concrete.

Timing/Implementation: Prior to the issuance of a grading permit

Enforcement/Monitoring: City of Wildomar Engineering and Planning Departments

3.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Geotechnical impacts are site-specific rather than cumulative in nature. For example, seismic events may damage or destroy a building on the project site, but the construction of a development project on one site would not cause any adjacent parcels to become more susceptible to seismic events, nor can a project affect local geology in such a manner as to increase risks regionally. As a result the cumulative setting for this project is the project boundaries, including the paving of Via Carnaghi Lane, and the administration building.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Soil Stability and Seismic Impacts

Impact 3.6.7 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in Wildomar and nearby areas of Riverside County, would not contribute to cumulative geologic and soils impacts. The proposed project's incremental contribution would be **less than cumulatively considerable**.

Soils associated with the project site are similar to others in the area. The proposed project will grade parts of the property to result in new parking areas. The resulting project site will be visually and topographically different from existing development surrounding the proposed project site. While some grading occurred for surrounding homes, much of the prior development occurred

3.6 GEOLOGY AND SOILS

with minimal or building-pad-specific grading only. As shown in **Figure 2.0-3a**, the site of the proposed parking lot will generally be higher than existing development. The proposed project will be graded to be similar to existing adjacent natural topography to avoid erosion. With compliance with existing codes and standards, including the California Building Code and implementation of mitigation measures outlined in **Impacts 3.6.1** through **3.6.6**, the proposed project's contribution to cumulative impacts related to the area's geology would be **less than cumulatively considerable**.

Mitigation Measures

None required.

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3.7 HYDROLOGY AND WATER QUALITY

This section describes surface water and groundwater features for the proposed project site and relevant surrounding areas and addresses potential issues associated with drainage, erosion, and flooding associated with increased stormwater runoff and water quality. Draft EIR Section 3.9, Public Services and Utilities, discusses impacts related to water supplies and the provision of water service. Information in this section is based on the Preliminary Hydrology and Hydraulic Study (**Appendix 3.7**) and Preliminary Water Quality Management Plan (WQMP) (**Appendix 3.7**) for the Cornerstone Community Church of Wildomar (JLC 2014a).

3.7.1 EXISTING SETTING

CLIMATE AND PRECIPITATION

The climate of Wildomar is dry-subtropical or Mediterranean, characterized by mild winters and hot, dry summers as defined on the Koppen climate classification system. Mild sea breezes carry pollutants from urbanized Los Angeles to inland areas such as Riverside County. Temperature inversion is the prime factor that allows contaminants to accumulate in the South Coast Air Basin. An inversion occurs when warm air masses lie over cool moist marine layer, often forming a cap, preventing pollutants from escaping upward. Temperature inversions are stronger in the summer than in winter due to calm wind conditions. Rainfall in the project area averages from 11 to 15 inches per year, with approximately 75 percent of the precipitation occurring during the four-month period from December through March (Riverside County 2006).

REGIONAL HYDROLOGY

The proposed project site is located in the Santa Margarita Watershed, which covers approximately 746 square miles, split into a mountainous highland (upper drainage basin) and a broad, flat-topped sea terrace (coastal drainage basin). The boundary between the upper drainage basin and the coastal drainage basin transitions at the county line between Riverside and San Diego counties.

The upper drainage basin is formed almost solely by Murrieta Creek, which has a drainage area of 222 square miles and is a major tributary of the greater 750-square-mile Santa Margarita Watershed. This watershed consists of three major portions: the Murrieta Creek subwatershed to the north, the Temecula Creek subwatershed to the southeast, and the Santa Margarita River to the southwest. The watershed currently contains three major water storage reservoirs: Lake Skinner and the recently completed Diamond Valley Reservoir, which are part of the Murrieta Creek subwatershed, and Vail Lake, which is part of the Temecula Creek subwatershed. These reservoirs control over 50 percent of the Santa Margarita Watershed. Runoff entering the reservoirs is initially stored, and excess flows (depending on available storage

The following terms may be useful when reading this section of the EIR:

Back Basin: The geographic area east of Lake Elsinore that represents the historical extent of the lake (MWD 2007).

Best Management Practices: Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States (CFR 2013).

Bioretention: A best management practice (BMP) that utilizes soils and both woody and herbaceous plants to remove pollutants from stormwater runoff (EPA 1999).

Detention Basin: An area where excess stormwater is stored or held temporarily and then slowly drains when water levels in the receiving channel recede (HCFCD 2013).

Cubic Foot (ft³): A “cube” 12 inches on each side and containing 7.48 gallons of water.

Cubic Foot per Second (cfs): A method of expressing water flow in multiples of cubic feet.

Impervious: Not allowing fluid to pass through.

Retention Basin: An area that stores stormwater indefinitely allowing the captured stormwater to be absorbed into the soils or to evaporate (HCFCD 2013).

3.7 HYDROLOGY AND WATER QUALITY

volume) are discharged downstream. The combined reservoirs have a substantial storage capacity capable of significantly reducing downstream flows from the natural condition.

Temecula and Murrieta creeks join along the Elsinore fault zone at the head of Temecula Canyon to form the Santa Margarita River. Temecula Canyon is approximately 5 miles long and is a steep, narrow, and rocky canyon. The San Diego-Riverside county line crosses Temecula Canyon. From here, the river runs 27 miles to the Pacific Ocean (Riverside County 2006).

PROJECT SITE HYDROLOGY

The proposed project site will include approximately 19.75 acres of a 63.51-acre property. The undisturbed 43.76 acres adjacent to the project site are currently undeveloped, consisting of steeply sloping hills that drain through several southwest-draining channels (EnGEN 2006). The approximate 19.75 acres of the property that will include the proposed project contain the hydrologic soil group “C” (**Appendix 3.7**) (JLC 2014a). Hydrologic soil group C includes soils that have moderately high runoff potential when thoroughly wet and which somewhat restrict the transmission of water (USDA 2007).

The preliminary hydrology and hydraulic also describes and analyzes the proposed project as three drainage areas (**Figure 3.7-1**). The three areas of the proposed project site and their current hydrology are as follows:

- **Drainage Area A** consists of the area occupied by the existing church buildings and the existing north parking area. The proposed preschool and proposed administration building will be built in Area A, which may be approximately identified by APN 367-210-008. Area A is currently 100 percent impervious, and it is tributary to an existing basin south of Area A that connects to an existing 36-inch storm drain crossing Monte Vista Drive and Interstate 15.
- **Drainage Area B** includes the proposed maintenance area parking lot. The proposed maintenance building and the proposed maintenance building parking area will be built in Area B, which may be approximately identified by APNs 367-210-018, 367-210-039, and 367-210-043. Area B is tributary to an existing 48-inch storm drain crossing Monte Vista Drive and Interstate 15.
- **Drainage Area C** consists of the area that will include the proposed lower parking area and the proposed access road from the proposed lower parking area to proposed upper parking area. Area C may be approximately identified by APN 367-210-041 within the proposed access road occurring in APN 367-210-018. Area C is tributary to an existing storm drain located south of Via Carnaghi Lane that crosses Monte Vista Drive and Interstate 15.

Ultimately all three areas of the proposed project are tributary to the six receiving waters listed in **Table 3.7-1**.

FLOODING

According to Flood Insurance Rate Map (FIRM) Panel 06065C2682G, published by the Federal Emergency Management Agency (FEMA), for Riverside County dated August 28, 2008, the project site is designated as Zone X (FEMA 2014). Zone X is defined by FEMA as an area of minimum flood hazard, usually outside the limits of the 100-year and 500-year floods. FIRM panels are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than 1 foot or drainage areas less than 1 square mile.

GROUNDWATER

While the proposed project is outside of any groundwater basin area, to the north of the proposed project site, the Elsinore Groundwater Basin underlies the Elsinore Valley in western Riverside County. The Elsinore Groundwater Basin is bounded on the southwest by the Santa Ana and Elsinore mountains along the Willard fault, a splay of the active Elsinore fault zone. The basin adjoins the Temecula Valley Groundwater Basin on the southeast at a low surface drainage divide. The basin is bounded on the northwest by the Temescal Subbasin of the Upper Santa Ana River Valley Groundwater Basin at a constriction in Temescal Wash. The basin is bounded on the northeast by non-water-bearing rocks of the Peninsular Ranges along the Glen Ivy fault. Average annual precipitation ranges from 12 to 14 inches.

Groundwater Recharge

The principal recharge of the Elsinore Groundwater Basin is from infiltration of stream flow through alluvial fan deposits near the edges of the basin and through gravel deposits along the course of the San Jacinto River. Other contributing sources include infiltration from unlined channels overlying the basin, underflow from saturated alluvium and fractures in the surrounding bedrock mountains and hills, and spreading of water in recharge basins (DWR 2006).

Groundwater Levels

Groundwater levels in the Elsinore Groundwater Basin declined more than 100 feet between 1927 and 1950 (DWR 2006). A hydrograph from one well shows that the water level declined about 110 feet in the southern part of the basin from 1967 through 1985. However, a hydrograph from a well in the northern part of the basin shows a rise in water level of about 65 feet from 1963 through 1980. Under natural conditions, groundwater should flow generally toward Lake Elsinore; however, because faults cutting the sediments impede groundwater movement, groundwater flow is predominantly contained within fault blocks in the basin (DWR 2006).

WATER QUALITY

Surface Water

Section 303(d) of the federal Clean Water Act (CWA) requires states to identify the waters of the State that do not meet the designated beneficial uses and to develop total maximum daily loads (TMDLs) for such waters, with oversight by the US Environmental Protection Agency (EPA). These waters are commonly referred to as impaired. A TMDL is a quantifiable assessment of potential water quality issues, contributing sources, and load reductions or control actions needed to restore or protect bodies of water. Total maximum daily loads are discussed further in the Regulatory Framework subsection below. Four of the five receiving waters for the proposed project are included on the 2010 Clean Water Act Section 303(d) List of Water Quality Limited Segments requiring TMDL. These four receiving waters are Murrieta Creek, Upper Santa Margarita River, Lower Santa Margarita River, and the Santa Margarita Lagoon. **Table 3.7-1** details the pollutants that are impairing the water bodies, status of the TMDLs and the distance of the water body from the proposed project site.

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**TABLE 3.7-1
RECEIVING WATERS FOR URBAN RUNOFF FROM PROPOSED PROJECT – SANTA MARGARITA WATERSHED**

Receiving Water	303(d) List Impairments	TMDL Status	Distance from Site
Murrieta Creek	Chlorpyrifos	TMDL needed	2.01 miles
	Copper, Iron, Manganese	TMDL needed	
	Nitrogen	TMDL needed	
	Phosphorus	TMDL needed	
	Toxicity	TMDL needed	
Santa Margarita River (Upper)	Phosphorus	TMDL needed	12.12 miles
	Toxicity	TMDL needed	
Santa Margarita River (Lower)	Enterococcus, Fecal Coliform	TMDL needed	15.97 miles
	Phosphorus, Nitrogen	TMDL needed	
Santa Margarita Lagoon	Eutrophic	TMDL needed	28.07 miles
Pacific Ocean	None	TMDL needed	28.72 miles

Source: SWRCB 2010

Groundwater Quality

The groundwater in the Elsinore Groundwater Basin is generally of good to fair quality, with total dissolved solids concentrations ranging from 250 milligrams per liter (mg/L) in the Back Basin area east of Lake Elsinore to about 600 mg/L in the northwest part of the basin (MWD 2007). Contaminants of concern for the Elsinore Basin are summarized in **Table 3.7-2**. As shown in the table, total dissolved solids (TDS), nitrate, and arsenic are present in the basin.

**TABLE 3.7-2
SUMMARY OF CONSTITUENTS OF CONCERN IN THE ELSINORE GROUNDWATER BASIN**

Constituent	Units	Range	Description
Total Dissolved Solids MCL ¹ = 500	mg/L	250 to > 600 Ambient: 460	TDS concentrations range from about 250 mg/L in the Back Basin area to above 600 mg/L northwest of Lake Elsinore.
Nitrate Primary MCL = 10	mg/L	Not detectable to 8 Ambient: 2.4	Nitrate concentrations range from non-detect in the Back Basin area to as much as 8 mg/L along the southern margin of the basin. Nitrate concentrations in areas where septic tanks exist are currently increasing.
Volatile Organic Compounds (VOCs): Trichloroethylene (TCE) and Perchloroethylene (PCE) Primary MCL for TCE = 5 Primary MCL for PCE = 5	µg/L	PCE: Not detectable TCE: Not detectable	TCE and PCE have not been detected in the Elsinore Basin.
Perchlorate Notification level = 6	µg/L	Not detectable	Perchlorate has not been detected in the Elsinore Basin.

Constituent	Units	Range	Description
Arsenic Primary MCL = 10	µg/L	Not detectable to 35	Concentrations of arsenic range from non-detect in the northwestern portions of the basin to as much as 35 mg/L in the Back Basin area and exceed the primary MCL for arsenic. The highest concentrations of arsenic are found in the deeper zones of the basin.

Source: MWD 2007

¹ MCL = maximum contaminant level

3.7.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The federal Clean Water Act (CWA) gives states the primary responsibility for protecting and restoring water quality. In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are the agencies with the primary responsibility for implementing federal CWA requirements, including developing and implementing programs to achieve water quality standards. Water quality standards include designated beneficial uses of water bodies, criteria or objectives (numeric or narrative) which are protective of those beneficial uses, and policies to limit the degradation of water bodies. The project site is located in a portion of the state that is regulated by the San Diego Regional Water Quality Control Board (SDRWQCB), and the water quality standards for the project site are contained in the Water Quality Control Plan for the San Diego Basin (Basin Plan) (SDRWQCB 1994).

Sections 401 and 404 of the Clean Water Act

Sections 401 and 404 of the federal Clean Water Act are administered through the Regulatory Program of the US Army Corps of Engineers (USACE) and regulate the water quality of all discharges of fill or dredged material into waters of the United States, including wetlands and intermittent stream channels. Section 401, Title 33, Section 1341 of the Clean Water Act sets forth water quality certification requirements for any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into the navigable waters.

Section 404, Title 33, Section 1344 of the CWA in part authorizes the USACE to:

- Set requirements and standards pertaining to such discharges: subparagraph (e);
- Issue permits “for the discharge of dredged or fill material into the navigable waters at specified disposal sites:” subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if “the discharge of such materials into such area would have an unacceptable, adverse effect on municipal water supplies and fishery areas:” subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);

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- Provide for individual state or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such state or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain federal or state projects from regulation under this section: subparagraph (r); and
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).

National Pollutant Discharge Elimination System

As authorized by Section 402(p) of the CWA, the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The State Water Resources Control Board issues NPDES permits to cities and counties through the RWQCBs, and it is the responsibility of the RWQCBs to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements. Waste discharge requirements for discharges to surface waters also serve as NPDES permits.

General Construction Activity Storm Water Permits and Stormwater Pollution Prevention Plans

In accordance with NPDES regulations, the SWRCB has issued a Statewide General Permit (Water Quality No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ) for construction activities in the state. The Construction General Permit (General Permit) is implemented and enforced by the RWQCBs. The General Permit applies to any construction activity affecting 1 acre or more and requires those activities to minimize the potential effects of construction runoff on receiving water quality. Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ.

General Permit applicants are required to submit to the appropriate regional board Permit Registration Documents for the project, which include a Notice of Intent, a risk assessment, a site map, a signed certification statement, an annual fee, and a stormwater pollution prevention plan (SWPPP). The permit program is risk based wherein a project's risk is based on the project's potential to cause sedimentation and the risk of such sedimentation on the receiving waters. A project's risk determines its water quality control requirements, ranging from Risk Level 1, which consists of only narrative effluent standards, implementation of best management practices (BMPs), and visual monitoring, to Risk Level 3, which consists of numeric effluent limitations, additional sediment control measures, and receiving water monitoring. Additional requirements include compliance with post-construction standards focusing on low impact development (LID), preparation of rain event action plans, increased reporting requirements, and specific certification requirements for certain project personnel.

The SWPPP must include implementing best management practices to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction best management practices included in SWPPPs include, but are not limited to:

- Using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils;
- Storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water;
- Developing and implementing a spill prevention and cleanup plan; and
- Installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters.

Total Maximum Daily Loads

Under CWA Section 303(d) and California's Porter-Cologne Water Quality Control Act of 1969, the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes the total maximum daily load (TMDL) process to assist in guiding the application of state water quality standards, requiring the states to identify waters whose water quality is "impaired" (affected by the presence of pollutants or contaminants) and to establish a TMDL, or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects on the beneficial use identified. The establishment of TMDLs is generally a stakeholder-driven process that involves investigation of sources and their loading (pollution input), estimation of load allocations, and identification of an implementation plan and schedule. Where stakeholder processes are not effective, total maximum daily loads can be established by the RWQCBs or the EPA. TMDLs are adopted as amendments to the Basin Plan.

As discussed in the Existing Setting subsection above and shown in **Table 3.7-1**, the project site would discharge into four Section 303(d) listed impaired waterways. TMDLs have not been established for any of the waterways.

STATE

Porter-Cologne Water Quality Control Act

In 1969, the California legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The CWA and the Porter-Cologne Water Quality Control Act are similar in many ways, with the fundamental purpose of both laws being to protect the beneficial uses of water. An important distinction between the two is that the Porter-Cologne Water Quality Control Act addresses both groundwater and surface water, while the CWA addresses surface water only.

The Porter-Cologne Water Quality Control Act established the SWRCB and the nine RWQCBs as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the SWRCB to establish water quality principles and guidelines for long-range resource planning, including groundwater and surface water management programs and control and use of recycled water.

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State Water Resources Control Board

The five-member SWRCB allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality Control Boards located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters (SWRCB 2012). The SWRCB is responsible for implementing the Clean Water Act and issues NPDES permits to cities and counties through Regional Water Quality Control Boards.

REGIONAL

The project site is within the jurisdictional boundary of the San Diego RWQCB. As a result, the proposed project site is regulated by the SDRWQCB and is required to comply with the SDRWQCB MS4 Permit (NPDES No. CA S0108766, Order No. R9-2010-0016) and the NPDES Permit and Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District (NPDES No. CAS 618033, Order No. R8-2010-0033).

San Diego Regional Water Quality Control Board

The San Diego Regional Water Quality Control Board (SDRWQCB) has responsibility for controlling water quality in San Diego County, Imperial County, and parts of Riverside County. As previously stated, the water quality standards for water bodies in the San Diego region are contained in the Water Quality Control Plan for the San Diego Region Basin (SDRWQCB 1994).

Water Quality Control Plan for the San Diego Basin (Basin Plan)

The Water Quality Control Plan for the San Diego Basin designates beneficial uses for water bodies in the San Diego region and establishes water quality objectives and implementation plans to protect those beneficial uses. Specifically, the Basin Plan (1) designates beneficial uses for surface water and groundwater; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

The SDRWQCB issues permits, called waste discharge requirements and master reclamation permits, which require that waste and reclaimed water not be discharged in a manner that would cause an exceedance of applicable water quality objectives or adversely affect beneficial uses designated in the Basin Plan. The SDRWQCB enforces these permits through a variety of administrative means. **Table 3.6-4** lists beneficial uses of the receiving waters, located in the Santa Margarita Watershed, for the proposed project.

TABLE 3.7-3
BENEFICIAL USES FOR THE RECEIVING INLAND SURFACE WATERS FOR THE SANTA MARGARITA WATERSHED

Water Body	Beneficial Uses														
	MUN	GWR	AGR	IND	PROC	REC-1	REC-2	WARM	COLD	EST	WILD	RARE	MAR	MIGR	SPWN
Murrieta Creek	X		X	X	X	P	X	X			X				
Santa Margarita River	X		X	X		X	X	X	X		X	X			
Santa Margarita Lagoon						X	X			X	X	X	X	X	X

Source: SDRWQCB 1994

Notes: (X) Existing Beneficial Use; (P) Potential Beneficial Use

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As listed in **Table 3.7-3**, beneficial uses include the following:

- **Municipal and Domestic Supply (MUN)** – Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- **Groundwater Recharge (GWR)** – Uses of water for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting saltwater intrusion into freshwater aquifers.
- **Agricultural Supply (AGR)** – Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
- **Industrial Service Supply (IND)** – Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
- **Industrial Process Supply (PROC)** – Includes uses of water for industrial activities that depend primarily on water quality.
- **Water Contact Recreation (REC-1)** – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, or use of natural hot springs.
- **Non-Contact Water Recreation (REC-2)** – Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- **Warm Freshwater Habitat (WARM)** – Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Cold Freshwater Habitat (COLD)** – Includes uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Estuarine Habitat (EST)** – Includes uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).
- **Wildlife Habitat (WILD)** – Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- **Rare, Threatened or Endangered Species (RARE)** – Waters that support the habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened, or endangered.

- Marine Habitat (MAR) – Includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).
- Migration of Aquatic Organisms (MIGR) – Includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.
- Spawning, Reproduction, and/or Early Development (SPWN) – Includes uses of water that support high quality habitats suitable for reproduction, early development, and sustenance of marine fish and/or cold freshwater fish.

Waste Discharge Requirements for Riverside County MS4s

Waste Discharge Requirements for Discharges from the MS4s (Order No. R9-2010-0016)

The SDRWQCB issued a municipal stormwater permit, Order No. 90-46, in July 1990 to the co-permittees for their municipal separate storm sewer system (MS4) discharges. NPDES No. CAS0108766, Order No. R9-R9-2010-0016 (Waste Discharge Requirements for Discharges from the MS4s Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region) is the fourth iteration of the stormwater permit for MS4s in the Riverside County portion of the SDRWQCB.

Order 90-46 specifies requirements necessary for the co-permittees to reduce the discharge of pollutants in stormwater to the maximum extent practicable and to achieve water quality standards. Some of the requirements, such as the revised Watershed Water Quality Workplan (Watershed Workplan) section, are designed to specifically address high priority water quality problems. Other requirements, such as for unpaved roads, are a result of the SDRWQCB's identification of water quality problems through investigations and complaints during the previous permit period. Other requirements address program deficiencies that have been noted during audits, report reviews, and other SDRWQCB compliance assessment activities. Potential development projects resulting from the proposed project would be required to comply with all applicable provisions of this order.

National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements (Order No. R8-2010-0033)

Similar to the waste discharge requirements described above for the Riverside County portion of the San Diego Regional Water Quality Control Board, NPDES No. CAS618033, Order No. R8-2010-0033 (NPDES Permit and Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside within the Santa Ana Region) regulates co-permittees for their MS4 stormwater discharges into receiving waters in the Santa Ana region.

LOCAL

City of Wildomar Municipal Code

The City of Wildomar Municipal Code establishes the following requirements that pertain to hydrology and water quality:

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- Title 13, Chapter 13.12, Stormwater/Urban Runoff Management and Discharge Controls Ordinance, establishes requirements for stormwater and non-stormwater quality discharge and control. The chapter prohibits discharges of pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards. The chapter codifies various federal and state requirements for stormwater pollution prevention and requires compliance with these statutes and regulations. The purpose of this chapter is to reduce pollutants in stormwater discharges to the maximum extent practicable, regulate illicit connections and discharges to the storm drain system, and regulate non-stormwater discharges to the storm drain system. The chapter requires new development projects to control stormwater runoff so as to prevent any deterioration of water quality that would impair subsequent or competing uses of the water via best management practices (BMPs) that may, among other things, require new developments or redevelopments to increase permeable areas, direct runoff to permeable areas, and maximize stormwater storage for reuse.
- Title 15, Chapter 15.96 prohibits any development within floodways and also establishes requirements for construction in floodplains. This chapter codifies federal requirements for development within floodplains and requires compliance with those regulations.

3.7.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The thresholds in italics do not apply to the proposed project but have been included for consistency with Appendix G of the CEQA Guidelines. A project is considered to have significant impacts if implementation of the project will:

- 1) Violate any water quality standards or waste discharge requirements.
- 2) 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).
- 3) 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 which would result in substantial erosion or siltation on- or off-site.
- 4) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- 5) Otherwise substantially degrade water quality.
- 6) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- 7) Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

- 8) Expose people or structures to a significant loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- 9) Inundation by seiche, tsunami, or mudflow.

The proposed project site is not within a groundwater basin management area. No impact would occur, and this issue (Standard of Significance 2) will not be addressed further in this DEIR.

The proposed project does not include the construction of housing, and the project site is in the FEMA-designated flood hazard Zone X, which indicates that the site is subject to a minimal risk of being flooded (FEMA 2014). No impact will occur, and these issues (Standard of Significance 6 and 7) will not be addressed further in this Draft EIR.

Riverside County identifies dam inundation hazard areas throughout the county. A review of records maintained at the California Office of Emergency Services provided potential failure inundation maps for 23 dams affecting Riverside County; these maps were compiled into geographic information system (GIS) digital coverage of potential dam inundation zones. The county's dam inundation zones are identified in Figure S-10 of the Wildomar General Plan. According to Figure S-10, the project site is not in any dam inundation hazard zones. In addition, the project is not in the vicinity of any levees. Therefore, no impact would occur, and this issue (Standard of Significance 8) will not be addressed further in this Draft EIR.

Based on the elevation of the project site above sea level and the lack of nearby enclosed bodies of water, the potential for inundation by seiche, tsunami, or mudflow is nonexistent. Therefore, no impact would occur, and this issue (Standard of Significance 9) will not be addressed further in this Draft EIR.

METHODOLOGY

The primary sources for this section of the draft EIR include the Preliminary Hydrology and Hydraulic Study for Cornerstone Community Church of Wildomar (JLC 2013a), Preliminary Water Quality Management Plan for Cornerstone Community Church of Wildomar (JLC 2013b), City of Wildomar General Plan (2008), California's Groundwater Bulletin 118, Elsinore Groundwater Basin (DWR 2006), the SDRWQCB's Basin Plan (1994), NPDES No. CAS0108766, Order No. R9-2010-0016, and FEMA flood hazard mapping.

Drainage

JLC Engineering & Consulting, Inc., prepared the Preliminary Hydrology and Hydraulic Study for Cornerstone Community Church of Wildomar (2014a) (see **Appendix 3.7**). The study was prepared to determine anticipated changes to the existing drainage patterns on the site as well as the adequacy of the proposed drainage system in terms of capacity and water quality treatment. It should be noted that the existing condition hydrology analyses were performed for three drainage areas designated as Areas A, B, and C, which are referenced in **Tables 3.7-5** through **3.7-7** and **Tables 3.7-10** through **3.7-13**. Areas A, B, and C are shown on **Figure 3.7-1**.

Water Quality

The project's preliminary hydrology and hydraulic study (JLC 2014a) and preliminary water quality management plan (JLC 2014b) were reviewed to determine potential sources and types of pollutants that could be generated by project construction and/or operation. The SWRCB

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statewide permit and SDRWQCB permit requirements were reviewed to determine whether water quality would be sufficiently protected or if further mitigation would be required.

IMPACTS AND MITIGATION MEASURES

Degrade Water Quality or Violate Water Quality Standards (Standards of Significance 1 and 5)

Impact 3.7.1 Construction and operation of the proposed project could result in erosion or a degradation of downstream surface water and groundwater resources. This impact would be **potentially significant**.

Urban runoff (both dry and wet weather) discharges into storm drains and, in most cases, flows directly to creeks, rivers, lakes, and the ocean. Polluted runoff can have harmful effects on drinking water, recreational water, and wildlife. Urban runoff pollution includes a wide array of environmental, chemical, and biological compounds from both point and nonpoint sources. In the urban environment, stormwater characteristics depend on site conditions (e.g., land use, impervious cover, pollution prevention, types and amounts of best management practices), rain events (duration, amount of rainfall, intensity, and time between events), soil type and particle sizes, multiple chemical conditions, the amount of vehicular traffic, and atmospheric deposition (EPA 2005). Major pollutants typically found in runoff from urban areas include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogens, and bacteria.

Urban runoff can be divided into two categories: dry and wet weather urban runoff.

- Dry weather urban runoff occurs when there is no precipitation-generated runoff. Typical sources include landscape irrigation runoff, driveway and sidewalk washing, noncommercial vehicle washing, groundwater seepage, fire flow, potable water line operations and maintenance discharges, and permitted or illegal non-stormwater discharges.
- Wet weather urban runoff refers collectively to nonpoint source discharges that result from precipitation events. Wet weather runoff includes stormwater runoff. Stormwater discharges are generated by runoff from land and impervious areas such as building rooftops and paved streets and parking lots.

Wet and dry weather runoff typically contains similar pollutants of concern. However, except for the first flush concentrations following a long period between rainfall events, the concentration levels found in wet weather flows are typically lower than levels found in dry weather flows because the larger wet weather flows dilute the amount of pollution in runoff waters. Most urban stormwater discharges are considered nonpoint sources and are regulated by an NPDES Municipal General Permit or Construction General Permit.

A net effect of development can be to increase pollutant export over naturally occurring conditions to adjacent streams and also on the downstream receiving waters. However, an important consideration in evaluating stormwater quality from the project is to assess whether it impairs the beneficial use of the receiving waters. Receiving waters can assimilate a limited quantity of various constituent elements; however, there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. For this evaluation, impacts to stormwater quality would be considered significant if the project did not attempt to address stormwater pollution to the maximum extent practicable.

Short-Term Construction

During construction activities, erosion potential and the possibility of water quality impacts are always present and occur when protective vegetative cover is removed and soils are disturbed. Construction activities can result in sediment runoff rates, which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. In addition to sediment, stormwater flowing over a construction site can carry various pollutants such as nutrients, bacteria and viruses, oil and grease, heavy metals, organics, pesticides, gross pollutants, and miscellaneous waste into receiving waters. These pollutants can originate from soil disturbances, construction equipment, building materials, and workers. To minimize the potential for contamination of stormwater during construction, a stormwater pollution prevention plan (SWPPP) is required as part of the grading permit submittal package. The SWPPP will have a series of specific measures that will be included in the construction process to address erosion, accidental spills and the quality of stormwater runoff.

The best management practices that must be implemented as part of a SWPPP can be grouped into two major categories: (1) erosion and sediment control BMPs and (2) non-stormwater management and materials management BMPs. Erosion and sediment control BMPs fall into four main subcategories:

- Erosion controls
- Sediment controls
- Wind erosion controls
- Tracking controls

Erosion controls include practices to stabilize soil, to protect the soil in its existing location, and to prevent soil particles from migrating. Examples of erosion control BMPs are preserving existing vegetation, mulching, and hydroseeding. Sediment controls are practices to collect soil particles after they have migrated, but before the sediment leaves the site. Examples of sediment control BMPs are street sweeping, fiber rolls, silt fencing, gravel bags, sand bags, storm drain inlet protection, sediment traps, and detention basins. Wind erosion controls prevent soil particles from leaving the site in the air. Examples of wind erosion control BMPs include applying water or other dust suppressants to exposed soils on the site. Tracking controls prevent sediment from being tracked off site via vehicles leaving the site to the extent practicable. A stabilized construction entrance not only limits the access points to the construction site but also functions to partially remove sediment from vehicles prior to leaving the site.

Non-stormwater management and material management controls reduce non-sediment-related pollutants from potentially leaving the construction site to the extent practicable. The Construction General Permit prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges (such as irrigation and pipe flushing and testing). Non-stormwater BMPs tend to be management practices with the purpose of preventing stormwater from coming into contact with potential pollutants. Examples of non-stormwater BMPs include preventing illicit discharges and implementing good practices for vehicle and equipment maintenance, cleaning, and fueling operations, such as using drip pans under vehicles. Waste and materials management BMPs include implementing practices and procedures to prevent pollution from materials used on construction sites. Examples of materials management BMPs include:

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- Good housekeeping activities such as storing of materials covered and elevated off the ground, in a central location.
- Securely locating portable toilets away from the storm drainage system and performing routine maintenance.
- Providing a central location for concrete washout and performing routine maintenance.
- Providing several dumpsters and trash cans throughout the construction site for litter/floatable management.
- Covering and/or containing stockpiled materials and overall good housekeeping on the site.

The Construction General Permit also requires that construction sites be inspected before and after storm events and every 24 hours during extended storm events. The purpose of the inspections is to identify maintenance requirements for the BMPs and to determine the effectiveness of the BMPs that are being implemented. The SWPPP is a “living document” and as such can be modified as construction activities progress. Additional requirements include compliance with post-construction standards focusing on low impact development (LID) and preparation of rain event action plans.

The SWRCB has also issued a Statewide General Permit (Water Quality Order R5-2008-0081, NPDES No. CAG995001 and) for dewatering and other low-threat discharges to surface waters in the state. Should construction of a project require dewatering, the project applicant would be required to submit a Notice of Intent, as well as a Best Management Practices Plan, to comply with the general permit. The BMP Plan would include disposal practices to ensure compliance with the general permit, such as the use of sediment basins or traps, dewatering tanks, or gravity or pressurized bag filters. Monitoring and reporting would also be performed to ensure compliance with the permit. Mitigation measure **MM 3.7.1** requires preparation of a stormwater pollution prevention plan (SWPPP) and indicates the types of BMPs that are typically required as part of the permit.

Project Operation

The proposed project will construct two retention planters, two sand filter basins, a subsurface system, and porous pavers to treat for water quality treatment purposes and to mitigate flows of increased runoff. Additionally, the project site will utilize two existing septic systems to treat for water quality purposes. Collectively, these facilities will represent the operational BMPs of the proposed project. It should be noted, however, that flows within the south Via Carnaghi improvements do not require mitigation for increased runoff because these flows will be treated for water quality purposes using catch basin filter inserts, as no other means of treatment is feasible. Additionally, the adjacent properties are private properties and due to requirements for the street improvements, area within the right-of way cannot be used.

The capacities of the proposed BMPs that will protect surface water quality were determined using the Santa Margarita Watershed BMP Design Volume V_{BMP} spreadsheet. The 85th percentile, 24-hour rainfall depth of 0.70 inch was obtained from the Isohyetal Map included in **Appendix 3.7a**. To establish the capacities of the project BMPs, the impervious fraction values included in **Table 3.7-4** were used.

TABLE 3.7-4
IMPERVIOUS FRACTION VALUES

Developed Cover	Effective Impervious Fraction
Roofs	1.0
Asphalt/Concrete	1.0
Natural Soil "C"	0.3
Landscaping	0.1

Source: JLC 2014a

Conservatively, the area of the proposed preschool is assigned an effective impervious fraction of 1.0 for the building's roof. This is considered a conservative value since the area draining to the bioretention basins will include a landscaped area that has an effective impervious fraction of 0.1.

The area of the administration building was assigned an effective impervious fraction based on the building's roof and landscaped areas. The proposed upper, maintenance building, and lower parking areas were assigned asphalt/concrete, landscaping, and natural soil "C" for any minor off-site areas or non-landscaped areas that are tributary to the BMPs. Although the lower parking area will incorporate porous pavers, this parking area was analyzed as asphalt/concrete to be conservative, as the parking areas may utilize subsurface basins for treatment and mitigation. Comprehensive final impervious fraction calculations are included in **Appendix 3.7a**.

Based on the effective impervious fraction calculations, the required capacities of the project BMPs are included in **Table 3.7-5**.

TABLE 3.7-5
WATER QUALITY VOLUMES FOR PROPOSED BMPs

Area Designation	Location of Tributary Area	BMP Designation	Effective Impervious Fraction	Required BMP Capacity (ft ³)
A-1	East side of preschool	Bioretention Basin "A-1"	1.0	1,845
A-3	Administration Building	Bioretention Basins "A3-A" and "A3-B"	0.8	489
B-2A	Maintenance Building Parking	Porous Pavers/Subsurface Basin	0.39	848
B-2B	Upper Parking	Sand Filter Basin B-2B	0.64	4,265
B-2C	North Via Carnaghi	Sand Filter Basin B-2C	0.51	1,045
C-1	Lower Parking	Porous Pavers	0.34	710
C-2A	South Via Carnaghi (east side)	Catch Basin Filter C-2A	0.42	0.1
C-2B	South Via Carnaghi (west side)	Catch Basin Filter C-2B	1.0	0.1*

Source: JLC 2014a

*Although water quality spreadsheet calculated 0 cfs for the water quality volume, the catch basin filter insert will be sized for 0.1 cfs. The flow rate for this area is too low for the spreadsheet to round up. To be conservative, 0.1 cfs will be utilized.

The preschool area will not require mitigation for increased runoff because the existing area is a parking lot with no pervious area. The preschool will increase the pervious area from 0 to 15 percent and therefore will decrease the stormwater flow rate. The pre-project flow rate for the 100-year rational method is 3.52 cubic feet per second, and the post-project flow rate is 3.40 cubic feet per second, which is a decrease of 0.12 cubic feet per second.

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Additionally, the southern portion of Via Carnaghi will not require mitigation for increased runoff. Since these street improvements are not within the project boundary, the use of a downstream location for storage was not feasible for the entire Area C watershed. Therefore, the pre-project condition was performed for the entire watershed to the existing 24-inch pipe along Monte Vista south of Via Carnaghi (with the exception of the large off-site watershed in which there are no proposed improvements and is being left in its current condition). However, the post-project condition analyzed two unit hydrograph areas: Area C-1 tributary to the porous pavers within the south parking area, and Area C-2 tributary to Monte Vista and Via Carnaghi. Based on the unit hydrograph hydrology results, the project will store the entire flow rate and volume associated with Area C-1. Storing this entire area will allow for the flows from Area C-2 to run off without storage, while not increasing the flow rate downstream.

For the remainder of the project site, pre-project and post-project runoff volumes were then determined using the maximum delta volume of hydrograph analyses for the 2-year 24-hour, 10-year 24-hour, and 100-year 1-hour duration. The complete pre-project and post-project volumes are included in **Appendix 3.7a. Table 3.7-6** summarizes the difference in pre-project and post-project volumes.

TABLE 3.7-6
VOLUME DIFFERENCES BETWEEN PRE-PROJECT AND POST-PROJECT RUNOFF

Area	Description	Volume Differences Between Pre and Post-Project Volumes (ft ³)		
		2-yr 24-hr	10-yr 24-hr	100-yr 1-hr
A-2	Administration Building	414	632	61
B-2A	Maintenance Building Parking	1,473	1,460	18
B-2B	Upper Parking	17,555	21,859	1,556
B-2C	North Via Carnaghi	2,178	1,307	27
C-1*	Lower Parking	2,801	6,800	4,875

Source: JLC 2014a

*Values shown for Area C-1 are the total post-project volumes, since this area is required to store the entire volume generated by the tributary.

Based on the unit hydrograph results, the largest increases vary between the 2-year, 24-hour and 10-year, 24-hour volumes. These volumes will be used in sizing the facilities for increased runoff mitigation.

The northern Via Carnaghi street improvements will be treated with Sand Filter Basin B-2C and mitigated for increased runoff within Subsurface System B-2C.

Table 3.7-7 summarizes the total required volumes and proposed design volumes for the BMPs and shows that all designs have sufficient volumes to treat runoff for water quality purposes and to mitigate for increased runoff.

TABLE 3.7-7
SUMMARY OF REQUIRED BMP TREATMENT CAPACITIES AND ACTUAL RUNOFF VOLUMES

Area	BMP	Required Water Quality Volume (based on effective impervious fraction) (ft ³)	Required Mitigation Volume (based on 10-yr 24-hr event) (ft ³)	Total Required Volume (ft ³)	Proposed Volume of BMP Feature (ft ³)
A-1	Westerly Septic System	1,845	N/A	1,845	5,386
A-3	Easterly Septic Systems and Retention Planters "A3-A & A3-B"	489	632	1,121	2,906
B-2A	Porous Pavers	848	1,473	2,321	4,472
B-2B	Sand Filter Basin B-2B	4,265	21,859	26,124	46,875
B-2C	Sand Filter Basin B-2C	1,045	N/A	1,045	1,117
B-2C	Subsurface Systems B-2C	N/A	2,182	2,182	3,294
C-1	Porous Pavers	710	6,800	7,510	8,223

Source: JLC 2014a

The volumes for the porous pavers were calculated assuming 40 percent void ratios for the gravel within the porous paver storage areas and also assuming a 2-foot gravel depth. Volumes are equal to the surface area multiplied by 2 feet and that quantity multiplied by 40 percent. The resulting surface areas shown in **Figure 3.7-1** are 5,590 ft² and 10,280 ft² for the north and south parking areas, respectively. The volume for the subsurface system utilized 48-inch pipe surrounded by gravel with 40 percent void ratios. The gravel surrounds each pipe 2 feet on the sides and 1 foot above. The storage volume spreadsheets for the retention planters, sand filter basin, porous pavers, and subsurface system are found in **Appendix G** of the Hydrology and Hydraulic Study (JLC 2014a) prepared for the proposed project site.

Following on-site treatment at the proposed project BMPs, runoff will drain to the Santa Margarita Watershed via existing permitted MS4 facilities. Within the watershed, the project site drains to four receiving waters, some of which are Section 303(d) listed impaired waterways as detailed in **Tables 3.7-1** and **3.7-2**. Pollutants that are typically associated with urban and suburban development that would contribute to the Section 303(d) impaired water bodies are shown in **Table 3.7-8**.

TABLE 3.7-8
EXPECTED URBAN RUNOFF POLLUTANTS AND 303(D) IMPAIRMENTS

Expected Pollutant	Expected or Potential Source	303(d) Listing
Sediment/Turbidity	Attached & Detached Residential Development, Streets	Yes
Nutrients	Attached & Detached Residential Development	Yes
Organic Compounds (Petroleum Hydrocarbons and Polychlorinated Biphenyls)	Automotive Repair Shops, Parking Lots, Streets	No
Trash and Debris	Attached & Detached Residential Development, Commercial Development, Parking Lots, Streets	No
Oxygen-Demanding Substances	Detached Residential Development, Restaurants	No

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Expected Pollutant	Expected or Potential Source	303(d) Listing
Bacteria and Viruses	Detached Residential Development, Restaurants	Yes
Oil and Grease	Attached Residential Development, Commercial Development, Parking Lots, Streets	No
Pesticides	Attached & Detached Residential Development	Yes
Metals	Parking Lots, Streets	Yes

Source: JLC 2014b

As demonstrated by **Table 3.7-7**, the proposed BMPs will have sufficient volume to treat for water quality purposes and to mitigate flows for increased runoff. As discussed further under Impact 3.8.3 below, according to the preliminary hydrology and hydraulic study (JLC 2014a), the proposed extended detention basins have been designed to adequately treat the on-site flows for water quality purposes as well as to mitigate flows for increased runoff.

Water Quality

A Preliminary Water Quality Management Plan (WQMP) (JLC 2014b) was prepared for the proposed project (**Appendix 3.7b**). A subsequent final WQMP will be prepared for the project if it is approved and will replace the preliminary WQMP. The WQMP identifies a series of specific best management practices to be incorporated into the design to achieve four goals: (1) minimize urban runoff; (2) minimize impervious footprint; (3) conserve natural areas; and (4) minimize directly connected impervious areas. Measures for design of the project in the preliminary WQMP include:

Site Design Concept 1 – Minimize Urban Runoff

- Maximize the permeable area.
- Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought-tolerant trees and large shrubs.
- Use natural drainage systems
- Where soil conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration.
- Construct on-site ponding areas or retention facilities to increase opportunities for infiltration consistent with vector control objectives.
- Other comparable and equally effective site design concepts as approved by the co-permittee.
- The project site utilizes several methods of water quality treatment that are consistent with Low-Impact Development, including porous pavers. Additionally, the project site will utilize existing septic systems and leach fields that are to be abandoned. Using these abandoned systems gives opportunities for infiltration for the preschool area and administration building area. The project minimizes impervious area, where feasible.

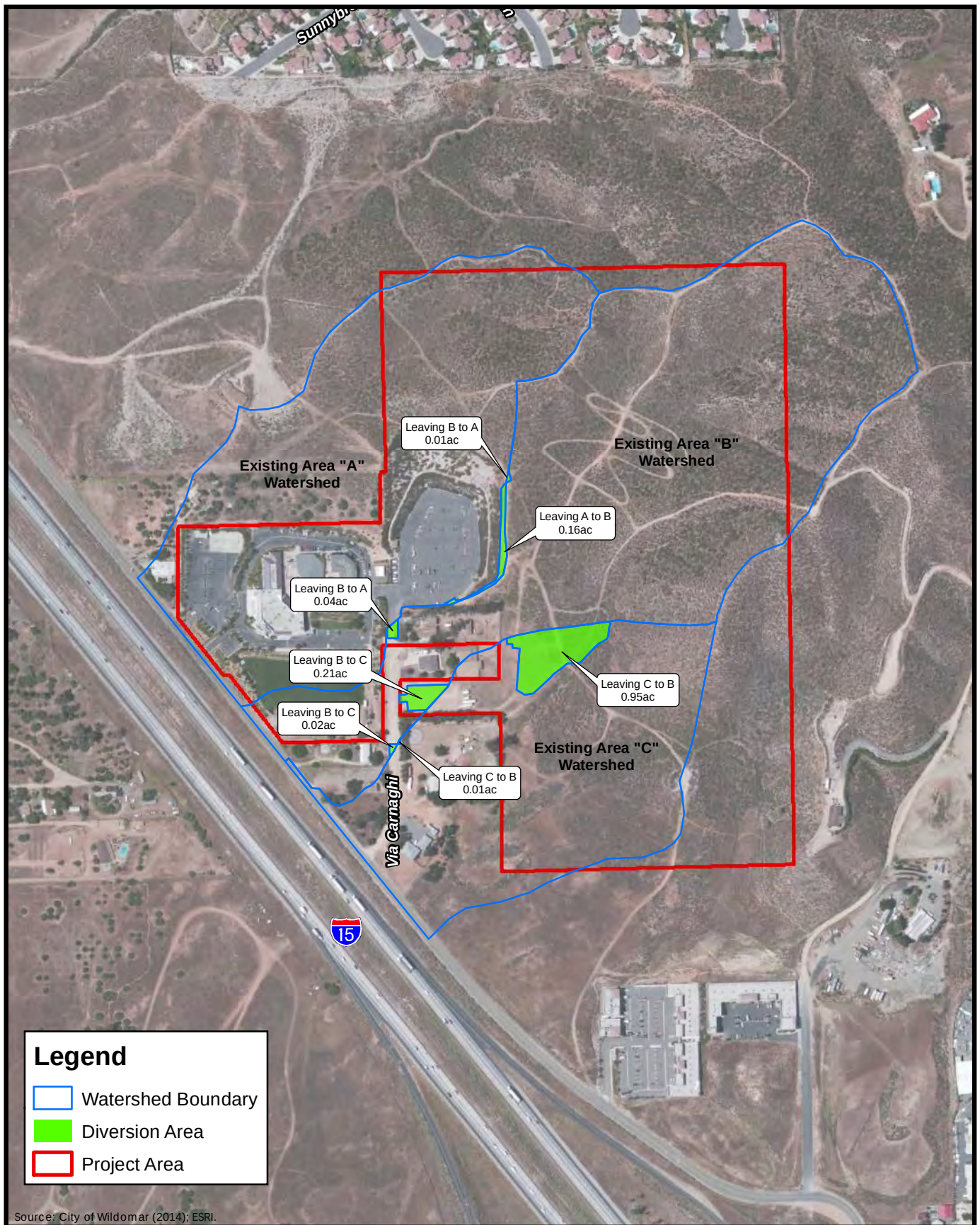


Figure 3.7-1
Project Site Drainage Areas

SITE DESIGN CONCEPT 2 – MINIMIZE IMPERVIOUS FOOTPRINT

- Maximize the permeable area.
- Construct walkways, trails, patios, overflow parking lots, alleys, driveways, low-traffic streets, and other low-traffic areas with open-jointed paving materials or permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
- Construct streets, sidewalks, and parking lot aisles to the minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.
- Reduce widths of street where off-street parking is available.
- Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.
- Other comparable and equally effective site design concepts as approved by the co-permittee. (As described under Site Design Concept 1.)

Site Design Concept 3 – Conserve Natural Areas

- Conserve natural areas.
- Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought-tolerant trees and large shrubs.
- Use natural drainage systems.
- Other comparable and equally effective site design concepts as approved by the co-permittee. (As described under Site Design Concept 1.)

Site Design Concept 4 – Minimize Directly Connected Impervious Areas

- Residential and commercial sites must be designed to contain and infiltrate roof runoff or direct roof runoff to vegetative swales or buffer areas, where feasible.
- Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.
- Increase the use of vegetated drainage swales in lieu of underground piping or imperviously lined swales.
- Urban curb/swale system: street slopes to curb; periodic swale inlets drain to vegetated swale/biofilter.
- Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.
- Overflow parking (parking stalls provided in excess of the co-permittee's minimum parking requirements) may be constructed with permeable paving.
- Other comparable and equally effective site design concepts as approved by the co-permittee. (As described under Site Design Concept 1.)

3.7 HYDROLOGY AND WATER QUALITY

Non-Structural Source Control BMPs

- Education for property owners, tenants, and occupants
- Activity restrictions
- Irrigation system and landscape maintenance
- Common area litter control
- Drainage facility inspection and maintenance

Structural Source Control BMPs

- Landscape and irrigation system design
- Protect slopes and channels
- Properly design:
 - Trash storage areas
 - Loading docks
 - Maintenance bays
 - Outdoor material storage areas
 - Outdoor work areas or processing areas

The proposed project includes the following design features intended to achieve water quality standards:

- Use of City of Wildomar guidelines to determine the minimum pavement width for public streets, driveways, and minimum sidewalks, as well as evaluations of low impact development methods such as landscape buffers.
- The proposed project incorporates landscaped areas between the development and street areas.
- The proposed project uses the natural drainage systems where feasible for the off-site areas. The project uses the minimal amount of subsurface storm drain required for the project site.
- Education materials will be provided to property owners, occupants, operators, and employees at the time of purchase, occupancy, or hire.
- Activity restrictions, including prohibitions on power washing, dumping of oil, discharges of fertilizer, pesticides, or animal wastes, etc., will be enforced.

Additional BMPs will be incorporated into the project where feasible during final engineering. The project would also be required to implement BMPs to increase permeable areas, direct runoff to permeable areas, and maximize stormwater storage for reuse consistent with requirements of the Riverside County Stormwater/Urban Runoff Management and Discharge Controls Ordinance.

Mitigation Measures

MM 3.7.1

Prior to the approval of the grading permit for future development on the project site, the project applicant shall be required to prepare a stormwater pollution and prevention plan (SWPPP) consistent with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2010-0014-DWQ), which is to be administered through all phases of grading and project construction. The SWPPP shall incorporate best management practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. The SWPPP shall be submitted to the Regional Water Quality Control Board and to the City of Wildomar for review. A copy of the SWPPP must be kept accessible on the project site at all times. In addition, the project applicant will be required to submit, and obtain City approval of, a water quality management plan prior to the issuance of any building or grading permit for future development on the project site in order to comply with the Areawide Urban Runoff Management Program. The project shall implement site design BMPs, source control BMPs, and treatment control BMPs as identified in the water quality management plan. Site design BMPs shall include, but are not limited to, landscape buffer areas, on-site ponding areas, roof and paved area runoff directed to vegetated areas, and vegetated swales. Source control BMPs shall include, but are not limited to, education, landscape maintenance, litter control, parking lot sweeping, irrigation design to prevent overspray, and covered trash storage. Treatment control BMPs shall include vegetated swales and a detention basin or an infiltration device. The project will be responsible for maintenance of the basins.

Timing/Implementation: *Prior to the issuance of a grading permit*

Enforcement/Monitoring: *City of Wildomar Engineering Department*

The project's proposed storm drain system, as well as implementation of the project's WQMP and applicable requirements, including implementation of appropriate BMPs, would remove sediment and pollutants from site runoff and minimize impacts to downstream surface water and groundwater resources. This impact would therefore be considered **less than significant** with the implementation of mitigation measure **MM 3.7.1**.

Alter Drainage Patterns/Increase Stormwater Runoff (Standards of Significance 3 and 4)

Impact 3.7.2

Development of the proposed project will alter the existing drainage pattern of the site and may impact stormwater runoff rates and volumes compared to existing conditions. This impact is considered **less than significant**.

A preliminary hydrology and hydraulic study for the proposed project was performed by JLC Engineering (see **Appendix 3.7**). As previously described, the study divided the area of the proposed project (1.58 acres) into three drainage areas:

- Drainage Area A is 1.27 acres and consists of the area occupied by the existing church buildings and existing north parking area.
- Drainage Area B includes the existing maintenance building parking area.

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- Drainage Area C includes Via Carnaghi Lane and the area that will include the proposed lower parking lot and the access road between the proposed lower parking lot and the proposed upper parking area.

Drainage Area A will include the proposed preschool and proposed administration building.

The construction of the proposed preschool will occur on an existing parking lot that is completely impervious. The preschool will decrease the impervious area of Drainage Area A by approximately 15 percent. The flows will be collected within the planters and conveyed to the existing septic systems. Therefore, the project will relocate the existing septic tanks near the preschool and use the leach field to treat for water quality purposes. Flows in excess of the required water quality volume will be conveyed via subsurface storm drain from the planer areas to an existing inlet in the southern portion of the parking area.

The proposed administration building will be constructed within existing landscaped and parking area immediately north of the existing football field. The flows from the proposed building will be collected in two retention planter areas. The planters will connect to the existing adjacent septic system, which will be abandoned. The septic system will be used to treat for water quality purposes, and the retention planters will be used to mitigate for increased runoff. Once flows have been treated and mitigated for increased runoff, the flows will discharge into the existing 30-inch corrugated steel pipe crossing at the football field.

Drainage Area A will be tributary to an existing 36-inch storm drain that crosses Monte Vista Drive and Interstate 15.

Drainage Area B will include the proposed maintenance building and upper parking lots, maintenance building, and north Via Carnaghi.

The proposed maintenance building parking area currently has existing buildings. The buildings will be removed, and the proposed maintenance building, parking area, landscaped area, and porous pavers will be constructed. The flows from the northerly access road connecting the existing parking area to the proposed east parking area will be collected via subsurface storm drain and conveyed to the porous pavers. The flows from the access road, maintenance building, and parking area will be treated for water quality purposes and mitigated for increase runoff within the porous pavers. Additional porous pavement will be provided so that the entire parking area is constructed with porous pavers, however, only a portion of the pavers will implement reservoir areas for the water quality volume and mitigation volume. This is in order to ensure that the project does not increase the impervious percentage of the project site by more than 50 percent.

The proposed upper parking area will sheet flow south to a proposed inlet that will collect the flows and discharge into a proposed sand filter basin. The flows will be treated for water quality purposes and mitigated for increased runoff. Offsite flows will be conveyed via v-ditches to a proposed offsite storm drain. This will prevent the offsite flows from the east from entering the sand filter basin or comingling with onsite flows. The flows from the sand filter basin will connect to the offsite storm drain and conveyed downstream.

The northern portion of Via Carnaghi improvements will be conveyed to a sand filter basin adjacent to the roadway for water quality treatment. Flows in excess of the water quality volume will be conveyed to a subsurface system for mitigation of increased runoff. The flows will ultimately discharge to the existing 48-inch storm drain.

Drainage Area B, which includes the proposed upper parking lot, proposed maintenance building parking lot, and easterly off-site area, will be tributary to an existing 48-inch storm drain that crosses Monte Vista Drive and Interstate 15 north of Via Carnaghi. A total of 0.96 acre of Drainage Area C will be diverted to Drainage Area B due to the construction of the sand filter basin. However, 0.23 acre of Drainage Area B will be diverted to Drainage Area C, and 0.05 acre of Drainage Area B will be diverted to Drainage Area A. Additionally, 0.16 acre of Drainage Area A will be diverted to Drainage Area B. The net resulting diversion will be 0.11 acre less for Drainage Area A, 0.87 acre more for Drainage Area B, and 0.73 acre less for Drainage Area C. These diversions will be less than the maximum 1 acre allowable diversion for each of the three main watersheds. **Figure 3.7-1** illustrates the diversions in the three identified watershed areas.

Drainage Area C will include the proposed lower parking lot and the access road between the lower parking lot and the upper parking lot and southern portion of Via Carnaghi Lane.

The lower parking area will collect flows from the parking area, proposed access road to the upper parking lot area, and a small portion of offsite flows. The offsite flows will be collected in a grassed swale that will run adjacent to the parking lot on the north side. Flows will then discharge into the parking area at the approximate ridgeline between Areas B and C. this will prevent excess area from being diverted to Area B. The remaining flows west of the ridge will continue to Via Carnaghi Lane. All flows tributary to the parking area will be treated within proposed porous paver area, as well as mitigated for increase runoff. Flows will then be discharged via subsurface pipe within Via Carnaghi Lane and connect to the existing 24-inch storm drain crossing Monte Vista Drive south of Via Carnaghi Lane.

The southern portion of Via Carnaghi Lane does not require mitigation for increased runoff, therefore catch basin filter inserts will be implemented for water quality.

Drainage Area C is tributary to an existing 24-inch storm drain that crosses Monte Vista Drive and Interstate 15 south of Via Carnaghi Lane.

In order to demonstrate that the flow rates will not increase for the proposed preschool area and Via Carnaghi street improvements, JLC Engineering performed a pre-project condition rational method hydrology analysis to complete the preliminary hydrology report for the proposed project. For the remainder of the project site, only post-project condition rational method calculations were performed for the 100-year storm event in order to determine whether the proposed storm drain infrastructure is adequately sized. In completing these analyses, the rainfall depths in **Table 3.7-9** were used.

**TABLE 3.7-9
RAINFALL DEPTHS**

Storm Event	Duration	
	1-Hour (inches)	24-Hour (inches)
2-Year	0.61	2.75
100-Year	1.48	7.75

Source: JLC 2014a

The on-site improvements for Drainage Areas A, B, and C were analyzed as asphalt/concrete and roofs, landscaped area, porous pavers, and natural area. The proposed north and south parking areas were analyzed as asphalt/concrete to allow a conservative assumption of stormwater volume. The existing conditions for the proposed improvements also utilized

3.7 HYDROLOGY AND WATER QUALITY

asphalt/concrete and roofs, landscaped area (for existing landscaped areas onsite), and natural area. Tables **3.7-10**, **3.7-11**, and **3.7-12** summarize the unit hydrograph hydrology results for the pre-project and post-project conditions.

**TABLE 3.7-10
FLOW RATE COMPARISON**

Area	Description	Pre-Project (cfs)			Post-Project (cfs)		
		2-yr 24-hr	10-yr 24-hr	100-yr 1-hr	2-yr 24-hr	10-yr 24-hr	100-yr 1-hr
A-3	Administration Building	0.07	0.17	1.26	0.09	0.18	1.43
B-2A	Maintenance Building Parking	0.10	0.51	4.05	0.15	0.51	4.43
B-2B	Upper Parking	0.14	1.54	11.35	0.81	1.91	13.09
B-2C	North Via Carnaghi	0.09	0.59	3.09	0.16	0.58	3.09
C-1	Lower Parking	N/A	N/A	N/A	0.11	0.45	4.12
C-2	South Via Carnaghi	N/A	N/A	N/A	0.38	1.73	12.27
C	Via Carnaghi & Monte Vista Drive	0.45	2.62	14.85	N/A	N/A	N/A

Source: JLC 2014a

**TABLE 3.7-11
VOLUME COMPARISON**

Area	Description	Pre-Project (cfs)			Post-Project (cfs)		
		2-yr 24-hr	10-yr 24-hr	100-yr 1-hr	2-yr 24-hr	10-yr 24-hr	100-yr 1-hr
A-3	Administration Building	0.04	0.08	0.04	0.05	0.10	0.04
B-2A	Maintenance Building Parking	0.06	0.17	0.12	0.09	0.20	0.12
B-2B	Upper Parking	0.09	0.44	0.38	0.49	0.94	0.41
B-2C	North Via Carnaghi	0.05	0.22	0.13	0.10	0.25	0.13
C-1	Lower Parking	N/A	N/A	N/A	0.06	0.16	0.11
C-2	South Via Carnaghi	N/A	N/A	N/A	0.23	0.69	0.38
C	Via Carnaghi & Monte Vista	0.22	1.00	0.56	N/A	N/A	N/A

Source: JLC 2014a

**TABLE 3.7-12
100-YEAR 1-HOUR COMPARISON**

Area	Description	Pre-Project		Post-Project (cfs)	
		Flow Rate (cfs)	Volume (ac-ft)	Flow Rate (cfs)	Volume (ac-ft)
A-3	Administration Building	1.26	0.04	1.431	0.0365
B-2A	Maintenance Building Parking	4.054	0.1226	4.43	0.12
B-2B	Upper Parking	11.352	0.3754	13.088	0.4111
B-2C	North Via Carnaghi	3.09	0.13	3.09	0.13
C-1	Lower Parking	N/A	N/A	4.12	0.11
C-2	South Via Carnaghi	N/A	N/A	12.27	0.38
C	Via Carnaghi & Monte Vista	14.85	0.56	N/A	N/A

Source: JLC 2014a

To determine the tributary flow rates to the proposed project boundaries from off-site areas, JLC Engineering determined a yield based on previous studies performed at the project site. These studies are listed in **Appendix 3.7**. Following the rational method hydrology summary, these yields for the 100-year flow rates are included in **Table 3.7-13**.

**TABLE 3.7-13
TRIBUTARY FLOW RATES**

Area	Description	Area (AC)	Flow Rate (cfs)	Yield (cfs per AC)
A	Area tributary to existing 36-inch CMP	15.05	35.04	2.32
B	Area tributary to existing 48-inch CMP	32.00	61.91	1.94
C	Area tributary to existing 24-inch CMP	11.77	29.24	2.48

Source: JLC 2014a

The yield rates listed in **Table 3.7-13** average 2.25 cubic feet per second per acre. A conservative value of 2.40 cubic feet per second per acre was used to determine the capacity of stormwater treatment facilities, resulting in a **less than significant** impact to existing drainage patterns and volumes.

Mitigation Measures

None required.

3.7.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for hydrology and water quality includes the Santa Margarita Watershed as described in detail in the Existing Setting subsection above.

3.7 HYDROLOGY AND WATER QUALITY

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Hydrology and Water Quality

Impact 3.7.3 The proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the Santa Margarita Watershed, could alter drainage conditions, rates, volumes, and water quality, which could result in potential erosion, flooding, and water quality impacts within the overall watersheds. This is considered a **less than cumulatively considerable** impact.

The proposed project, when considered in combination with existing, approved, proposed, and reasonably foreseeable development in the Santa Margarita Watershed, would alter cumulative drainage conditions, rates, volumes, and water quality, which could result in potential flooding and stormwater quality impacts within the overall watershed. However, as discussed in Impacts 3.7.1 and 3.7.2, the proposed project's storm drain system and implementation of a water quality management plan would reduce the project's contributions to cumulative runoff, water quality, and flooding impacts. As demonstrated by the preliminary hydrology study completed for the project, the proposed project does not increase the flow rate for the post-project conditions. As such, the project is rendered noncontributory to cumulative hydrology impacts. The proposed project includes a series of drainage basins that both reduce the velocity of runoff and serve to remove debris and contaminants from stormwater runoff. Stormwater can only enter the storm drainage lines after passing through these basins. In many cases, the stormwater also travels along vegetated aboveground pathways leading to the basin and/or drop inlets. The vegetated paths help remove contaminants and debris from the stormwater before it enters the basins and ultimately the storm drain system. The proposed project's contribution to cumulative water quality, runoff, and flooding impacts is considered to be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

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3.8 NOISE

This section discusses the existing noise setting, identifies potential noise impacts associated with implementation of the proposed project, and recommends mitigation measures to address potential impacts. Specifically, this section analyzes potential noise impacts due to development of the project area relative to the existing ambient noise environment and applicable noise criteria. Noise mitigation measures are recommended where the predicted noise levels would exceed applicable noise standards.

3.8.1 TECHNICAL BACKGROUND

ACOUSTIC FUNDAMENTALS

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency. Amplitude is defined as the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower, and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA (EPA 1971). The most common sounds vary between 40 dBA (very quiet) and 100 dBA (very loud). Normal conversation at 3 feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA, which can cause serious discomfort. Common community noise sources and associated noise levels, in dBA, are depicted in **Figure 3.8-1**.

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks, and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates at a rate between 3.0 and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways, and hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source (EPA 1971).

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the “line of sight” between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

3.8 NOISE

NOISE DESCRIPTORS

Environmental noise descriptors are generally based on average, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. In addition, the hourly L_{eq} is the noise metric used to collect short-term noise level measurement samples and to estimate the 24-hour Community Noise Equivalent Level (CNEL). CNEL is the weighted average of the intensity of a sound with corrections for time of day and averaged over 24 hours. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. The time of day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7 p.m. to 10 p.m. and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10 p.m. and 7 a.m. These additions are made to account for the noise-sensitive periods during the evening and night hours when sound is perceived to be louder. Common noise level descriptors are summarized in **Table 3.8-1**.

TABLE 3.8-1
COMMON ACOUSTICAL DESCRIPTORS

Descriptor	Definition
Energy Equivalent Noise Level (L_{eq})	The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.
Minimum Noise Level (L_{min})	The minimum instantaneous noise level during a specific period of time.
Maximum Noise Level (L_{max})	The maximum instantaneous noise level during a specific period of time.
Day-Night Average Level (DNL or L_{dn})	The 24-hour L_{eq} with a 10 dBA “penalty” for noise events that occur during the noise-sensitive hours between 10:00 p.m. and 7:00 a.m. In other words, 10 dBA is “added” to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.
Community Noise Equivalent Level (CNEL)	The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA “penalty” added to noise events that occur between the hours of 7:00 p.m. to 10:00 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated L_{dn} .
Single Event Noise Level (SEL)	The level of sound accumulated over a given time interval or event. Technically, the sound exposure level is the level of the time-integrated mean square A-weighted sound for a stated time interval or event, with a reference time of one second.
Percent Exceeded Noise Level (L_n)	The level exceeded for n percent of the time. For instance, L_{10} is the level exceeded for 10% of the time. The commonly used values of n for the n -percent exceeded level, L_n , are 2, 10, 50, and 90.

Source: *Urban Crossroads 2013a*

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	
Quiet Urban Daytime	50	Large Business Office
		Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night,
		Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Figure 3.8-1
Common Noise Levels

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HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called “ambient” environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial.
- A 10 dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

A limitation of using a single noise-level increase value to evaluate noise impacts, as discussed above, is that it fails to account for pre-development noise conditions. With this in mind, the Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that take into account the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL, L_{dn}). FICON-recommended noise evaluation criteria are summarized in **Table 3.8-2**.

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TABLE 3.8-2
FICON-RECOMMENDED CRITERIA FOR
EVALUATION OF INCREASES IN AMBIENT NOISE LEVELS

Ambient Noise Level Without Project	Increase Required for Significant Impact
< 60 dB	5.0 dB, or greater
60–65 dB	3.100 dB, or greater
> 65 dB	1.5 dB, or greater

Source: FICON 2000

As depicted in **Table 3.8-2**, an increase in the noise level of 5.0, or greater, would typically be considered to result in increased levels of annoyance where existing ambient noise levels are less than 60 dB. In areas where the ambient noise level ranges from 60 to 65 dB, increased levels of annoyance would be anticipated at increases of 3 dB, or greater. Increases of 1.5 dB, or greater, could result in increased levels of annoyance in areas where the ambient noise level exceeds 65 dB. The rationale for the FICON-recommended criteria is that as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant increases in annoyance (FICON 2000).

EFFECTS OF NOISE ON HUMAN ACTIVITIES

The extent to which environmental noise is deemed to result in increased levels of annoyance, activity interference, and sleep disruption varies greatly from individual to individual depending on various factors, including the loudness or suddenness of the noise, the information value of the noise (e.g., aircraft overflights, child crying, fire alarm), and an individual's sleep state and sleep habits. Over time, adaptation to noise events and to increased levels of noise may also occur. In terms of land use compatibility, environmental noise is often evaluated in terms of the potential for noise events to result in increased levels of annoyance, sleep disruption, or interference with speech communication, activities, and learning. Noise-related effects on human activities are discussed in more detail below.

Speech Communication

For most noise-sensitive land uses, an interior noise level of 45 dB L_{eq} is typically identified for the protection of speech communication in order to provide for 100 percent intelligibility of speech sounds. Assuming an average 20 dB reduction in sound level between outdoors and indoors (which is an average amount of sound attenuation that assumes windows are closed), this interior noise level equates to an exterior noise level of 65 dBA L_{eq} . For outdoor voice communication, an exterior noise level of 60 dBA L_{eq} allows normal conversation at distances up to 2 meters with 95 percent sentence intelligibility (EPA 1971). Based on this information, speech interference begins to become a problem when steady noise levels reach approximately 60 to 65 dBA. Within interior noise environments, an average-hourly background noise level of 45 dBA L_{eq} is typically recommended for noise-sensitive land uses, such as educational facilities (Caltrans 2002).

Annoyance and Sleep Disruption

With regard to potential increases in annoyance, activity interference, and sleep disruption, land use compatibility determinations are typically based on the use of the cumulative noise exposure metrics (i.e., CNEL or L_{dn}). Perhaps the most comprehensive and widely accepted evaluation of the relationship between noise exposure and the extent of annoyance was one originally

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developed by Theodore J. Schultz in 1978. Schultz's research findings provided support for L_{dn} as the descriptor for environmental noise. His research identified a correlation between the cumulative noise exposure metric and individuals who were highly annoyed by transportation noise. When expressed graphically, this relationship is typically referred to as the Schultz curve. The Schultz curve indicates that approximately 13 percent of the population is highly annoyed at a noise level of 65 dBA L_{dn} . It also indicates that the percentage of people describing themselves as being highly annoyed accelerates smoothly between 55 and 70 dBA L_{dn} . A noise level of 65 dBA L_{dn} is a commonly referenced dividing point between lower and higher rates of people describing themselves as being highly annoyed (Caltrans 2002).

The Schultz curve and associated research became the basis for many of the noise criteria subsequently established for federal, state, and local entities. Most federal and California regulations and policies related to transportation noise sources establish a noise level of 65 dBA CNEL/ L_{dn} as the basic limit of acceptable noise exposure for residential and other noise-sensitive land uses. For instance, with respect to aircraft noise, both the Federal Aviation Administration (FAA) and the State of California have identified a noise level of 65 dBA L_{dn} as the dividing point between normally compatible and normally incompatible residential land use generally applied for determination of land use compatibility. For noise-sensitive land uses exposed to aircraft noise, noise levels in excess of 65 dBA CNEL/ L_{dn} are typically considered to result in a potentially significant increase in levels of annoyance (Caltrans 2002).

Allowing for an average exterior-to-interior noise reduction of 20 dB, an exterior noise level of 65 dBA CNEL/ L_{dn} would equate to an interior noise level of 45 dBA CNEL/ L_{dn} . An interior noise level of 45 dB CNEL/ L_{dn} is generally considered sufficient to protect against activity interference at most noise-sensitive land uses, including residential dwellings, and would also be sufficient to protect against sleep interference (EPA 1971). In California, the California Building Code establishes a noise level of 45 dBA CNEL as the maximum acceptable interior noise level for residential uses (other than detached single-family dwellings). Use of the 45 dBA CNEL threshold is further supported by recommendations provided in the State of California Office of Planning and Research's General Plan Guidelines, which recommend an interior noise level of 45 dB CNEL/ L_{dn} as the maximum allowable interior noise level sufficient to permit "normal residential activity" (OPR 2003).

The cumulative noise exposure metric is currently the only noise metric for which there is a substantial body of research data and regulatory guidance defining the relationship between noise exposure, people's reactions, and land use compatibility. However, when evaluating environmental noise impacts involving intermittent noise events, such as aircraft overflights and train pass-bys, the use of cumulative noise metrics may not provide a thorough understanding of the resultant impact. The general public often finds it difficult to understand the relationship between intermittent noise events and cumulative noise exposure metrics. In such instances, supplemental use of other noise metrics, such as the L_{eq} or L_{max} descriptor, may be helpful as a means of increasing public understanding regarding the relationship between these metrics and the extent of the resultant noise impact (Caltrans 2002).

SOUND PROPAGATION AND ATTENUATION

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level decreases (attenuates) at a rate of approximately 6 decibels for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of

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several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 decibels for each doubling of distance from a line source, depending on ground surface characteristics. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or a body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation for soft surfaces results in an overall attenuation rate of 4.5 decibels per doubling of distance from the source.

Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from a highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

Noise Reduction

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in minimum 5 dB of noise reduction. Taller barriers provide increased noise reduction.

Noise reductions afforded by building construction can vary depending on construction materials and techniques. Standard construction practices typically provide approximately 15 dBA exterior-to-interior noise reductions for building façades, with windows open, and approximately 20 to 25 dBA with windows closed. With compliance with current Title 24 energy efficiency standards, which require increased building insulation and inclusion of an interior air ventilation system to allow windows on noise-impacted façades to remain closed, exterior-to-interior noise reductions typically average approximately 25 dBA. The absorptive characteristics of interior rooms, such as carpeted floors, draperies, and furniture, can result in further reductions in interior noise.

Additional noise control techniques commonly used for transportation noise sources include traffic control, such as prohibiting heavy-duty trucks and reducing speed limits along primarily affected corridors. However, an approximate 20 mile per hour reduction in speed would typically be required to achieve a noticeable decrease in noise levels. In some instances, the use of noise-reducing pavements, such as rubberized asphalt, has also been used to reduce traffic noise. However, when compared with hard site surfaces (i.e., asphalt, concrete, stone, and very hard packed earth), soft site surfaces or natural surfaces (i.e., earth and ground vegetation covers) are the most effective method used to reduce traffic-associated noise by resulting in a drop-off rate of 4.5 dBA per doubling of distance (Urban Crossroads 2013a) and thus are better at reflecting traffic-associated noise levels. Hard site surfaces typically result in a 3.0 dBA drop-off rate (Urban Crossroads 2013a).

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3.8.2 EXISTING SETTING

EXISTING CHURCH OPERATIONS

The project site contains the Cornerstone Church and the Cornerstone Christian School, which is a pre-kindergarten through 12th grade school with approximately 240 students. School hours are typically 7:45 a.m. to 3:00 p.m. weekdays. In addition to the students, approximately 100 church and school employees are on-site on school days, including pastoral staff, church administrative staff, school office staff, teachers, coaches, and maintenance, landscaping, custodial, event, and production staff.

The church also has numerous other events that extend activities at the facilities until 9:00 p.m. on Monday through Thursday and up to 10:00 p.m. on Friday. Activities on Saturday and Sunday can start as early as 8:00 a.m. and are usually concluded by 8:30 p.m. With the exception of worship services on Saturday and Sunday, most of the activities have less than 250 people in attendance. The church holds two services on Saturday (5:00 p.m. and 6:30 p.m.) that typically draw up to 500 worshipers for each service. Three Sunday services are held (9:00 a.m., 10:20 a.m., and 11:40 a.m.) that typically draw a total of up to 1,000 worshipers for each service.

The church occasionally has sporting events that require lighting provided by portable task lighting with power generators; however, it is rare for the activities at the sports field to extend past 9:00 p.m. Generally the sports field activities follow the operational times of the church and school.

NOISE-SENSITIVE LAND USES

Noise-sensitive land uses adjacent to the project area consist of single-family homes located north and west of the project area, along Monte Vista Drive, and to the south and east, along Via Carnaghi Lane. One of the existing homes, located at 34620 Via Carnaghi Lane (APN 367-210-041), is located between the existing maintenance shed to the north and a gravel parking lot to the south. The owners of this home keep horses, with barns along the north and east property lines (see **Figure 2.0-2**). This is the closest home to the proposed construction and is less than 50 feet from the project boundaries.

EXISTING NOISE CONDITIONS

To assess the current ambient noise levels both within and around the proposed project site, the roadways surrounding the proposed project were evaluated. This evaluation included establishing noise level contour boundaries for the 55, 60, 65, and 70 dBA Community Noise Equivalent Levels (CNEL) for each of the surrounding roadway segments. **Table 3.8-3** presents these existing CNEL noise contour boundaries with existing traffic volumes for all roadway segments in proximity to Monte Vista Drive.

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TABLE 3.8-3
EXISTING CONDITIONS NOISE CONTOURS

Road	Segment	CNEL at 100 Feet (dBA) ¹	Distance to Contour (Feet) ¹			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
I-15 Freeway	Between Bundy Canyon and Baxter Road	83.7	2,354	7,445	23,545	74,455
Monte Vista Drive	South of Bundy Canyon Road	57.1	RW	RW	RW	161
Monte Vista Drive	North of Driveway ²	57.5	RW	RW	RW	180
Monte Vista Drive	North of Via Carnaghi	57.8	RW	RW	RW	189
Monte Vista Drive	North of Baxter Road	59.2	RW	RW	84	265
Bundy Canyon Road	West of I-15 Freeway SB Ramps	73.4	218	689	2,180	6,894
Bundy Canyon Road	I-15 Freeway Overpass	73.7	235	744	2,353	7,440
Bundy Canyon Road	East of I-15 Freeway NB Ramps	73.7	234	740	2,340	7,401
Bundy Canyon Road	West of Monte Vista Drive	73.6	229	724	2,291	7,245
Bundy Canyon Road	East of Monte Vista Drive	73.8	243	767	2,427	7,673
Baxter Road	West of I-15 Freeway SB Ramps	66.4	RW	137	434	1,372
Baxter Road	I-15 Freeway Overpass	65.2	RW	105	323	1,051
Baxter Road	East of I-15 Freeway NB Ramps	62.8	RW	RW	189	596
Baxter Road	East of Monte Vista Drive	61.7	RW	RW	147	464

Source: *Urban Crossroads 2013a*

1. Measurement from centerline

2. RW = location of the respective noise contour falls within the right-of-way of the road

As shown in **Table 3.8-3**, several of the roadway segments exceed the 65 dBA CNEL standard at 100 feet from roadway centerlines.

3.8.3 REGULATORY FRAMEWORK

STATE

Government Code

Government Code Section 65302(f) requires that a noise element be included as part of all city and county general plans.

Noise contours must be shown for noise sources based on noise monitoring and accepted noise modeling techniques. The noise contours are to be used as a guide for designating land uses in the land use element that minimizes the exposure of community residents to excessive noise.

California Building Code

Title 24 of the California Code of Regulations contains standards for allowable interior noise levels associated with exterior noise sources (California Building Code, 1998 edition, Volume 1, Appendix Chapter 12, Section 1208A). The standards apply to new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family residences. The standards state that the interior noise level attributable to exterior sources cannot exceed 45 dBA in any

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habitable room. Proposed residential structures to be located where the annual L_{dn} or CNEL exceeds 60 dBA require an acoustical analysis showing that the proposed building design would achieve the prescribed allowable interior noise standard. The noise metric (measurement period, such as hourly or daily) is either the day-night average sound level (L_{dn}) or the Community Noise Equivalent Level (CNEL), consistent with the noise element of the local general plan. Worst-case noise levels, either existing or future, are used as the basis for determining compliance with these standards (Caltrans 2002).

LOCAL

City of Wildomar General Plan

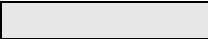
The Noise Element of the City of Wildomar General Plan addresses several types of noise sources: mobile, stationary, and construction. The mobile, or transportation-related, noise impact policies are intended to ensure that noise-sensitive land uses are not located near noisy roads. The stationary impact noise policies are intended to ensure that the proposed land use does not generate noise that could affect sensitive receptors during operations. Construction noise can affect existing development, and the Noise Element policies are intended to minimize the impact.

Mobile Noise Standards

The City of Wildomar General Plan Noise Element specifies the maximum noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. The Noise Element includes standards for land use compatibility for community noise exposure in Policy N 1.3 and Policy N 4.1 and characterizes both schools and places of worship as noise-sensitive uses. For noise-sensitive land uses, the exterior noise levels should not exceed 65 dBA CNEL. The Noise Element also includes Table N-1, Land Use Compatibility for Community Noise Exposure, that indicates that exterior noise for “Schools, Libraries, Churches, Hospitals, and Nursing Homes” to be “conditionally acceptable” up to 70 dBA (see **Table 3.8-4**).

In addition to exterior noise, the Noise Element also establishes an interior noise standard of 45 dBA CNEL for noise-sensitive uses in Policy N 13.1. The Noise Element contains several policies associated with noise-generating uses. Other than construction noise, the operation of a preschool, administrative office building, and parking areas will not generate significant noise.

TABLE 3.8-4
CITY OF WILDOMAR LAND USE COMPATIBILITY NOISE CRITERIA

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)						Interpretation
	55	60	65	70	75	80	
Residential – Single-Family							 Normally Acceptable Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Residential – Multiple-Family							

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Land Use Category	Community Noise Exposure (L _{dn} or CNEL, dBA)						Interpretation
	55	60	65	70	75	80	
Transient Lodging – Motels, Hotels							 Conditionally Acceptable New construction or development should be undertaken only after a detailed analysis of noise reduction requirements and needed noise insulation features included in the design. Conventional construction with closed windows and fresh air supply systems or air conditioning will normally suffice.
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Parks							 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.
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing							
							 Clearly Unacceptable New construction or development should generally not be undertaken.

Source: Wildomar 2008

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Stationary Noise Standards

Worst-case impacts from stationary (non-transportation) noise sources (such as speakerphones, trash compactors, etc.) for daytime and nighttime activities are provided in Policy 4.1 and shown in **Table 3.8-5**.

TABLE 3.8-5
FACILITY-RELATED NOISE, RECEIVED BY ANY SENSITIVE USE, WORST-CASE LEVELS

Worst-Case Noise Level	Time of Day
65 dBA L_{eq} – 10 minutes	7 a.m. to 10 p.m.
45 dBA L_{eq} – 10 minutes	10 p.m. to 7 a.m.

Source: Wildomar 2008 (Noise Element, Policy N 4.1)

Construction-Related Noise Standards

Policy N 12.1 of the Noise Element requires that construction noise be minimized within acceptable practices. Among these are the requirement for a noise mitigation plan in Policy N 12.3 that must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of the project through the use of methods including, but not limited to, temporary noise attenuation fences, preferential location of equipment, and use of current noise suppression technology and equipment.

The General Plan also requires that all construction equipment use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer (General Plan Policy N 12.4). Without an adopted construction noise standard, the proposed project cannot generate noise in excess of currently established standards.

Community Noise Assessment Criteria

Changes in noise levels greater than 3 dBA are often identified as “barely perceptible,” while changes of 5 dBA are “readily perceptible.” Studies show that a relative noise impact of 5 dBA triggers community reaction (sporadic complaints to widespread complaints to several legal threats to vigorous action). In the range of 1 dBA to 3 dBA, people who are very sensitive to noise may perceive a slight change in noise level. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dBA. However, in a community situation, the noise exposure is extended over a long time period, and changes in noise levels occur over years rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people. While a 1 dBA increase may be perceptible to a minority of very noise-sensitive people, noise increases of up to 3 dBA are barely perceptible to most people. The 3 dBA increase criteria represent a balance of community benefits and reasonableness.

GROUNDBORNE VIBRATION

The Noise Element of the General Plan also addresses vibration by establishing policies that restrict the placement of sensitive land uses in proximity to vibration-producing land uses. While the Noise Element contains Table N-3 (shown here as **Table 3.8-6**) that shows the human reaction to typical vibration levels, it does not establish a threshold or limit on vibration.

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TABLE 3.8-6
HUMAN REACTION TO TYPICAL VIBRATION LEVELS

Vibration Level Peak Particle Velocity (inches/second)	Human Reaction
0.0059–0.0188	Threshold of perception, possibility of intrusion
0.0787	Vibrations readily perceptible
0.0984	Continuous vibration begins to annoy people
0.1968	Vibrations annoying to people in buildings
0.3937–0.5905	Vibrations considered unpleasant when continuously subjected and unacceptable by some walking on bridges

Source: Wildomar 2008 (Noise Element, Table N-3)

There are no federal, state, or local regulatory standards for groundborne vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, the California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance. Caltrans-recommended criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are summarized in **Table 3.8-7** and **Table 3.8-8**, respectively. The criteria differentiate between transient and continuous/frequent sources. Transient sources of groundborne vibration include intermittent events, such as blasting, whereas continuous and frequent events would include the operations of equipment, including construction equipment, and vehicle traffic on roadways (Caltrans 2002, 2004).

TABLE 3.8-7
DAMAGE POTENTIAL TO BUILDINGS AT VARIOUS GROUNDBORNE VIBRATION LEVELS

Structure and Condition	Vibration Level (in/sec ppv)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely Fragile Historic Buildings, Ruins, Ancient Monuments	0.12	0.08
Fragile Buildings	0.20	0.10
Historic and Some Old Buildings	0.50	0.25
Older Residential Structures	0.50	0.30
New Residential Structures	1.00	0.50
Modern Industrial/Commercial Buildings	2.00	0.50

Source: Caltrans 2002, 2004

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

TABLE 3.8-8
ANNOYANCE POTENTIAL TO PEOPLE AT VARIOUS GROUNDBORNE VIBRATION LEVELS

Human Response	Vibration Level (in/sec ppv)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.90	0.10
Severe	2.00	0.40

Source: Caltrans 2002, 2004

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Assessing Exposure to Groundborne Vibration

The groundborne vibration criteria recommended by Caltrans for evaluation of potential structural damage are based on building classifications, which take into account the age and condition of the building. For residential structures and newer buildings, Caltrans considers a minimum peak particle velocity (ppv) threshold of 0.50 inches per second (in/sec) for transient sources and 0.30 in/sec for continuous/frequent sources to be sufficient to protect against building damage. With the exception of fragile buildings, ruins, and ancient monuments, continuous groundborne vibration levels below approximately 0.20 in/sec ppv are unlikely to cause structural damage. In terms of human annoyance, continuous vibrations in excess of 0.04 in/sec ppv and transient sources in excess of 0.25 in/sec ppv are identified by Caltrans as being “distinctly perceptible.” Within buildings, short periods of groundborne vibration in excess of 0.20 in/sec ppv are generally considered to result in increased levels of annoyance (Caltrans 2002, 2004).

Groundborne vibration levels would be considered significant if predicted short-term construction or long-term operational groundborne vibration levels attributable to the proposed project would exceed the recommended limit for an older residential structure demonstrated in **Tables 3.8-7** and be more than distinctly perceptible as shown in **Table 3.8-8** at the nearby existing structures. **Table 3.8-9** shows representative construction equipment vibration levels at 25 feet from the property based on information from Caltrans and the Federal Transit Administration.

TABLE 3.8-9
REPRESENTATIVE CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Equipment	Peak Particle Velocity at 25 Feet (in/sec ppv)
Impact Pile Driver (Upper Range)	1.518
Impact Pile Driver (Typical)	0.644
Sonic Pile Driver (Upper Range)	0.734
Sonic Pile Driver (Typical)	0.17
Vibratory Roller	0.21
Large Tractors	0.089
Caisson Drilling	0.089

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Equipment	Peak Particle Velocity at 25 Feet (in/sec ppv)
Loaded Trucks	0.076
Jackhammer	0.035
Small Tractors	0.003

Source: Caltrans 2004; FTA 2006

3.8.4 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Criteria for determining the significance of noise impacts were developed based on information contained in California Environmental Quality Act (CEQA) Guidelines Appendix G. According to those guidelines, a project may have a significant effect on the environment if it would result in the following conditions:

- 1) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or of applicable standards of other agencies.
- 2) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- 3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. For purposes of this analysis, roadway noise impacts would be considered significant if the proposed project increased noise levels for a noise-sensitive land use by 3 dBA CNEL and (1) the existing noise levels already exceed the 65 dBA CNEL residential standard, or (2) the project increases noise levels from below the 65 dBA CNEL standard to above 65 dBA CNEL.
- 4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- 5) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, exposure of people residing or working in the project area to excessive noise levels.
- 6) For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

The nearest airport is Skylark Field Airport, which is located approximately 3 miles northwest of the proposed project site. The project site is not located within 2 miles of a public airport or private airstrip, nor would implementation of the proposed project affect airport operations. For these reasons, there is no impact to the exposure of people to aircraft noise levels and Standards of Significance 5 and 6 are not discussed further in this DEIR.

The City of Wildomar General Plan does not set standards for temporary noise impacts like construction. Chapter 9.48 of the Wildomar Municipal Code includes noise standards in addition to the standards contained in the General Plan, but Municipal Code Section 9.48.010 specifically states that the noise standards contained in that chapter are not thresholds of significance for the purposes of CEQA review. In addition, Wildomar Municipal Code Section 9.48.020(l) states that sound emanating from private construction projects located within one-quarter of a mile from an inhabited dwelling is exempt from the noise ordinance, provided that:

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1. Construction does not occur between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September; and
2. Construction does not occur between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May.

Without an adopted construction noise standard, the proposed project cannot generate noise in excess of currently established standards.

Long-Term Off-Site Transportation Noise Impacts

To assess the off-site traffic-related noise level impacts associated with the project, the CNEL levels at a distance of 100 feet from the centerline of traffic study area roadway segments were developed for existing and Year 2017 conditions.

- Existing: This scenario refers to the existing traffic noise conditions, with and without the proposed project.
- Project Completion (Year 2017) without/with Project: This scenario refers to the background noise conditions at project completion (Year 2017) without and with the proposed project.

Table 3.8-10 presents the hourly traffic flow distributions (vehicle mix) used for this analysis. The vehicle mixes were based on City of Wildomar requirements to prepare noise impact analysis and the truck mix data provided by Caltrans for all freeways. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the Federal Highway Administration (FHWA) Model.

TABLE 3.8-10
HOURLY TRAFFIC FLOW DISTRIBUTION¹

Motor Vehicle Type	Daytime (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)	Total % Traffic Flow
I-15 Freeway¹				
Automobiles	77.5%	12.9%	9.6%	93.27%
Medium Trucks	84.8%	4.9%	10.3%	3.03%
Heavy Trucks	86.5%	2.7%	10.8%	3.70%
Major, Arterial²				
Automobiles	75.5%	14.0%	10.5%	92.00%
Medium Trucks	48.0%	2.0%	50.0%	3.00%
Heavy Trucks	48.0%	2.0%	50.0%	5.00%
Secondary/Collector²				
Automobiles	77.5%	12.9%	9.6%	97.42%
Medium Trucks	84.8%	4.9%	10.3%	1.84%
Heavy Trucks	86.5%	2.7%	10.8%	0.74%

Source: Urban Crossroads 2013a

1. Vehicle mix provided in the 2010 Caltrans Truck Data on Interstate 15.

2. Vehicle mix obtained from the City of Wildomar General Plan Circulation Element.

3.8 NOISE

Off-Site Traffic Noise Contour Boundaries

Traffic noise contour boundaries are often desired by local land planning and zoning authorities to represent sound level exposures on land that is being considered for development and is adjacent to highways. Noise contour boundaries represent the equal levels of noise exposure and are measured from the center of the roadway. Traffic noise contour boundaries are calculated at distances of 100 feet from a roadway centerline. CNEL noise contour boundaries are also determined below for the 55, 60, 65, and 70 dBA noise levels. The off-site transportation noise contour calculations are presented in **Appendix 3.8. Tables 3.8-3 and 3.8-11** present the existing conditions noise contours without and with the project. **Tables 3.8-12 and 3.8-13** present the Year 2017 noise contours without and with the project. The off-site traffic noise analysis worksheets are included in **Appendix 3.8**.

The off-site traffic noise prediction model inputs are used to calculate the reference CNEL dBA noise levels at a distance of 100 feet from the centerline for the 14 off-site study area roadway segments. Noise level contours represent the distance to noise levels of a constant value and are measured from the center of the roadway. In addition, noise level contours do not take into account the effect of any existing noise barriers, intervening buildings, or topography.

TABLE 3.8-11
EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
I-15 Freeway	Between Bundy Canyon and Baxter Roads	83.7	2,356	7,452	23,565	74,518
Monte Vista Drive	South of Bundy Canyon Road	58.4	RW	RW	RW	218
Monte Vista Drive	North of Driveway ¹	58.6	RW	RW	RW	227
Monte Vista Drive	North of Via Carnaghi	58.4	RW	RW	RW	218
Monte Vista Drive	North of Baxter Road	59.9	RW	RW	99	312
Bundy Canyon Road	West of I-15 Freeway SB Ramps	73.4	219	693	2,192	6,933
Bundy Canyon Road	I-15 Freeway Overpass	73.8	238	752	2,377	7,518
Bundy Canyon Road	East of I-15 Freeway NB Ramps	73.8	238	752	2,377	7,518
Bundy Canyon Road	West of Monte Vista Drive	73.7	234	740	2,340	7,401
Bundy Canyon Road	East of Monte Vista Drive	73.9	245	775	2,451	7,751
Baxter Road	West of I-15 Freeway SB Ramps	66.4	RW	139	440	1,391
Baxter Road	I-15 Freeway Overpass	65.3	RW	108	341	1,079
Baxter Road	East of I-15 Freeway NB Ramps	63.0	RW	RW	201	634
Baxter Road	East of Monte Vista Drive	61.7	RW	RW	147	464

Source: *Urban Crossroads 2013a*

1. "RW" = Location of the respective noise contour falls within the right-of-way of the road

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**TABLE 3.8-12
YEAR 2017 WITHOUT PROJECT CONDITIONS NOISE CONTOURS**

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
I-15 Freeway	Between Bundy Canyon and Baxter Road	84.1	2,548	8,056	25,476	80,564
Monte Vista Drive	South of Bundy Canyon Road	62.1	RW	RW	162	511
Monte Vista Drive	North of Driveway ¹	62.6	RW	RW	183	577
Monte Vista Drive	North of Via Carnaghi	62.7	RW	RW	186	587
Monte Vista Drive	North of Baxter Road	63.1	RW	RW	207	653
Bundy Canyon Road	West of I-15 Freeway SB Ramps	75.3	336	1,063	3,363	10,634
Bundy Canyon Road	I-15 Freeway Overpass	75.9	390	1,235	3,905	12,347
Bundy Canyon Road	East of I-15 Freeway NB Ramps	76.3	424	1,340	4,237	13,399
Bundy Canyon Road	West of Monte Vista Drive	75.5	357	1,130	3,572	11,296
Bundy Canyon Road	East of Monte Vista Drive	75.4	346	1,095	3,461	10,945
Baxter Road	West of I-15 Freeway SB Ramps	68.0	RW	202	637	2,016
Baxter Road	I-15 Freeway Overpass	66.9	RW	154	488	1,543
Baxter Road	East of I-15 Freeway NB Ramps	64.6	RW	91	287	909
Baxter Road	East of Monte Vista Drive	62.4	RW	RW	174	549

Source: Urban Crossroads 2013a

1. "RW" = Location of the respective noise contour falls within the right-of-way of the road

**TABLE 3.8-13
YEAR 2017 WITH PROJECT CONDITIONS NOISE CONTOURS**

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
I-15 Freeway	Between Bundy Canyon and Baxter Road	84.1	2,550	8,063	25,497	80,627
Monte Vista Drive	South of Bundy Canyon Road	62.5	RW	RW	177	558
Monte Vista Drive	North of Driveway ¹	63.0	RW	RW	198	625
Monte Vista Drive	North of Via Carnaghi	62.9	RW	RW	195	615
Monte Vista Drive	North of Baxter Road	63.4	RW	RW	218	691
Bundy Canyon Road	West of I-15 Freeway SB Ramps	75.3	337	1,067	3,375	10,673
Bundy Canyon Road	I-15 Freeway Overpass	75.9	393	1,243	3,929	12,425
Bundy Canyon Road	East of I-15 Freeway NB Ramps	76.3	429	1,355	4,286	13,555
Bundy Canyon Road	West of Monte Vista Drive	75.6	361	1,141	3,609	11,413
Bundy Canyon Road	East of Monte Vista Drive	75.4	349	1,102	3,486	11,023
Baxter Road	West of I-15 Freeway SB Ramps	68.1	RW	203	643	2,035

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Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Baxter Road	I-15 Freeway Overpass	67.0	RW	157	497	1,571
Baxter Road	East of I-15 Freeway NB Ramps	64.8	RW	95	299	946
Baxter Road	East of Monte Vista Drive	62.4	RW	RW	174	549

Source: Urban Crossroads 2013a

1. "RW" = Location of the respective noise contour falls within the right-of-way of the road

Existing Roadway Noise Levels

Table 3.8-3 presents the existing noise contour boundaries. **Table 3.8-11** shows that for existing traffic volumes, all segments adjacent to Bundy Canyon Road and two segments of Baxter Road currently exceed the City of Wildomar's 65 dBA CNEL standard for noise-sensitive residential areas at 100 feet from each roadway's centerline.

Existing Traffic Noise Level Contributions

Table 3.8-14 presents a comparison of existing conditions noise levels without and with the proposed project. The roadway noise impacts will increase on all segments from 0.0 dBA CNEL to 1.0 dBA CNEL with the development of the proposed project. Similarly, **Table 3.8-15** illustrates a comparison of Year 2017 noise levels without and with the proposed project.

TABLE 3.8-14
EXISTING OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact ¹
		No Project	With Project	Project Contribution	
I-15 Freeway	Between Bundy Canyon and Baxter Road	83.7	83.7	0.0	No
Monte Vista Drive	South of Bundy Canyon Road	57.1	58.4	1.3	No
Monte Vista Drive	North of Driveway	57.5	58.6	1.0	No
Monte Vista Drive	North of Via Carnaghi	57.8	58.4	0.6	No
Monte Vista Drive	North of Baxter Road	59.2	59.9	0.7	No
Bundy Canyon Road	West of I-15 Freeway SB Ramps	73.4	73.4	0.0	No
Bundy Canyon Road	I-15 Freeway Overpass	73.7	73.8	0.0	No
Bundy Canyon Road	East of I-15 Freeway NB Ramps	73.7	73.8	0.1	No
Bundy Canyon Road	West of Monte Vista Drive	73.6	73.7	0.1	No
Bundy Canyon Road	East of Monte Vista Drive	73.8	73.9	0.0	No
Baxter Road	West of I-15 Freeway SB Ramps	66.4	66.4	0.1	No
Baxter Road	I-15 Freeway Overpass	65.2	65.3	0.1	No
Baxter Road	East of I-15 Freeway NB Ramps	62.8	63.0	0.3	No
Baxter Road	East of Monte Vista Drive	61.7	61.7	0.0	No

Source: Urban Crossroads 2013a

1. An impact is considered significant when the project generates a noise level increase of greater than 3.0 dBA.

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**TABLE 3.8-15
YEAR 2017 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS**

Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact ¹
		No Project	With Project	Project Contribution	
I-15 Freeway	Between Bundy Canyon and Baxter Road	84.1	84.1	0.0	No
Monte Vista Drive	South of Bundy Canyon Road	62.1	62.5	0.4	No
Monte Vista Drive	North of Driveway	62.6	63.0	0.3	No
Monte Vista Drive	North of Via Carnaghi	62.7	62.9	0.2	No
Monte Vista Drive	North of Baxter Road	63.1	63.4	0.2	No
Bundy Canyon Road	West of I-15 Freeway SB Ramps	75.3	75.3	0.0	No
Bundy Canyon Road	I-15 Freeway Overpass	75.9	75.9	0.0	No
Bundy Canyon Road	East of I-15 Freeway NB Ramps	76.3	76.3	0.1	No
Bundy Canyon Road	West of Monte Vista Drive	75.5	75.6	0.0	No
Bundy Canyon Road	East of Monte Vista Drive	75.4	75.4	0.0	No
Baxter Road	West of I-15 Freeway SB Ramps	68.0	68.1	0.0	No
Baxter Road	I-15 Freeway Overpass	66.9	67.0	0.1	No
Baxter Road	East of I-15 Freeway NB Ramps	64.6	64.8	0.2	No
Baxter Road	East of Monte Vista Drive	62.4	62.4	0.0	No

Source: Urban Crossroads 2013a

1. An impact is considered significant when the project generates a noise level increase of greater than 3.0 dBA.

Off-Site Project Traffic Noise Level Contributions

Based on the community noise assessment criteria, a significant off-site traffic noise impact would occur if the project were to create a noise level increase in the area adjacent to the roadway segment of greater than 3.0 dBA. As shown on **Table 3.8-14**, for existing conditions, the project will increase the off-site traffic noise levels from 0.0 to 1.3 dBA CNEL on the 14 roadway segments. For Year 2017 conditions, **Table 3.8-15** indicates that the project will increase off-site traffic noise levels from 0.0 to 0.4 dBA CNEL on the same roadway segments. Project-related vehicular source noise may affect permanent and ongoing ambient noise conditions but is not considered a temporary or periodic noise source.

LONG-TERM ON-SITE TRANSPORTATION NOISE

The project site will be subjected to transportation-related noise impacts from the adjacent roadways and Interstate 15 (I-15). This subsection discusses the potential noise impacts to the proposed preschool/day-care building.

On-Site Transportation-Related Noise Level Analysis

The project site is currently exposed to significant traffic noise levels from Interstate 15. To estimate the future exterior noise levels, the site plan was used to calculate the distance from the proposed preschool expansion building façade to roadway centerlines to develop a traffic noise prediction model.

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To predict the future on-site noise environment at the project site, long-range average daily traffic volumes estimates were used for both Monte Vista Drive and I-15. Using the Riverside County ADT (average daily traffic) design capacities for level of service C, the noise level impacts were estimated using a future traffic volume of 20,700 vehicles travelling at 40 miles per hour for Monte Vista Drive. A future ADT volume of 127,400 and speeds of 65 miles per hour were used to describe the future I-15 traffic noise levels.

On-Site Exterior Transportation Noise Impacts

The project site is currently exposed to significant traffic noise levels from Interstate 15. **Table 3.8-16** shows the noise predictions based on future traffic at the preschool building façade. As shown in the table, the future exterior noise level at the exterior preschool building façade is estimated at 72.4 dBA CNEL. The result of the future noise prediction model suggests that the future exterior noise levels may experience an increase of 5.3 dBA CNEL over the existing measured ambient noise levels of 67.1 dBA CNEL. In reality, the predicted future exterior noise level of 72.4 dBA CNEL likely overstates the worst-case exterior noise levels, as the analysis does not take into account topography or existing buildings (Urban Crossroads 2013a).

According to the Land Use Compatibility for Community Noise Exposure provided in the General Plan Noise Element, the predicted future exterior noise level of 72.4 dBA CNEL is considered “normally unacceptable” for schools and churches. However, the noise element indicates that for noise levels that are considered “normally unacceptable,” a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design.

TABLE 3.8-16
ON-SITE TRAFFIC NOISE IMPACTS (DBA CNEL)¹

Roadway	Exterior Noise Level at Façade	Exterior Noise Standard	Required Exterior Noise Reduction	Interior Noise Level for Windows		Interior Noise Standard ⁴	Required Interior Noise Reduction
				Open ²	Closed ³		
Monte Vista Drive	66.1	70	n/a	54.1	41.1	45	n/a
I-15 Freeway	71.3	70	1.3	59.3	46.3	45	1.3
Total¹	72.4	70	2.4	60.4	47.4	45	2.4

Source: Urban Crossroads 2013a

1. The totals represent the sum of the logarithmic energy levels for Monte Vista Drive and Interstate 15.

2. A minimum of 12 dBA noise reduction is assumed with a windows open condition.

3. A minimum of 25 dBA noise reduction is assumed with windows closed and upgraded dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 30.

4. Standard with windows closed.

LAND USE COMPATIBILITY

Proposed land uses are evaluated in comparison to the City's General Plan noise standards for land use compatibility shown in **Table 3.8-4**. Accordingly, “Schools, Libraries, Churches, Hospitals, and Nursing Home” land uses are considered normally acceptable in exterior noise environments up to 60 dBA CNEL/L_{dn} and conditionally acceptable at levels up to 70 dBA CNEL/L_{dn}.

METHODOLOGY

The following subsection outlines the methods and procedures used to model and analyze the future traffic noise environment.

Short-Term Exposure to Construction-Related Noise

Construction noise represents a short-term impact on the ambient noise levels. The project's construction noise impacts will include both short-term mobile equipment and long-term stationary equipment. Short-term mobile construction activities (e.g., nail guns, hammers, power saws, drills) that are not staged or stationary will be generated throughout the project site. During construction, all of the long-term construction equipment (generators, compressors, pumps) staging activities will be located in areas that will create the greatest distance between construction-related noise sources and the noise-sensitive receptors. It is expected that the project construction activities will consist primarily of short-term mobile equipment noise associated with backhoes, water trucks, graders, excavators, dump trucks, pickup trucks, vibratory rollers, and pavers. Portable tools will likely involve compressors, nail guns, hammers, drills, and saws.

Predicted noise levels at nearby noise-sensitive land uses were calculated utilizing typical noise levels and usage rates associated with construction equipment, derived from the FHWA Roadway Construction Noise Model (version 1.1). Construction noise levels are predicted assuming an average noise attenuation rate of 6 dB per doubling of distance from the source.

Transportation Noise

The following methods and procedures were used to model and analyze the future traffic noise environment.

FHWA Traffic Noise Prediction Model

The roadway noise impacts from vehicular traffic were projected using a computer program that replicates the FHWA Traffic Noise Prediction Model-FHWA-RD-77-108 (the FHWA Model). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the REMEL to account for the roadway classification (e.g., collector, secondary, major, or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

Traffic Noise Prediction Model Inputs

Table 3.8-17 presents the FHWA Traffic Noise Prediction Model roadway parameters used in this analysis. Soft site conditions were used to develop the noise contours to analyze the traffic noise impacts. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Even though the proposed project will result in development, the areas adjacent to the roadway will remain earthen and vegetated rather than completely covered with concrete, asphalt, or another building material. Therefore, soft site conditions better represent the noise level contours.

The existing and Year 2017 average daily traffic volumes used for the study and presented in **Table 3.8-18** were provided by the traffic impact analysis prepared by Urban Crossroads in 2013.

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**TABLE 3.8-17
OFF-SITE ROADWAY PARAMETERS**

Roadway	Segment	Roadway Classification ¹	Lanes	Vehicle Speed (mph)	Site Conditions
I-15	Between Bundy Canyon and Baxter Road	Freeway	6	65	Soft
Monte Vista Drive	South of Bundy Canyon Road	Secondary	2	40	Soft
Monte Vista Drive	North of Driveway 1	Secondary	2	40	Soft
Monte Vista Drive	North of Via Carnaghi	Secondary	2	40	Soft
Monte Vista Drive	North of Baxter Road	Secondary	2	40	Soft
Bundy Canyon Road	West of I-15 Southbound Ramps	Urban Arterial	6	40	Soft
Bundy Canyon Road	I-15 Freeway Overpass	Urban Arterial	6	40	Soft
Bundy Canyon Road	East of I-15 Freeway Northbound Ramps	Urban Arterial	6	40	Soft
Bundy Canyon Road	West of Monte Vista Drive	Urban Arterial	6	40	Soft
Bundy Canyon Road	East of Monte Vista Drive	Urban Arterial	6	40	Soft
Baxter Road	West of I-15 Freeway Southbound Ramps	Secondary	2	40	Soft
Baxter Road	I-15 Freeway Overpass	Secondary	2	40	Soft
Baxter Road	East of I-15 Freeway Northbound Ramps	Secondary	2	40	Soft
Baxter Road	East of Monte Vista Drive	Secondary	2	40	Soft

Source: Urban Crossroads 2013b; 1. Wildomar 2008

**TABLE 3.8-18
AVERAGE DAILY TRAFFIC VOLUMES FOR EXISTING AND YEAR 2017 CONDITIONS**

Roadway	Segment	Average Daily Traffic (1,000s)			
		Existing		Year 2017	
		No Project	With Project	No Project	With Project
I-15	Between Bundy Canyon and Baxter Road	117.0	117.1	126.6	126.7
Monte Vista Drive	South of Bundy Canyon Road	1.7	2.3	5.4	5.9
Monte Vista Drive	North of Driveway 1	1.9	2.4	6.1	6.6
Monte Vista Drive	North of Via Carnaghi	2.0	2.3	6.2	6.5
Monte Vista Drive	North of Baxter Road	2.8	3.3	6.9	7.3
Bundy Canyon Road	West of I-15 Southbound Ramps	17.7	17.8	27.3	27.4
Bundy Canyon Road	I-15 Freeway Overpass	19.1	19.3	31.7	31.9
Bundy Canyon Road	East of I-15 Freeway Northbound Ramps	19.0	19.3	34.4	34.8
Bundy Canyon Road	West of Monte Vista Drive	18.6	19.0	29.0	29.3
Bundy Canyon Road	East of Monte Vista Drive	19.7	19.9	28.1	28.3
Baxter Road	West of I-15 Freeway Southbound Ramps	14.5	14.7	21.3	21.5
Baxter Road	I-15 Freeway Overpass	11.1	11.4	16.3	16.6
Baxter Road	East of I-15 Freeway Northbound Ramps	6.3	6.7	9.6	10.0
Baxter Road	East of Monte Vista Drive	4.9	4.9	7.1	7.2

Source: Urban Crossroads 2013b

3.8 NOISE

IMPACTS AND MITIGATION MEASURES

Exposure to Excessive Noise Levels (Standard of Significance 1)

Impact 3.8.1 The completed proposed project may expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. As such, impacts are considered **potentially significant**.

Construction Noise Level Impacts

Noise levels generated by heavy construction equipment can range from approximately 70 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 78 dBA measured at 50 feet from the noise source to the receiver would be reduced to 72 dBA at 100 feet from the source to the receiver and would be further reduced to 66 dBA at 200 feet from the source to the receiver. The analysis shows that the highest construction noise level impacts will occur during construction activities at the boundaries of the project site.

At a distance of less than 50 feet from the project boundaries, it is expected that the nearby noise-sensitive residential receivers will likely experience a significant, temporary/periodic increase above the existing ambient noise due to project construction activities. However, while construction noise may be heard at varying levels of intensity according to the location and operations of grading equipment, it will often be overshadowed by existing traffic noise from Interstate 15.

While construction noise is temporary, intermittent, and of short duration, and will not present any long-term impacts, the following noise abatement measures have been developed to reduce the noise level impacts produced by the construction equipment to the nearby noise-sensitive residential land uses.

The primary method of addressing construction noise in Wildomar is to limit the hours of construction to typical business days. It is very difficult to fully mitigate construction noise because most of the methods associated with noise attenuation would impede the act of development, such as a noise wall or increasing the distance to the receptor, or would be too flimsy to be effective. Further, grading and earth movement require the use of heavy equipment over a large area. Attenuating mobile sources with a stationary acoustic fence or wall will likely be ineffective.

The sensitive receptor that will experience the most impact from construction on the project site is the residents of the home at 34620 Via Carnaghi Lane. This home is surrounded by construction with the project on three sides (north, south, and east) and the paving of Via Carnaghi Lane on the west (see **Figure 2.0-3A**). While the Wildomar Municipal Code limits the hours of construction, during the permitted construction hours the home will experience a significant increase in noise. While construction noise will be temporary and will cease entirely with completion of the project, compliance with mitigation measure **MM 3.8.1a** will reduce, but not eliminate, noise impacts at this location.

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Off-Site Construction

The project requires the construction of a 1,900-foot sewer line in Monte Vista Drive extending from the project driveway north to an existing manhole (see **Figure 2.0-7**). The sewer line will be placed in a trench on the west side of Monte Vista Drive adjacent to the Caltrans right-of-way for Interstate 15. Construction will occur with the first phase of the project and will take approximately two weeks to complete. The construction will occur within the 83.7 dBA contour of Interstate 15 (see **Table 3.8-12**). Noise from the construction will be overshadowed by the noise from the Interstate, and all construction is subject to the mitigation measures shown below. This impact is considered less than significant.

The City requires the paving of Via Carnaghi Lane as a condition of approval. The paving of the roadway and the construction of driveways and other access features will involve grading of the existing roadway, import of fill material as a base for the pavement, and compaction of the material with vibratory rollers and water trucks and finally the use of paving machines. The paving of the roadway will take approximately two weeks to complete and will occur in conjunction with Phase 1 of the proposed project. Noise from roadway paving will affect the adjacent residents. As with other construction, the hours will be limited by the Municipal Code and enforced by the City. Also, implementation of mitigation measure **MM 3.8.1** will ensure that any noise associated with the paving of the roadway is reduced to a less than significant level.

Phase 1

Based on the noise study conducted by Urban Crossroads (2013a), the results of the noise impact analysis prepared for the proposed project indicate the future unmitigated exterior noise levels at the preschool building façade are estimated at 72.4 dBA CNEL (**Table 3.8-14**). This conservative level increase of 6.3 dBA CNEL over the existing measured ambient noise levels of 66.1 dBA CNEL exceeds the “normally acceptable” range as identified in the City of Wildomar Land Use Compatibility Noise Criteria (**Table 3.8-4**) of 70 dBA CNEL for exterior noise levels. The area that exceeds the normally acceptable level is the parking and travel area associated with the preschool and the main school building. The area is neither designed nor intended to accommodate a long-term use by students. As such, the parking lot and access area noise is considered acceptable.

For purposes of analysis, the preschool outdoor play area is classified as a sensitive receptor and is subject to noise mitigation, as the area is intended for long-term use. While it is possible that during certain times of the day the outdoor play area may be a noise generator, these periods would be limited and noise would be mitigated through the same methods that would shield the outdoor play area from freeway noise. The outdoor play area located on the north end of the proposed school building will be approximately 3 feet below the adjacent grade and several feet below the western and northern property lines. The lowered play area allows the surrounding terrain to block freeway and parking lot noise. The physical mass of the preschool building will also block noise from the parking area and the freeway (Lawson 2014).

To ensure that the combination of preschool building and grade change results in the anticipated acceptable exterior noise levels, mitigation measure **MM 3.8.1e** requires noise measurements of the outdoor play area prior to occupancy of the building. If the exterior noise levels of the outdoor play area remain above 70 dBA, **MM 3.8.1e** requires the construction of a block wall along the western property line to shield the playground area from freeway noise. Currently, the site plans show a 6-foot plastic or wood fence in this location. If necessary, the noise attenuation specifications of the wall will be made by the noise analyst and approved by the City. Although the future predicted exterior noise level of 72.4 dBA CNEL is an overestimation

3.8 NOISE

of actual potential noise level standards, implementation of mitigation measure **MM 3.8.1e** will ensure that the resulting level of noise is less than significant at the outdoor play area.

To meet the 45 dBA CNEL interior noise standard, an exterior to interior noise level reduction of 27.4 dBA CNEL is required (**Table 3.8-14**). The required interior noise level reduction can be accomplished with the “windows closed” condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 30 for classrooms, libraries, and other noise-sensitive rooms in the preschool building. The implementation of these design features is outlined in mitigation measures **MM 3.8.1b**, **MM 3.8.1c**, and **MM 3.8.1d**.

The proposed maintenance building will replace an existing structure located north of the residence at 34620 Via Carnaghi Lane. Construction of the building will involve the use of compressors and hand tools such as drills, saws, and hammers, and will occur at the same time as the rest of the site is graded for construction of the adjacent parking area. Construction of the building will create noise that will affect the adjacent residents. Compliance with the Wildomar Municipal Code limiting the times of construction and with mitigation measure **MM 3.8.1a** will reduce this impact to a less than significant level.

Phase 2

The administration building will be built as part of Phase 2 of the proposed project. This future building will be located approximately 350 feet east of the Interstate 15 contour and approximately 180 feet west of the residence at 34620 Via Carnaghi Lane, which is the closest sensitive receptor. The administration building is designed to open toward the internal courtyard of the main church campus and is not expected to generate noise during operations. Once complete, the building may block existing noise generated by activity in the courtyard. Construction of the building will be subject to mitigation measure **MM 3.8.1a**, which will limit the hours of construction and direct the staging of the construction activity. With the implementation of the mitigation measure, this impact is considered less than significant.

As noted above, activity at the existing sports field is extended into the evening hours through the use of portable generator-powered field lighting. As part of Phase 2 construction, the proposed project will install permanent lighting that will eliminate the need for generators. No change is anticipated in the hours or use of the facility, and the elimination of the generators will reduce noise in the area. As the sports field is an existing use, and the only change is to eliminate the use of portable generator-powered field lighting, this aspect of the project is expected to have no impact to noise.

Mitigation Measures

- MM 3.8.1a** Prior to the issuance of grading permits, the project applicant shall submit a construction-related noise control plan to the City for review and approval. The plan shall:
- Depict the location of construction equipment staging areas.
 - Require that construction contractors equip construction equipment (fixed or mobile) with properly operating and maintained mufflers consistent with manufacturers’ standards.

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- Require that the construction contractor place stationary construction equipment so that emitted noise is directed away from the noise-sensitive receptors nearest the project site.
- Describe other noise control measures that will be implemented during project-related construction activities.
- Specify that all construction activity, including staging and haul truck deliveries, is subject to the same hours specified for construction equipment (i.e., between the hours of 6 a.m. and 6 p.m. during the months of June through September, and between the hours of 7 a.m. and 6 p.m. during the months of October through May). Where alternative routes are available that would not substantially increase vehicle miles traveled, the plan shall denote haul routes that do not pass noise-sensitive land uses or residential dwellings. The construction-related noise control plan shall also incorporate any other restrictions imposed by City staff.
- Indicate the location of frame-mounted temporary noise curtains. The noise curtains shall be installed near the noise-sensitive residential receiver locations to shield the neighboring homes from construction noise. Noise control curtains shall provide a minimum STC (Sound Transmission Class) rating of 20. The temporary noise curtains shall be installed without any gaps or openings on the project boundary between the noise-sensitive receiver and the construction activities.

The construction supervisor shall provide written notification of planned activities to the City of Wildomar and to each of the property owners located along Via Carnaghi Lane and the home at 34520 Monte Vista Drive 15 days prior to commencement of each phase of construction.

The construction supervisor shall maintain a complaint log noting date, time, complainant's name, nature of the complaint, and any corrective action taken. A copy of the complaint log shall be provided to the City on a daily basis. The project manager shall publish and distribute to the potentially affected community, a phone number that is attended during active construction working hours for use by the disturbed public to register complaints.

The construction supervisor shall ensure compliance with the noise control plan, and the City shall conduct periodic inspections at its discretion.

Timing/Implementation: During construction activities

Enforcement/Monitoring: City of Wildomar Building and Planning Departments

MM 3.8.1b

The project applicant shall provide a "windows closed" condition, requiring a means of mechanical ventilation and standard dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 30 for classrooms, libraries, and other noise-sensitive rooms in the preschool building.

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Timing/Implementation: Prior to a certificate of occupancy of the preschool (as part of building permit requirements)

Enforcement/Monitoring: City of Wildomar Planning and Building Departments

MM 3.8.1c

For the preschool building, the project applicant shall ensure that exterior walls have a minimum STC rating of 46. Typical walls with this rating will have 2x4 studs or greater, 16-inch o.c. with R-13 insulation, a minimum 7/8-inch exterior surface of cement plaster, and a minimum interior surface of 1/2-inch gypsum board. Interior wall finish shall be at least 1/2-inch-thick gypsum wallboard or plaster. Ceilings shall be finished with gypsum board or plaster that is at least 1/2 inch thick. The roof system should have minimum 1/2-inch plywood sheathing that is well sealed to form a continuous barrier with a minimum insulation of R-19.

Timing/Implementation: Prior to a certificate of occupancy of the preschool (as a part of building permit requirements)

Enforcement/Monitoring: City of Wildomar Planning and Building Departments

MM 3.8.1d

All window and door assemblies used throughout the preschool shall be free of cutouts and openings and shall be well fitted and well weather-stripped.

Timing/Implementation: Prior to a certificate of occupancy of the preschool (as a part of building permit requirements)

Enforcement/Monitoring: City of Wildomar Planning and Building Departments

MM 3.8.1e

The project applicant shall prepare a final noise analysis prior to obtaining building permits for the preschool and submit the analysis to the City for review and approval. This analysis will finalize the noise requirements based on precise grading plans and actual building design specifications. If the noise analysis shows that the exterior noise levels at the preschool playground will exceed 70 dBA, the project applicant shall provide attenuation such as a noise barrier along the western property line, noise barrier or façade extensions along the southern face of the preschool building, or other measures recommended by the acoustical expert to ensure the outdoor play area noise level is below 70 dBA.

Timing/Implementation: Prior to occupancy of the preschool

Enforcement/Monitoring: City of Wildomar Planning and Building Departments

3.8 NOISE

With implementation of mitigation measures **MM 3.8.1a** through **MM 3.8.1d**, the proposed project will meet the City of Wildomar 45 dBA CNEL interior noise level standards. The noise study concluded that interior noise levels would be acceptable on the ground floor with window ratings of STC 30 for classrooms, libraries, and other noise-sensitive rooms contained in the preschool building. Additionally, exterior walls with a minimum STC rating of 46 would further reduce impacts. While the noise study concluded that the parking lot and driveway area would be exposed to exterior noise outside of the “normally acceptable” range of 70 dBA CNEL, this area is not intended for long-term use and the noise level is acceptable in this instance. However, the outdoor play area is an area intended for long-term use and will need noise attenuation. The location of the outside play area behind the building and the topography of the site are such that the anticipated noise level at the outside play area should be well below 70 dBA. Mitigation measure **MM 3.8.1e** is intended to ensure that the noise attenuation assumptions made in this section are reflected by the actual measurements following construction. With implementation of the above mitigation measures, both the exterior and interior noise levels will be reduced to a **less than significant** impact.

Exposure Excessive Groundborne Vibration or Noise (Standard of Significance 2)

Impact 3.8.2 Implementation of the proposed project may expose persons to or generate minimal, short-duration groundborne vibration or groundborne noise levels. This impact is considered **less than significant**.

Construction methods used for the proposed project will involve graders, excavators, and various-sized trucks as well as personal vehicles. **Table 3.8-9** illustrates the peak particle velocity for various types of equipment, including vibratory rollers, large tractors, and loaded trucks. Use of a vibratory roller is likely for roadway construction. As noted in the table, a vibratory roller's velocity at 25 feet from the sources is 0.21 inches per second. **Table 3.8-6** notes that the vibration would be strongly perceptible as an intermittent source. The Caltrans acceptable vibration standard ranges from 0.30 to 0.50 for older and newer residential structures, respectively. Further, the maximum velocity will be at 25 feet or closer to the equipment. Because there are no structures within 25 feet of any area being developed, or along Monte Vista Road for the alignment of the sewer line, the actual ground vibration will be less than the threshold. As the projected ground vibration is less than the acceptable standard, this impact is considered **less than significant**.

Mitigation Measures

None required.

Result in a Permanent Increase in Ambient Noise Levels (Standard of Significance 3)

Impact 3.8.3 Completion of the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity. As such, there will be **no impact**.

To assess the off-site noise levels associated with the development of the proposed project, noise level contour boundaries for the 55, 60, 65, and 70 dBA Community Noise Equivalent Levels were developed to determine whether project traffic volumes would create noise level increases greater than 3 dBA on the study area roadway segments.

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For the Year 2017 scenario, **Table 3.8-15** shows that potential traffic noise level impacts will range from 0.0 to 0.4 dBA CNEL; therefore, the proposed project's incremental off-site traffic noise level contributions will be considered barely perceptible (less than 3.0 dBA CNEL). The proposed project will not generate a substantial permanent increase in transportation-related ambient noise levels. As such, there will be **no impacts** to permanent ambient noise levels due to increased traffic noise.

Operation of heating, ventilation, and air conditioning (HVAC) equipment on the roof of the preschool building has the potential to generate noise affecting the adjacent home at 34520 Monte Vista Drive (APN 367-210-006). **Figures 2.0-4A** and **2.0-4B** show that a parapet wall will screen the HVAC units from ground level. Screening the HVAC units, as shown on **Figures 2.0-4A** and **2.0-4B**, will ensure that the noise at the property line is less than 65 dBA, consistent with General Plan Policy N 4.1.

Mitigation Measures

None required.

Result in a Temporary Increase in Ambient Noise Levels (Standard of Significance 4)

Impact 3.8.4 Construction of the proposed project may result in a temporary increase in ambient noise levels in the project vicinity. This temporary impact is considered **potentially significant**.

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, can reach high levels, typically greater than 5 dBA over ambient noise levels. Grading activities typically represent one of the highest potential sources for noise impacts. As the proposed project area is already developed, it is possible that construction noise will result in a short-term increase in the ambient noise. Noise levels associated with typical construction equipment are summarized in **Table 3.8-19**.

Noise levels attenuate as the distance between the noise source and the sensitive receptor increases. A common attenuation rate for noise levels is a 3 dBA reduction in noise level for every doubling of distance. Both the home at 34520 Monte Vista Drive (APN 367-210-006) and the home at 34620 Via Carnaghi Lane are sensitive receptors and will be affected by construction noise. Both structures are within 30–50 feet of active construction areas as shown in **Figure 2.0-3A** and **Table 3.8-20**.

TABLE 3.8-19
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 feet)
Rock Drills	83–99
Jackhammers	75–85
Pneumatic	78–88
Pumps	74–84
Dozers	77–90
Scrapers	83–91

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Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 feet)
Haul Trucks	83–94
Cranes	79–86
Portable Generators	71–87
Rollers	75–82
Tractors	77–82
Front-End Loaders	77–90
Hydraulic Backhoes	81–90
Hydraulic Excavators	81–90
Graders	79–89
Air Compressors	76–89
Trucks	81–87

Source: FTA 2006

Based on these typical noise levels, construction activities associated with future development may result in noise levels that range from 71 to 99 dBA at 50 feet from the noise source, which is the closest distance heavy equipment is likely to be to the sensitive receptors. The City regulates the time of construction but does not establish noise standards for construction activity. Construction activity will result in a substantial temporary increase in ambient noise affecting these two sensitive receptors. The other sensitive receptors along Via Carnaghi Lane will be less impacted by construction noise, as the activity will be limited to roadway grading and paving.

TABLE 3.8-20
APPROXIMATE DISTANCE TO SENSITIVE RECEPTORS

APN	Approximate Distance to Construction
367-210-006	30 feet to property line for fence 50 feet to preschool building
367-210-010	60 feet
367-210-011	40 feet
367-210-012	n/a (property vacant)
367-210-037	90 feet
367-210-038	60 feet
367-210-041	50 feet

Source: DEIR Figure 2.0-3A

Implementation of mitigation measure **MM 3.8.1a** will reduce noise impacts on the sensitive receptors through staging of equipment away from the structures and ensuring that all noise attenuation equipment is installed and operational on all equipment; however construction activity will remain a significant temporary impact on ambient noise. This impact will remain **significant and unavoidable**.

Operation of the facility will also result in temporary impacts. Usage of the parking lots, particularly during late day events, has the potential to disturb residents along Via Carnaghi Lane. Use of lawnmowers, leaf blowers, string trimmers, and other landscape maintenance equipment can also generate substantial if temporary noise. Small parking lot sweeper noise levels (estimated based on published information for a TYMCO Standard Model 210 parking lot

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sweeper) can generate levels of 77.0 dBA L_{eq} to a high of 81.0 dBA L_{max} during operations. Implementation of mitigation measure **MM 3.8.4** will ensure that operational noise occurs only during the daytime consistent with General Plan Policy N 4.1.

Mitigation Measures

MM 3.8.4 Parking lot sweeping and landscape maintenance activities shall occur only between the hours of 7:00 a.m. and 10:00 p.m.

Timing/Implementation: Ongoing

Enforcement/Monitoring: City of Wildomar Planning Department and Public Works Department

Implementation of mitigation measure **MM 3.8.1a** will reduce, but will not eliminate, the proposed project's increase in interim noise associated with construction of the proposed project. While the City recognizes that the impacts are short in duration and will not present any long-term impacts on the project site or in the surrounding area, this impact remains **significant and unavoidable**. Implementation of mitigation measure **MM 3.8.4** will ensure that impacts associated with operation and maintenance of the proposed project are **less than significant**.

3.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The geographic extent of the cumulative setting for noise consists of the proposed project site, the property adjacent to Via Carnaghi Lane, the existing sports field, and the approximately 1,900 feet of sewer line proposed north of the project site along Monte Vista Drive.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Contribution to Cumulative Noise Levels

Impact 3.8.5 Implementation of the proposed project will not result in a substantial contribution to cumulative noise levels. The impact would be considered **less than cumulatively considerable**.

The proposed project's contribution to the cumulative traffic noise levels along area roadways was determined by comparing the predicted noise levels with and without project-generated traffic. As noted in the tables in this section, area-wide growth will result in most of the increase in noise affecting the proposed project. Implementation of the proposed project would result in predicted increases of 0.0 to 0.4 dBA in 2017, and such low levels of increase are considered barely perceptible (Urban Crossroads 2013a). The proposed project would not result in a substantial increase in traffic noise levels along primarily affected area roadways. It is important to note that the existing traffic noise levels presented in **Table 3.8-3** do not take into account noise reductions provided by existing structures, barriers, or terrain. Given that the proposed project would not result in a significant contribution to traffic noise levels, the proposed project's cumulative contribution to ambient noise levels would be considered **less than cumulatively considerable**.

Activity at the preschool is likely to result in additional noise over the current condition due to children playing in the outdoor play area. As noted in Impact 3.8.1 above, the outdoor play area is below grade and shielded by the preschool building. These factors also shield the play area from the adjacent residence at 34520 Monte Vista Drive. Implementation of mitigation

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measure **MM 3.8.1e** will ensure that noise from the freeway does not affect the outdoor play area and simultaneously affirm that noise from the play area will not affect the residence. This impact is considered **less than cumulatively considerable**.

Activity at the new maintenance building will be similar in noise impact to the existing facility that it will replace. There may be use of hand tools and small equipment like table saws, drills, and sanders in the preparation of props for plays staged at the school. There may also be noise associated with tuning of lawnmowers, lawn edgers, string trimmers, and leaf blowers used in the maintenance of the grounds. These noises are considered typical for a residential neighborhood and are already in existence at the current maintenance building. This impact is considered **less than cumulatively considerable**.

The future administrative building will be located at the south end of the existing courtyard framed by the main sanctuary and the classroom building. The building will be oriented away from the access road and will effectively serve to block noise from the existing courtyard. The office building is located approximately 240 feet north and west of the home at 34620 Via Carnaghi Lane. The building will replace existing uses within the main church campus but is not anticipated to generate any noise above the operation of HVAC equipment that will be roof mounted and shielded by a parapet wall. As with the preschool HVAC equipment, shielding by a parapet wall will ensure that the noise from operation of the equipment will not impact the home on Via Carnaghi Lane. This impact is considered **less than cumulatively considerable**.

The new upper parking lot is accessed through a new driveway in the existing northern parking lot that is north of the proposed maintenance building, and from a new driveway that leads south and then west into the existing lower parking lot. From the new upper parking area, the entrance to the southern driveway elevation is approximately 1,455 feet above sea level and the exit onto the gravel lower parking lot is at 1,430 feet, which is the approximate elevation of the home at 34620 Via Carnaghi Lane. Cars traveling on this driveway will be above the elevation of the home, and noise associated with the driveway would be above the existing structures. This impact is considered **less than cumulatively considerable**.

Operation of the parking lots adjacent to the residence has the potential to result in periodic noise events. To determine the noise level impacts associated with parking lot noise, Urban Crossroads collected reference noise level measurements at the Laguna Niguel Walmart located at 27470 Alicia Parkway on May 30, 2012. As shown in **Table 3.8-21**, the 15-minute noise level measurement indicates that parking lot activity generates a noise level of 60.1 dBA L_{eq} at a distance of 5 feet. The parking lot noise levels are mainly due to cars pulling in and out of spaces, car alarms sounding, and customers moving shopping carts. Noise associated with parking lot activity is expected during the typical daytime and nighttime conditions for the entire hour (60 minutes). As the church does not operate at night like many shopping centers, noise events would occur during the daytime hours of 7:00 a.m. to 10:00 p.m. These are normal sounds associated with parking lots and already exist near the residence on Via Carnaghi Lane, as the lower parking area is currently in use.

TABLE 3.8-21
TYPICAL PARKING LOT REFERENCE NOISE LEVELS

Noise Source	Duration (mm:ss)	Distance from Source (feet)	Noise Source Height (feet)	Hourly Activity (minutes)	Hourly (L_{eq} dBA)
Parking Lot Activity	15:00	5	4	60	60.1

Source: Lewis, 2014

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The use of the church parking lots will be less intensive than would be anticipated at a shopping center; therefore, the noise levels shown in **Table 3.8-21** are considered conservative. As noted in the table, the noise levels are below the 65 dBA limit established by General Plan Policy N 4.1; therefore, this impact is considered **less than cumulatively considerable**.

The church property is unattended during nighttime hours, and there is the potential for unauthorized use of the parking areas. The church already has an access control gate at the northern end of Via Carnaghi Lane to prevent drive-through and off-hour access. Mitigation measure **MM 3.8.5** would require a similar access control device to be installed at the lower parking lot. This would block access to the lower parking lot from Via Carnaghi Lane and would prevent use of the access road to the upper parking lot during times when the church is not in operation. The measure also requires the posting of a number that can be called if unauthorized or noisy activity is observed in the parking lots. With implementation of mitigation measure **MM 3.8.5**, this impact is considered **less than cumulatively considerable**.

The proposed sewer line will be underground, operates on gravity, and will therefore be entirely silent once completed. Pavement of Via Carnaghi Lane and the gravel parking lot south of 34620 Via Carnaghi Lane will reduce noise associated with vehicle traffic, but may increase noise associated with maintenance of the landscaping and parking lot. Noise impacts from these aspects of the project are considered **less than cumulatively considerable**.

The installation of lighting at the sports field will allow the church to discontinue the portable generator-powered field lighting currently associated with evening games. The new lights will be wired into the power grid on the campus and will not generate any noise. As the church already uses the sports field in the evening using the generator-powered lights and has no plans to expand use of the facility after the new lights are installed, this impact is considered **less than cumulatively considerable**.

Mitigation Measures

MM 3.8.5 Prior to completion of the upper parking lot, an access control gate shall be installed at the entrance to the lower parking area. The gate shall be operated and maintained by the church and be designed to prevent use or access to the parking area during times when the church is not in operation. The Planning Director or City Engineer may approve an alternative location for the gate if another area would serve the same purpose of denying access. A sign shall be placed on the gate, and at the entrance to each parking area, indicating a number that can be called should activity occur in the parking lot(s) when the church is not in operation.

Timing/Implementation: Prior to completion of the upper parking lot

Enforcement/Monitoring: City of Wildomar Planning Department and Public Works Department

3.8 NOISE

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3.9 PUBLIC SERVICES AND UTILITIES

This section describes the public services and utilities that would serve the Cornerstone Community Church project upon completion. Specifically, this section includes an examination of fire protection and emergency medical services, law enforcement services, public schools, water supply and service, wastewater services, solid waste services, parks and recreation. Each subsection includes a description of existing facilities and infrastructure, applicable service goals, potential environmental impacts resulting from implementation of the proposed project, and cumulative impacts.

Impacts associated with the following public service and utility issues are addressed in other sections of this Draft EIR, as listed below.

- Storm drainage system, including potential overflow and downstream flooding impacts – Section 3.7, Hydrology and Water Quality
- Groundwater impacts, including water quality – Section 3.7, Hydrology and Water Quality
- Energy use, including energy demands associated with the proposed project – Section 3.4, Climate Change and Greenhouse Gases

3.9.1 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

3.9.1.1 EXISTING SETTING

Riverside County Fire Department

The Riverside County Fire Department (RCFD) provides fire protection and emergency medical services to an approximate 7,000-square-mile service area that includes Wildomar.

RCFD services include providing fire suppression, emergency medical, rescue, and fire prevention services while serving as the operational area coordinator for the California Fire and Rescue Mutual Aid System for all fire service jurisdictions in Riverside County.

The Riverside County Fire Department also has several automatic aid agreements with other municipal jurisdictions as well as with the adjacent National Forests. The County of Riverside contracts with the State of California for fire protection. Public Resources Code 4142 affords legal authority for the California Department of Forestry and Fire Protection (Cal Fire) to enter into agreements with local government entities to provide fire protection services with the approval of the California Department of General Services. By virtue of this authority, Cal Fire administers the Riverside County Fire Department.

The RCFD currently operates 95 fire stations in 17 battalions. These 95 fire stations are divided into two operational divisions: East Operations and West Operations. The two divisions comprise six subdivisions: Bautista, Indio, Moreno, Northwest, Oak Glen, and Southwest. The City of Wildomar is located in the Southwest Division.

The Southwest Division comprises four battalions and encompasses the southwestern portion of Riverside County from the San Diego county line to the south, to the southern edge of the City of Moreno Valley to the north, and east to the western portion of the Hemet Valley. Wildomar is located in Battalion 2, which includes eight fire stations. The locations of the eight stations are listed below (RCFD 2012).

3.9 PUBLIC SERVICES AND UTILITIES

- Elsinore Fire Station #10, 410 West Graham Avenue, Lake Elsinore (battalion headquarters)
- Lakeland Village Fire #11, 33020 Maiden Lane, Lake Elsinore
- El Cariso Fire Station #51, 32353 Ortega Highway, Lake Elsinore
- Wildomar Fire Station #61, 32637 Gruwell Street, Wildomar
- Rancho Carrillo Fire Station #62, Lot #51, Verdugo Road, San Juan Capistrano (a volunteer station)
- Rancho Capistrano Fire Station #74, 35420 Calle Grande, Lake Elsinore (a volunteer station)
- McVicker Park Fire Station #85, 29405 Grand Avenue, Lake Elsinore
- Canyon Hills Fire Station #94, 22770 Railroad Canyon Road, Lake Elsinore

The department consists of 1,200 career firefighters, 200 administrative support personnel, and 300 volunteer reserve firefighters who responded to 121,059 incidents in 2011, averaging 325 emergency responses per day (RCFD 2012).

Response Times and Service Standards

The Riverside County Fire Department developed a methodology to determine the location of future fire stations. This methodology was established utilizing principles recommended in the National Fire Protection Association (NFPA) Handbook, Volume II, 20th edition. The principles utilized by the RCFD are listed below (RCFD 2009).

- Consideration of criteria established by the Insurance Services Offices, Inc. (ISO) regarding the distribution of fire companies in the community.
- Consideration of NFPA Standard 1710 as a guideline, which calls for an engine company within 4 minutes, 0 seconds of travel time to fire incidents and emergency medical service (EMS) calls, and a full first-alarm group.
- Ability to respond within 8 minutes, 0 seconds to a minimum of 90 percent of all annual incidents.
- Consideration of the proximity of travel time to other station protection zones for timely inclusion in the full first-alarm response group.
- Consideration of rapid and safe access to multi-directional major response routes.
- Consideration of appropriate locations given the land use issues in the surrounding environment.
- Consideration of utility availability, plot size, and surrounding traffic control issues.
- Consideration of historical and projected call volume (response workload) in the area of concern using risk versus cost analysis.

The City of Wildomar currently collects fire protection fees for the Riverside County Fire Department. For commercial development, the fees are based on the square footage of the proposed project. The fees collected are used to address future fire protection facilities and equipment needs.

3.9.1.2 REGULATORY FRAMEWORK

STATE

California Fire Code

The 2007 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California (CBSC 2008). The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

California Health and Safety Code

Additional state fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and child-care facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Fighting Equipment, the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

LOCAL

Riverside County Fire Department Strategic Plan

The Riverside County Fire Department's (2009) Strategic Plan 2009–2029 covers fiscal years 2009–10 through 2029–30. The plan describes the array of fire and rescue services provided to citizens, and it provides an evaluation of the current status of various commonly used service performance measures. The plan also makes recommendations for staffing, facilities, and station sites and remodels.

3.9 PUBLIC SERVICES AND UTILITIES

Mutual Aid Agreements

Fire protection mutual aid is defined as an agreement between two fire agencies in which they commit to respond to calls for services in the other agency's jurisdiction when they are called, at no cost to the requesting agency. Automatic aid is not only predetermined, but one or more additional departments are automatically dispatched to certain locations or types of alarms at the same time as the home department. Typically, both mutual and automatic aid agreements are written between the agencies.

The Riverside County Fire Department has four mutual aid and seven automatic aid agreements with other agencies. The specific agencies with which the County has current contracts for these services are listed in **Table 3.9.1-1**.

TABLE 3.9.1-1
RCFD CONTRACTUAL AGREEMENTS

Mutual Aid Agreements	Automatic Aid Agreements
City of Corona (Hazmat) Chuckawalla Valley State Prison Fire Department March Air Force Base Niland Fire District	City of Palm Springs Idyllwild Fire Protection District City of Hemet Morongo Band of Mission Indians City of Murrieta Orange County Fire Authority Pechanga Band of Luiseno Mission Indians

Source: RCFD 2009

Based on a recent administrative review of the Riverside County Fire Department's mutual aid and automatic aid agreements, the agreements are virtually identical. However, the agreements do not include provisions for annual reviews by either party. Data regarding these agreements is tracked in terms of how many responses to calls were provided under each agreement during the year. Several of the agreements are over ten years old (e.g., Orange County Fire Authority agreement dated 1999 and Idyllwild Fire Protection District agreement dated 2000) (RCFD 2009).

3.9.1.3 IMPACTS AND MITIGATION MEASURES

STANDARD OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. A fire protection and emergency services impact is considered significant if implementation of the proposed project would:

- 1) Create substantial adverse physical impacts associated with the provision of new or physically altered fire related facilities or services, the construction and/or provision of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency services.

- 2) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

METHODOLOGY

Evaluation of potential fire protection and emergency medical service impacts was based on information provided by the Riverside County Fire Department, as well as a review of the applicable fire codes and regulations, the Wildomar General Plan and Municipal Code, and other relevant literature.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Fire Protection and Emergency Medical Services (Standard of Significance 1)

Impact 3.9.1.1 Implementation of the proposed project will not result in the need for additional fire protection and emergency services in order to maintain acceptable service levels. However, the proposed project may result in a slight increase in demand for fire protection and emergency medical services. The impact is considered **less than significant**.

Completion of the proposed project will result in the construction of a 17,315-square-foot preschool, 23,042 square foot administration building, 2,438-square-foot maintenance building, and two parking lots, one containing 274 vehicle stalls and the other containing 64. The RCFD will provide fire protection and emergency medical services to the proposed project.

While the proposed project will not result any permanent increase in the population of the city, it will result in an increase to the number of people who are within the fire protection and emergency medical service area provided by the RCFD. The Cornerstone Christian School at the proposed project site has a current enrollment of 225 students, and those students are supported by 45 faculty members, resulting in a ratio of one faculty member for every five students. The current capacity of the school is 300 students which, if the faculty member to student ratio were to remain the same, would require 60 faculty members.

The proposed project will increase the capacity of the school facilities on-site to allow for an additional 180 students which, if the faculty member to student ratio were to remain the same, would require an additional 36 faculty members. The proposed administration building will house the current administration staff of the church which is composed of 20 full time and 15 part time employees. Following the completion of the proposed project, the same number of people would serve as administrators for the church while the maximum student capacity of the school would be 480 students and 96 faculty members, an increase of 35 percent in the number of people at the proposed project site daily.

The proposed project will be primarily served by Wildomar Fire Station #61, located at 32637 Gruwell Street, approximately 2.2 miles from the project site. In addition to Fire Station #61, several other Riverside County fire stations in the surrounding area would be able to provide fire protection safety services to the project site if needed. The 2011 RCFD annual report concluded that within Wildomar there were a total of 2,674 incidents in 2010 and 2,555 incidents in 2011. Considering the population of the city, 32,176 in 2010 and 32,414 in 2011 (DOF 2012), there was one incident for every 12.03 people in 2010 and one incident for every 12.69 people in 2011.

3.9 PUBLIC SERVICES AND UTILITIES

The proposed project will result in an additional 126 people being present within the city on a daily basis. Considering the 2011 incident rate of one incident for every 12.69 people, the proposed project may be projected to generate 9.9 annual incidents. An additional 9.9 incidents would represent an increase of 0.004 percent in the number of incidents in Wildomar.

Finally, Wildomar General Plan Policy S-5.1 directs the City to develop and enforce construction and design standards which ensure that proposed development incorporates fire prevention features through specified minimum standards and the inclusion of certain safety features.

Considering the projected 0.004 percent increase in the number of incidents in Wildomar and the proposed project's required compliance with Wildomar General Plan Policy S-5.1, any impact would be **less than significant**.

Mitigation Measures

None required.

Significant Risk of Loss Due to Wildland Fire (Standard of Significance 2)

Impact 3.9.1.2 While the proposed project is located in an area that is identified as being exposed to a very high risk of wildfire, it is more specifically located in an area that is developed and well served by fire prevention services. The close proximity to a fire station and the limited undeveloped land near the proposed project will result in a **less than significant** impact.

In November 2007, the California Department of Forestry and Fire Protection (Cal Fire) adopted Fire Hazard Severity Zone (FHSZ) maps for State Responsibility Areas. The current adopted map identifies the area of the proposed project as a very high fire hazard severity (VHFHS) zone.

VHFHS zones are determined by the Director of Cal Fire and are those real properties that are not deemed to be a state responsibility pursuant to Public Resources Code Sections 4125 et seq. Identification of a VHFHS is based on consistent statewide criteria and on the severity of the fire hazard that is expected to prevail in those areas. VHFHS zones are based on fuel loading, slope, fire weather, and other relevant factors.

Cal Fire classifies real property in accordance with whether a very high fire hazard is expected to prevail in those areas so that public officials can identify measures that will retard the rate of spread and reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property and to require that those measures be implemented.

According to Government Code Section 51179, a local agency (defined as a city, county, city and county, or district responsible for fire protection within a VHFHS zone) may make changes to recommendations made by the Director of Cal Fire pursuant to Government Code Section 51178. This provision allows a local agency, at its discretion, to make changes to the boundaries of VHFHS zones that may not be reflected on maps released by Cal Fire.

Upon city incorporation in 2008, the City of Wildomar adopted the FHSZ map used by Riverside County to identify which areas of the county (the Local Regional Authority) would be categorized as being a VHFHS. This map identifies the project site as a VHFHS zone under the authority of the City of Wildomar.

However, in consideration of the proposed project site's proximity to a fire station and the considerable development that currently surrounds the proposed project site, the categorization of the area as a VHFHS zone will not result in any significant exposure of individuals or structures to the threat of wildfire. Therefore, the impact would be **less than significant**.

Mitigation Measures

None required.

Adequate Fire Flow (Standard of Significance 1)

Impact 3.9.1.3 While the implementation of the proposed project will result in the need for additional water supply, this additional need will not be sufficient to require the creation of additional water supply infrastructure. Implementation of the proposed project may result in additional need for water supply and infrastructure to provide adequate fire flows for fire protection. The provision of these facilities could cause environmental impacts. This is a **less than significant** impact.

The Riverside County Fire Department has established the following minimum requirements for fire protection facilities required by the proposed project:

- Type of fire hydrant and connection as approved by the agency providing fire protection.
- Approved fire hydrants shall be located one at each street intersection and spaced not more than 330 feet apart in any direction.
- The water system shall be capable of providing a fire flow of 1,000 gallons per minute (gpm) for 2 hours duration at a minimum of 20 pounds per square inch operating pressure from each fire hydrant. This amount shall be in addition to the average day demand as defined in the California Administrative Code, Title 22, Chapter 16 (California Waterworks Standards).
- The fire protection system shall be installed and operational prior to any combustible building material being placed on the job site.

The RCFD will further review and approve the proposed project site plan for fire hydrant sizing and placement during the building permit and site review processes. Fire flow will be provided at the project site via future water lines and public hydrants along Monte Vista Road.

Upon review and the necessary permit processing by the Riverside County Fire Department and the Elsinore Valley Municipal Water District, this impact will be **less than significant**.

Mitigation Measures

None required.

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3.9.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for fire protection and emergency medical services includes the proposed project area and the immediate surrounding areas. The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development in the immediate area of the proposed project that could potentially place demand on fire protection and emergency medical services or could be expected to place demand on services in the future.

Cumulative Demand for Fire Protection and Emergency Medical Services

Impact 3.9.1.4 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the immediate area, may increase the demand for fire protection and emergency medical services. However, given the requirement for CEQA review of future development, any necessary infrastructure or facilities expansion will be reviewed for potential impacts. Impacts related to the proposal project are **less than cumulatively considerable**.

The Riverside County Fire Department was contacted and determined that with standard development conditions in place, the department can provide service to the project area. Growth in the project area was previously addressed, and the proposed project is consistent with the development potential for the area. This impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.9.2 LAW ENFORCEMENT SERVICES

3.9.2.1 EXISTING SETTING

Riverside County Sheriff's Department

The Riverside County Sheriff's Department (RCSD) provides law enforcement services to the City of Wildomar. Composed of 2,049 sworn officers and 1,808 civilian personnel, the RCSD is responsible for law enforcement services over a 7,300-square-mile area that includes the unincorporated areas of the county as well as 17 incorporated cities (RCSD 2012). The RCSD provides service through ten sheriff's stations; the City of Wildomar is in the service area of the Lake Elsinore Station, which is located at 333 Limited Avenue in Lake Elsinore. Responses to calls for service are dispatched to the Lake Elsinore Station through the RCSD's central dispatch communication center located in the City of Riverside.

3.9.2.2 REGULATORY FRAMEWORK

STATE

Emergency Response/Evacuation Plans

Government Code Section 8607(a) directs the Governor's Office of Emergency Services to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. The program is intended to provide effective management of multi-agency and multijurisdictional emergencies in California. SEMS consists of five organizational levels, which are activated as necessary: (1) Field Response, (2) Local Government, (3) Operational Area, (4) Regional, and (5) State.

Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The City of Wildomar is generally responsible for emergencies that occur within city boundaries and has adopted an Emergency Operations Plan that is consistent with the SEMS.

LOCAL

City of Wildomar Disaster Operation and Relief Plan

The objectives of the City of Wildomar Emergency Plan (Ordinance No. 44) are to prepare for and facilitate coordinated and effective responses to emergencies in Wildomar and to provide adequate assistance to other jurisdictions as needed. The plan specifies actions for the coordination of operations, management, and resources during emergencies; governmental responsibilities during emergency events; and a plan for the organization of nongovernmental organizations providing support assistance.

3.9.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A law enforcement services impact is considered significant if implementation of the proposed project would:

- 1) Create substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for law enforcement services.

METHODOLOGY

Evaluation of potential law enforcement impacts was based on information provided by the Riverside County Sheriff's Department, as well as review of the RCSD's staffing report and facilities needs assessment. The impact analysis focuses on whether those impacts would have a significant effect on the physical environment.

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PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Law Enforcement Services (Standard of Significance 1)

Impact 3.9.2.1 Implementation of the proposed project will not result in a significant increased demand for law enforcement services and will not result in the need for new or physically altered law enforcement facilities, the construction of which could cause significant environmental impacts. Therefore, this is a **less than significant impact**.

While the completion of the proposed project will not result in any increase to the population of Wildomar, the proposed school will result in an increase in the number of students, teachers, and administrators that are at the project site during working hours. The increased facilities will likely allow for a greater number of people to be at the project site during non-working hours. However, since it is difficult to predict how great this increase will be, this EIR will assume that the total number of people at the site will increase by 180 students and 36 staff members during daytime hours on weekdays.

Police protection services are provided by the Riverside County Sheriff's Department. The nearest sheriff's station is located at 333 Limited Street in Lake Elsinore, approximately 6.7 miles northwest of the project site. Traffic enforcement is provided for Riverside County in this area by the California Highway Patrol, with additional support from the RCSD.

For the purpose of establishing acceptable levels of service, the Riverside County Sheriff's Department maintains a recommended service ratio of 1.2 sworn law enforcement personnel for every 1,000 residents (Wildomar 2008a). As stated above, the proposed project will result in an estimated 216 additional people in Wildomar. Considering the RCSD's recommended service ratio, the population increase resulting from the proposed project would require 0.21 additional sworn law enforcement personnel.

Finally, the proposed project will be located on a currently developed site that is in an area that receives law enforcement services from the RCSD station located at 333 Limited Avenue in Lake Elsinore. Because development associated with the proposed project is in an already developed area, the RCSD will not be required to expand its service area to accommodate the proposed project upon completion. In consideration of the incremental population increase the proposed project represents and the location of the proposed project in an area that is currently receiving service from the RCSD, the potential impacts of the proposed project will be **less than significant**.

Mitigation Measures

None required.

3.9.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for law enforcement services includes the service area boundaries of the Riverside County Sheriff's Department. The RCSD provides services within the current Wildomar city limits, as well as to the surrounding unincorporated areas of Riverside County and 16 other

incorporated cities. The cumulative analysis includes all existing, planned, proposed, approved, and reasonably foreseeable development in the project area.

Cumulative Demand for Law Enforcement Services

Impact 3.9.2.2 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the RCSD service area, would increase the demand for law enforcement services. The project's contribution to the need for expanded law enforcement services is considered **less than cumulatively considerable**.

The Riverside County Sheriff's Department was contacted and determined that law enforcement service can be provided to the project area. Growth in the project area and the related need for law enforcement services was addressed above under the discussion of Impact 3.9.2.1, and the proposed project is consistent with the development potential for the area. This impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.9.3 PUBLIC SCHOOLS

3.9.3.1 EXISTING SETTING

Lake Elsinore Unified School District

The Lake Elsinore Unified School District (LEUSD) was formed in 1989 and now serves a 131.78-square-mile area that includes Wildomar, Lake Elsinore and Canyon Lake, and several unincorporated communities, including Lakeland Village and Horsethief Canyon. The LEUSD operates 13 elementary schools, two K–8 schools, four middle schools, three comprehensive high schools, four alternative schools, and a virtual K–12 school. LEUSD schools are shown in **Table 3.9.3-1**.

**TABLE 3.9.3-1
LEUSD SCHOOLS**

Elementary Schools	
Cottonwood Canyon	Donald Graham
Earl Warren	Elsinore
Jean Hayman	Machado
Railroad Canyon	Rice Canyon
Ronald Reagan	Tuscany Hills
Wildomar	William Collier
Withrow	
K–8 Schools	
Luiseno	Lakeland Village

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Middle Schools	
Canyon Lake	David A. Brown
Elsinore	Terra Cotta
High Schools	
Elsinore	Lakeside
Temescal Canyon	
Alternative Schools	
Gordon Kiefer Independent Study	Keith McCarthy Academy
Ortega High	Tri-Valley Community Day
Virtual K–12	
Southern California Online Academy	

Source: LEUSD 2012

Charter Schools

Charter schools are public schools that are created or organized by a group of teachers, parents, community leaders, or a community-based organization. Charter schools may provide instruction in any grades K–12 and are generally sponsored by a local public school board or county board of education. Specific goals and operating procedures for the charter school are detailed in an agreement (or “charter”) between the sponsoring board and charter organizers. Public charter schools may not charge tuition and may not discriminate against any pupil on the basis of ethnicity, national origin, gender, or disability (CCSA 2012). The State of California charters one school in the Wildomar area: Sycamore Academy. Sycamore Academy was established in 2009, offers grades K–6, and serves the Wildomar community and the surrounding area.

Transportation

The LEUSD has approved the establishment of a fee-based transportation program in order to continue transportation services to eligible students. Kindergarten students are eligible for the transportation program (school buses) if they reside more than 0.75 mile from the school, elementary students beyond 1.5 miles, middle school students beyond 2.5 miles, and high school students beyond 3.5 miles from the school. Parents desiring transportation services to transport children from their homes to the school must apply for the service annually, receive district approval, and pay a \$170.00 semi-annual fee.

Enrollment

Existing and Historical Enrollment

For the 2011/12 academic year, the Lake Elsinore Unified School District had an enrollment of 22,171 students. During the past ten years, the LEUSD’s enrollments have risen from 17,769 students for the 2001/02 school year to 22,171 students for the academic year of 2011/12, representing an overall increase of 24.78 percent. As shown in **Table 3.9.3-2**, while the district was rapidly growing earlier in the decade, growth in recent years has significantly slowed, and in two recent academic years (2008/09 and 2010/11), enrollment declined.

TABLE 3.9.3-2
LAKE ELSINORE UNIFIED SCHOOL DISTRICT ENROLLMENT 2001/02–2011/12

Academic Year	District Enrollment	Change from Previous Year	Percentage Change
2001–02	17,769	–	–
2002–03	18,933	+ 1,164	6.55%
2003–04	19,711	+ 778	4.11%
2004–05	20,203	+ 492	2.50%
2005–06	20,652	+ 449	2.22%
2006–07	21,525	+ 873	4.23%
2007–08	22,109	+ 584	2.71%
2008–09	21,756	-353	-1.60%
2009–10	22,216	+ 460	2.11%
2010–11	22,065	-151	-0.68%
2011–12	22,171	+ 106	0.48%

Source: California Department of Education 2012

3.9.3.2 REGULATORY FRAMEWORK

STATE

Development Impact Fees/SB 50

Proposition 1A, the Kindergarten–University Public Education Facilities Bond Act of 1998, or Senate Bill (SB) 50, was approved by the voters in November 1998. This proposition provided \$6.7 billion in general obligation bonds for K–12 public school facilities and provided the first funding for the new School Facility Program, which provides state funding assistance for new construction and modernization. A primary result of SB 50 was the creation of different levels of developer fees. The Lake Elsinore Unified School District currently levies development impact fees on development within the district's boundaries consistent with SB 50. The current fees are \$3.20 per square foot for new residential development and \$0.51 per square foot for new commercial development (LEUSD 2012a).

3.9.3.3 IMPACTS AND MITIGATION MEASURES

STANDARD OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A public schools impact is considered significant if implementation of the proposed project would:

- 1) 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, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.

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METHODOLOGY

To determine the level of impact the proposed project will have on the local public school system, the schoolchildren generation rates published by the Lake Elsinore Unified School District were used to predict how many children will be housed within the proposed project. The predicted numbers were then reviewed against both the current and historic enrollment numbers of the LEUSD to determine the significance of enrollment increases.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for School Facilities (Standard of Significance 1)

Impact 3.9.3.1 The proposed project will not result in increased enrollment in the local school district. **No impact** is anticipated.

The proposed project includes the construction of a preschool that is projected to enroll 180 students. The proposed project will not result in an increase in enrollment to the Lake Elsinore Unified School District. **No impact** is anticipated.

Mitigation Measures

None required.

3.9.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for public school impacts includes the district boundaries for the LEUSD for grade school services. The LEUSD serves a 131.78-square-mile area that includes Wildomar, including the proposed project site. Any existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting could result in cumulative impacts.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Schools Impacts

Impact 3.9.3.2 The proposed project will not result in any population growth, nor will it result in population growth when developed in conjunction with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting. Any impact would be **less than significant**.

Implementation of the proposed project will not result in population growth that would increase student enrollment in the Lake Elsinore Unified School District. In addition, the proposed project will be required to pay all applicable development impact fees, and any significant expansion of LEUSD school facilities or development of new school facilities would be subject to the appropriate CEQA environmental review, which would identify any site-specific impacts and provide mitigation to reduce those impacts. Therefore, cumulative impacts on school facilities are considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.9.4 WATER SUPPLY AND SERVICE

3.9.4.1 EXISTING SETTING

Elsinore Valley Municipal Water District

The Elsinore Valley Municipal Water District (EVMWD) is a nonprofit public utility supplying water service to 35,000 water, wastewater, and agricultural service connections in the region as well as to two water agencies: the Farm Mutual Water Company and the Elsinore Water District (EVMWD 2012). The EVMWD is a subagency of the Western Municipal Water District, a member agency of the Metropolitan Water District of Southern California. The EVMWD serves the cities of Lake Elsinore, Canyon Lake, Murrieta, and Wildomar and the surrounding areas in unincorporated Riverside County. The EVWMD's water supply is a blend of local groundwater, surface water from Railroad Canyon Reservoir, and imported water. In an average year, approximately half of the EVWMD's water supply is imported, and the district's total water production equals approximately 27,000 acre-feet (EVMWD 2012).

3.9.4.2 REGULATORY FRAMEWORK

LOCAL

In order to comply with the Urban Water Management Planning Act of the California Water Code, the Elsinore Valley Municipal Water District prepared the Urban Water Management Plan. The most recent Urban Water Management Plan (UWMP) prepared by the EVMWD was adopted on June 9, 2011. The purpose of a UWMP is to determine the current levels of water use and to predict and plan for future water demand. The information contained within the EVWMD Urban Water Management Plan includes the water usage and predicted water demand of the service area of the Farm Mutual Water Company.

3.9.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. A water service impact is considered significant if implementation of the proposed project would:

- 1) Result in the need for new entitlements or a substantial expansion or alteration to local or regional water supplies that would result in a physical impact to the environment.
- 2) Result in the need for new systems or a substantial expansion or alteration to the local or regional water treatment or distribution facilities that would result in a physical impact to the environment.
- 3) 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

3.9 PUBLIC SERVICES AND UTILITIES

would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

- 4) As previously mentioned, water quality impacts are discussed in Section 3.7, Hydrology and Water Quality.

METHODOLOGY

To determine the potential impact the proposed project may have on local water supplies and potable water distribution facilities, the information regarding current water use and predicted water demands contained within the 2011 EVWMD Urban Water Management Plan was referenced. In addition, the development standards of the Western Municipal Water District were reviewed and used to determine the potential water demand of the proposed project. Documents and planning criteria of the local water agency, the Elsinore Valley Municipal Water District, were also reviewed and used to determine impacts. The proposed project has also been reviewed by the EVMWD, which found that an adequate water supply for the proposed project currently exists and that no significant upgrade of EVMWD facilities would be necessary to provide water to the project.

PROJECT IMPACTS AND MITIGATION MEASURES

Water Supply Demand and Environmental Effects (Standards of Significance 1 and 3)

Impact 3.9.4.1 Implementation of the proposed project will slightly increase demand for water supply, which could result in effects on the physical environment. However, adequate water supply sources exist, and the proposed project's and the Elsinore Valley Municipal Water District's water conservation provisions would ensure adequate water service. This is considered a **less than significant** impact.

The EVMWD obtains its potable water supplies from imported water from the Metropolitan Water District and local surface water from Canyon Lake. In addition, the EVMWD has access to groundwater from the Elsinore Basin, Coldwater Basin, San Bernardino Bunker Hill Basin, Rialto-Colton Basin, and Riverside-North Basin. Almost all of the groundwater production for potable use occurs in the Elsinore Basin. Through recharge programs run by the EVMWD, the amount of annual groundwater pumping is nearly equal to the natural recharge (EVWMD 2011b). California Department of Water Resources, Bulletin 118, does not identify the Elsinore Basin to be in a state of overdraft (EVWMD 2011b). Imported water supply is purchased from the Metropolitan Water District via the Eastern Municipal Water District and the Western Municipal Water District.

The EVMWD's existing recycled water demands are supplied by tertiary treated wastewater from the Regional Water Reclamation Facility (WRF), Railroad Canyon WRF, and Horsethief Canyon WRF. In the effort to minimize the need for imported water, the EVMWD plans to expand its recycled water system to provide recycled water for irrigation users and to maintain water levels in Lake Elsinore during normal and dry years.

The EVMWD's 2011 Urban Water Management Plan reports that the average daily per capita water use within their service area from 1999 to 2008 was 248 gallons per capita per day (base daily rate). Conservatively, the proposed project would result in a 216 new people in the EVMWD service area, which would result in a residential water demand of 53,568 gallons per day, or approximately 60 acre-feet per year.

The 2011 Comprehensive Annual Financial Report produced by the EVMWD states that the district produced 23,748 acre-feet of water in fiscal year 2011 (July 1, 2010, through June 30, 2011). The report further states that of the 23,748 acre-feet of water produced, a total of 22,996 acre-feet of water was consumed. For the past ten years, the EVMWD has produced between 23,748 acre-feet (fiscal year 2011) and 34,016 acre-feet (fiscal year 2007) of water annually, with average water production of approximately 27,442 acre-feet from fiscal year 2002 to fiscal year 2011. During that same period, the lowest amount of water consumed by EVMWD customers was 22,966 acre-feet (2011) and the highest amount of consumption 31,878 acre-feet (2007), with an average annual consumption of 26,453 acre-feet.

With estimated water consumption of 60 acre-feet annually, the proposed project will represent an increase in water consumption by the EVMWD of 0.002 percent in years of low water consumption, 0.002 percent in years of high water consumption, and a 0.001 percent increase over the historic average water consumption of the EVMWD's customers.

Considering the current estimations that were determined by utilizing the EVMWD and Western Municipal Water District water consumption assumptions, the proposed project will increase regional water consumption by less than 1 percent. This impact is **less than significant**.

Mitigation Measures

None required.

Water Supply Infrastructure (Standard of Significance 2)

Impact 3.9.4.2 Implementation of the proposed project would increase demand for water supply and thus require additional water supply infrastructure that could result in a physical impact to the environment. This is considered a **less than significant** impact.

The Elsinore Valley Municipal Water District has reviewed the proposed project and determined that the district can provide water to the proposed project. As noted above, the amount of water provided to the project is considered a small increase in the amount currently provided to the area. The EVMWD will be able to supply the estimated increase in the amount of water required by the proposed project. Other than the connection of the proposed project to existing waterlines within Monte Vista Road, the Elsinore Valley Municipal Water District has indicated that no other improvements to the water treatment or delivery system are necessary. The impacts of the proposed project on the water treatment and delivery system are **less than significant**.

Mitigation Measures

None required.

3.9.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for water services, including supplies and related infrastructure, consists of Elsinore Valley Municipal Water District boundaries, as well as other areas obtaining water from the Western Municipal Water District.

3.9 PUBLIC SERVICES AND UTILITIES

The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development in the EVMWD service area and the larger service area of the Western Municipal Water District.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Water Supply Impacts

Impact 3.9.4.3 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would increase the cumulative demand for water supplies. However, this increased demand will not be sufficient to lead to a requirement for new water facilities and related infrastructure. The project's contribution to cumulative water supply and infrastructure impacts is considered **less than cumulatively considerable**.

To determine future water demands within its service area, the EVMWD based the predictions contained in the 2011 UWMP on the existing year (2010) demands calculated as a product of the 2010 population and the 10-year baseline per capita water use. Starting in 2020, future demands were calculated as the product of the population, and the target water use (240 gallons per capita per day) was established for the EVMWD using the summation of three performance standards: indoor residential use, outdoor residential use, and commercial, industrial use, and institutional (CII) use. Water demand for 2015 was calculated as halfway between the usage in 2010 and 2020. Water use projections for years 2015, 2020, 2025, 2030, and 2035 are presented in **Table 3.9.4-1**.

TABLE 3.9.4-1
EVMWD DEMAND ASSUMPTIONS AND PREDICTIONS

Projections	2015	2020	2025	2030	2035
Population of service area	136,133	149,852	162,626	174,579	185,102
Employment	24,699	27,458	32,272	37,086	41,900
Housing	46,388	51,297	55,774	59,921	63,888
EVMWD water deliveries (acre-feet per year)	37,292	40,338	43,777	46,995	49,827
Total water sales to the Farm Mutual Water Company (acre-feet per year)	501	542	588	631	669

Source: EVWMD 2011b

The projections provided in **Table 3.9.4-1** include the demand projections of the area served by the Farm Mutual Water Company. The 2011 EVWMD Urban Water Management Plan states that it is assumed that demand within the Farm Mutual Water Company service area will increase proportionally to the water demand increase within the EVMWD service area. For the years 2005 and 2010, the EVMWD delivered 420 and 460 acre-feet of water to the Farm Mutual Water Company, respectively.

The demand assumptions of EVMWD are calculated by determining demand based on specific land uses. The proposed project does not involve any change to the current or planned land use of the project site allowing that the EVMWD demand assumptions allow for the increase in potable water demands that will result from the completion of the proposed project. Any impact will be less than significant.

Mitigation Measures

None required.

3.9.5 WASTEWATER SERVICES

3.9.5.1 EXISTING SETTING

Wastewater generated on the proposed project site is currently collected and treated with an on-site septic system. The existing septic system, which was certified by the Riverside County Department of Environmental Health on May, 28, 2008, includes four septic tanks with a total capacity of 17,000-gallons and includes 19 seepage pits that are each 6 feet in diameter and 24 to 28 feet deep (RCDEH 2008).

The Elsinore Valley Municipal Water District maintains facilities to convey, treat, and dispose of municipal wastewater generated in a 96-square-mile area of western Riverside County. This service area includes the area of the proposed project and much of Wildomar, among other jurisdictions.

The EVMWD currently operates three wastewater treatment facilities: the Regional Wastewater Treatment Plant (WWTP), the Horsethief Canyon WWTP, and the Railroad Canyon WWTP. In addition, flow in the southern part of the EVMWD's service area is treated at the Santa Rosa Water Reclamation Facility operated by the Rancho California Water District. These four treatment plants serve four major service areas in the EVMWD's wastewater collection system. Each service area consists of gravity collectors, trunk lines, lift stations, and force mains, which convey flow to the treatment plants. The regional area contains 21 lift stations, the Canyon Lake area contains seven lift stations, and the Horsethief area contains two lift stations. A large portion of the EVMWD's wastewater collection system consists of 8-inch through 15-inch-diameter collector and trunk sewer lines. In addition to these collector and trunk lines, the EVMWD has two major interceptor sewers ranging in size from 12 inches to 27 inches in diameter. The EVMWD's system also contains 30 force mains, with diameters ranging in size from 4 inches to 16 inches.

3.9.5.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The Clean Water Act (CWA) is the primary federal legislation governing surface water quality protection. The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water. Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and Ph; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges (EPA 2012).

3.9 PUBLIC SERVICES AND UTILITIES

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program, Section 402 of the CWA, controls direct discharges into navigable waters. Direct discharges, or point source discharges, are from sources such as pipes and sewers. NPDES permits, issued by either the EPA or an authorized state/tribe, contain industry-specific, technology-based, and/or water-quality-based limits and establish pollutant monitoring and reporting requirements. (The EPA has authorized 40 states to administer the NPDES program including California, under which the regional boards administer the NPDES Program.) A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent and the permit will then set forth the conditions and effluent limitations under which a facility may make a discharge (EPA 2012).

STATE

Porter-Cologne Water Quality Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The act established the State Water Resources Control Board and nine Regional Water Quality Control Boards as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the SWRCB to establish water quality principles and guidelines for long-range resource planning including groundwater and surface water management programs and control and use of recycled water (USDOE 2012).

State Water Resources Control Board

Created by the California Legislature in 1967, the five-member State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality Control Boards located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters (SWRCB 2012).

The SWRCB is responsible for implementing the Clean Water Act and issues NPDES permits to cities and counties through Regional Water Quality Control Boards (RWQCBs). Wildomar is located in the jurisdiction of two RWQCBs: the San Diego RWQCB (Region 9) and the Santa Ana RWQCB (Region 8). The proposed project is specifically within the San Diego RWQCB (Region 9).

REGIONAL

San Diego Regional Water Quality Control Board

The San Diego RWQCB provides planning, monitoring, and enforcement techniques for surface water and groundwater quality in San Diego County and western Riverside County, including the City of Wildomar and the surrounding area. The San Diego RWQCB develops and enforces water quality objectives and implements plans that will best protect the area's waters while recognizing local differences in climate, topography, geology, and hydrology. The RWQCB also

protects and enforces the many uses of water, including the needs of industry, agriculture, municipal districts, and the environment (RWQCB 2012).

Water Reuse Requirements (Permits)

The San Diego RWQCB issues water reuse requirements (permits) for projects that reuse treated wastewater. These permits include water quality protections as well as public health protections by incorporating criteria established in Title 22. The San Diego RWQCB may incorporate requirements into the permit in addition to those specified in Title 22. These requirements typically include periodic inspection of recycled water systems, periodic cross-connection testing, periodic training of personnel that operate recycled water systems, maintaining a database and/or permitting individual use sites, periodic monitoring of recycled water and groundwater quality, and periodic reporting.

Waste Discharge Requirements

The San Diego RWQCB typically requires a waste discharge requirement (WDR) permit for any facility or person discharging or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system. Those discharging pollutants (or proposing to discharge pollutants) into surface waters must obtain an NPDES permit from the San Diego RWQCB. The NPDES permit serves as the WDR permit. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land), a Report of Waste Discharge must be filed with the San Diego RWQCB in order to obtain a WDR permit. For specific situations, the San Diego RWQCB may waive the requirement to obtain a WDR permit for discharges to land or may determine that a proposed discharge can be permitted more effectively through enrollment in a general NPDES permit or general WDR permit (RWQCB 2012).

LOCAL

Wastewater Master Plan

The EVMWD's (2008) Wastewater Master Plan evaluates the capacity of its wastewater collection system during peak wet weather flows and describes current services and plans to connect currently unserved areas and future development areas to the district's sanitary sewer system. The plan provides a detailed capital improvement program for the necessary improvements to the existing wastewater collection system facilities and improvements needed for future growth, as well as a detailed cost summary and implementation plan.

3.9.5.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The following standards are based on State CEQA Guidelines Appendix G. A significant impact to wastewater service would occur if implementation of the proposed project would:

- 1) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

3.9 PUBLIC SERVICES AND UTILITIES

- 2) Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

METHODOLOGY

Evaluation of potential impacts on wastewater facilities and services was based on the Elsinore Valley Municipal Water District's 2011 Urban Water Management Plan and 2008 Wastewater Master Plan. Wastewater demand projections, as well as infrastructure conditions and needs, discussed in these documents were compared to potential impacts resulting from the development of the proposed project.

PROJECT IMPACTS AND MITIGATION MEASURES

Waste Discharge Requirements and Conveyance and Treatment Standards (Standards of Significance 1 and 2)

Impact 3.9.5.1 Implementation of the proposed project will not result in wastewater discharge that would exceed the wastewater treatment requirements of the San Diego Regional Water Quality Control Board. This impact is considered **less than significant**.

The proposed project will include connection to the EVMWD wastewater system via an 8-inch vitrified clay pipe to be installed in Monte Vista Drive as part of the proposed project. The line will extend for approximately 1,900 feet north on Monte Vista Drive before turning west and connecting to an existing EVMWD sewer line. Once the sewer line is constructed, the entire church property will connect to the EVMWD wastewater collection and treatment system and the on-site septic system will be abandoned consistent with Riverside County requirements.

The EVMWD currently operates three wastewater treatment facilities: the Regional WWTP, the Horsethief Canyon WWTP, and the Railroad Canyon WWTP. In addition, flow in the southern part of the EVMWD's service area is treated at the Santa Rosa Water Reclamation Facility operated by the Rancho California Water District. The proposed project will be within the Regional WWTP service area, which has its wastewater conveyed by 24 lift stations and treated by the Regional Water Reclamation Facility (EVMWD 2008).

To determine future demand for wastewater facilities, the EVMWD relies on recommended generation factors included in Appendix B of the Wastewater Master Plan (2008). The recommended generation factors are determined according to land use designation, with the designation of the proposed project being Rural Residential, developed (R-R). The generation factor for R-R developed is 340 gallons per day per acre (EVMWD 2008). Using this factor and allowing that the proposed project will result in a total of 20.37 developed acres (14.14 acres of existing development and 6.23 acres of development for the proposed project), the proposed project may be expected to generate 6,926 gallons of wastewater per day.

Of the 24 lift stations operating with the Regional WRF service area, wastewater produced by the proposed project will be drawn by the B-2 Regional Lift Station located approximately 3.2 miles northwest of the project site at 32741 Mission Trail. The B-2 lift station includes three 25 horsepower pumps and has a firm capacity (the capacity of the lift station with the largest pump out of service) of 3,456,000 gallons per day (gpd). Considering the proposed project's projected wastewater generation rate of 6,926 gpd, the proposed project would represent a 0.002 percent increase in capacity at the B-2 lift station.

The 2008 EVMWD Wastewater Master Plan includes detailed descriptions of all facilities operated by the EVMWD for the purpose of collecting and treating wastewater. For its description of the Regional WRF, the 2008 Wastewater Master Plan states that the existing average flow and peak flow capacities of the Regional WRF are 8 million gallons per day (mgd) and 17.6 mgd, respectively.

Considering the EVMWD's generation factor to determine that the proposed project will result in a wastewater demand of 6,926 gallons per day, and the stated current treatment capacity of the Regional WRF to be 8 million gallons per day, the proposed project would result in an increase of less than 0.001 percent to the average wastewater flow of the Regional WRF. Any impact would be **less than significant**.

Mitigation Measures

None required.

3.9.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The 2008 EVMWD Wastewater Master Plan analyzes current and future wastewater demand by developing projections for average dry weather flows, average wet weather flows, and peak wet weather flows. These projections are based on past wastewater demands and population growth estimates. Of the three projection categories—average dry weather flows, average wet weather flows, and peak wet weather flows—the peak wet weather flow projection is the most conservative in that it anticipates the highest volume of wastewater flow. The peak wet weather wastewater flows within the Regional Wastewater Treatment Plant service area are predicted to be 15.3 million gallons per day.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Wastewater Service Impacts

Impact 3.9.5.2 Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would contribute to the cumulative demand for wastewater service. However, continued implementation of EVMWD standards would ensure adequate wastewater facilities are provided. This impact is considered to be **less than cumulatively considerable**.

The proposed project will construct all of the wastewater collection systems necessary to meet its needs. No future phases of the project will require additional wastewater collection or treatment facilities. Therefore, the proposed project would not contribute to cumulative wastewater infrastructure impacts, and this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

3.9 PUBLIC SERVICES AND UTILITIES

3.9.6 SOLID WASTE

3.9.6.1 EXISTING SETTING

Solid waste services for the proposed project site are provided by contract by Waste Management of the Inland Empire. Waste Management currently serves over 220,000 residents by disposing of over 17,000 tons of waste on a weekly basis.

Solid waste collection from the region is trucked to the Moreno Valley Transfer Station, which is owned and operated by Waste Management and which also serves as a component of the Riverside County Waste Management Department's (RCWMD) network of solid waste facilities. The transfer station is located approximately 26 miles from the proposed project site at 17700 Indian Street in Moreno Valley. Following collection at the transfer station, the waste is taken to one of three landfills: El Sobrante, Lamb Canyon, or Badlands. The El Sobrante Landfill (CalRecycle Solid Waste Information System Number 33-AA-0217), which is owned and operated by USA Waste Services of California, is the facility closest to and most likely to receive waste from the project site. The other two landfills are owned and operated by the County of Riverside.

Solid waste collection and disposal is funded through monthly service fees paid by service users. Funding options support disposal sites, diversion activities, public education programs, hazardous waste collection, and transportation programs, along with other requirements of state and federal laws. Other fees are provided by a surcharge on residential collection bills for recycling programs, tipping fees, the sale of recyclables, waste hauler franchise fees, special programs (recycling and hazardous materials), and grants (RCWMD 2012).

3.9.6.2 REGULATORY FRAMEWORK

FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), an amendment to the Solid Waste Disposal Act of 1965, was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. The RCRA gives the US Environmental Protection Agency (EPA) the authority to control hazardous waste from “cradle to grave.” This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes. The federal Hazardous and Solid Waste Amendments are the 1984 amendments to the RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. Amendments to the RCRA in 1986 enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances (EPA 2012).

STATE

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (Public Resources Code Sections 42900–42927) requires all California cities and counties to reduce the volume of waste deposited

in landfills by 50 percent by the year 2000 and continue to remain at 50 percent or higher for each subsequent year. The purpose of this act is to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible.

The California Integrated Waste Management Act requires each California city and county to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the Integrated Waste Management Act's mandated diversion goals. Each jurisdiction's SRRE must include specific components, as defined in Public Resources Code Sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated in the jurisdiction that is consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. Included in this hierarchy is the requirement to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste that must be disposed of by transformation and land disposal (Public Resources Code Sections 40051, 41002, and 41302) (CalRecycle 2012).

REGIONAL

Riverside County Waste Management Department

The RCWMD is responsible for the landfilling of nonhazardous county waste. In this effort, the RCWMD operates six landfills and has a contract agreement for waste disposal with an additional private landfill; it also administers several transfer station leases. The RCWMD ensures that Riverside County has a minimum of 15 years of capacity, at any time, for future landfill disposal.

LOCAL

Wildomar Source Reduction and Recycling Element

On April 27, 2011, the City of Wildomar adopted its Source Reduction and Recycling Element (SRRE), which is required to fulfill the requirements of the California Integrated Waste Management Act of 1989. The law requires that all cities and counties in California divert 50 percent of the total waste generated within their jurisdiction from landfill disposed annually by the year 2000. The adopted element includes a Source Reduction and Recycling Element, a Household Hazardous Waste Element, and a Nondisposal Facility Element. Waste Management of the Inland Empire is the solid waste hauler under contract to the City of Wildomar.

City of Wildomar Municipal Code

Title 8 Health and Safety of the City of Wildomar Municipal Code sets forth the city's solid waste provisions, including restrictions on disposing of any garbage, rubbish, or waste matter in the city other than at a disposal site established by the City Council or designated by the City Manager, prohibitions on solid waste collectors disposing of recyclable materials, and restrictions on accumulation of solid waste on residential properties.

3.9 PUBLIC SERVICES AND UTILITIES

3.9.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G. A solid waste impact is considered significant if implementation of the proposed project would:

- 1) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- 2) Fail to comply with federal, state, and local statutes and regulations related to solid waste.

METHODOLOGY

Evaluation of potential solid waste service impacts was based on information from the CalRecycle website and personal conversation with Waste Management of the Inland Empire, the contract hauler for the City of Wildomar. The SRRE was also reviewed to determine the diversion rates and goals for Wildomar. The capacity of landfills and other solid waste facilities was evaluated based on reporting from CalRecycle, and residential waste generation was based on actual per-capita generation rates in 2011.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Solid Waste Disposal (Standard of Significance 1)

Impact 3.9.6.1 While implementation of the proposed project will generate increased amounts of solid waste that will need to be disposed of in landfills or recycled, the proposed project is consistent with the current land use of the project site allowing for anticipation of the increased waste generation. This impact is considered **less than significant**.

Implementation of the proposed project will result in a maximum of 180 students and 36 additional staff members at the project site who will generate solid waste that will require disposal and recycling.

CalRecycle provides unofficial estimates of solid waste generation and disposal rates for five different land use or business types: commercial, industrial, institutional, residential, and service. The CalRecycle unofficial estimates for education and educational facilities are included in the institutional waste category. Of the solid waste generation rates for the public sector and institutions, the most recent data source presented by CalRecycle, Guide to Solid Waste and Recycling Plans for Development Projects by the Santa Barbara County Public Works Department, was published in May 1997, and it proposes that schools generate 0.6 pounds of solid waste per person per day (CalRecycle 2014).

Based on the solid waste generation rate of 0.6 pounds per person per day, the proposed project may be predicted to produce 129.6 pounds of solid waste per day. Considering a five-day school week, the proposed project may be expected to generate 16.85 tons of solid waste annually.

The main disposal site in the vicinity of the project site is the El Sobrante Landfill in Corona. The El Sobrante Landfill is projected to reach full capacity of 184,930,000 tons in 2045 (CalRecycle 2014). The landfill covers approximately 1,322 acres and receives approximately 16,054 tons of solid waste per day.

Based on solid waste generation rate assumptions provided by CalRecycle and information related to the El Sobrante Landfill, the proposed project would result in a less than 0.01 percent increase to the amount of daily solid waste delivered to this landfill, allowing any impact to be **less than significant**.

Mitigation Measures

None required.

Compliance with Federal, State, and Local Statutes for Solid Waste (Standard of Significance 2)

Impact 3.9.6.2 Implementation of the proposed project would not fail to comply with federal, state, and local statutes and regulations related to solid waste. This impact is considered **less than significant**.

Wildomar Municipal Code Title 8, Chapter 8.20 regulates refuse disposal sites in Wildomar. Section 8.20.050 requires that each solid waste facility operator perform random load checks across load types of residential, commercial, and industrial to detect hazardous waste before such incoming waste is transferred to and/or disposed at the landfill. The goals of the ordinance and check program are to (1) prevent hazardous waste from being placed in a landfill not permitted to receive such waste, and (2) educate and discourage customers from bringing in such material. The code mandates the number of checks per day, depending on the daily tonnage. The load checks are random and an inspection form is required for each check. Chapter 8.104 mandates that solid waste be collected in the city and establishes the methodology and timing for collection. Through compliance with the SRRE and City ordinances, the proposed project will comply with federal, state, and local regulations regarding solid waste. This impact is considered **less than significant**.

Mitigation Measures

None required.

3.9.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for solid waste includes all existing, planned, proposed, approved, and reasonably foreseeable development in Riverside County. Future development associated with the proposed project, as well as in the surrounding region, would result in an increased cumulative demand for solid waste collection and disposal in regional landfills.

3.9 PUBLIC SERVICES AND UTILITIES

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Solid Waste Impacts

Impact 3.9.6.3 Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would result in increased demand for solid waste services. This impact is **less than cumulatively considerable**.

The proposed project, when considered with all existing, planned, proposed, approved and reasonably foreseeable development in the region, will not produce a significant amount of solid waste. Any impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

3.9.7 PARKS AND RECREATION

3.9.7.1 EXISTING SETTING

The City of Wildomar owns and manages three public parks: Marna O'Brien Park, Regency Heritage Park, and Windsong Park. In addition, the city contains 306.93 acres of land dedicated to open space recreation and 220.92 acres of land dedicated to open space conservation. A summary of the park and open space acreages in Wildomar is shown in **Table 3.9.7-1**.

**TABLE 3.9.7-1
PARK AND OPEN SPACE FACILITIES**

Open Space	Acreage
Marna O'Brien Park	8.94
Regency Heritage Park	3.26
Windsong Park	2.07
Open Space – Recreation	306.93
Open Space – Conservation	220.92
Total Open Space Acreage	542.11

Source: Colgan 2012

Upon city incorporation in 2008, the City of Wildomar adopted the Riverside County Municipal Code. The code includes an open space requirement of 3 acres of neighborhood and community parkland per 1,000 residents. As of 2012, according to the California Department of Finance, Wildomar's estimated population was 32,719. As demonstrated in Table 3.9.7-1, the city's current open space inventory includes 542.11 acres, which surpasses the 98.16 acres required by the City's Municipal Code.

3.9.7.2 REGULATORY FRAMEWORK**STATE****Quimby Act**

The goal of the 1975 Quimby Act (California Government Code Section 66477) was to require developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances only to cities and counties, thus requiring special districts to work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide parks and recreation services community-wide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities (Westrup 2002).

Originally, the Quimby Act was designed to ensure “adequate” open space acreage in jurisdictions adopting Quimby Act standards (e.g., 3–5 acres per 1,000 residents). In some California communities, the acreage fee was very high where property values were high, and many local governments did not differentiate on their Quimby fees between infill projects and greenbelt developments. In 1982, the Quimby Act was substantially amended via AB 1600. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project’s impacts as identified through traffic studies required by CEQA. In other words, AB 1600 requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed (Westrup 2002). Cities or counties with a high ratio of parkland to inhabitants can set a standard of 5 acres per 1,000 residents for new development. Cities or counties with a lower ratio can only require the provision of up to 3 acres of parkland per 1,000 residents. The calculation of a city’s or county’s parkland-to-population ratio is based on a comparison of the population count of the last federal census to the amount of city- or county-owned parkland.

LOCAL**Wildomar Community Services Department**

The City of Wildomar Community Services Department oversees the development and maintenance of local parks and assists in coordinating disaster preparedness programs. Open space in the city is maintained by private landowners or associations.

City of Wildomar Municipal Code

Chapter 16.20 of Title 16 requires fees in lieu of dedication or dedication of parkland at a ratio of 3 acres per 1,000 residents. The code defines a park as a parcel or parcels of land, exclusive of natural open space, which is open and available for use by the general public and which serves the recreational needs of the public.

3.9 PUBLIC SERVICES AND UTILITIES

3.9.7.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A park and recreation impact is significant if implementation of the proposed project would:

- 1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- 2) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

METHODOLOGY

Evaluation of the proposed project was based on review of the current facilities and the City's Municipal Code. This material was compared to the proposed project's specific park and recreation service-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Parks and Recreation Facilities (Standards of Significance 1 and 2)

Impact 3.9.7.1 Implementation of the proposed project would not result in any population increase or additional demand for city recreation facilities. There will be **no impact** to parks and recreation facilities.

The proposed project includes construction of additional facilities for an existing church and school. And while the proposed project will result in an additional 180 students at the existing school as well as an additional 36 staff members, these additional students and staff members will use church and school facilities while on-site, which would result in **no impact** to City parks and recreation facilities.

Mitigation Measures

None required.

3.9.7.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for parks and recreation consists of the City of Wildomar's jurisdictional boundary, which encompasses 13.2 square miles. Any existing, planned, proposed, approved, and reasonably foreseeable development in the city could contribute to cumulative impacts.

Cumulative Park and Recreation Demands

Impact 3.9.7.2 Implementation of the proposed project, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would increase the use of existing parks and would require additional park and recreation facilities within the cumulative setting, the provision of which could have an adverse physical effect on the environment. This would be a **less than cumulatively considerable** impact.

The proposed project would not result in additional users of City parks and recreation facilities. The additional students and staff members that will be present at the project site as a result of the proposed project will use the existing and proposed facilities of the project site, which would allow any impact to be **less than cumulatively considerable**.

Mitigation Measures

None required.

3.9 PUBLIC SERVICES AND UTILITIES

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3.10 TRAFFIC AND CIRCULATION

3.10 TRAFFIC AND CIRCULATION

This section represents the results of the traffic impact analysis (TIA) prepared by Urban Crossroads (2013) for the proposed project. The traffic impact analysis evaluated the potential impacts to traffic and circulation associated with the development of the proposed project and recommended improvements to mitigate impacts considered significant in comparison to established regulatory thresholds.

3.10.1 EXISTING SETTING

The nine study area intersection locations listed on **Table 3.10-1** were selected for the TIA based on the following: (1) Riverside County TIA guidelines that require analysis of intersection locations in which a proposed project is anticipated to contribute 50 or more peak-hour trips; and (2) input from the City of Wildomar. **Figure 3.10-1** illustrates the intersections in the study area.

TABLE 3.10-1
INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
1	I-15 Southbound Ramps/Bundy Canyon Road	Caltrans
2	I-15 Southbound Ramps/Baxter Road	Caltrans
3	I-15 Northbound Ramps/Bundy Canyon Road	Caltrans
4	I-15 Northbound Ramps/Baxter Road	Caltrans
5	Monte Vista Drive/Bundy Canyon Road	Wildomar
6	Monte Vista Drive/Driveway 1 (outbound only)	Wildomar
7	Monte Vista Drive/Driveway 2 (inbound only)	Wildomar
8	Monte Vista Drive/Via Carnaghi Drive	Wildomar
9	Monte Vista Drive/Baxter Road	Wildomar

Source: Urban Crossroads 2013

It should be noted that the 50 peak-hour trip criterion utilized by the City of Wildomar and the County of Riverside is consistent with the methodology employed by other jurisdictions throughout Southern California and generally represents a threshold of trips at which an intersection would have the potential to be impacted. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a valid and proven way to establish a study area.

Pavement markings indicating a school zone along with posted school zone 25 mile per hour (MPH) speed limit signs currently exist along Monte Vista Drive in the vicinity of the school, and were taken into account as part of the peak hour intersection level of service (LOS) calculations.

TRANSIT SERVICE

The study area is currently served by the Riverside Transit Authority (RTA), a public transit agency serving the unincorporated Riverside County region near Wildomar, with bus service along Mission Trail immediately west of Interstate 15 (I-15) via Routes 7 and 8. The existing bus routes provided in the area by the RTA are shown in the TIA (**Appendix 3.10**). The RTA reviews and updates transit service periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments, which may lead to either enhanced or reduced service where appropriate.

3.10 TRANSPORTATION AND TRAFFIC

EXISTING TRAFFIC COUNTS

Manual AM and PM peak-hour turning movement counts were conducted on May 17, 2012. Existing (2012) average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on **Figure 3.10-2**. Existing (2012) ADT volumes are based on factored intersection peak-hour counts collected by Urban Crossroads using the following formula for each intersection leg (see **Appendix 3.10**):

$$\text{PM Peak Hour (Approach Volume + Exit Volume)} \times 12 = \text{Leg Volume}$$

The PM peak-hour volume typically represents approximately 8 percent of the daily traffic. The equation shown above was utilized to estimate average daily traffic, using the PM peak-hour volumes multiplied by a factor of 12 ($1/8.33 \times 100$).

EXISTING TRAFFIC CONDITIONS

Existing (2012) peak-hour traffic operations were evaluated for the study area intersections based on the analysis methodologies presented in the Methodology subsection below. The intersection operation analysis results are summarized in **Table 3.10-3**, which indicates that the following study area intersections are currently operating at an unacceptable level of service (LOS) during the peak hours.

TABLE 3.10-2
EXISTING UNACCEPTABLE LOS INTERSECTIONS

ID	Intersection Location	Jurisdiction
2	I-15 Southbound Ramps/Baxter Road	Caltrans
4	I-15 Northbound Ramps/Baxter Road	Caltrans
5	Monte Vista Drive/Bundy Canyon Road	Wildomar

Source: *Urban Crossroads 2013*



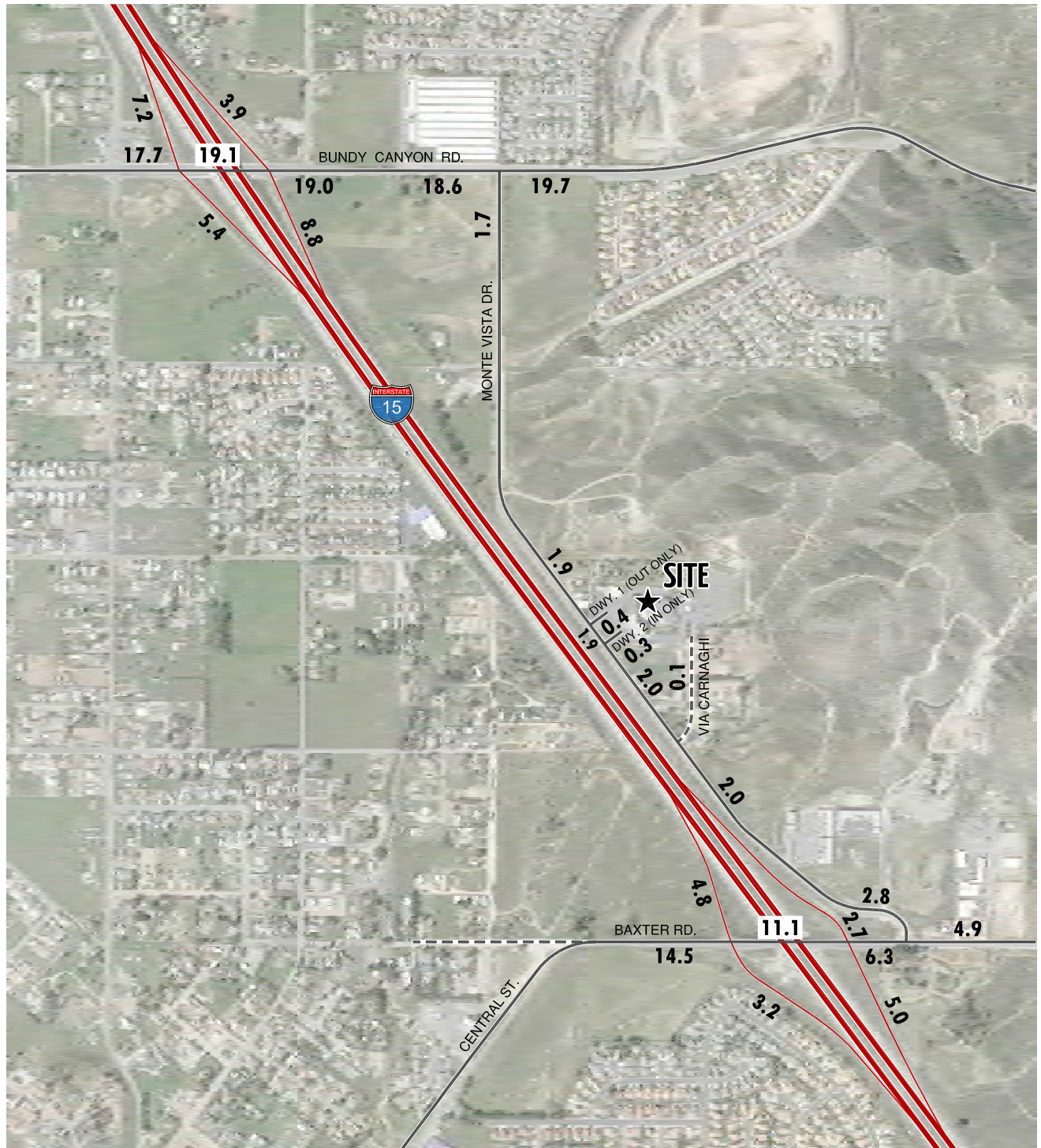
LEGEND:

- ⑨ = INTERSECTION ANALYSIS LOCATION
- = DIRT ROAD

Source: Urban Crossroads



Figure 3.10-1
Intersection Analysis Locations



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: Urban Crossroads



Figure 3.10-2
Existing Conditions

TABLE 3.10-3
INTERSECTION ANALYSIS FOR EXISTING (2012) CONDITIONS

#	Intersection	Jurisdiction	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
				Northbound			Southbound			Eastbound			Westbound						
				L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	I-15 Southbound Ramps/Bundy Canyon Road	Caltrans	TS	0	0	0	1	1	0	0	2	0	1	2	0	20.3	21.6	C	C
2	I-15 Southbound Ramps/Baxter Road	Caltrans	CSS	0	0	0	0	1	0	0	1	d	1	1	0	18.2	> 50.0	C	F
3	I-15 Northbound Ramps/Bundy Canyon Road	Caltrans	TS	1	1	0	0	0	0	1	2	0	0	2	0	20.1	21.6	C	C
4	I-15 Northbound Ramps/Baxter Road	Caltrans	CSS	0	1	0	0	0	0	1	1	0	0	1	d	> 50.0	> 50.0	F	F
5	Monte Vista Drive/Bundy Canyon Road	Wildomar	CSS	0	1	0	0	0	0	0	1	0	1	1	0	21.7	35.8	C	E
6	Monte Vista Drive/Driveway 1 (outbound only)	Wildomar	CSS	0	1	0	0	1	0	0	0	0	1	0	1	11.8	9.5	B	A
7	Monte Vista Drive/Driveway 2 (inbound only)	Wildomar	CSS	0	1	0	0	1	0	0	0	0	0	0	0	7.8	7.4	A	A
8	Monte Vista Drive/Via Carnaghi Drive	Wildomar	CSS	0	1	0	0	1	0	0	0	0	0	1	0	10.0	9.2	A	A
9	Monte Vista Drive/Baxter Road	Wildomar	CSS	0	0	0	1	0	d	0	1	0	0	1	d	18.8	16.4	C	C

Source: Urban Crossroads 2013

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. (L = left; T = through; R = right; d = de facto right turn lane)
2. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3. CSS = cross-street stop; TS = traffic signal

3.10 TRANSPORTATION AND TRAFFIC

ROADWAY SEGMENTS AND INTERSECTIONS

Analysis Methodology

Traffic operations of roadway facilities are described using the term “level of service” (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined, ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

3.10.2 REGULATORY FRAMEWORK

STATE

Caltrans Traffic Operation Standards

The California Department of Transportation (Caltrans) *Guide for the Preparation of Traffic Impact Studies* (2002) includes criteria for evaluating the effects of land use development and changes to the circulation system on state highways. Caltrans maintains a target level of service at the transition between LOS C and LOS D for freeway facilities.

Regarding Caltrans’ ramp to arterial intersections the following guideline as found in recent Caltrans District 8 comments regarding acceptable LOS will apply:

“The LOS for operating State highway facilities is based upon Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadway segments, and intersections is “D”.

As such, LOS “D” is considered to be the limit of acceptable traffic operations for Caltrans-maintained facilities.

REGIONAL

Riverside Transit Agency

The Riverside Transit Agency (RTA) was established as a Joint Powers Agency on August 15, 1975, and began operating bus service on March 16, 1977. The RTA is the Consolidated Transportation Service Agency for western Riverside County and is responsible for coordinating transit services throughout the approximate 2,500-square-mile service area, providing driver training, assistance with grant applications, and development of short-range transit plans.

The RTA provides both local and regional services throughout the region with 36 fixed routes, eight CommuterLink routes, and dial-a-ride services using 261 vehicles. Wildomar is served by Route 7, which heads north to the City of Lake Elsinore, Route 8, which heads around Lake

Elsinore, and Route 23, which heads toward the City of Murrieta. The routes include connections to other routes into and beyond Riverside County.

Riverside County Congestion Management Program

The passage of Proposition 111 in June 1990 established a process for each metropolitan county in California, including Riverside County, to prepare a Congestion Management Plan (CMP). The CMP, which was prepared by the Riverside County Transportation Commission (RCTC) in consultation with the County and the cities in Riverside County, is intended to more directly align land use, transportation, and air quality management efforts and to promote reasonable growth management programs that effectively use statewide transportation funds, while ensuring that new development pays its fair share of needed transportation improvements.

The focus of the CMP is the development of an Enhanced Traffic Monitoring System in which real-time traffic count data can be accessed by the RCTC to evaluate the condition of the Congestion Management System (CMS) as well as meet other monitoring requirements at the state and federal levels. Per the adopted level of service standard of E, when a CMS segment falls to LOS F, a deficiency plan is required. Preparation of a deficiency plan will be the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency will also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including transportation demand management (TDM) strategies and transit alternatives, and a schedule for mitigating the deficiency. To ensure that the CMS is appropriately monitored to reduce the occurrence of Congestion Management Plan deficiencies, it is the responsibility of local agencies, when reviewing and approving development proposals, to consider the traffic impacts on the CMS.

Non-Motorized Transportation

Bicycling occurs throughout the county but is more concentrated in the cities and urbanized portions of unincorporated areas, and is more recreational than commute-oriented. Although the County's current bicycle plan provides for connections between major urban and recreational facilities within the county, implementation of the plan has occurred only to a limited extent. There is no comprehensive bicycle or trail system that links Wildomar to the rest of Riverside County.

LOCAL

City of Wildomar General Plan

Policy C 2.1 of the City's General Plan states:

C 2.1 Maintain the following target Levels of Service:

LOS "C" along all City maintained roads and conventional state highways. As an exception, LOS "D" may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Arterials, Urban Arterials, Expressways, conventional state highways of freeway ramp intersections.

LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities.

3.10 TRANSPORTATION AND TRAFFIC

The City of Wildomar is included in the Elsinore Area Plan which is a Community Development area. As such, LOS C is the target, but LOS D may be allowed as indicated in Policy C 2.1. Monte Vista, Bundy Canyon and Baxter Roads are all designated arterials. Via Carnighi Lane is a local road.

3.10.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. Transportation impacts are considered significant when the project would:

- 1) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections).
- 2) Conflict with an applicable congestion management program, including, but not limited to, level of service standard and travel demand measure or other standards established by the county congestion management agency for designated roads or highways.
- 3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- 4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- 5) Result in inadequate emergency access.
- 6) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Based on the Riverside County traffic study guidelines, a significant impact occurs when the addition of project traffic, as defined by any “with project” scenario, causes an intersection that operates at an acceptable level of service under the “without project” traffic condition (i.e., LOS C or D or better) to fall to an unacceptable level of service (i.e., LOS E or F). Therefore, the following criteria were utilized to identify significant project-related traffic impacts:

- If an intersection is projected to operate at an acceptable level of service without the project and the addition of project traffic, as measured by 50 or more peak-hour trips, is expected to cause the intersection to operate at an unacceptable level of service, the impact is considered significant.

In addition, for intersections within the jurisdictional authority of the City of Wildomar, the City requires that an additional test be performed for intersection locations found to operate at a deficient level of service (i.e., LOS E or F) under pre-project conditions:

- If an intersection is projected to operate at an unacceptable level of without the project, and the addition of project traffic (as measured by 50 peak-hour trips or more) results in an increase of more than 5.0 seconds to the peak-hour delay, the impact is considered significant. Mitigation is then required to bring the “with project” scenario delay to within 5.0 seconds of the pre-project condition.

Caltrans does not identify specialized significance criteria within their traffic study guidelines.

A significant cumulative impact has been identified when an intersection is projected to operate below the requisite level of service standard under pre-project conditions and the project's measurable increase in traffic, as defined by 50 or more peak-hour trips, contributes to the deficiency. Cumulative traffic impacts are created as a result of a combination of the proposed project together with other future developments contributing to the overall traffic impacts and requiring additional improvements to maintain acceptable level of service operations with or without the project. For the purposes of this analysis, mitigation measures have been recommended for cumulatively impacted intersections to bring the "with Project" delay and associated level of service back to acceptable peak hour operations at intersections located outside of the City's jurisdiction (e.g., I-15 Freeway ramps at Bundy Canyon Road and Baxter Road).

A project's contribution to a cumulatively significant impact can be reduced to less than significant if the project is required to implement or fund its fair share of improvements designed to alleviate the potential cumulative impact. If full funding of future cumulative improvements is not reasonably assured, a temporary unmitigated cumulative impact would be identified and would exist until the needed improvement is fully funded and constructed.

Additionally, the nearest airport is Skylark Field Airport, which is located approximately 3 miles northwest of the proposed project site. Due to the distance of the airports from the project site, the proposed project would not result in any change in air traffic patterns or travels. As such, this issue area (Standard of Significance 3) will not be analyzed further in this Draft EIR.

METHODOLOGY

Trips generated by the project's proposed land uses were estimated using traffic counts taken of existing traffic and based on trip generation rates collected by the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition (2012). The proposed project is estimated to generate a net total of approximately 1,020 net trip-ends per day on a typical weekday with approximately 158 net AM peak-hour trips and 159 net PM peak-hour trips.

The scope of the traffic impact analysis was reviewed by the City's Public Work Director and designed to show the impact of the project on the surrounding roadways. Buildout for the proposed project was assumed to be 2017, and this horizon was used to evaluate the proportionate share of improvements. The buildout assumption included all of the improvements discussed in Section 2.0 Project Description even though some of the improvements such as the new administrative building and the sports field lighting may not occur until later years.

Intersection Capacity Analysis

The intersection LOS analysis is based on the traffic volumes observed during the peak-hour conditions using traffic count data collected on May 17, 2012. The following peak hours were selected for analysis:

- Weekday AM peak hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM peak hour (peak hour between 4:00 PM and 6:00 PM)

3.10 TRANSPORTATION AND TRAFFIC

It should be noted that a longer PM peak period was considered for the purposes of this analysis in an effort to account for traffic generated by evening church activities. The volume development worksheets are provided in **Appendix 3.10**.

Signalized Intersections

Consistent with Section 5.0, Required Methodology, of the Riverside County traffic analysis guidelines, signalized intersection operations analysis was based on the methodology described in Chapter 16 of the *Highway Capacity Manual* (HCM). Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, level of service is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in **Table 3.10-4**. All signalized study area intersections were analyzed using the software package Traffix (Version 8.0 R1, 2008).

TABLE 3.10-4
SIGNALIZED INTERSECTION LOS THRESHOLDS

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up

Source: *Urban Crossroads 2013*

V/C = volume-to-capacity

The peak-hour traffic volumes have been adjusted using a peak-hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g., $PHF = [Hourly Volume] / [4 \times Peak\ 15\text{-minute Flow Rate}]$). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs were used for all analysis scenarios.

Unsignalized Intersections

Urban Crossroads evaluated the operations of unsignalized intersections using the methodology described in Chapter 17 of the HCM (also consistent with Riverside County traffic study guidelines). The level of service rating is based on the weighted average control delay expressed in seconds per vehicle (see **Table 3.10-5**).

**TABLE 3.10-5
UNSIGNALIZED INTERSECTION LOS THRESHOLDS**

Level of Service	Description	Average Control per Vehicle (Seconds)
A	Little or no delays	0 to 10.00
B	Short traffic delays	10.01 to 15.00
C	Average traffic delays	15.01 to 25.00
D	Long traffic delays	25.01 to 35.00
E	Very long traffic delays	35.01 to 50.00
F	Extreme traffic delays with intersection capacity exceeded	> 50.00

Source: *Urban Crossroads 2013*

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop-controlled intersections, LOS is computed for the intersection as a whole. All unsignalized study area intersections were analyzed using the software package Traffix (Version 8.0 R1, 2008).

Traffic Signal Warrant Analysis Methodology

The term “signal warrants” refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. The TIA used the signal warrant criteria presented in the latest edition of the Federal Highway Administration’s (FHWA) *Manual on Uniform Traffic Control Devices* (MUTCD) (2009), as amended by the MUTCD 2010 California Supplement, for all study area intersections.

The signal warrant criteria for existing (2012) conditions are based on several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. Both the MUTCD and the MUTCD 2012 California Supplement indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. Specifically, the TIA utilized Peak Hour Volume-Based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 criteria are basically identical for both the MUTCD and the MUTCD 2010 California Supplement. Warrant 3 was deemed appropriate to use for the TIA because it provides specialized warrant criteria for intersections with rural characteristics (e.g., located in communities with populations of less than 10,000 or with adjacent major streets operating at or above 40 miles per hour). For the purposes of the TIA, the 45 mile per hour (mph) speed limit on Bundy Canyon Road was the basis for determining whether urban or rural warrants were used for a given intersection.

Future unsignalized intersections were assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning-level ADT-based signal warrant analysis worksheets.

Traffic signal warrant analyses were performed at the unsignalized area intersections shown in **Table 3.10-6**.

3.10 TRANSPORTATION AND TRAFFIC

TABLE 3.10-6
UNSIGNALIZED TRAFFIC SIGNAL WARRANT ANALYSES LOCATIONS

ID	Intersection Location	Jurisdiction
2	I-15 Southbound Ramps/Baxter Road	Caltrans
4	I-15 Northbound Ramps/Baxter Road	Caltrans
5	Monte Vista Drive/Bundy Canyon Road	Wildomar

Source: Urban Crossroads 2013

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above LOS C or operate below LOS C and not meet a signal warrant.

LOS Criteria/Threshold of Significance

As Bundy Canyon, Monte Vista and Baxter Roads are all designated arterials in the City of Wildomar General Plan, and the City is a Community Development General Plan area, the level of service for intersections of these roadways with each other is LOS D. As Via Carnighi Lane is a local roadway, Via Carnighi Lane and the intersection with Monte Vista is subject to LOS C.

Regarding Caltrans' ramps to arterial intersections and other Caltrans-maintained facilities, the published Caltrans traffic study guidelines (December 2002) state, "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on state highway facilities; however, Caltrans acknowledges that this may not be always feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS."

If an intersection is already operating at an unacceptable level of service, the City determines that there is significant impact if the project will increase delay by 5.0 seconds or more. If project delay is increased by 5.0 seconds or more, the project must mitigate for its impact at that intersection.

Analysis of Sunday peak period LOS was not deemed necessary the traffic engineer determined that Sunday peak period church operations would be unchanged as a result of the proposed preschool/day care facility and expansion of church office facilities. These particular uses are instead anticipated to operate and generate the most traffic during typical weekday peak hours.

Traffic Operations Analysis Methodology

For the purpose of the TIA, potential impacts to traffic and circulation were assessed for each of the following conditions:

Existing (2012) Conditions (1 scenario)

Information for the existing year (2012) is disclosed to represent the baseline traffic conditions as they existed at the time the TIA was prepared.

Existing Plus Project Conditions (1 scenario)

The existing year (2012) with project analysis determines direct project-related traffic impacts that would occur on the existing roadway system in the theoretical scenario of the project being placed on existing conditions. Based on discussions with City staff, project impacts have been determined through a comparison of the existing (2012) versus existing with project traffic conditions. As such, the existing with project scenario is provided to assess direct project impacts and to identify the associated project mitigation measures.

Opening Year (2017) Without and With Project Conditions

The opening year (2017) without and with project conditions analyses will be utilized to determine both direct project-related and cumulative traffic impacts. To account for background traffic, ten other known cumulative projects in the study area were included in addition to 10.41 percent of ambient growth. This list of cumulative projects was compiled from information provided by the City of Wildomar in May 17, 2012, in an effort to identify pending development projects and development applications on file with the City. The opening year (2017) scenario is provided to assess the cumulative impacts and to identify the associated mitigation measures through a comparison of opening year (2017) without and with project traffic conditions.

Projected Future Traffic

Project Trip Generation

Trip generation represents the amount of traffic that is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based on forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

Trip generation rates used to estimate project traffic are shown in **Table 3.10-7**. A summary of the project's trip generation is shown in **Table 3.10-8**. Trip generation statistics published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition (2012) manual for the proposed land uses (ITE Land Use Code 565 Day Care Center and ITE Land Use Code 560 Church) have been utilized.

TABLE 3.10-7
PROJECT TRIP GENERATION RATES¹

Land Use	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Preschool/Day Care	STU	565	0.42	0.38	0.80	0.38	0.43	0.81	4.38
Church (Administration Building)	TSF	560	0.35	0.21	0.56	0.26	0.29	0.55	9.11

Source: *Urban Crossroads* 2013

1. *Trip Generation Source: ITE Trip Generation Manual, 9th Edition, 2012*

2. STU = students; TSF = thousand square feet

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TABLE 3.10-8
PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity	Units ¹	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Preschool/Day Care	180	STU	76	68	144	68	77	145	788
Church (Administration Building)	25.462	TSF	9	5	14	7	7	14	232
TOTAL			85	73	158	75	84	159	1,020

Source: *Urban Crossroads 2013*

1. STU = students; TSF = thousand square feet

Project Trip Distribution

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be used by project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the route where the project traffic would distribute. The project trip distributions were developed based on anticipated travel patterns to and from the project site for the traffic associated with both the residential and commercial uses.

The total volume on each roadway was divided by the total site traffic generation to indicate the percentage of project traffic that would use each component of the regional roadway system in each relevant direction. A project trip distribution exhibit is provided on **Figure 3.10-3**. The proposed project trip distribution patterns were based on anticipated travel patterns associated with the proposed preschool in relation to the residential uses in the surrounding area.

Modal Split

The traffic-reducing potential of public transit, walking, or bicycling was not considered in the TIA. Essentially, the traffic projections are conservative in that these alternative travel modes might be able to reduce the forecast traffic volumes.

Project Trip Assignment

The assignment of traffic from the project area to the adjoining roadway system is based on the project trip generation, the trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the project. Based on the identified project traffic generation and trip distribution patterns, project average daily traffic (ADT) volumes for the weekday are shown on **Figure 3.10-3**. Project AM and PM peak hour volumes are shown in the TIA (**Appendix 3.10**).

Background Traffic

Future year traffic forecasts were based on two years of background (ambient) growth at 2 percent per year for 2017 traffic conditions. The total ambient growth is 10.41 percent for 2017 traffic conditions (compounded growth of 2 percent per year over five years). This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth was added to daily and peak-hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.



LEGEND:

10 = PERCENT TO/FROM PROJECT

Source: Urban Crossroads



Figure 3.10-3
Project Trip Distribution

Cumulative Development Traffic

The CEQA Guidelines require that other reasonably foreseeable development projects that are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of the TIA through consultation with the City of Wildomar and the City of Menifee.

Cumulative Development Trip Generation

Cumulative development trip generation rates and associated trip generation are shown on **Tables 3.10-9** and **3.10-10**. The cumulative development projects assumed in the traffic impact analysis were estimated to generate 31,161 net trip-ends per day during a typical weekday, with approximately 1,664 net vehicle trips during the AM peak hour and 2,782 net vehicle trips during the PM peak hour.

TABLE 3.10-9
CUMULATIVE DEVELOPMENT TRIP GENERATION RATES¹

Land Use	ITE Code	Units ²	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
SFDR (Single-Family Detached Residential)	210	DU	0.19	0.56	0.75	0.63	0.37	1.00	9.52
Apartments	220	DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Freestanding Discount Superstore	813	TSF	1.04	0.81	1.85	2.13	2.22	4.35	50.75
Wholesale Nursery	818	TSF	1.20	1.20	2.40	2.59	2.58	5.17	39.00
Commercial Retail ³	820	TSF	0.60	0.36	0.96	1.78	1.93	3.71	42.70
Commercial Retail ⁴	820	TSF	1.08	0.66	1.74	3.16	3.43	6.59	75.10
Specialty Retail ⁵	820/826	TSF	0.60	0.36	0.96	1.19	1.52	2.71	44.32
Pharmacy w/Drive-Thru	881	TSF	1.79	1.66	3.45	4.96	4.95	9.91	96.91
Fast Food w/Drive-Thru	934	TSF	23.16	22.26	45.42	16.98	15.67	32.65	496.12
Gas Station w/Market	945	VFP	5.08	5.08	10.16	6.76	6.75	13.57	162.78
Gas Station w/Market & Car Wash	946	VFP	6.04	5.80	11.84	7.07	6.79	13.86	152.84

Source: Urban Crossroads 2013

1. Source: ITE 2012

2. DU = dwelling units; TSF = thousand square feet; VFP = vehicle fueling positions

3. AM peak-hour split is unavailable for ITE Land Use 620. As such, a split of 50/50 was utilized.

4. Trip generation rates based on the regression equation for ITE Land Use 820.

5. AM peak-hour rates are not available in the ITE Trip Generation Manual. As such, the AM peak-hour average rates for ITE LU 820 have been utilized.

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**TABLE 3.10-10
CUMULATIVE DEVELOPMENT TRIP GENERATION SUMMARY**

Traffic Allocation Zone (TAZ)	Project Name	Land Use ¹	Quantity	Units ²	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
City of Wildomar											
1	Tulip Lane (08-0147)	SFDR	60	DU	11	34	45	38	22	60	571
2	Canyon Plaza/JR Oil (08-179)	Retail	33.800	TSF	51	33	84	147	160	307	3,394
		Pass-by Reduction (40%)			-20	-13	-34	-59	-64	-123	-1,358
		Fast Food w/Drive-Thru	6.200	TSF	173	167	340	149	138	287	3,076
		Pass-by Reduction (45%)			-78	-75	-153	-67	-62	-129	-1,384
		Gas Station w/Market	12	VFP	63	64	127	82	81	163	1,953
		Pass-by Reduction (60%)			-38	-38	-76	-49	-49	-98	-1,172
Subtotal TAZ 2 ³					151	137	288	203	204	407	4,509
3	DL Almond (09-0265)	Wholesale Nursery	5.040	TSF	6	6	12	13	13	26	197
4	Baxter Village	SFDR	67	DU	13	38	50	42	25	67	638
		Apartments	204	DU	20	84	104	82	45	126	1,357
		Retail	75.000	TSF	81	50	131	237	257	494	5,633
		Internal Trips			-7	-7	-14	-52	-52	-104	-1,126
		Pass-by Reduction			0	0	0	-73	-73	-146	-1,724
	Subtotal TAZ 4					107	164	271	236	202	438
6	Tentative Map No. 30522 (10/0301)	Retail	79.497	TSF	48	29	76	142	153	295	3,395
		Fast Food w/Drive-Thru	1.500	TSF	35	33	68	25	24	49	744
		Pass-by Reduction (25% Retail Only)									
		Gas Station w/Market	6	VFP	30	30	61	41	41	81	977
		Pass-by Reduction (62% AM; 56% PM & Daily)			-19	-19	-38	-23	-23	-45	-547

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Traffic Allocation Zone (TAZ)	Project Name	Land Use ¹	Quantity	Units ²	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
	Subtotal TAZ 6				98	79	177	190	193	383	4,588
7	Tract 31409 (APN 367-110-007 & -008)	SFDR	126	DU	24	71	95	79	47	126	1,200
8	Tract 32024 (APN 367-140-011)	SFDR	70	DU	13	39	59	44	26	70	666
9	Oak Creek TTM No. 36388 (11-0261)	SFDR	275	DU	52	154	206	173	102	275	2,618
		Pharmacy	14.469	TSF	26	24	50	72	72	143	1,402
		Gas Station w/Market/Carwash	8	VFP	48	46	95	57	54	111	1,223
		Specialty Retail	2,550	TSF	2	1	2	3	4	7	113
		Pass-by Reduction (Pharmacy & Gas Station)			-30	-29	-59	-69	-68	-137	-1,1310
	Subtotal TAZ 9					98	196	294	236	164	399
10	Wildomar Walmart	Freestanding Discount Superstore	200.000	TSF	208	162	370	426	444	870	10,150
		Specialty Retail	3.900	TSF	2	1	4	5	6	11	173
		Fast Food w/Drive-Thru	3.900	TSF	90	87	177	66	61	127	1,935
		Internal Trips			-21	-25	-46	-54	-50	-104	-1,225
		Pass-by Reduction			-38	-38	-76	-28	-28	-56	-871
	Subtotal TAZ 10				242	187	429	415	433	848	10,162
Grand Total					753	911	1,664	1,461	1,321	2,7852	31,161

Source: Urban Crossroads 2013

1. SFDR = single-family detached residential

2. DU = dwelling units; TSF = thousand square feet; VFP = vehicle fueling positions

3. Project trip generation is consistent with the Canyon Plaza Traffic Study (Darnell & Associates, Inc., November 10, 2003).

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Cumulative Development Trip Assignment

Based on the identified trip distribution patterns for the cumulative development projects on arterial highways throughout the study area for future conditions, cumulative projected development ADT volumes and AM peak-hour and PM peak-hour intersection turning movement volumes are included in the TIA (**Appendix 3.10**).

Traffic Forecasts

An existing plus project analysis scenario was included to address a recent CEQA case ruling, which asserts that impacts of a proposed project must be measured against the current existing physical conditions. The existing plus project analysis scenario was utilized to identify significant project-related impacts and mitigation measures necessary to reduce those impacts to less than significant.

To provide a comprehensive assessment of the potential project-related and cumulative traffic impacts, the “buildup” analyses were performed. The buildup method was used to approximate the opening year conditions for the study year of 2017 and is intended to identify the cumulative impacts on both the existing and planned near-term circulation system. The opening year (2017) traffic condition includes background traffic, traffic generated by other cumulative development projects in the study area, and the traffic generated by the proposed project.

Opening Year (2017) Conditions

The buildup approach combines existing traffic counts with a background ambient growth factor to forecast the opening year (2017) traffic conditions. An ambient growth factor of 10.41 percent accounts for background (area-wide) traffic increases that occur over time up to the year 2017 from the year 2012 (compounded 2 percent per year growth over a five-year period). In addition, the traffic generated by other cumulative development projects in the study area was included. Traffic volumes generated by the project are then added to assess the opening year (2017) with project traffic conditions. The 2017 roadway network is consistent with the existing conditions roadway network. The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- Opening year (2017) without project
 - Existing 2012 counts
 - Ambient growth traffic (10.41 percent)
 - Cumulative development project traffic
- Opening year (2017) with project
 - Existing 2012 counts
 - Ambient growth traffic (10.41 percent)
 - Cumulative development project traffic
 - Cornerstone preschool expansion traffic

Roadway Improvements Under Opening Year (2017) Conditions

The lane configurations and traffic controls assumed to be in place for opening year (2017) conditions are consistent with those shown on **Figure 3.10-1**.

Opening Year (2017) Without Project Traffic Volume Forecasts

This scenario includes existing (2012) traffic volumes plus an ambient growth factor of 10.41 percent plus traffic from pending and approved but not yet constructed known development projects (as previously listed in **Table 3.10-10**) in the area.

Opening Year (2017) with Project Traffic Volume Forecasts

This scenario includes existing (2012) traffic volumes, an ambient growth factor of 10.41 percent, traffic from pending and approved but not yet constructed known development projects in the area, and the addition of project traffic. The weekday ADT volumes that can be expected for opening year (2017) with project traffic conditions are shown on **Figure 3.10-4**, while **Table 3.10-15** shows the AM and PM peak-hour intersection turning movement volumes for opening year (2017) with project traffic conditions.

Sight Distance Analysis Along Monte Vista Drive

This section summarizes project site access for the following three access points:

- Driveway 1 on Monte Vista Drive – outbound access only (full access, no restrictions on left turn out)
- Driveway 2 on Monte Vista Drive – inbound access only (full access, no restrictions on left turns in)
- Via Carnaghi Drive on Monte Vista Drive – full access

No new access points are proposed, as the existing access points to the church will be utilized to serve the proposed school on-site. Regional access to the project site is provided by Interstate 15 (located to the west) via Bundy Canyon Road and Baxter Road.

Sight Distance Analysis

A sight distance analysis was performed for the project egress point (Driveway 1) on Monte Vista Drive based on the visibility limitations due to the elevation and roadway curvature. It should be noted that the sight distance analysis was only performed on Driveway 1 since Driveway 2 is an ingress-only access point. As such, a sight distance analysis was not necessary at Driveway 2 since no outbound vehicles are anticipated. The sight distance analysis was utilized to determine whether acceptable stopping/corner sight distances are provided based on the minimum distances defined by the County of Riverside roadway standards. It should be noted that the County's sight distance criteria are consistent with the requirements outlined in the Caltrans Highway Design Manual (HDM).

Sight Distance Criteria

The City has adopted and uses the County of Riverside intersection sight distance standard (Standard No. 821) that requires the assessment of both stopping sight distance and corner sight

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distance. As defined by the HDM, sight distance is the continuous length of highway ahead visible to the driver. Stopping sight distance is the minimum sight distance provided at interchanges and at-grade intersections. Per County Standard No. 821, only the minimum stopping sight distance was evaluated for Driveway 1, as it is a private driveway.

At unsignalized intersections, intersection sight distance must provide a substantially clear line of sight between the driver of the vehicle waiting on the minor road (driveway) and the driver of an approaching vehicle. For the purposes of this analysis, a 7.5-second criterion was applied to the outside travel lanes in either direction to provide the most conservative sight distance. The 7.5-second criterion allows waiting vehicles to either cross all lanes of through traffic by turning left or cross the near lanes by turning right without requiring through traffic to radically alter its speed.

County of Riverside Sight Distance Standards

Since Monte Vista Drive is an existing roadway, it was assumed to be designed to meet sight distance requirements. Driveway 1 on Monte Vista Drive was assessed for the stopping sight distance assuming the “object” in the road is another vehicle. Per County Standard No. 821, intersection sight distance calculations assume a driver eye height of 3.5 feet to the top of an object 4.25 feet above the pavement. In determining intersection sight distance, a setback distance for the waiting vehicle on the minor road must be assumed. Setback for the driver on the minor road must be a minimum of 15 feet behind the edge of the traveled way.

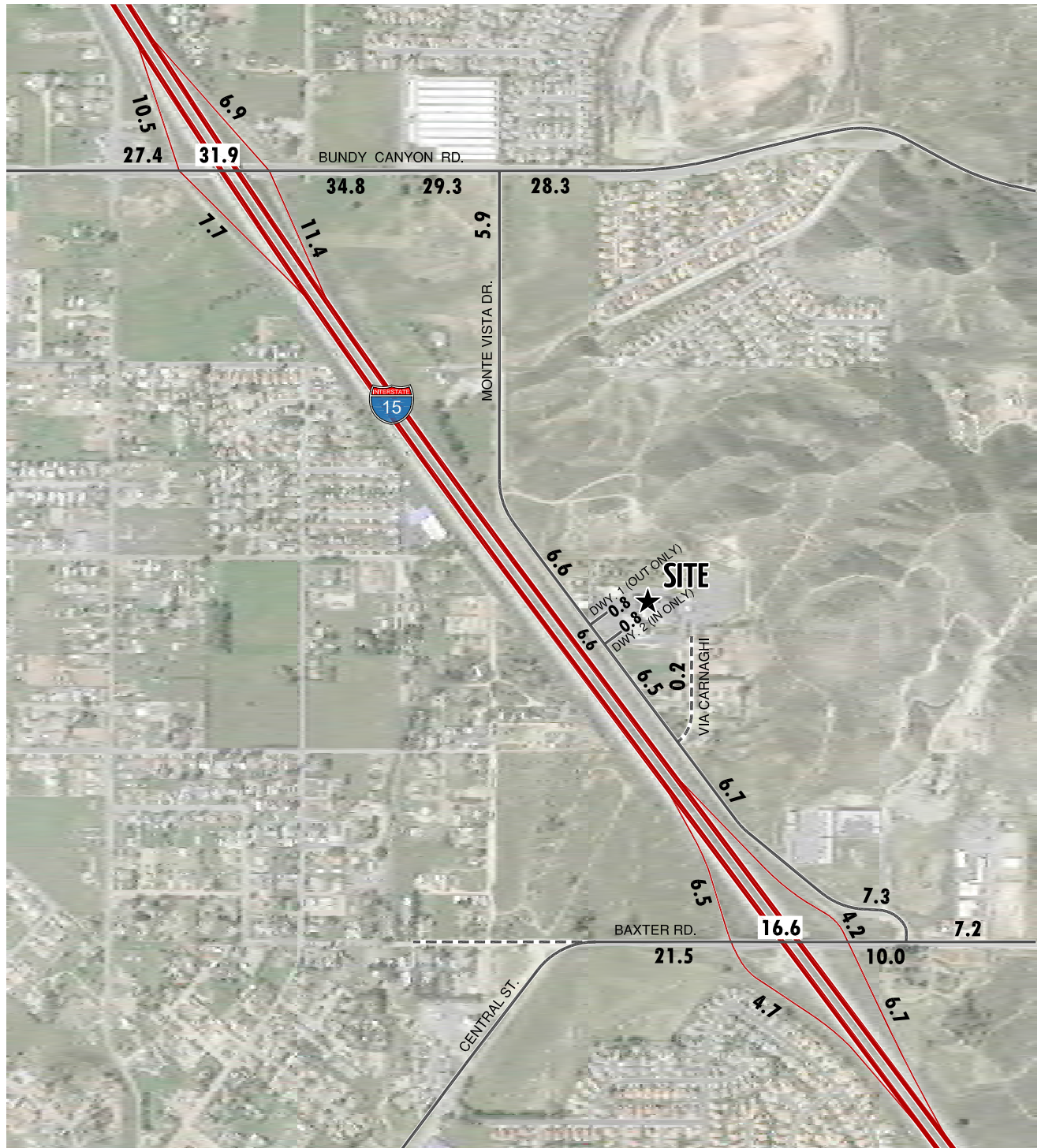
Adequate visibility for vehicular and pedestrian traffic can be provided at Driveway 1 by limiting sight obstructions within the limited use area. Any landscaping within the limited use area should not exceed 30 inches in height in an effort to keep the area clear of any landscaping or any other obstructions that may impede the visibility of the driver.

County Standard No. 821 states that the minimum stopping sight distance on a level roadway with a speed limit of 55 miles per hour is 500 feet. It should be noted that Monte Vista Drive has a school zone (defined by striping and signage) that begins and ends approximately 300 feet north of Driveway 1 to approximately 600 feet south of Driveway 1. The school zone identifies a regulatory speed limit of 25 miles per hour when schoolchildren are present. The minimum stopping sight distance on a travel roadway with a speed limit of 25 miles per hour is 150 feet. However, the sight distance of 500 feet was utilized for the purposes of this analysis in an effort to evaluate the most conservative condition.

Sight Distance at Driveway 1 on Monte Vista Drive

The sight distance lines and limited use areas at Driveway 1 are illustrated on **Figure 3.10-5**. Any landscaping within the limited use area should be limited in height to 30 inches or less. As Driveway 1 is a cross-street stop-controlled intersection with full access, sight distance was assessed in both the northbound and southbound directions. A corner sight distance of approximately 605 feet can be accommodated for vehicles traveling in the southbound direction on Monte Vista Drive toward Driveway 1 from Bundy Canyon Road. It is anticipated that the minimum 605-foot corner sight distance could be accommodated on Monte Vista Drive for vehicles traveling in the northbound direction from Baxter Road toward Driveway 1.

Due to the roadway’s vertical curve, a profile of the sight lines for Driveway 1 on Monte Vista Drive is provided on **Figure 3.10-6** which identifies the line of sight for the driver’s eye height of 3.5 feet (waiting vehicle) represented by a yellow line and an object height of 4.25 feet (approaching vehicle) represented by a green line. As shown on **Figure 3.10-6** it is anticipated



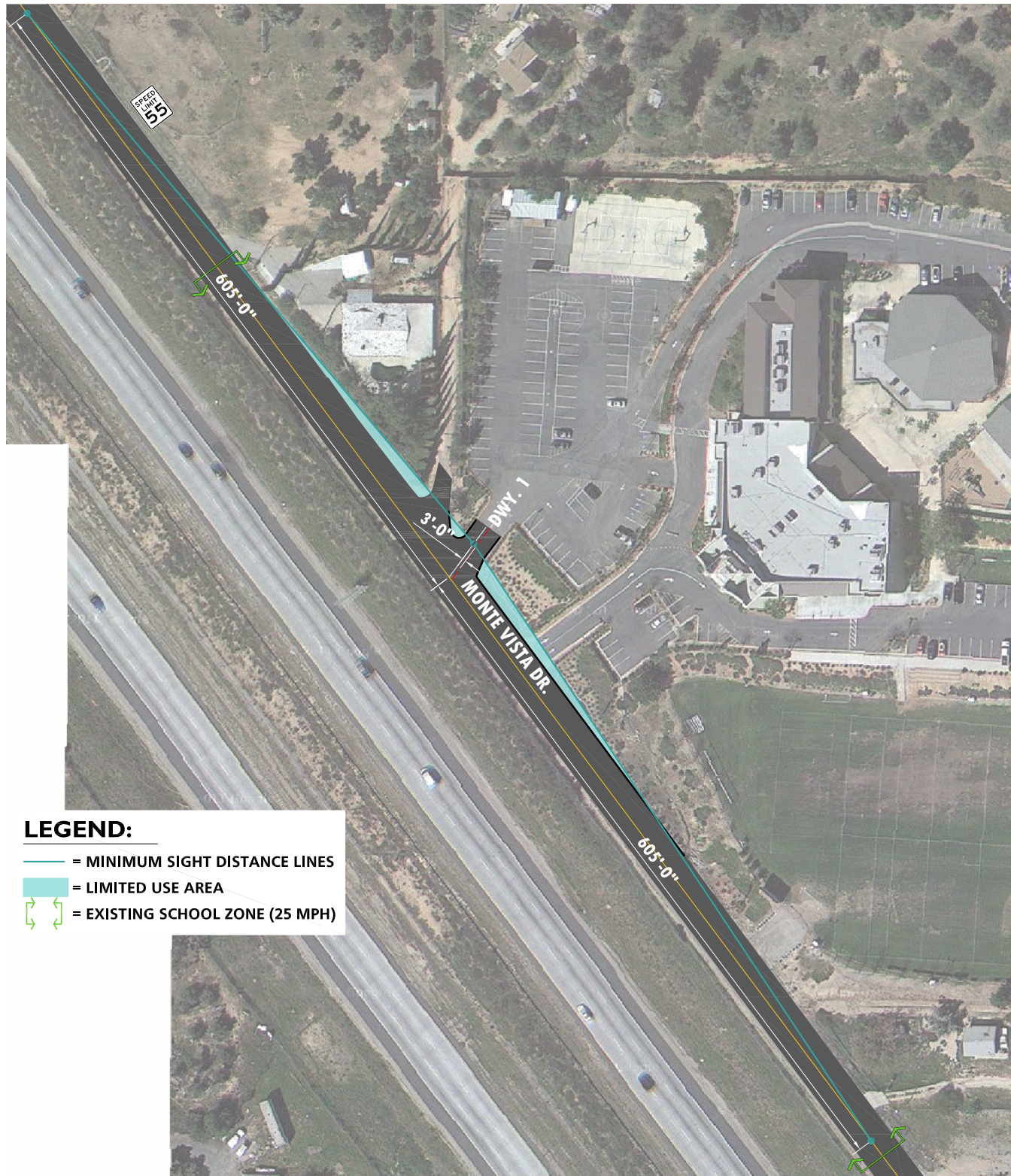
LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: Urban Crossroads



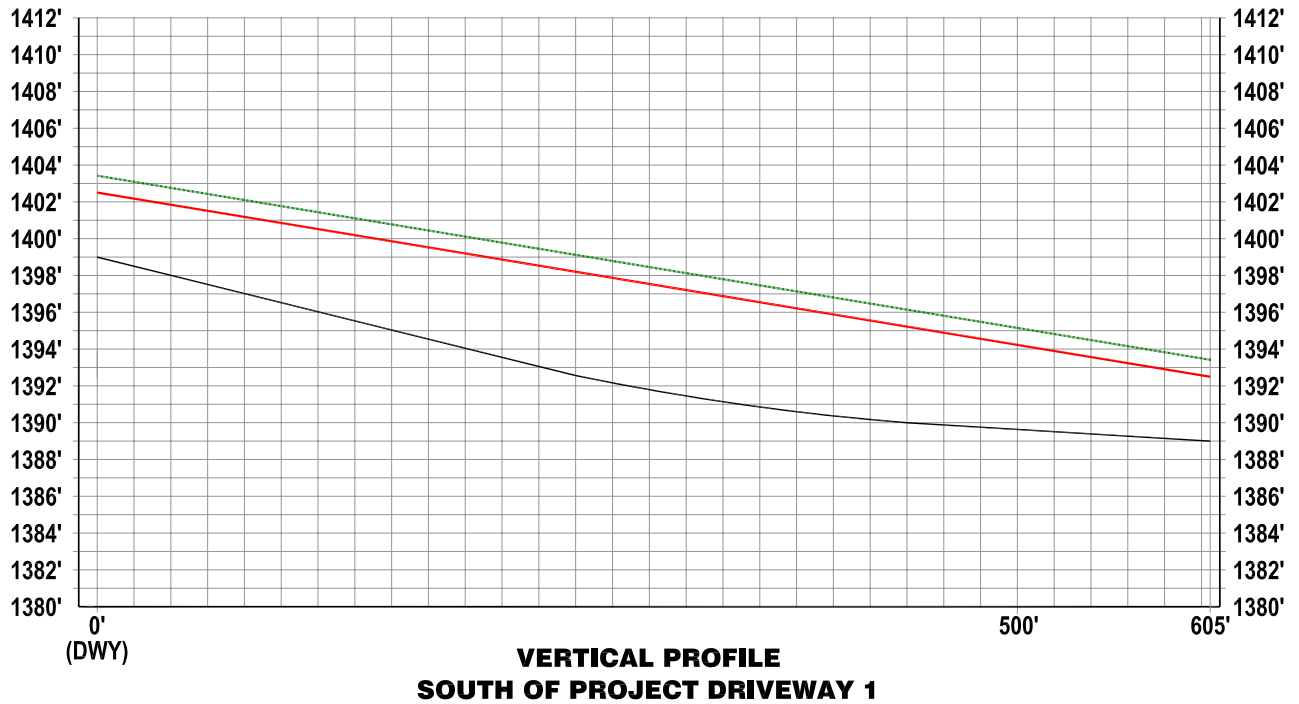
Figure 3.10-4
Opening Year (2017) With Project Average Daily Traffic



Source: Urban Crossroads



Figure 3.10-5
Site Distance at Driveway 1 on Monte Vista Drive



LEGEND:

- = ROADWAY
- = DRIVER'S EYE HEIGHT (3'6")
- ... = OBJECT HEIGHT (4'3")

Source: Urban Crossroads



Figure 3.10-6
Monte Vista Drive and Driveway 1 Vertical Site Distance

that a vehicle waiting to exit Driveway 1 on Monte Vista Drive can see an approaching vehicle at a height of 4.25 feet from a distance of 605 feet. Since the green line (representing the approaching vehicle) clears the vertical alignment of the roadway to the north of Driveway 1, it is therefore visible to the waiting vehicle at the project driveway.

Driveway Analysis on Monte Vista Drive

Pursuant to discussions with City staff, a driveway analysis was performed for the project egress and ingress points (Driveway 1 and Driveway 2) on Monte Vista Drive to determine whether there are existing queuing issues along Monte Vista Drive and to identify whether there are any potential queuing issues on Monte Vista Drive related to the increase in traffic associated with the proposed preschool.

The traffic modeling and signal timing optimization software package Synchro (Version 8 Build 801) was utilized to analyze the peak-hour operations at the two site access driveways. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in Chapter 16 of the HCM and the unsignalized intersection capacity analysis as specified in HCM Chapter 17. Macroscopic-level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length in Synchro. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro to generate random simulations. The 95th percentile queue is not necessarily ever observed; it is simply based on statistical calculations (or average queue plus 1.65 standard deviations). However, the average queue is the average of all the two-minute maximum queues observed by SimTraffic. The maximum back of queue observed for every two-minute period is recorded by SimTraffic.

SimTraffic was utilized to assess peak-hour queuing at the site access driveways for both existing (2012) and opening year (2017) with project traffic conditions. The random simulations generated by SimTraffic have been utilized to determine the 95th percentile queue lengths observed for each lane. A SimTraffic simulation was recorded ten times, for each peak hour and for each analysis scenario, and was seeded for 15-minute periods with 60-minute recording intervals.

Queuing Analysis

Queuing analysis findings for Monte Vista Drive are presented in **Table 3.10-11** for both existing (2012) and opening year (2017) with project traffic conditions. As shown in **Table 3.10-11**, there are currently no potential queuing issues along Monte Vista Drive, and the addition of project traffic is not anticipated to result in any potential queuing issues.

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TABLE 3.10-11
AM/PM PEAK-HOUR STACKING LENGTH SUMMARY ON MONTE VISTA DRIVE

Intersection	Movement	Stacking Distance (Feet) ¹	Existing (2012)				2017 With Project			
			95 th Percentile Stacking Distance		Acceptable?		95 th Percentile Stacking Distance		Acceptable?	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
Monte Vista Drive/Driveway 1	WBL	1,580	54	33	Yes	Yes	73	45	Yes	Yes
	WBR	62	45	32	Yes	Yes	61	53	Yes	Yes

Source: Urban Crossroads 2013

PROJECT IMPACTS AND MITIGATION MEASURES

Substantial Increase in Traffic Volume – Existing Plus Project (Standards of Significance 1 and 2)

Impact 3.10.1 The proposed project would result in an increase in traffic under the existing plus project scenario that is substantial in relation to the existing traffic load and capacity of the street system or exceeds an established level of service standard (i.e., result in a substantial increase in either the volume-to-capacity ratio and/or the level of service at intersections). This impact is considered **potentially significant**.

Existing Plus Project Intersection Operations Analysis

Existing plus project peak-hour traffic operations were evaluated for the study area intersections based on the analysis methodologies presented above. The intersection analysis results are summarized in **Table 3.10-13**, which indicates that the study area intersections listed in **Table 3.10-12** are anticipated to operate at unacceptable levels of service with the addition of project traffic.

TABLE 3.10-12
UNACCEPTABLE LOS EXISTING PLUS PROJECT INTERSECTIONS

ID	Intersection Location	Jurisdiction
2	I-15 Southbound Ramps/Baxter Road – LOS F PM peak hour	Caltrans
4	I-15 Northbound Ramps/Baxter Road – LOS F AM/PM peak hours	Caltrans
5	Monte Vista Drive/Bundy Canyon Road – LOS F AM/PM peak hours	Wildomar

Source: Urban Crossroads 2013

Based on the City of Wildomar significance criteria discussed in the Standards of Significance subsection above, the following intersections were found to be impacted by the project:

I-15 Southbound Ramps/Baxter Road (Intersection #2) – Although this intersection was found to operate at an unacceptable level of service (LOS F) during the weekday PM peak hour under existing (2012) conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. The project-related delay increase is greater than 5.0 seconds; therefore, the impact is considered **potentially significant**.

TABLE 3.10-13
INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS

#	Intersection	Jurisdiction	Traffic Control ²	Existing				Existing + Project			
				Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service	
				AM	PM	AM	PM	AM	PM	AM	PM
1	I-15 Southbound Ramps/ Bundy Canyon Road	Caltrans	TS	20.3	21.6	C	C	25.2	22.1	C	C
2	I-15 Southbound Ramps/ Baxter Road	Caltrans	CSS	18.2	142.7	C	F	20.1	187.7³	C	F
3	I-15 Northbound Ramps/ Bundy Canyon Road	Caltrans	TS	20.1	21.6	C	C	22.7	21.5	C	C
4	I-15 Northbound Ramps/ Baxter Road	Caltrans	CSS	64.6	146.3	F	F	85.0³	441.3³	F	F
5	Monte Vista Drive/Bundy Canyon Road	Wildomar	CSS	21.7	35.8	C	E	60.9³	112.0³	F	F
6	Monte Vista Drive/ Driveway 1 (outbound only)	Wildomar	CSS	11.8	9.5	B	A	13.0	10.0	B	A
7	Monte Vista Drive/ Driveway 2 (inbound only)	Wildomar	CSS	7.8	7.4	A	A	8.0	7.5	A	A
8	Monte Vista Drive/Via Carnaghi Drive	Wildomar	CSS	10.0	9.2	A	A	11.4	10.1	B	B
9	Monte Vista Drive/Baxter Road	Wildomar	CSS	18.8	16.4	C	C	23.6	18.6	C	C

Source: Urban Crossroads 2013

1. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

2. CSS = cross-street stop; TS = traffic signal

3. Project impact related to an increase in the peak-hour delay of more than 5 seconds.

3.10 TRANSPORTATION AND TRAFFIC

I-15 Northbound Ramps/Baxter Road (Intersection #4) – Although this intersection was found to operate at an unacceptable level of service (LOS F) during the peak hours under existing (2012) conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. The project-related delay increase is greater than 5.0 seconds; therefore, the impact is considered **potentially significant**.

Monte Vista Drive/Bundy Canyon Road (Intersection #5) – Although this intersection was found to operate at an unacceptable level of service (LOS E) during the weekday PM peak hour under existing (2012) conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant.

The traffic signal at Monte Vista Drive and Bundy Canyon Road (intersection 5) is a required component of the proposed Walmart project (Project #13-0086) and of the approved Oak Creek Canyon project (Project #11-0261, MM 3.3.1). The proposed project increase traffic at this intersection by greater than five seconds as shown in Table 3.10-14, and is therefore responsible for the proportionate share of the cost of improvements.

As shown in **Table 3.10-13**, the proposed project contributes to already impacted intersections by greater than 5.0 seconds in the existing plus project scenario. Improvements to the regional transportation system would ordinarily be part of the Transportation Uniform Mitigation Fee (TUMF) administered by the Western Riverside Council of Governments (WRCOG) and if part of the program, payment of the TUMF is adequate mitigation for project impacts. However, the TUMF program typically only funds ultimate system design improvements, not interim improvements that might need to be replaced when the ultimate design is built. Interim improvements can be part of the City's development impact fee (DIF) as long as there is no overlap of improvements in improvements between the DIF and the TUMF.

The City believes that the signals at the I-15 ramps at Baxter Road would be considered interim improvements by the WRCOG and would be replaced when the ultimate interchange was constructed. As interim improvements the City believes that they would be ineligible for TUMF funding. As only the WRCOG can determine which improvements are eligible for TUMF funding, this EIR assumes that the improvements would be considered interim and would not be eligible for TUMF funding.

Because the ultimate interchange improvements at Baxter Road and I-15 are part of the TUMF program, the City did not include any interchange improvements, such as signals at the top of the ramps, in the DIF. As the project would result at impacts to the interchange in the existing plus project scenario, and there is no certain funding source, mitigation measure **MM 3.10.1** requires payment of the pro-rata share of cost of the I-15 Ramp signals at Baxter Road. If the improvements are determined to be eligible for TUMF funding, or if the City adds the improvements to these ramps to the DIF, then payment of the TUMF or DIF fees would be satisfy the project's proportionate share responsibility.

Opening Year (2017) Intersection Operations Analysis

Level of service calculations were conducted for the study intersections to evaluate their operations under opening year (2017) conditions with existing roadway and intersection geometrics consistent with **Figure 3.10-1**. As shown in **Table 3.10-15**, the intersections listed in **Table 3.10-14** were found to operate at an unacceptable level of service under opening year (2017) with project traffic conditions.

**TABLE 3.10-14
UNACCEPTABLE LOS OPENING YEAR (2017) INTERSECTIONS**

ID	Intersection Location	Jurisdiction
1	1-15 Southbound Ramps/Bundy Canyon Road – LOS F PM peak hour	Caltrans
2	I-15 Southbound Ramps/Baxter Road – LOS F AM/PM peak hour	Caltrans
4	I-15 Northbound Ramps/Baxter Road – LOS F AM/PM peak hours	Caltrans
5	Monte Vista Drive/Bundy Canyon Road – LOS F AM/PM peak hours	Wildomar
9	Monte Vista Drive/Baxter Road – LOS F AM/PM peak hours	Wildomar

Source: Urban Crossroads 2013

**TABLE 3.10-15
INTERSECTION ANALYSIS FOR OPENING YEAR (2017) CONDITIONS**

#	Intersection	Jurisdiction	Traffic Control ²	2017 Without Project				2017 With Project			
				Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service	
				AM	PM	AM	PM	AM	PM	AM	PM
1	I-15 Southbound Ramps/Bundy Canyon Road	Caltrans	TS	47.2	78.2	D	F⁵	50.3	81.5	D	F
2	I-15 Southbound Ramps/Baxter Road	Caltrans	CSS	53.8³	945.3³	F	F	71.9³	--- ⁴	F	F
3	I-15 Northbound Ramps/Bundy Canyon Road	Caltrans	TS	31.8	46.6	C	D	33.1	49.9	C	D
4	I-15 Northbound Ramps/Baxter Road	Caltrans	CSS	611.7³	--- ⁴	F	F	711.6³	--- ⁴	F	F
5	Monte Vista Drive/Bundy Canyon Road	Wildomar	CSS	1,591.4	3,718.0	F	F	2,238.6³	4,998.2³	F	F
6	Monte Vista Drive/Driveway 1 (outbound only)	Wildomar	CSS	16.2	12.9	C	B	19.2	14.1	C	B
7	Monte Vista Drive/Driveway 2 (inbound only)	Wildomar	CSS	8.3	7.9	A	A	8.6	8.0	A	A
8	Monte Vista Drive/Via Carnighi Drive	Wildomar	CSS	11.6	11.6	B	B	14.1	14.1	B	B
9	Monte Vista Drive/Baxter Road	Wildomar	CSS	54.0	> 57.0³	F	F	93.2³	87.2³	F	F

Source: Urban Crossroads 2013

1. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
2. CSS = cross-street stop; TS = traffic signal
3. Project impact related to an increase in the peak-hour delay of more than 5 seconds
4. Delay is theoretically infinite.
5. Volume to capacity ratio is greater than 1.00; Intersection unstable and therefore LOS F

3.10 TRANSPORTATION AND TRAFFIC

Based on the City of Wildomar significance criteria discussed in the Standards of Significance subsection above, the following intersections were found to be impacted by the project:

I-15 Southbound Ramps/Bundy Canyon Road (Intersection #1) – Although this intersection was found to operate at an unacceptable level of service (LOS F) during the PM peak hour under opening year (2017) without project traffic conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. The project-related delay increase is anticipated to be 3.3 seconds which is less than the 5.0-second threshold; therefore, impacts are **less than significant**.

I-15 Southbound Ramps/Baxter Road (Intersection #2) – Although this intersection was found to operate at an unacceptable level of service (LOS F) during the AM and PM peak hours under opening year (2017) without project traffic conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. The project-related delay increase is anticipated to be greater than the 5.0-second threshold. Implementation of mitigation measure **MM 3.10.1** requires the payment of fees to address the proposed project's proportionate share of impact at this intersection. With the construction of the improvements, impacts are **less than significant**.

I-15 Northbound Ramps/Baxter Road (Intersection #4) – Although this intersection was found to operate at an unacceptable level of service (LOS F) during the AM and PM peak hours under opening year (2017) without project traffic conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. The project-related delay increase is anticipated to be greater than the 5.0-second threshold. Implementation of mitigation measure **MM 3.10.1** requires the payment of fees to address the proposed project's proportionate share of impact at this intersection. With the construction of the improvements, impacts are **less than significant**.

Monte Vista Drive/Bundy Canyon Road (Intersection #5) – Although this intersection was found to operate at an unacceptable level of service (LOS F) during the AM and PM peak hours under opening year (2017) without project traffic conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. The project-related delay increase is anticipated to be greater than the 5.0-second threshold. Implementation of mitigation measure **MM 3.10.1** requires the payment of fees to address the proposed project's proportionate share of impact at this intersection. With the construction of the improvements, impacts are **less than significant**.

Monte Vista Drive/Baxter Road (Intersection #9) – Although this intersection was found to operate at an unacceptable level of service (LOS F) during the AM and PM peak hours under opening year (2017) without project traffic conditions, the City of Wildomar's specialized significance criteria dictate that if the addition of project traffic (as measured by 50 or more peak-hour trips) results in an increase in delay by more than 5.0 seconds, the impact is considered significant. The project-related delay increase is anticipated to be greater than the 5.0-second threshold. Implementation of mitigation measure **MM 3.10.1** requires the payment of fees to address the proposed project's proportionate share of impact at this intersection. With the construction of the improvements, impacts are **less than significant**.

Table 3.10-16 shows the project's proportionate share of the above improvements assuming a 2017 buildout of the project features.

TABLE 3.10-16
PROJECT CONTRIBUTION TO TOTAL NEW TRAFFIC AT IMPACTED INTERSECTIONS

#	Intersection	Peak Hour	2012 Traffic	Project Traffic	With Project	New Traffic	Project Contribution
2	I-15 SB Ramps/Baxter Road	AM	1,268	47	1,767	499	9.4%
		PM	1,396	49	2,111	715	6.9%
4	I-15 NB Ramps/Baxter Road	AM	871	63	1,263	392	16.1%
		PM	1,042	64	1,612	570	11.2%
5	Monte Vista Dr./Bundy Canyon Road	AM	1,531	88	2,296	795	11.5%
		PM	1,667	87	2,737	1070	8.1%
9	Monte Vista Dr./Baxter Road	AM	640	71	964	324	21.9%
		PM	579	72	1,062	483	14.9%

Source: Urban Crossroads, 2014

Bold number represents the highest of the two peak hours.

The Monte Vista Drive and Baxter Road (intersection 9) intersection will operate unacceptably with or without the project, however the project will contribute sufficient additional new trips to warrant participation in the signalization of the intersection. This signal is neither part of the City's DIF nor the TUMF therefore mitigation measure **MM 3.10.1** requires that the project pay its proportionate share of the cost of signalization of this intersection.

Mitigation Measures

MM 3.10.1 The project applicant shall be required to pay its pro rata share of the implementation of the following traffic improvements:

I-15 Southbound Ramps/Baxter Road (Intersection #2)

- Install a traffic signal.

I-15 Northbound Ramps/Baxter Road (Intersection #4)

- Install a traffic signal.

Monte Vista Drive/Bundy Canyon Road (Intersection #5)

- Install a traffic signal.

Monte Vista Drive/Baxter Road (Intersection #9)

- Install a traffic signal.

Timing/Implementation: Prior to occupancy, or building permit as required by the DIF or TUMF programs

Enforcement/Monitoring: City of Wildomar Public Works Department

3.10 TRANSPORTATION AND TRAFFIC

As shown in **Table 3.10-17**, implementation of the proposed mitigation measures will ensure that all intersections operate at an acceptable level of service under the existing plus project scenario.

Table 3.10-18 shows that traffic resulting from regional growth will also impact the study area intersections and will cause the Monte Vista Drive/Bundy Canyon Road intersection to operate at an unacceptable level of service even with the proposed mitigation. The required mitigation is designed to address the proposed project's impacts and consequently reduces delay at these intersections caused by the project. As shown in **Table 3.3-18**, implementation of the proposed mitigation reduces the delay at the Monte Vista Drive/Bundy Canyon Road intersection and therefore does not increase the delay by the threshold 5.0 seconds. With implementation of the intersection mitigation discussed above, **Table 3.10-18** shows that project-related impacts to study area intersections would be less than significant.

The City does not have the authority to build improvements on I-15, and cannot be certain that the other projects shown in **Table 3.10-10** will be built and will pay to address their impacts at the intersections addressed in **MM 3.10.1**. Without certain funding or jurisdiction, the City cannot guarantee that the proposed improvements will be constructed as proposed by mitigation measure **MM 3.10.1**. Because the City cannot be certain that the improvements will occur, the EIR must assume that the improvements may not occur and that the project impacts would remain as shown in **Table 3.10-15**. As shown in **Table 3.10-15**, the intersection analysis for opening year 2017 would result in significant impacts at I-15 Southbound Ramps/Baxter Road (Intersection 2), I-15 Northbound Ramps/Baxter Road (Intersection 4), Monte Vista Drive/ Bundy Canyon Road (Intersection 5), and Monte Vista Drive/ Baxter Road (Intersection 9). While the City will collect fees representing the proportionate share of the proposed project's impact at the intersections identified in mitigation measure **MM 3.10.1**, for the reasons explained in this section, this impact remains **significant and unavoidable**.

TABLE 3.10-17
INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS WITH PROJECT MITIGATION MEASURES

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
2	I-15 SB Ramps/Baxter Road																	
	- Existing (2013)	CSS	0	0	0	0	1	0	0	1	d	1	1	0	18.2	> 50.0	C	F
	- E + P w/o Mitigation	CSS	0	0	0	0	1	0	0	1	d	1	1	0	20.1	> 50.0⁴	C	F
	- With Project Mitigation	TS	0	0	0	0	1	0	0	1	d	1	1	0	16.1	17.9	B	B
4	I-15 NB Ramps/Baxter Road																	
	- Existing (2013)	CSS	0	1	0	0	0	0	1	1	0	0	1	d	> 50.0	> 50.0	F	F
	- E + P w/o Mitigation	CSS	0	1	0	0	0	0	1	1	0	0	1	d	> 50.0⁴	> 50.0⁴	F	F
	- With Project Mitigation	TS	0	1	0	0	0	0	1	1	0	0	1	d	19.0	24.0	B	C
5	Monte Vista Dr./Bundy Canyon Road																	
	- Existing (2013)	CSS	0	1	0	0	0	0	0	1	0	1	1	0	21.7	35.8	C	D
	- E + P w/o Mitigation	CSS	0	1	0	0	0	0	0	1	0	1	1	0	> 50.0⁴	> 50.0⁴	F	F
	- With Project Mitigation	TS	0	1	0	0	0	0	0	1	0	1	1	0	33.2	29.8	C	C

Source: Urban Crossroads 2013

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = left; T = through; R = right; ≥ right-turn overlap phasing; d = de facto right turn lane; 1 = improvement

2. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

3. CSS = cross-street stop; TS = traffic signal

4. Project impact related to an increase in the peak-hour delay of more than 5.0 seconds.

3.10 TRANSPORTATION AND TRAFFIC

TABLE 3.10-18
INTERSECTION ANALYSIS FOR OPENING YEAR (2017) CONDITIONS WITH PROJECT MITIGATION MEASURES

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												2017 With Project			
			Northbound				Southbound				Eastbound				Delay ² (secs.)		Level of Service	
			L	T	R	L	T	R	L	T	R	L	T	R	L	P	AM	PM
2	I-15 SB Ramps/Baxter Road																	
	- 2017 Without Project	CSS	0	0	0	0	1	0	0	1	d	1	1	0	> 50.0	> 50.0	F	F
	- 2017 With Project	CSS	0	0	0	0	1	0	0	1	d	1	1	0	> 50.0 ⁴	> 50.0 ⁴	F	F
	- With Mitigation Measure	<u>TS</u>	0	0	0	0	1	0	0	1	d	1	1	0	16.9	29.1	B	C
4	I-15 NB Ramps/Baxter Road																	
	- 2017 Without Project	CSS	0	1	0	0	0	0	1	1	0	0	1	d	> 50.0	> 50.0	F	F
	- 2017 With Project	CSS	0	1	0	0	0	0	1	1	0	0	1	d	> 50.0 ⁴	> 50.0 ⁴	F	F
	- With Mitigation Measure	<u>TS</u>	0	1	0	0	0	0	1	1	0	0	1	d	23.7	42.9	C	D
5	Monte Vista Dr./Bundy Canyon Road																	
	- 2017 Without Project	CSS	0	1	0	0	0	0	0	1	0	0	1	d	> 50.0	> 50.0	F	F
	- 2017 With Project	CSS	0	1	0	0	0	0	0	1	0	0	1	d	> 50.0 ⁴	> 50.0 ⁴	F	F
	- With Mitigation Measure	<u>TS</u>	0	1	0	0	0	0	0	1	0	0	1	d	98.8	138.0	F	F
9	Monte Vista Drive/Baxter Road																	
	- 2017 Without Project	CSS	0	0	0	1	0	d	0	1	0	0	1	d	54.0	> 50.0	F	F
	- 2017 With Project	CSS	0	0	0	1	0	d	0	1	0	0	1	d	> 50.0 ⁴	> 50.0 ⁴	F	F
	- With Mitigation Measure	<u>TS</u>	0	0	0	1	0	d	<u>1</u>	1	0	0	1	d	17.7	21.6	B	C

Source: Urban Crossroads 2013

- When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = left; T = through; R = right; ≥ right-turn overlap phasing; d = de facto right turn lane; 1 = improvement
- Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
- CSS = cross-street stop; TS = traffic signal
- Project impact related to an increase in the peak-hour delay of more than 5.0 seconds.
- Volume-to-capacity ratio is greater than 1.00; intersection unstable; LOS F.

Roadway or Traffic Hazard (Standard of Significance 4)

Impact 3.10.2 Implementation of the proposed project will not result in increased hazards due to a design feature or incompatible uses. This impact is considered **less than significant**.

The City of Wildomar implements development standards designed to ensure standard engineering practices are used for all improvements. The proposed project would be checked for compliance with these standards as part of the review process conducted by the City.

Two exceptions to the City's adopted street standards are included as part of the project. The first exception is to the development standard for Monte Vista Drive. The Circulation Element requires Monte Vista to be improved to Secondary Arterial Standard 94 as shown in the City's adopted design standards. This standard requires 100 feet of right of way and four lanes of travel. Due to the existing conditions (e.g. Fixed State Right of Way for I-15 on the west and existing improvements and topographic constraints on the east), the city reviewed the improvement standard to ensure that planned and future improvements could be accommodated. Further, the general plan trail element proposes a multi-purpose trail on the easterly side of Monte Vista (Standard 405).

Figure x reflects the proposed street section from Baxter Road to Canyon. The proposed street section is modified by adapting Standards 94, Secondary Highway, Standard 109, Frontage, and Standard 405 multi-purpose trail. There is sufficient right of way and area to meet Standard 94 from Canyon Drive to Bundy Canyon Road. The road section proposed in **Figure x** keeps the intent of providing a 4-lane secondary highway and a multipurpose trail but modifies the elements within the existing right of way as follows:

- Eliminates both a 5 foot sidewalk and 9 foot landscape strip on west side of Monte Vista Drive.
- Redesigns the street light spacing and lighting footprint to allow for all street lights along the street to be placed on the westerly side.
- Eliminates the 8 foot shoulder on the west side and east side and widens the 12 foot travel lane to 14 feet along curb side.
- Widens the easterly sidewalk from 5 feet to 6 feet.
- Eliminates all landscaping on the east side of Monte Vista Drive within the public right of way. The modification requires as a condition of approval that 10 feet minimum of landscaping remain as a buffer between the right of way and improvements on private property.
- Reduces the width of the multipurpose trail from 10 feet to 8 feet; places the split rail fence on the right of way line and eliminates landscaping associated with the trail standard within the public right of way. Landscaping will remain, however it will be within a 10 foot easement as described above.

The modified street section allows for the same traffic and pedestrian travel as Secondary Highway Standard 109, while fitting within a constrained right of way. As the functionality of the roadway remains unchanged with the modified standard, this impact is **less than significant**.

3.10 TRANSPORTATION AND TRAFFIC

Via Carnighi Road is currently an unimproved public right of way. Because the project will increase use of the roadway, the City is requiring that the roadway be paved from the intersection with Monte Vista Drive to the current pavement associated with the church property. The roadway will be paved consistent with local road standard 105-A as shown on Figure 2.0-3A, but will not be developed with sidewalks and street lighting as only a portion of the roadway is adjacent to church property. The planned street improvements include two paved travel lanes and driveway approaches to the existing properties along Via Carnighi Lane, and storm drainage improvements designed to accommodate the additional pavement (see 3.7, Hydrology and Water Quality).

Improvements to the transportation and circulation system surrounding the project site would also be implemented (see mitigation measure **MM 3.10.1**), and all such improvements would be designed and constructed to local, regional, and federal standards. As such, they would not introduce any hazardous design features. The proposed project includes new parking lots to accommodate the additional new church buildings proposed as part of the project and paving Via Carnighi Lane for easier access to the new parking lots and church buildings. The improvements to Via Carnighi Lane are similar to the existing roadway and consistent with City standards. The proposed project would not include any dangerous design features, curves, or intersections. As such, impacts would be **less than significant**.

Section 3.8, Noise, includes a discussion of access to the upper parking lot from Via Carnighi Lane (see Impact 3.8.5). The impact discussion requires that the project install a method of closing access to the upper parking lot during times when the church is not in operation. Mitigation measure MM 3.8.5 recommends use of a gate at the entrance to the lower parking lot similar to the existing gate that the church operates at the north end of Via Carnighi Lane. As the gate will be located at the entrance to the parking lot it will be obvious that access is blocked. Via Carnighi currently has a turn around area in front of the existing gate. The turn around area will be incorporated into the new upper parking lot ensuring a safe way to exit the area in the event the gate is closed.

Mitigation Measures

None required.

Emergency Access (Standard of Significance 5)

Impact 3.10.3 Implementation of the proposed project could result in temporary blockages of Bundy Canyon Road and other roadways, causing an impact to emergency access. This impact is considered **potentially significant**.

All of the roadways proposed with the project meet the City's design standards for access. During construction of improvements associated with the project such as the 1,900 sewer line in Monte Vista or the pavement of Via Carnighi Lane, the roadways may be temporarily blocked or subject to detours and delays, which could temporarily affect emergency access. Both Riverside County and the City of Wildomar require traffic management plans (TMP) for large-scale construction projects. A TMP is prepared through coordination with emergency services personnel and made part of the construction requirements placed on the contractor. The TMP often requires public notice of construction schedules as well as contact information in case of emergency or concern with the construction site and/or roadways. A TMP can be customized to avoid construction during special events, holidays, or other periods of intense traffic demand. Of particular focus in a TMP is a requirement to ensure access to adjacent homes and property during the construction process. The mitigation measure requires coordination of the TMP with

the County to ensure consistency. The following mitigation measure establishes the requirement for the TMP and minimizes the effect of construction activity on emergency access. Implementation of the mitigation measure will reduce this impact to a **less than significant** level.

Mitigation Measures

MM 3.10.3 The project applicant will prepare and implement a traffic management plan (TMP) to minimize the inconveniences during construction. Included among the provisions, the contractor will coordinate with the City of Wildomar, Riverside County, and local police, fire, and emergency medical service providers regarding construction scheduling and any other practical measures to maintain adequate access to properties and response times. The TMP may also limit construction activity that would impact traffic flow along Monte Vista Drive to occur outside of the typical weekday morning (7:00 AM to 9:00 AM) and weekday evening (4:00 PM to 6:00 PM) peak hours. The TMP will include contact information for the general public who may have questions concerning the project and access to their property. Two-way traffic through the construction zone will be maintained throughout the construction period.

Timing/Implementation: Prior to filing of a final map

Enforcement/Monitoring: City of Wildomar Public Works and Planning Departments

Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities (Standard of Significance 6)

Impact 3.10.4 Implementation of the proposed project will not conflict with adopted policies, plans, or programs supporting alternative transportation. This is considered a **less than significant** impact.

The addition of population proposed by the project due to new employment has the potential to increase the demand for public transit. It is likely that existing Wildomar residents will need to travel to the project site and would potentially use existing transit services. While Wildomar is served by RTA Routes 7 and 8, the proposed project is not located along either route. As such, the proposed project would provide the opportunity for the Riverside Transit Authority to expand its service area along Bundy Canyon Road, Baxter Road, and Monte Vista Drive to better meet the needs of not only the proposed project area but those residing and working in proximity to it. Additionally, existing transit options would remain intact and not otherwise be affected by the project. Therefore, impacts related to existing alternative transportation would not result from the project, and the proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation or the expansion of alternative transportation. Therefore, a **less than significant** impact would occur in terms of alternative transportation.

Mitigation Measures

None required.

3.10 TRANSPORTATION AND TRAFFIC

3.10.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Future year traffic forecasts were based on four years of background (ambient) growth at 2 percent per year for 2017 traffic conditions. The total ambient growth is 10.41 percent for 2017 traffic conditions (compounded growth of 2 percent per year over five years). This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth was added to daily and peak-hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

The proposed administration building, kitchen and maintenance building would predominately support existing church operations, and as such, would not generate new vehicle trips. However, in an effort to overstate as opposed to understate potential impacts, vehicle trips associated with the administrative and maintenance buildings were included in the traffic study as 25,462 square feet of church use.

Cumulative development trip generation rates and associated trip generation are shown in **Table 3.10-10**.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Traffic Impacts on Local Roadways and State Highways

Impact 3.10.5 When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed project would contribute to cumulative traffic volumes in the region that result in significant impacts to level of service and operations. This is considered a **cumulatively considerable** impact.

A significant cumulative impact has been identified when an intersection is projected to operate below the requisite level of service standard under pre-project conditions and the project's measurable increase in traffic, as defined by 50 or more peak-hour trips, contributes to the deficiency. Cumulative impacts on the following roadway intersections are considered **cumulatively considerable**.

- I-15 Southbound Ramps/Baxter Road (Intersection #2)
- I-15 Northbound Ramps/Baxter Road (Intersection #4)
- Monte Vista Drive/Bundy Canyon Road (Intersection #5)
- Monte Vista Drive/Baxter Road (Intersection #9)

Mitigation Measure

Implementation of mitigation measure **MM 3.10.1**.

With implementation of the intersection mitigation discussed in Impact 3.10.1 above, the project will have mitigated its impact at the study area intersections. Table 3.10-18 reflects the level of service at the study area intersections following implementation of the mitigation measures. As seen in the table, the project mitigates all of its impacts to acceptable levels. The discussion in impact 3.10.1 concluded that neither the City nor the applicant could ensure that the payment of fees would lead to the physical improvements required by MM 3.10.1 necessary to address the project impacts by the opening year 2017. In the cumulative condition, the City can reasonably expect that improvements to the Baxter Road and I-15 interchange will occur as it is part of the regional TUMF program. The City can also reasonable anticipate that other development projects will occur in the City over time and that these future projects will be required to fund improvements at both Bundy Canyon and Baxter Road intersections with Monte Vista Drive as part of their conditions of approval or future mitigation. Therefore, the City anticipates that the improvements required in mitigation measure MM 3.10.1 will occur and that as shown in Table 3.10-18, implementation of the improvements results in impacts that are **less than cumulatively considerable**.

3.10 TRANSPORTATION AND TRAFFIC

REFERENCES

- Caltrans (California Department of Transportation). 2002. *Guide for the Preparation of Traffic Impact Studies*.
- FHWA (Federal Highway Administration). 2009. *Manual on Uniform Traffic Control Devices*.
- ITE (Institute of Transportation Engineers). 2004. *Trip Generation Handbook*, 2nd Edition.
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- TRB (Transportation Research Board). 2000. *Highway Capacity Manual 2000*.
- Urban Crossroads. 2013. *Cornerstone Pre-School Expansion Traffic Impact Analysis*.
- Urban Crossroads. 2014. *Cornerstone Church, Project Contribution to New Traffic*

3.11 EFFECTS FOUND NOT TO BE SIGNIFICANT

3.11 EFFECTS FOUND NOT TO BE SIGNIFICANT

This section is based on the Notice of Preparation (NOP), dated October 28, 2013, and contained in **Appendix 2.0** of this Draft Environmental Impact Report (Draft EIR; DEIR). The NOP was prepared to identify the potentially significant effects of the proposed project and was circulated for public review between October 28, 2013, and November 28, 2013. In the course of this evaluation, certain impacts were found to be less than significant because the characteristics of the proposed project would not create such impacts. This section provides a brief description of effects found not to be significant or less than significant, based on the NOP comments or more detailed analysis conducted as part of the EIR preparation process. Note that a number of impacts found to be less than significant are addressed in the various Draft EIR topical sections (Sections 3.1 through 3.10) to provide more comprehensive discussion as to why impacts are less than significant, in order to better inform decision-makers and the general public.

3.11.1 AGRICULTURAL AND FOREST RESOURCES

The project site is zoned R-R (Rural Residential) and does not contain any active forestland or support trees that could be commercially harvested. These conditions preclude the possibility of the proposed project converting forestland to non-forest use. No impacts would occur.

3.11.2 HAZARDS AND HAZARDOUS MATERIALS

The proposed project will not involve hazardous materials of significant quantity to constitute a hazard to the public. Churches and schools are considered sensitive receptors and are not known for generating hazardous materials. Construction equipment on the site may have gasoline, diesel, or other chemicals necessary for operation and/or construction; however, the normal use of these types of materials is addressed through existing state and federal laws. Additionally, the proposed project is not located on any hazardous materials site as designated by Government Code Section 65962.5. A review of the information on the California Department of Toxic Substances Control website (2013) did not identify any other hazardous materials sites on or adjacent to the project site. Further, the project site is not located within any airport land use plan. According to the Riverside County Land Information System (2013), the project site is not located in a High Wildfire Zone area, which is found in more rural areas of the county. As such, no impacts to this issue area would occur.

3.11.3 LAND USE AND PLANNING

The City of Wildomar General Plan designates the church property, along with the property along Via Carnaghi Lane, as Business Park (BP). The BP land use designation allows for employee-intensive uses, including research and development, technology, centers and support offices uses, “clean” industry and supporting retail uses. Building intensity ranges from 0.25 to 0.60 floor area ratio (FAR). The current FAR of the 63.51 acre site is 0.031. The proposed preschool, first floor of the administrative office building¹ and maintenance building would result in a total of 27,436 square feet for a new FAR of 0.041.

The properties are zoned Rural Residential (R-R). The development standards and permitted uses of the R-R zone district are found in Chapter 17.16 of the City of Wildomar Municipal Code. The

¹When determining the floor area ratio only the first or “ground” floor is considered in the calculation. In this instance if the entire building were part of the calculation, the FAR would increase to 0.046.

3.11 EFFECTS FOUND NOT TO BE SIGNIFICANT

R-R zone district permits a large number of land uses including single family homes, nurseries and greenhouses, farms, certain mining operations and the storage of outdoor materials.

The project site is currently developed with the Cornerstone Community Church and supporting structures and facilities. There are three existing single family homes along Via Carnaghi Lane to the south of the proposed project. To the east on top of the ridge that overlooks the property there are more single family homes. Another existing single-family home is located to the north and west of the project area along Monte Vista Drive, with vacant land beyond. Interstate 15 is farther to the west across Monte Vista Drive. The proposed project will not affect the existing alignment or access of any roadway. The project will add buildings to an existing built environment and will therefore not divide any established community. Additionally, the City has adopted the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and the Stephens' Kangaroo Rate (SKR) Habitat Conservation Plan and requires all projects to comply with both the MSHCP and SKR provisions. While the project will occur on existing developed areas and the impacts are expected to be less than significant, the project's compliance with the MSHCP and SKR as well as other environmental protection policies are described in this Draft EIR.

3.11.4 MINERAL RESOURCES

A review of project soil types, based on information from the Natural Resources Conservation Service of the US Department Agriculture (2014), did not reveal any significant potential for mineral resources at the project site. There are no known locally important mineral resource recovery sites identified on the project site in the Wildomar General Plan or in a specific plan or other land use plan of value to the region or to the residents of the state. Therefore, no impacts would occur to mineral resources.

3.13.5 POPULATION AND HOUSING

The proposed project would not result in any additional housing. Expansion of the church could result in new employment. The California Department of Finance (2013) estimates that the vacancy rate of homes in Wildomar is 7.53 percent, which means that of the 10,857 homes in the city, approximately 800 of them are vacant. While the number of employees is unknown at this time, it is reasonable to assume that any new jobs created by this project could be filled by existing residents in Wildomar. If new employees did move to the area, the existing number of vacant homes would accommodate their housing needs. The project would not result in the construction of new homes. The proposed project will result in the removal of a structure that was formerly a home. The building has not been used as a residence for several years. No homes or residents will be displaced by the proposed project. Therefore, the proposed project has no impact on population growth in the area.

3.11.6 RECREATION

The proposed project does not propose additional housing or population that would require new recreational facilities. The existing church facilities include playing fields and open space, and the proposed preschool includes a playground area for the students. While the proposed project will include permanent lighting to replace the temporary lighting currently used for nighttime activities, the project is not anticipated to have any impacts on recreational facilities. Therefore, the proposed project would not result in any impacts to recreation.

REFERENCES

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- California Department of Toxic Substances Control. 2013.
http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm Accessed January 23, 2014.
- Riverside County Land Information System. 2013.
<http://www3.tlma.co.riverside.ca.us/pa/rclis/viewer.htm>, Accessed January 23, 2014.
- US Department of Agriculture, Natural Resources Conservation Service. 2014.
<http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>, Accessed January 23, 2014.

4.0 – ALTERNATIVES

The alternatives analysis consists of the following components: an overview of California Environmental Quality Act (CEQA) requirements for alternatives analysis, descriptions of the alternatives evaluated, a comparison between the anticipated environmental effects of the alternatives and those of the proposed project, and identification of an “environmentally superior” alternative.

4.1 CEQA REQUIREMENTS FOR ALTERNATIVES

The CEQA Guidelines require that an environmental impact report (EIR) describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives but would avoid or substantially lessen one or more of the project’s significant effects (CEQA Guidelines Section 15126.6(a)).

In addition, Sections 15126.6(a) and (b) of the CEQA Guidelines require the consideration of alternatives that could reduce or eliminate any significant adverse environmental effects of the proposed project, including alternatives that may be more costly or could otherwise impede the project’s objectives. The range of alternatives considered must include those that offer substantial environmental advantages over the proposed project and may be feasibly accomplished in a successful manner considering economic, environmental, social, technological, and legal factors. The CEQA Guidelines also require analysis of a “No Project” alternative and identification of the environmentally superior alternative among those analyzed.

4.2 DEVELOPMENT OF PROJECT ALTERNATIVES

This section discusses the reasoning for selecting the alternatives and summarizes the assumptions identified for the alternatives. The range of alternatives included for analysis in an EIR is governed by the “rule of reason.” The primary objective is formulating potential alternatives and choosing which ones to analyze to ensure that the selection and discussion of alternatives fosters informed decision-making and informed public participation. This is accomplished by providing sufficient information to enable readers to reach conclusions themselves about such alternatives. This approach avoids assessing an unmanageable number of alternatives or analyzing alternatives that differ too little to provide additional meaningful insights about their environmental effects. The alternatives addressed in this Draft EIR were selected in consideration of one or more of the following factors:

- The extent to which the alternative would accomplish most of the basic objectives of the project.
- The extent to which the alternative would avoid or reduce any of the identified significant effects of the project.
- The feasibility of the alternative, taking into account site suitability and surrounding existing land uses, and consistency with applicable public plans, policies, and regulations.
- The appropriateness of the alternative in contributing to a reasonable range of alternatives necessary to permit a reasoned choice.

The alternatives analyzed in this DEIR were ultimately chosen based on each alternative’s ability to feasibly attain the basic project objectives while avoiding or reducing one or more of the project’s significant effects. The analysis provides readers with adequate information to compare the effectiveness of identified mitigation or significant adverse impacts and to enable

4.0 ALTERNATIVES

readers to make decisions about the project. CEQA requires EIRs to address a reasonable range of reasonable alternatives, not all potential alternatives.

PROJECT OBJECTIVES

As noted above, an EIR must describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives while avoiding or reducing one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)). In identifying the range of alternatives for analysis in this EIR, the following basic project objectives were considered:

- Expand the existing school capabilities by adding a preschool building on the same site to take advantage of existing infrastructure.
- Expand and improve parking opportunities at the church to compensate for the loss of parking associated with construction of the preschool and ease on-site congestion between services.
- Eliminate the use of generator-powered field lighting by installing more efficient and quiet permanent field lighting.
- Provide for a future administration building to enable a more efficient configuration of school resources.
- Provide for a new campus maintenance structure.

4.3 ALTERNATIVES DESCRIPTIONS AND ANALYSIS

DESCRIPTION OF ALTERNATIVES

Alternative 1: No Project

CEQA Guidelines Section 15126.6(e) requires that a No Project alternative be evaluated in an EIR. The No Project analysis must discuss the circumstance under which the project does not proceed. The comparison is that of the proposed project versus what can reasonably be expected to occur on the properties should the proposed project not be approved. The analysis allows decision-makers to compare the impacts of approving the project with the impacts of not approving the project (CEQA Guidelines Section 15126.6(e)(3)(B)).

Alternative 2: No Upper Parking Lot

This alternative would eliminate the upper parking lot as shown on **Figure 2.0-3A**. The intent of the alternative is to reduce the amount of grading and impervious surface added to the site and to eliminate the noise associated with vehicles using the access road behind the existing home at 34620 Via Carnaghi Lane. By eliminating the upper parking lot, the project would not add 274 new parking spaces or result in grading or construction of a new detention basin. The alternative assumes that the preschool, administrative office, maintenance building, Via Carnaghi Lane, and the maintenance building parking and the lower parking lots would be constructed as planned with the proposed project.

Alternative 3: No Maintenance Building Parking Lot

The maintenance building parking lot replaces an existing residential structure and landscape area that is being used as a maintenance and utility building. As proposed, a new parking lot would be constructed with 45 spaces and a new maintenance building. This would place cars adjacent to the northern property line of the home located at 34620 Via Carnaghi Lane, resulting in additional noise and disturbance from construction and operation of the parking lot. This alternative would eliminate the construction of a new parking lot but allow the maintenance building to be reconstructed.

Alternative 4: Relocated Preschool

This alternative would move the proposed preschool to the upper parking lot to remove it from the freeway noise and adjacent home at 34520 Monte Vista Drive. The alternative assumes that all other features of the project would be constructed as planned with the proposed project.

Alternatives Considered but Rejected as Infeasible

Off-Site Alternative

An off-site alternative was not considered because the basic objective of the project is to locate within the existing school and church campus to make use of the existing physical and educational infrastructure. Locating the preschool and other features of the project off-site would separate the features of the school and make their operation infeasible.

Reduced Project Size Alternative

The proposed project involves a new preschool, a new administration building, construction of new parking areas, and paving of an existing parking lot. While different configurations of the parking areas are considered in Alternatives 2 and 3, and a different location for the preschool considered in Alternative 4, a smaller preschool or administration building would not significantly reduce the impacts associated with the proposed project. Traffic impacts from these project components are fully mitigated as shown in Section 3.10, Traffic and Circulation, of this Draft EIR. As reported in Section 3.10, the study area intersection levels of service would fail with or without the proposed project. Reducing the size of the preschool and administration buildings would not make a substantial reduction in traffic impacts at the study area intersections or materially affect the proposed mitigation measures (see Alternative 1, No Project). As no change in land use is requested with the proposed project, it is reasonable to expect that the proposed project is part of the background growth associated with area traffic.

SIGNIFICANCE FINDINGS OF THE EIR

This EIR determined that the proposed project either resulted in no impacts or that impacts could be reduced to a less than significant level through implementation of mitigation measures. The alternatives discussion focuses on environmental impacts of the proposed project that either required mitigation measures or that could not be mitigated to less than significant. **Table 4.0-1** shows the impacts evaluated in this DEIR along with a brief summary of the mitigation measures that address the impacts. In all but one instance, the mitigation measures result in a finding of less than significant.

Impact 3.8.4 concludes that noise associated with construction will result in a significant but unavoidable impact even though there are mitigation measures designed to reduce noise. The

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proximity of construction activity to the homes located on Via Carnaghi Lane and Monte Vista Drive is such that regardless of mitigation, noise will impact the occupants of these structures.

TABLE 4.0-1
SUMMARY OF ENVIRONMENTAL ISSUES, IMPACTS, AND MITIGATION MEASURES

Issue Area	Impact Before Mitigation	Mitigation Summary (See EIR Sections for Complete Wording)	Impact After Mitigation
3.1 Aesthetics and Visual Resources	PS	3.1.3 Requirements for parking lot light shielding	LS
3.2 Air Quality	LS	N/A	N/A
3.3 Biological and Natural Resources	PS	MM 3.3.1 Plant survey for white rabbit-tobacco and/or bottle liverwort 3.3.2a–b Preconstruction survey for burrowing owl 3.3.2c Preconstruction survey for California gnatcatcher 3.3.2d Migratory bird surveys 3.3.3 No net loss of riparian vegetation 3.3.4a Survey for waters of United States 3.3.4b No net loss of waters and requirement for compliance with Sections 404 and 401	LS
3.4 Climate Change and Greenhouse Gases	LS	N/A	N/A
3.5 Cultural Resources	PS	3.5.2a–d Requirements for treatment of resources discovered during construction 3.5.3a–e Requirements for monitoring during excavation for cultural and paleontological resources 3.5.4a–c Requirements for discovery of human remains	LS
3.6 Geology and Soils	PS	3.6.4a–b Requirements for slope construction 3.6.5 Removal of undocumented fill 3.6.6a–b Expansive soil foundation requirements	LS
3.7 Hydrology and Water Quality	PS	3.7.1 NPDES and SWPPP requirements	LS
3.8 Noise	PS	3.8.1a Construction noise control plan 3.8.1b Windows closed design for preschool 3.8.1c Exterior wall insulation design 3.8.1d Window and door requirement. 3.8.1e Final exterior noise analysis for outdoor play area 3.8.4 Parking lot sweeper time restriction 3.8.5 Access control gate at lower parking lot	SU
3.9 Public Services and Utilities	LS	N/A	N/A
3.10 Traffic and Circulation	PS	3.10.1 Improvements to I-15 ramps at Bundy Canyon and Baxter; signals at Monte Vista, Bundy Canyon, and Baxter 3.10.3 Traffic management plan for off-site construction	LS

ANALYSIS OF ALTERNATIVES

Each alternative is compared to the proposed project. The project alternatives are evaluated in less detail than those of the proposed project, and the impacts are described in terms of difference in outcome compared with implementing the proposed project. **Table 4.0-2** at the end of this section provides an at-a-glance comparison of the environmental benefits and impacts of each alternative. **Table 4.0-3** compares the alternatives to the basic project objectives.

Alternative 1: No Project

Under the no project alternative, there would be no change to the existing site conditions. As the project has an operating church and school, the no project alternative assumes that the existing operations would continue to operate as they do currently. Existing operations include use of an on-site septic system for the entire campus, use of the portable generator-powered field lighting units, use of the unimproved 'lower parking lot' and access to the property from both Monte Vista Drive and the unimproved Via Carnaghi Lane.

Aesthetics and Visual Resources

Impacts to aesthetics were determined to be less than significant with mitigation incorporated. The no project alternative would eliminate the new maintenance building parking lot as well as construction of the upper and paving of the lower parking lots that would eliminate parking lot-related light impacts. While mitigation measure **MM 3.1.3** would reduce the proposed project's impacts in this regard to less than significant, the elimination of the parking lots would result in no impact in terms of lighting on the home at 34620 Via Carnaghi Lane. This alternative would also eliminate the sports field lighting installation, but would allow the use of the generator-powered equipment to continue. Under the no project alternative, the existing nighttime use of the sports field would remain unchanged from the current condition. Overall, the impact to aesthetics from the no project alternative would be less than the impacts of the proposed project.

Air Quality

The proposed project must comply with air quality district and City of Wildomar regulations for grading and construction to ensure that impacts will be less than significant. While these requirements would apply to any development project, the no project alternative would not result in any physical change to the property and therefore would not have any potential to disturb the soil or create air quality impacts. The impacts to air quality under this alternative are less than the proposed project.

Biological and Natural Resources

The proposed project has several mitigation measures designed to ensure that biological impacts are less than significant. These include mitigation measure **MM 3.3.1** that requires a survey for white rabbit-tobacco and/or bottle liverwort after the soils are disturbed, as well as mitigation measures **MM 3.3.2a** through **3.3.2d** that require preconstruction surveys for burrowing owl, California gnatcatcher, and migratory birds. These mitigation measures would apply to any development in Wildomar as a result of the City's participation in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). However, as the no project alternative would not result in any change to the existing project area and would not require any mitigation or MSHCP compliance, the impact to biological and natural resources is less than that of the proposed project.

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Climate Change and Greenhouse Gases

While the proposed project does not result in significant impacts to climate change through the generation of greenhouse gases, the construction of the preschool, maintenance building, and administration office as well as the additional paving will have an incremental impact on climate change. The no project alternative would not result in any changes to the project site and would therefore have less of an impact on climate change than the proposed project.

Cultural Resources

The construction of the upper parking lot and excavation necessary for the preschool, maintenance and administration buildings, or utilities such as water and sewer lines have the potential to impact cultural resources. The DEIR includes mitigation measures **MM 3.5.2a** through **MM 3.5.2d** to address the inadvertent discovery of cultural resources, **MM 3.5.3a** through **MM 3.5.3e** that require on-site monitoring during excavation, and **MM 3.5.4a** through **MM 3.5.4c** that direct how the accidental discovery of human remains during excavation will be addressed. While these measures will reduce impacts from construction to a less than significant level, the no project alternative would not result in any construction and would therefore have less of an impact on cultural resources.

Geology and Soils

Construction of the upper parking lot will result in grading and modification of the existing slope. Mitigation measures **MM 3.6.4a** and **MM 3.6.4b** address the design of the slope, and **MM 3.6.5** requires the removal of undocumented fill from any foundation areas. These mitigation measures reduce the proposed impacts to a less than significant level. However, the no project alternative will not result in any grading and would therefore have less of an impact on geology and soils than the proposed project.

Hydrology and Water Quality

The proposed project includes site improvements designed to accommodate the stormwater anticipated from the increase in impervious surface associated with the new upper parking lot and the paving of Via Carnaghi Lane. The project features address both quantity and quality of the stormwater runoff. Mitigation measure **MM 3.7.1** requires compliance with the National Pollutant Discharge Elimination Permit (NPDES) and preparation of a stormwater pollution prevention plan (SWPPP). While this mitigation would be required of any construction project, the no project alternative would not disturb the soil and would therefore have less of an impact on hydrology and water quality.

Noise

The proposed project will create noise during construction and operation of the new facilities. With mitigation measure **MM 3.8.1a**, the DEIR requires that a construction noise control plan be prepared that will keep staging of equipment away from sensitive receptors. However, the construction cannot be fully mitigated, and this impact remains significant and unavoidable after mitigation.

Mitigation measures **MM 3.8.1b** through **MM 3.8.1d** address design of the proposed preschool to address noise from Interstate 15, and **MM 3.8.1e** requires a post-construction analysis to ensure that the outdoor play area is below acceptable noise standards. Operation of the parking lots has the potential to create noise that will affect the existing residence at 34620 Via Carnaghi

Lane. As the lower parking lot is already in use as overflow parking for the church, it is possible that noise from the parking lot already affects the existing residence. With improvement of the parking lot, there will be maintenance that could also affect the adjacent home. Therefore, the Draft EIR includes mitigation measures **MM 3.8.4**, which requires that parking lot sweeping and maintenance be limited to business hours, and **MM 3.8.5**, which requires that the parking lots be secured from unauthorized after-hours access.

Noise from construction cannot be mitigated to a less than significant level, and it is likely that noise from operation of the church facility could affect the adjacent homes. The no project alternative would not result in any construction and would therefore have less of an impact than the proposed project. The no project alternative assumes that the lower parking lot and Via Carnaghi Lane would continue to be used for church surfaces. Although the unimproved nature of the roadway and parking lot, and the continued use of the generator-powered field lights, will contribute to noise in the area, overall the no project alternative would have less of an impact on noise than the proposed project.

Public Services and Utilities

The proposed project will connect to the Elsinore Valley Municipal Water District (EVMWD) sanitary sewer through an approximately 1,900-foot-long sewer line in Monte Vista Drive. The new connection will allow the abandonment of the on-site septic system. While the proposed project will result in a less than significant increase in the demand for other services such as water, police, and fire, the no project alternative would not allow for the abandonment of the on-site septic system. Generally, connection to a regional wastewater treatment facility is preferred to ensure that federal and state water quality standards continue to be met. As the no project alternative would not result in the connection to the EVMWD sewage collection and treatment system, the impact from this alternative on public services and utilities is greater than the proposed project.

Traffic and Circulation

The proposed project will result in an incremental increase to traffic on area roadways. The DEIR evaluates the intersections of Monte Vista Drive and both Bundy Canyon and Baxter roads as well as the freeway on/off-ramps at both Baxter Road and Bundy Canyon Road. Section 3.10, Traffic and Circulation, of the DEIR includes mitigation measure **MM 3.10.1** that requires the project to pay its proportionate share of improvements at these locations. The project will also be required to pay the Transportation Uniform Mitigation Fee (TUMF) at the time of building permit issuance. The Traffic Impact Analysis for the project shows that these intersections would be impacted with or without the proposed project. The no project alternative would not result in any construction and would therefore have less of an impact on traffic.

Alternative 2: No Upper Parking Lot

This alternative involves eliminating the upper parking lot, which eliminates most of the grading on the site as well as the drainage basin and the access road to the lower parking area. The elimination of the upper parking lot would remove 275 new parking spaces from the project, which may affect church operations. The alternative assumes that all of the other proposed project features remain in place.

4.0 ALTERNATIVES

Aesthetics and Visual Resources

The No Upper Parking Lot alternative would eliminate the grading associated with the parking lot. This would also eliminate the parking lot-related light impacts as well as mitigation measure **MM 3.1.3**. Because the elimination of this feature would result in less grading and land alteration, this alternative would have less aesthetic impact than the proposed project.

Air Quality

The proposed project must comply with air quality district and City of Wildomar regulations for grading and construction to ensure that impacts will be less than significant. There will be grading associated with the paving of the maintenance building and lower parking lots as well as the paving of Via Carnaghi Lane. However, the upper parking lot constitutes the most significant grading and therefore the largest impact to air quality. While the air quality requirements would apply to any development on the site, the No Upper Parking Lot alternative would result in less land disturbance and therefore have less impacts to air quality than the proposed project.

Biological and Natural Resources

The proposed project has several mitigation measures designed to ensure that biological impacts are less than significant. These include mitigation measure **MM 3.3.1** that requires a survey for white rabbit-tobacco and/or bottle liverwort after the soils are disturbed, as well as mitigation measures **MM 3.3.2a** through **3.3.2d** that require preconstruction surveys for burrowing owl, California gnatcatcher, and migratory birds. These mitigation measures would apply to any development in Wildomar as a result of the City's participation in the MSHCP. All of these measures would continue to apply even though the remaining areas are already disturbed or paved with the current use. The No Upper Parking Lot alternative reduces the total area of disturbance, however, and would therefore have less of an impact to biological and natural resources than the proposed project.

Climate Change and Greenhouse Gases

While the proposed project does not result in significant impacts to climate change through the generation of greenhouse gases, the construction of the preschool, maintenance building, and administration office as well as the additional paving will have an incremental impact on climate change. The No Upper Parking Lot alternative would result in less construction, paving, and ground disturbance, and therefore would have less of an impact on climate change than the proposed project.

Cultural Resources

The construction of the upper parking lot and excavation necessary for the preschool, maintenance and administration buildings, or utilities such as water and sewer lines have the potential to impact cultural resources. The DEIR includes mitigation measures **MM 3.5.2a** through **MM 3.5.2d** to address the inadvertent discovery of cultural resources, **MM 3.5.3a** through **MM 3.5.3e** that require on-site monitoring during excavation, and **MM 3.5.4a** through **MM 3.5.4c** that direct how the accidental discovery of human remains during excavation will be addressed. While these measures will reduce impacts from construction to a less than significant level, the No Upper Parking Lot alternative would not disturb new undeveloped area on the site and would therefore have less of an impact on cultural resources.

Geology and Soils

Construction of the upper parking lot will result in grading and modification of the existing slope. Mitigation measures **MM 3.6.4a** and **MM 3.6.4b** address the design of the slope, and **MM 3.6.5** requires the removal of undocumented fill from any foundation areas. While these mitigation measures reduce the proposed impacts to a less than significant level, the No Upper Parking Lot alternative would eliminate the need for mitigation and would therefore have less of an impact on geology and soils than the proposed project.

Hydrology and Water Quality

The proposed project includes site improvements designed to accommodate the stormwater anticipated from the increase in impervious surface associated with the new upper parking lot and the paving of Via Carnaghi Lane. The No Upper Parking Lot alternative would remove the new basin at the south end of the proposed parking lot. The Preliminary Hydrology and Hydraulic Study (Appendix 3.7) states that the southern portion of Via Carnaghi Lane does not need a stormwater basin, and the northern portion of the lane can be conveyed to a sand filter adjacent to the roadway at the southeast end of the sports field (see Detail A of **Figure 2.0-3C**). As both the maintenance building and the lower parking lot will have pervious pavement surfaces and these areas are below the finished elevation of the drainage basin, the only purpose for the basin is the upper parking lot. This alternative would be required to comply with mitigation measure **MM 3.7.1** that requires compliance with the NPDES and preparation of a stormwater pollution prevention plan (SWPPP). While this mitigation would be required of any construction project, the No Upper Parking Lot alternative would disturb less area and would therefore have less of an impact on hydrology and water quality.

Noise

The proposed project will create noise during construction and operation of the new facilities. With mitigation measure **MM 3.8.1a**, the DEIR requires that a construction noise control plan be prepared that will keep staging of equipment away from sensitive receptors. However, the construction cannot be fully mitigated, and this impact remains significant and unavoidable after mitigation.

Mitigation measures **MM 3.8.1b** through **MM 3.8.1d** address design of the proposed preschool to address noise from Interstate 15, and **MM 3.8.1e** requires a post-construction analysis to ensure that the outdoor play area is below acceptable noise standards. Operation of the parking lots has the potential to create noise that will affect the existing residence at 34620 Via Carnaghi Lane. As the lower parking lot is already in use as overflow parking for the church, it is possible that noise from the parking lot already affects the existing residence. With improvement of the parking lot, there will be maintenance that could also affect the adjacent home. Therefore, the Draft EIR includes mitigation measures **MM 3.8.4**, which requires that parking lot sweeping and maintenance be limited to business hours, and **MM 3.8.5**, which requires the parking lots be secured from unauthorized after-hours access. The No Upper Parking Lot alternative would eliminate the need for the access control and would reduce the amount of noise at the existing residence.

Noise from construction cannot be mitigated to a less than significant level, and it is likely that noise from operation of the church facility could affect the adjacent homes. The No Upper Parking Lot alternative would reduce the amount of overall construction; however, most of the upper parking area is north and east of the closest sensitive receptor and unlikely to be the main source of noise. Although this alternative would result in less construction, the noise impacts from

4.0 ALTERNATIVES

construction remain significant and unavoidable. Therefore, the impacts to noise from this alternative are similar to those of the proposed project.

Public Services and Utilities

The proposed project will connect to the EVMWD sanitary sewer through an approximately 1,900-foot-long sewer line in Monte Vista Drive. The new connection will allow the abandonment of the on-site septic system. While the proposed project will result in a less than significant increase in the demand for other services such as water, police, and fire, the No Upper Parking Lot alternative would allow for the same connectivity to the EVMWD sewage collection and treatment system and would therefore have similar impacts to public services and utilities as the proposed project.

Traffic and Circulation

The proposed project will result in an incremental increase to traffic on area roadways. The DEIR evaluates the intersections of Monte Vista Drive and both Bundy Canyon and Baxter roads as well as the freeway on/off-ramps at both Baxter Road and Bundy Canyon Road. Section 3.10, Traffic and Circulation, of the DEIR includes mitigation measure **MM 3.10.1** that requires the project to pay its proportionate share of improvements at these locations. The project will also be required to pay the TUMF at the time of building permit issuance. The Traffic Impact Analysis for the project shows that these intersections would be impacted with or without the proposed project.

The No Upper Parking Lot alternative would substantially reduce the amount of parking available on the project site. The reduction in parking has the potential to result in parking along Monte Vista Drive and Via Carnaghi Lane. The potential for spillover parking could result in additional congestion in the vicinity of the church. Although the provision of parking is not considered an environmental impact in the CEQA Guidelines, the No Upper Parking Lot alternative would have the physical impact of allowing overflow parking on streets and in areas not designed for parking. This impact to parking is considered greater than that of the proposed project.

The No Upper Parking Lot alternative would not affect the construction of traffic-generating features of the proposed project and would therefore have similar impacts to traffic and circulation as the proposed project.

Alternative 3: No Maintenance Building Parking Lot

This alternative involves eliminating the maintenance building parking lot that is adjacent to the northern property line of the residence at 34620 Via Carnaghi Lane. By eliminating the parking area, the noise associated with grading, paving, construction, and operation would no longer impact this residence. Further, the lighting associated with the parking lot would not have the potential to impact the home and yard area, although some security lighting associated with the existing building or new maintenance building would be anticipated. The elimination of the maintenance building parking lot would remove 45 new parking spaces from the project, which is unlikely to affect church operations. The alternative assumes that all of the other proposed project features remain in place.

Aesthetics and Visual Resources

The No Maintenance Building Parking Lot alternative would eliminate the grading associated with the parking lot. Like the upper parking lot, the maintenance building parking lot is higher than the adjacent home on Via Carnaghi Lane. The grade difference of approximately 5–10 feet places the parking lot above the adjacent structure and potentially affects aesthetics. By eliminating this parking area, the adjacent parcel would remain in its present condition. This alternative would have less aesthetic impact than the proposed project.

Air Quality

The proposed project must comply with air quality district and City of Wildomar regulations for grading and construction to ensure that impacts will be less than significant. There will be grading associated with the paving of the upper and lower parking lots as well as the paving of Via Carnaghi Lane. Paving of the maintenance building parking lot constitutes a small amount of grading on the site and minimal impact to air quality. While the air quality requirements would apply to any development on the site, the No Maintenance Building Parking Lot alternative would result in less land disturbance and therefore have less impact to air quality than the proposed project.

Biological and Natural Resources

The proposed project has several mitigation measures designed to ensure that biological impacts are less than significant. These include mitigation measures **MM 3.3.1** that requires a survey for white rabbit-tobacco and/or bottle liverwort after the soils are disturbed, as well as mitigation measures **MM 3.3.2a** through **3.3.2d** that require preconstruction surveys for burrowing owl, California gnatcatcher, and migratory birds. These mitigation measures would apply to any development in Wildomar as a result of the City's participation in the MSHCP. All of these measures would continue to apply even though the remaining areas are already disturbed or paved with the current use. The No Maintenance Building Parking Lot alternative affects an area of the site that was previously disturbed and unlikely to contain habitat. As the elimination of the parking lot does not reduce the mitigation measures or result in reduced development area, impacts to biological and natural resources are considered similar to those of the proposed project.

Climate Change and Greenhouse Gases

While the proposed project does not result in significant impacts to climate change through the generation of greenhouse gases, the construction of the preschool, maintenance building, and administration office as well as the additional paving will have an incremental impact on climate change. The No Maintenance Building Parking Lot alternative would result in less construction, paving, and ground disturbance, and therefore would have less of an impact on climate change than the proposed project.

Cultural Resources

The construction of the maintenance building parking lot and excavation necessary for the preschool, maintenance and administration buildings, or utilities such as water and sewer lines have the potential to impact cultural resources. The DEIR includes mitigation measures **MM 3.5.2a** through **MM 3.5.2d** to address the inadvertent discovery of cultural resources, **MM 3.5.3a** through **MM 3.5.3e** that require on-site monitoring during excavation, and **MM 3.5.4a** through **MM 3.5.4c** that direct how the accidental discovery of human remains during excavation will be

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addressed. While these measures will reduce impacts from construction to a less than significant level, the No Maintenance Building Parking Lot alternative would not reduce impacts to previously undisturbed area on the property and would therefore have similar impacts on cultural resources to the proposed project.

Geology and Soils

Construction of the maintenance building parking lot will not result in substantial grading or modification of any slope. Mitigation measures **MM 3.6.4a** and **MM 3.6.4b** address the design of the slope associated with the upper parking lot, and **MM 3.6.5** requires the removal of undocumented fill from any foundation areas. While these mitigation measures reduce the proposed impacts to a less than significant level, the No Maintenance Building Parking Lot alternative does reduce the need for the mitigation and would therefore have similar impacts on geology and soils to the proposed project.

Hydrology and Water Quality

The proposed project includes site improvements designed to accommodate the stormwater anticipated from the increase in impervious surface. The site plans show that the maintenance building parking lot will have pervious surface material designed to address stormwater runoff. Elimination of the parking lot would not affect the project's need to provide a stormwater basin or to ensure water quality. The remainder of the development associated with the proposed project and with the No Maintenance Building Parking Lot alternative would be required to comply with mitigation measure **MM 3.7.1** that requires compliance with the NPDES and preparation of a stormwater pollution prevention plan (SWPPP). The No Maintenance Building Parking Lot alternative would result in similar impacts to hydrology and water quality as the proposed project.

Noise

The proposed project will create noise during construction and operation of the new facilities. With mitigation measure **MM 3.8.1a**, the DEIR requires that a construction noise control plan be prepared that will keep staging of equipment away from sensitive receptors. However, the construction cannot be fully mitigated, and this impact remains significant and unavoidable after mitigation. The maintenance building parking lot is close to the existing residence at 34620 Via Carnaghi Lane and would result in impacts during construction and operation. The No Maintenance Building Parking Lot alternative would eliminate the grading and paving of this parking lot and reduce the noise impact to the existing home. The upper and lower parking lots would still be constructed and would therefore have similar noise characteristics to the proposed project. The upper parking lot is farther away from the home and other than the access driveway leading to the lower parking lot, is unlikely to result in impacts during operation. The lower parking lot is approximately 8–10 feet below the house, and the grade difference will help attenuate noise from operation of the parking lot.

Mitigation measures **MM 3.8.1b** through **MM 3.8.1d** address design of the proposed preschool to address noise from Interstate 15, and **MM 3.8.1e** requires a post-construction analysis to ensure that the outdoor play area is below acceptable noise standards. Operation of the parking lots has the potential to create noise that will affect the existing residence at 34620 Via Carnaghi Lane. As the lower parking lot is already in use as overflow parking for the church, it is possible that noise from the parking lot already affects the existing residence. With improvement of the parking lot, there will be maintenance that could also affect the adjacent home. Therefore, the Draft EIR requires mitigation measure **MM 3.8.4**, which requires that parking lot sweeping and

maintenance be limited to business hours, and **MM 3.8.5**, which requires that the parking lots be secured from unauthorized after-hours access. The No Maintenance Building Parking Lot alternative would not eliminate the need for the access control but would reduce the amount of noise at the existing residence.

Noise from construction cannot be mitigated to a less than significant level, and it is likely that noise from operation of the church facility could affect the adjacent homes. The No Maintenance Building Parking Lot alternative would reduce the amount of overall construction. Although this alternative would result in less construction, the noise impacts from construction remain significant and unavoidable, and therefore the impacts to noise from this alternative are similar to those of the proposed project.

Public Services and Utilities

The proposed project will connect to the EVMWD sanitary sewer through an approximately 1,900-foot-long sewer line in Monte Vista Drive. The new connection will allow the abandonment of the on-site septic system. While the proposed project will result in a less than significant increase in the demand for other services such as water, police, and fire, the No Maintenance Building Parking Lot alternative would allow for the same connectivity to the EVMWD sewage collection and treatment system and would therefore have similar impacts to public services and utilities as the proposed project.

Traffic and Circulation

The proposed project will result in an incremental increase to traffic on area roadways. The DEIR evaluates the intersections of Monte Vista Drive and both Bundy Canyon and Baxter roads as well as the freeway on/off-ramps at both Baxter Road and Bundy Canyon Road. Section 3.10, Traffic and Circulation, of the DEIR includes mitigation measure **MM 3.10.1** that requires the project to pay its proportionate share of improvements at these locations. The project will also be required to pay the TUMF at the time of building permit. The Traffic Impact Analysis for the project shows that these intersections would be impacted with or without the proposed project.

The No Maintenance Building Parking Lot alternative would substantially reduce the amount of parking available on the project site. The reduction in parking has the potential to result in parking along Monte Vista Drive and Via Carnaghi Lane. The potential for spillover parking could result in additional congestion in the vicinity of the church. Although the provision of parking is not considered an environmental impact in the CEQA Guidelines, the No Maintenance Building Parking Lot alternative would have the physical impact of allowing overflow parking onto streets and in areas not designed for parking. The maintenance building parking lot has 45 spaces and eliminating it from the overall parking plan would result in impacts to parking similar to those of the proposed project.

The No Maintenance Building Parking Lot alternative would not affect the construction of traffic-generating features of the proposed project and would therefore have similar impacts to traffic and circulation as the proposed project.

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Alternative 4: Relocated Preschool

This alternative involves relocating the preschool farther east away from Interstate 15 and the noise contours associated with the highway. As noted in Section 3.8, Noise, the parking and drop-off area of the building exceeds the desired noise level of 65 dBA. While this is normal for a parking area, the DEIR includes a mitigation measure that requires a post-construction analysis to ensure that the outdoor play area is adequately shielded by topography and the preschool building to provide an acceptable noise level. Mitigation measure **MM 3.8.1e** requires a subsequent noise study and the installation of a block sound wall along the western property line if the noise threshold cannot be met. This alternative would eliminate the need for the mitigation measure by placing the preschool at the north end of the existing east parking lot. The alternative assumes that all of the other proposed project features remain in place.

Aesthetics and Visual Resources

The Relocated Preschool alternative would allow the existing parking lot to remain and would result in construction that is shielded from view by the main church buildings. The relocation would remove the planned landscaping and water quality basins in the parking lot closest to Monte Vista Drive and would eliminate the need to reconfigure the existing entry and exit driveways. As all other aspects of the project would remain, including the construction of the upper parking lot and the sports field lighting, the Relocated Preschool alternative has similar impacts to the proposed project.

Air Quality

The proposed project must comply with air quality district and City of Wildomar regulations for grading and construction to ensure that impacts will be less than significant. There will be grading associated with the paving of upper and lower parking lots as well as the paving of Via Carnaghi Lane. As all of the proposed project features would be constructed, and both the current location and the relocated preschool location would occur in an existing parking lot, the impact to air quality is similar to the proposed project.

Biological and Natural Resources

The proposed project has several mitigation measures designed to ensure that biological impacts are less than significant. These include mitigation measure **MM 3.3.1** that requires a survey for white rabbit-tobacco and/or bottle liverwort after the soils are disturbed, as well as mitigation measures **MM 3.3.2a** through **3.3.2d** that require preconstruction surveys for burrowing owl, California gnatcatcher, and migratory birds. These mitigation measures would apply to any development in Wildomar as a result of the city's participation in the MSHCP. All of these measures would continue to apply even though the remaining areas are already disturbed or paved with the current use. The Relocated Preschool alternative would not affect any of the proposed mitigation; therefore, impacts to biological and natural resources are considered similar to those of the proposed project.

Climate Change

While the proposed project does not result in significant impacts to climate change through the generation of greenhouse gases, the construction of the preschool, maintenance building, and administration office as well as the additional paving will have an incremental impact on climate change. The Relocated Preschool alternative would not result in less construction,

paving, and ground disturbance, and therefore would have a similar impact on climate change as the proposed project.

Cultural Resources

The construction of the parking lots and excavation necessary for the preschool, maintenance and administration buildings, or utilities such as water and sewer lines have the potential to impact cultural resources. The DEIR includes mitigation measures **MM 3.5.2a** through **MM 3.5.2d** to address the inadvertent discovery of cultural resources, **MM 3.5.3a** through **MM 3.5.3e** that require on-site monitoring during excavation, and **MM 3.5.4a** through **MM 3.5.4c** that direct how the accidental discovery of human remains during excavation will be addressed. While these measures will reduce impacts from construction to a less than significant level, the Relocated Preschool alternative would not reduce impacts to previously undisturbed area on the property and would therefore have similar impacts on cultural resources as the proposed project.

Geology and Soils

Construction of the preschool does not require grading or modification of any slope. Mitigation measures **MM 3.6.4a** and **MM 3.6.4b** address the design of the slope associated with the upper parking lot, and **MM 3.6.5** requires the removal of undocumented fill from any foundation areas. While these mitigation measures reduce the proposed impacts to a less than significant level, the Relocated Preschool alternative does reduce the need for the mitigation and would therefore have similar impacts on geology and soils as the proposed project.

Hydrology and Water Quality

The proposed project includes site improvements designed to accommodate the stormwater anticipated from the increase in impervious surface. The site plans show that the preschool will have a water quality basin constructed in the existing parking lot to address stormwater runoff quality. If the preschool is relocated to the existing east parking lot, similar water quality basins would likely be installed. The Relocated Preschool alternative does not affect the project's need to provide a stormwater basin or to ensure water quality. The remainder of the development associated with the proposed project and with the Relocated Preschool alternative would be required to comply with mitigation measure **MM 3.7.1** that requires compliance with the NPDES and preparation of a stormwater pollution prevention plan (SWPPP). The Relocated Preschool alternative would result in similar impacts to hydrology and water quality as the proposed project.

Noise

This alternative is intended to move the preschool outside of the 70 dBA noise contour associated with Interstate 15. The Relocated Preschool alternative moves the building 750 feet east and behind the existing church building. This location would eliminate the need for mitigation measures **MM 3.8.1b** through **MM 3.8.1d** that address design of the proposed preschool to address noise. This location would also eliminate the need for mitigation measure **MM 3.8.1e**, which requires a post-construction analysis to ensure that the outdoor play area is below acceptable noise standards.

Operation of the parking lots has the potential to create noise that will affect the existing residence at 34620 Via Carnaghi Lane. As the lower parking lot is already in use as overflow parking for the church, it is possible that noise from the parking lot already affects the existing residence. With improvement of the parking lot, there will be maintenance that could also

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affect the adjacent home. Therefore, the Draft EIR requires mitigation measure **MM 3.8.4** mandating that parking lot sweeping and maintenance be limited to business hours and **MM 3.8.5** that requires the parking lots to be secured from unauthorized after-hours access. The Relocated Preschool alternative would not eliminate the need for the access.

Noise from construction cannot be mitigated to a less than significant level, and it is likely that noise from operation of the church facility could affect the adjacent homes. The Relocated Preschool alternative would not reduce the amount of overall construction. As this alternative would not result in less construction, the noise impacts from construction remain significant and unavoidable. However, because the alternative does eliminate the need for mitigation associated with the preschool, the Relocated Preschool alternative's impact on noise is considered less than the proposed project.

Public Services and Utilities

The proposed project will connect to the EVMWD sanitary sewer through an approximately 1,900-foot-long sewer line in Monte Vista Drive. The new connection will allow the abandonment of the on-site septic system. The Relocated Preschool alternative retains this new connection to the EVMWD sewage collection and treatment system. The location of the preschool approximately 750 feet east of its current proposed location will require the extension of water and sewer lines to serve the building. This will involve trenching through the existing driveways and parking areas and is likely to substantially increase both cost and disruption of church operations during construction. The impacts of trenching and repaving would be confined to the project site and would be addressed by the sections of the Draft EIR addressing erosion control and compliance with both the NPDES and the SWPPP (see mitigation measure **MM 3.7.1**). While the proposed project will result in a less than significant increase in the demand for other services such as water, police, and fire, the Relocated Preschool alternative would allow for the same connectivity to the EVMWD sewage collection and treatment system and would therefore have similar impacts to public services and utilities as the proposed project.

Traffic and Circulation

The proposed project will result in an incremental increase to traffic on area roadways. The DEIR evaluates the intersections of Monte Vista Drive and both Bundy Canyon and Baxter roads as well as the freeway on/off-ramps at both Baxter Road and Bundy Canyon Road. Section 3.10, Traffic and Circulation, of the DEIR includes mitigation measure **MM 3.10.1** that requires the project to pay its proportionate share of improvements at these locations. The project will also be required to pay the TUMF at the time of building permit issuance. The Traffic Impact Analysis for the project shows that these intersections would be impacted with or without the proposed project.

The Relocated Preschool alternative results in the same project components and is unlikely to affect the current traffic analysis. While the location of the preschool to the eastern portion of the site could result in more a.m. and p.m. traffic on Via Carnaghi Lane, this could be managed by the access control currently in place at the end of the roadway. Closing the gate during school drop-off and delivery times would ensure that traffic patterns would remain unchanged. It is also likely that the patterns would remain unchanged for parents with children in grades other than preschool. The Relocated Preschool alternative would not affect the construction of traffic-generating features of the proposed project and would therefore have similar impacts to traffic and circulation as the proposed project.

4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 4.0-2 provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed project. Based on the evaluation contained in subsection 4.3, Alternative 1, No Project, would be the environmentally superior alternative, as it would result in lesser impacts to all resources. However, this alternative does not meet any of the basic objectives of the proposed project.

TABLE 4.0-2
ALTERNATIVES IMPACTS COMPARISON

Environmental Issue	Proposed Project Impact Finding (Mitigated)	Alternatives			
		1	2	3	4
Aesthetics and Visual Resources	Less Than Significant	-	-	-	=
Air Quality	Less Than Significant	-	-	-	=
Biological and Natural Resources	Less Than Significant	-	-	=	=
Climate Change and Greenhouse Gases	Less Than Significant	-	-	-	=
Cultural and Paleontological Resources	Less Than Significant	-	-	=	=
Geology and Soils	Less Than Significant	-	-	=	=
Hydrology and Water Quality	Less Than Significant	-	-	=	=
Noise	Significant and Unavoidable	-	=	=	-
Public Services and Utilities	Less Than Significant	+	=	=	=
Traffic and Circulation	Less Than Significant	-	=	=	=
Overall Determination		-	-	=	=

- Impacts less than those of the proposed project

+ Impacts greater than those of the proposed project

= Impacts similar to those of the proposed project, or no better or worse

Table 4.0-3 shows the comparison of the alternatives to the basic project objectives.

4.0 ALTERNATIVES

TABLE 4.0-3
COMPARISON OF ALTERNATIVES TO PROJECT OBJECTIVES

	Alternatives			
	1	2	3	4
Expand the existing school capabilities by adding a preschool building on the same site to take advantage of existing infrastructure.	-	=	=	-
Expand and improve parking opportunities at the church to compensate for the loss of parking associated with construction of the preschool and ease on-site congestion between services.	-	-	=	=
Eliminate the use of generator-powered field lighting by installing more efficient and quiet permanent field lighting.	-	=	=	=
Provide for a future administration building to enable a more efficient configuration of school resources.	-	=	=	=
Provide for a new campus maintenance structure.	-	=	=	=

= Meets project objective
- Does not meet project objective

As shown in **Table 4.0-3**, the no project alternative does not meet any of the project objectives. Since the no project alternative would also not result in the connection to the EVMWD sewage collection and treatment system, the long-term impact on water quality may be greater than any of the other project alternatives. Removing the upper parking lot from the project would substantially reduce grading on the site but would result in significantly less parking. This could result in overflow onto Via Carnaghi Lane and Monte Vista Drive. The resulting congestion could also result in more vehicle idling time as church members wait for others to leave in order to find parking. Operational changes to the church services, such as extending the time between services, might alleviate some of the congestion; however, this would be at the expense of reducing opportunities for fellowship and visitation between members.

Relocating the preschool farther east would eliminate the noise impacts associated with Interstate 15 for the portion of the preschool designed for pickup/drop-off and parking. However, this alternative would require the extension of infrastructure farther east, which would increase both cost and disruption of the church. Placing the preschool farther from the main campus may also make it more difficult in terms of security and administration of the facilities.

Removal of the maintenance building parking lot would likely have little effect on parking, as the lot is small. However, the lot does create impacts for the adjacent residence during construction and operation. While the operational impacts can be addressed, the construction impacts will remain significant and unavoidable. The No Maintenance Building Parking Lot alternative meets all of the project objectives and is the least disruptive to the proposed project site plan and design. This alternative is considered the environmentally superior alternative.

5.0 – OTHER CEQA ANALYSIS

This section discusses additional topics statutorily required by the California Environmental Quality Act (CEQA), including growth-inducing impacts and significant irreversible environmental changes/irretrievable commitment of resources.

5.1 GROWTH-INDUCING IMPACTS

INTRODUCTION

CEQA Guidelines Section 15126.2(d) requires that an environmental impact report (EIR) evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by CEQA Guidelines Section 15126.2(d) as follows:

...the way in which a 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... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also...the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. For example, a project providing an increased water supply in an area where water service historically limited growth could be considered growth inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

The CEQA Guidelines state that it is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment (CEQA Guidelines Section 15126.2[d]). However, growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce “disorderly” growth (growth that conflicts with local land use plans) could indirectly cause additional adverse environmental impacts and other public services impacts. Thus, to assess whether a growth-inducing project would result in adverse secondary effects, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

5.0 OTHER CEQA ANALYSIS

COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a community or region are based upon various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions.

PROJECT-SPECIFIC GROWTH-INDUCING IMPACTS

Growth Inducement Potential

Construction of a preschool, parking lots, administrative office building and roadway associated with the proposed project would increase the intensity of the use on the project site. The preschool is anticipated to result in the need for 30 new teachers and assistances, and result in up to 180 new students. The future office use is expected to reduce overcrowding in the existing buildings by relocating approximately 20 existing staff to the new building, but may also result in 15 new employees working at the site. The maintenance building, parking lots, field lighting and other improvements are intended to support the facility and would not generate additional growth.

In addition to the on-site improvements described in Section 2.0, Project Description, of the DEIR, two off-site improvements will also be part of the first phase of the project. In order to provide wastewater services to the entire property, an approximately 1,900-foot-long 8-inch PVC sewer line will be extended from the project north along Monte Vista Drive to an existing manhole near Canyon Drive (**Figure 2.0-7**). The new gravity sewer line will be owned and operated by the Elsinore Valley Municipal Water District (EVMWD) Sewer Master Plan and is designed to accommodate development between the proposed project and Canyon Drive. **Table 5.0-1** shows the land use designation and zoning of the land north of the proposed project site on Monte Vista Drive that could connect to the new sewer line.

**TABLE 5.0-1
DEVELOPMENT POTENTIAL ON MONTE VISTA DRIVE BETWEEN
THE PROPOSED PROJECT DRIVEWAY AND CANYON DRIVE**

APN	Land Use	Zoning	Acres	Units	Population
367-130-030	Commercial Retail, CR	Scenic Highway Commercial, CPS	3.03	0	0
367-130-036	Commercial Retail, CR	Scenic Highway Commercial, CPS	0.92	0	0
367-140-010	Business Park/Medium Density Residential, BP/MDR	Rural Residential, RR	18.00	36	118
367-140-011	Business Park/ Medium Density Residential, BP/MDR	Commercial Office, CO One Family Dwelling, R1	19.57	39	128
367-140-012	Business Park, BP	Rural Residential, RR	0.24	1	3
367-210-005	Business Park, BP	Rural Residential, RR	1.62	3	10
367-210-006	Business Park, BP	Rural Residential, RR	0.37	1	3
Totals			43.75	80	262

Source: Wildomar GIS, California Department of Finance E-5 for 3.28 persons/unit.

The proposed project site is at the “top” of the line allowing for gravity flow of wastewater to Canyon Drive. According to the City Engineer, properties to the south of the proposed project, including those along Via Carnaghi Lane, would need to extend a sewer line south to Baxter Road or install a sewer lift station to reach the new line proposed as part of this project. The extension of services to the existing homes on Via Carnaghi Lane is not part of this proposal. The EVMWD Board Memorandum of December 13, 2012, states that the proposed sewer line is sized to meet the needs of the proposed project and the existing church facility as well as the additional future development as shown in **Table 5.0-1** (see **Appendix 3.9**).

Paving of Via Carnaghi Lane

The existing Via Carnaghi Lane is an unimproved dirt surface serving five single-family homes and a business. The roadway is unsuited for the additional traffic anticipated by the proposed project and will be improved with two travel lanes as a condition of approval of the proposed project. The existing homes along Via Carnaghi Lane are on property that is designated for Business Park and could therefore support a higher intensity of use. While the paving of the roadway would allow for future development, City procedures would require a site plan approval before any new nonresidential land uses could occur along the roadway. The City would also require additional environmental review to ensure that the area could support the intensification of land use. No application for new land uses has been filed with the City.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Public Resources Code Section 21100(b)(2), a part of CEQA, requires that certain EIRs must include a discussion of significant irreversible environmental changes of project implementation. CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as follows:

Uses 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.

Nonrenewable Resources

Development consistent with the proposed project would irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure. Nonrenewable and limited resources that would likely be consumed as part of project site development would include, but are not limited to, oil, natural gas, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar conventional building materials.

The new buildings will require utility services, as well as raw material resources for construction. The proposed project represents an incremental expansion and improvement to the existing Cornerstone Church and School. The addition of paving for the existing and new parking lots, and construction materials associated with the preschool, maintenance and future office buildings is consistent with other construction planned in the City. No special construction materials or resources are anticipated to be needed as part of the project.

6.0 – ABBREVIATIONS

AB	Assembly Bill
ADT	average daily traffic
amsl	above mean sea level
AQMP	air quality management plan
BAU	business as usual
BMP	best management practice
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
Cal Fire	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH₄	methane
CMP	Congestion Management Plan
CMS	Congestion Management System
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO₂	carbon dioxide
CO₂e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DEIR	Draft Environmental Impact Report
DOC	California Department of Conservation
DOF	California Department of Finance
EIR	environmental impact report
EPA	US Environmental Protection Agency

6.0 ABBREVIATIONS

ESA	Endangered Species Act
EVMWD	Elsinore Valley Municipal Water District
F	Fahrenheit
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Map
ft³	cubic foot
GCC	global climate change
GHG	greenhouse gas
GIS	geographic information system
gpd	gallons per day
gpm	gallons per minute
GWP	global warming potential
HCM	Highway Capacity Manual
I-15	Interstate 15
in/sec	inches per second
ITE	Institute of Transportation Engineers
lbs/day	pounds per day
LCFS	Low Carbon Fuel Standard
L_{dn}	day-night average level (noise)
L_{eq}	equivalent noise level
LEUSD	Lake Elsinore Unified School District
LID	low impact development
L_{max}	maximum noise level
L_{min}	minimum noise level
LOP	limited operating period
LOS	level of service
LST	localized significance threshold
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
mgd	million gallons per day
mg/L	milligrams per liter
MLD	most likely descendant
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
mph	miles per hour
MPO	metropolitan planning organization
MS4	municipal separate storm sewer system
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan

MT	metric ton
MUTCD	Manual on Uniform Traffic Control Devices
Mw	moment magnitude
NAAQS	national ambient air quality standards
NAHC	California Native American Heritage Commission
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO	nitric oxide
NOC	Notice of Completion
NOP	Notice of Preparation
NO₂	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
N₂O	nitrous oxide
OHP	Office of Historic Preservation (check this – see section 1.0 when finalized)
OPR	Office of Planning and Research
O₃	ozone
PHF	peak-hour factor
PM	particulate matter
PM_{2.5}	fine particulate matter
PM₁₀	coarse particulate matter
ppb	parts per billion
ppm	parts per million
ppv	peak particle velocity
PRC	Public Resources Code
PSA	project study area
R-R	Rural Residential
RCFCWCD	Riverside County Flood Control and Water Conservation District
RCFD	Riverside County Fire Department
RCRA	Resource Conservation and Recovery Act
RCSD	Riverside County Sheriff's Department
RCTC	Riverside County Transportation Commission
RCWMD	Riverside County Waste Management Department
REMEL	Reference Energy Mean Emission Level
ROG	reactive organic gas
RPW	relatively permanent waters
RTA	Riverside Transit Authority
RTP	regional transportation plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin

6.0 ABBREVIATIONS

SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	sustainable communities strategy
SDRWQCB	San Diego Regional Water Quality Control Board
SEMS	Standard Emergency Management System
SIP	State Implementation Plan
SO₂	sulfur dioxide
SO_x	sulfur oxide
SRA	source receptor area
SRRE	source reduction and recycling element
STC	Sound Transmission Class
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDM	transportation demand management
TDS	total dissolved solids
TIA	traffic impact analysis
TMDL	total maximum daily load
TNW	traditional navigable waters
TUMF	Transportation Uniform Mitigation Fee
UBC	Uniform Building Code
USACE	US Army Corps of Engineers
USC	United States Code
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UWMP	Urban Water Management Plan
V/C	volume-to-capacity (ratio)
VHFHS	very high fire hazard severity
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	waste discharge requirement
WQMP	Water Quality Management Plan
WRF	water reclamation facility
WWTP	wastewater treatment plant

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