

*Draft
Environmental Impact Report*

CITRACADO PARKWAY EXTENSION PROJECT

*City File # ER-2006-10
SCH# 2007041061*



August 2011

Prepared for:

City of Escondido
Department of Engineering Services
201 North Broadway
Escondido, CA 92025

Prepared by:

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FOR THE
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ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	average daily trips
AMSL	above mean sea level
APE	area of potential effects
APS	Alternative Planning Strategy
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BFSA	Brian F. Smith and Associates
BMP	best management practice
BRTR	Biological Resources Technical Report
BSA	biological study area
BUOW	burrowing owl
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CH ₄	methane
CLOMR	conditional letter of map revision
CMU	concrete masonry unit
CNDBB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalent

CWA	Clean Water Act
dB	decibels
dBA	decibels, A-weighted
diesel PM	diesel particulate matter
EDI	Escondido Disposal, Inc.
EDR	Environmental Data Resources, Inc.
EIR	Environmental Impact Report
ERTC	Escondido Research and Technology Center
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
HA	Hydrologic Area
HAP	hazardous air pollutant
HARRF	Hale Avenue Resource Recovery Facility
HLP	Habitat Loss Permit
HU	Hydrological Unit
I-15	Interstate 15
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
JURMP	Jurisdictional Urban Runoff Management Plan
KCRC	Kumeyaay Cultural Repatriation Committee
kV	kilovolt
LAFCO	Local Agency Formation Commission
LBV	least Bell's vireo
L _{eq}	noise level equivalent
LID	low impact development
LOD	limit of disturbance
LOS	level of service
LVB	least Bell's vireo
MBTA	Migratory Bird Treaty Act
MEP	maximum extent practical
MHCP	Multiple Habitat Conservation Program
MLD	Most Likely Descendent
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons

MOM	San Diego Museum of Man
mph	miles per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MSAT	mobile source air toxic
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Plan
NCMSCP	North County Multiple Species Conservation Program
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
OHWM	ordinary high water mark
OPR	California Office of Planning and Research
PAMA	Pre-Approved Mitigation Area
PDF	Project design feature
PM	particulate matter
PM ₁₀	particulate matter equal to or less than 10 microns
PM _{2.5}	particulate matter equal to or less than 2.5 microns
ppm	parts per million
ppv	peak particle velocity
PRC	Public Resources Code
RAQS	regional air quality strategy
RCEM	Roadway Construction Emissions Model
RPO	Resource Protection Ordinance
RSA	Resource Study Area
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCIC	South Coastal Information Center

SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas & Electric
SDSU	San Diego State University
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO ₂	sulfur dioxide
SOI	sphere of influence
SPA	Specific Plan Area
SR-78	State Route 78
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board
TAC	Toxic Air Contaminant
TCM	Transportation Control Measure
TDS	total dissolved solids
TMDL	total maximum daily load
TMP	Traffic Management Plan
TNM	Traffic Noise Model
tpy	tons per year
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
VOC	volatile organic compound
vph	vehicles per hour

EXECUTIVE SUMMARY

S.1 PURPOSE OF THE EIR

This Draft Environmental Impact Report (EIR) has been prepared to evaluate the environmental effects of the proposed Citracado Parkway Extension Project located partially within the jurisdictional limits of the City of Escondido and partially within an unincorporated portion of San Diego County. The City of Escondido (City) proposes to improve and extend Citracado Parkway from West Valley Parkway to Andreasen Drive, providing an arterial connection and roadway improvements as further discussed in Chapter 2. In addition, the City is proposing the annexation of three parcels in proximity to the proposed roadway extension. The above-mentioned transportation improvements and extensions are consistent with the General Plan Circulation Element, which designates the ultimate classification of Citracado Parkway as a “Major Road.”

S.2 PROJECT CHARACTERISTICS

The City proposes to improve and extend Citracado Parkway from West Valley Parkway to Andreasen Drive. The proposed Citracado Parkway roadway extension would require a new structure crossing over Escondido Creek. The new structure may require landform alterations, cut slopes, and fill slopes. Minor street realignments and/or grade adjustments are also proposed for the intersection of Kauana Loa Drive with Harmony Grove Road. In addition, the proposed roadway extension would be built to accommodate the pending extension of Lariat Drive from the west, and access to the Hale Avenue Resource Recovery Facility (HARRF) via a new driveway connection. A temporary construction staging area has been identified east of the proposed roadway extension and south of Escondido Creek. Potential improvements for transit, such as Americans with Disabilities Act-compliant boarding pads and future bus stops, would be developed in coordination with North County Transit District.

In an effort to keep the proposed roadway extension within the jurisdictional limits of Escondido, the City is also proposing the annexation of three parcels crossed by or in proximity to the proposed roadway extension. This would avoid the potential need for a joint jurisdictional operation and maintenance agreement between the County and the City. All three parcels are currently under the jurisdiction of the County of San Diego and outside of the City’s sphere of influence (SOI) boundaries and would therefore require an SOI boundary adjustment in conjunction with the annexation.

S.3 PROJECT BACKGROUND

Recent redevelopment of the City's downtown area and development of outlying rural areas have gradually changed land use patterns within the city boundaries to increasingly urbanized forms. This intensification of land uses results in increased traffic generation. The proposed Citracado Parkway Extension Project (Project) is located near the southwesterly Escondido city limits, near San Marcos, and partially within an unincorporated area of San Diego County. This transportation facility was included in the City's 1990 General Plan, and remained in the 2000 General Plan Update. Developments on the nearby light industrial parcels and the rapidly developing Escondido Research and Technology Center (ERTC), including Palomar Medical Center West, have placed an emphasis on completing planned transportation facilities. The progress of development in the ERTC, as well as the projected local traffic level, has refocused the need to complete this link of Citracado Parkway, providing an arterial connection to West Valley Parkway and enhancing the traffic circulation network within southwestern Escondido.

S.4 ENVIRONMENTAL SETTING

The Project area is situated among low, rolling hills west of the Escondido Valley about 2 miles north of Lake Hodges. Elevations within the Project area range from 600 to 660 feet above mean seal level. The mean annual temperature ranges from 60 degrees to 62 degrees Fahrenheit, with annual precipitation averaging 14 to 18 inches. Soils are of the Vista Series, made up of well-drained, moderately deep and deep coarse sandy loams over weathered rock. The geology is dominated by outcrops and boulders of Mesozoic granitic rocks, which are very common in the area. Vegetation within the Project area is dominated by oak woodland composed of scattered coast live oaks (*Quercus agrifolia*) and Engelmann oaks (*Quercus engelmannii*), with an understory composed of introduced grasses and poison oak (*Toxicodendron diversilobum*). Other introduced species include eucalyptus trees, olive trees, fruit trees, and several grape vines.

S.5 ENVIRONMENTAL ANALYSIS

Construction and operation of the Project would result in potentially significant environmental impacts. Impacts associated with the following issue areas received detailed analysis in preparation of this EIR. Where impacts are identified as significant, feasible mitigation measures are proposed to reduce impacts to less-than-significant levels. Where mitigation measures are infeasible, a brief discussion is included addressing measures that were considered and reasons for not including mitigation. Feasible mitigation measures are outlined in Table S-1.

Table S-1 summarizes the results of the environmental analysis completed for the following issue areas that were determined to have significant impacts with Project implementation:

- Biological Resources
- Noise
- Traffic/Circulation
- Cultural Resources

As described further in Chapters 3 and 4 of this EIR, the following issue areas were determined to have less-than-significant impacts:

- Land Use
- Agricultural Resources
- Air Quality
- Geology and Soils
- Hydrology/Water Quality
- Municipal Services/Utilities
- Aesthetic and Visual Quality
- Hazards and Hazardous Materials
- Mineral Resources
- Population and Housing
- Recreation

**Table S-1
Summary of Significant Environmental Impacts and Mitigation Measures**

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
BIOLOGICAL RESOURCES		
<p>BIO-1. Permanent and temporary direct impacts to sensitive vegetation communities within the Project site would occur as a result of construction activities.</p>	<p>MM-BIO-1: Direct Impacts to Sensitive Vegetation Communities</p> <p>MM-BIO-1.1: To avoid incidental loss of sensitive habitat types during construction activities, environmentally sensitive area fencing shall be installed along the limits of disturbance prior to the start of construction. In addition, grading limits shall be flagged or fenced and grading shall not occur beyond this flagging/fencing. Construction crews shall be made fully aware of this boundary.</p> <p>MM-BIO-1.2: Temporary impacts to sensitive upland and wetland habitats shall be mitigated through replacement on-site at a ratio of 1:1 for a total of 6.28 acres of habitat restoration. In addition to the 6.28-acre area, any bareground post-construction (e.g., areas of ornamental, disturbed, and eucalyptus woodland habitat impacted during construction) shall be planted post-construction for erosion control purposes.</p> <p>MM-BIO-1.3: A restoration maintenance and monitoring plan for the 6.28 acres of habitat restoration, as described in MM-BIO-1.2, shall be prepared by a qualified restoration ecologist and shall incorporate an appropriate native species planting palette to blend in with the existing and surrounding habitats. Preference for habitat community restoration shall be determined based on the existing and surrounding habitats by a qualified restoration ecologist. Areas of nonnative grassland and eucalyptus woodland shall be restored in the form of native grassland and/or open oak woodland habitats. No nonnative species shall be incorporated into the restoration plan. This plan shall include details of site preparation, implementation and planting specifications, and maintenance and monitoring</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>procedures. The plan shall also outline yearly success criteria and remedial measures should the mitigation effort fall short of the success criteria.</p> <p>MM-BIO-1.4: Permanent impacts to sensitive upland habitats shall be mitigated off-site through drawdown of mitigation credits from the Daley Ranch Mitigation Bank. Mitigation shall be completed, as shown in Table 3.4-3, at ratios in accordance with the NCMSCP and Escondido Subarea Plan as the guiding regulatory documents for the proposed Project. Coast live oak woodland shall be mitigated at 2:1 inside PAMA and 1:1 outside PAMA for a total of 1.70 acres of mitigation. Coastal sage scrub shall be mitigated at 1.5:1 inside PAMA and 1:1 outside PAMA for a total of 0.63 acre of mitigation. Nonnative grassland shall be mitigated at a ratio of 1:1 inside PAMA and 0.5:1 outside PAMA for a total of 4.20 acres of mitigation. Total mitigation credit to be drawn down from the Daley Ranch Mitigation Bank shall be 6.53 acres.</p> <p>MM-BIO-1.5: Permanent impacts to riparian and wetland habitats shall be mitigated at a ratio of 2:1 for a total of 1.42 acres of mitigation required. All permanent shaded areas shall be mitigated at a ratio of 2:1 with the first 0.64 acre occurring through restoration on-site, and the remaining 0.64 acre occurring off-site. All other permanent impacts (0.07 acre) shall be mitigated for off-site at 2:1 for a total of 0.78 acre off-site (0.64+0.14). Off-site mitigation in the amount of 0.78 acre shall occur directly adjacent to the Project site at the southeast portion of the Hale Avenue Resource Recovery Facility (HARRF) Expansion Parcel.</p> <p>MM-BIO-1.6: A mitigation maintenance and monitoring plan for both on-site and off-site riparian and wetland mitigation, as described in MM-BIO-1.5, shall be prepared by a qualified restoration ecologist and shall incorporate an appropriate native species planting palette to blend in with the existing and surrounding habitats. This plan shall include details of site</p>	

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	preparation, implementation and planting specifications, and maintenance and monitoring procedures. The plan shall also outline yearly success criteria and remedial measures should the mitigation effort fall short of the success criteria.	
<p>BIO-2. Potential temporary and permanent indirect impacts to the vegetation communities surrounding the Project site would occur as a result of Project construction and operation.</p>	<p>MM-BIO-2: Indirect Impacts to Sensitive Vegetation Communities</p> <p>MM-BIO-2.1: Storage of soil or fill material from the Project site shall be within the Project area or developed areas. The contractor shall delineate stockpile areas on the grading plans for review by the City.</p> <p>MM-BIO-2.2: Construction access shall use existing developed areas or be within the right-of-way of proposed road improvements. If unauthorized new or temporary access routes are determined to be necessary, these areas shall be surveyed for biological resources prior to their use. Contractors shall clearly mark all access routes (i.e., flagged and/or staked) prior to the onset of construction. Implementation of erosion and sedimentation control measures as identified in MM-BIO-5 would also reduce any potential indirect impacts to sensitive vegetation communities to less than significant.</p> <p>MM-BIO-2-3: The contractor shall periodically monitor the work area to ensure that construction-related activities do not generate excessive amounts of fugitive dust. Water shall be applied to the construction right-of-way, dirt roads, trenches, spoil piles, and other areas where ground disturbance has taken place to minimize dust emissions and topsoil erosion.</p>	<p>Less than significant.</p>
<p>BIO-3. Within the Project site, construction and placement of the Escondido Creek Bridge would result in 0.01 acre of permanent direct impacts to potential jurisdictional waters. Temporary direct impacts to jurisdictional waters within the Project site would occur to 0.75 acre. Shading from bridge construction would directly and permanently impact 0.64 acre.</p>	<p>MM-BIO-3: Direct Impacts to Jurisdictional Waters</p> <p>MM-BIO-3.1: MM-BIO-1 requires mitigation for all permanent wetland habitat impacts at a ratio of 2:1. In addition, in accordance with resource agency policies, the mitigation shall not result in a net loss of wetland habitat or wetland functions and values. Therefore, a minimum of 1:1 of the final mitigation replacement ratio shall be</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>accomplished by wetland/riparian restoration at the southeast portion of the HARRF Expansion Parcel (0.78 acre). The proposed mitigation is subject to the resource agencies' review and discretion; thus, the mitigation obligations for the impacts to jurisdictional wetland habitats may change from those presented here.</p> <p>MM-BIO-3.2: Impacts to riparian habitats and wetlands, as well as jurisdictional waters, shall require the following permits by regulatory federal and state agencies and acts: (1) USACE, CWA, Section 404 permit for placement of dredged or fill material within waters of the U.S.; (2) RWQCB, CWA, Section 401 state water quality certification/waiver for an action that may result in degradation of waters of the state; and (3) CDFG, CFGC, Section 1602 agreement for alteration of a streambed. The mitigation could occur in the form of wetland/riparian creation or restoration (which both result in a gain of wetland/riparian area), or creation or restoration combined with enhancement.</p>	
<p>BIO-4. Impacts to jurisdictional waters would occur within a deed restricted mitigation area.</p>	<p>MM-BIO-4: Direct Impacts to a Deed Restricted Mitigation Area</p> <p>The deed restriction shall be removed from the area underneath the bridge. In kind, a deed restriction shall be placed on all mitigation acreage proposed at the southeast portion of the HARRF Expansion Parcel. In addition, an area of equal acreage to the area being removed from the deed restriction to the west of the bridge shall be placed under deed restriction in the vicinity of the now proposed mitigation location on the HARRF Expansion Parcel.</p>	<p>Less than significant.</p>
<p>BIO-5. Potential temporary and permanent indirect impacts to the jurisdictional waters surrounding the Project site would occur as a result of Project construction.</p>	<p>MM-BIO-5: Indirect Impacts to Jurisdictional Waters</p> <p>MM-BIO-5.1: As identified in MM-BIO-1, environmentally sensitive area fencing shall be installed at the Project site to ensure no unintentional impacts to sensitive habitats. In the area of the HARRF access driveway, the limits of potentially jurisdictional southern willow riparian forest shall be flagged for avoidance, and</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>silt fencing shall be installed in this location to avoid any indirect impacts to this potentially jurisdictional habitat.</p> <p>M-BIO-5.2: A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared to comply with RWQCB requirements. The SWPPP shall identify the design features and BMPs that will be used to effectively manage drainage-related issues (e.g., erosion and sedimentation) during construction. Erosion control measures shall be regularly checked by the contractor, the Project biologist, and/or the City. Specific BMP plans shall be reviewed by the City and the Project biologist and modified, if necessary, prior to implementation. Fencing and erosion control measures of all Project areas shall be inspected a minimum of once per week.</p> <p>MM-BIO-5.3: Activities, including staging areas, equipment access, and disposal or temporary placement of excess fill, shall be prohibited within off-site drainages. Implementation of measures as identified in MM-BIO-2 would also reduce any potential indirect impacts to jurisdictional waters to less than significant.</p>	
<p>BIO-6. Direct permanent impacts would occur to 16 mature and 12 protected trees.</p>	<p>MM-BIO-6: Direct Impacts to Mature and Protected Trees</p> <p>MM-BIO-6.1: Prior to the start of construction, all <i>mature</i> and/or <i>protected</i> trees shall be identified by a qualified biological monitor within the temporary and permanent impact areas. Impacts to trees in the temporary work area shall be avoided to the extent feasible. Trees in the temporary impact area that can be avoided shall be temporarily fenced off at the drip line of the tree to prevent impacts during construction.</p> <p>MM-BIO-6.2: If <i>mature</i> and/or <i>protected</i> trees cannot be preserved on-site, then impacts shall be mitigated as required under the City of Escondido Municipal Code (Chapter 33, Article 55). Where mature and protected trees occur in open oak woodland and/or riparian habitat, habitat-based mitigation as required under MM-BIO-1 and MM-BIO-3 will reduce impacts to less than significant.</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	Of the 38 mature trees, a total of 16 mature trees are not associated with riparian and oak woodland habitats on-site. These 16 mature trees that cannot be preserved on-site shall be replaced at a minimum 1:1 ratio. Of the 33 protected trees, a total of 12 protected trees are not associated with riparian and oak woodland habitats on-site. These 12 protected trees that cannot be preserved on-site shall be replaced at a minimum 2:1 ratio. The number, size, species, and location of replacement trees shall be determined on a case-by-case basis by the City of Escondido Planning Department. Replacement trees shall be incorporated into the on-site revegetation plan, as required in MM-BIO-1.	
BIO-7. Mature and/or protected trees were not surveyed in the buffer; however, indirect impacts may occur to those adjacent to the Project site. Potential temporary, indirect impacts to mature and/or protected trees would arise during Project construction as a result of runoff and sedimentation, erosion, and fugitive dust.	MM-BIO-7: Indirect Impacts to Mature and Protected Trees Implementation of measures as identified in MM-BIO-2 would reduce any potential indirect impacts to mature and protected trees to less than significant.	Less than significant.
BIO-8. Direct permanent impacts would occur to three Engelmann oak that occur in the planned grading areas.	MM-BIO-8: Direct Impacts to Sensitive Plant Species (Engelmann Oaks) Impacts to two Engelmann oak trees shall be avoided in the temporary impact area to the extent feasible, as required in MM-BIO-5. Permanent impacts to one Engelmann oak tree (and temporary impacts to the two Engelmann oak trees, if they cannot be avoided) shall be mitigated as required for protected trees under the City of Escondido Municipal Code (Chapter 33, Article 55). Engelmann oaks shall be replaced at a minimum 2:1 ratio at an on-site location, or elsewhere in the City, as determined by the City Director of Planning.	
BIO-9. Potential temporary, indirect impacts to Palmer's sagewort and Engelmann oak would arise during Project construction as a result of runoff, sedimentation, erosion, and fugitive dust. Potential permanent indirect impacts to Palmer's sagewort and Engelmann oak may occur during Project operation, such as habitat degradation and introduction of harmful exotic plant species.	MM-BIO-9: Indirect Impacts to Sensitive Plant Species (Palmer's Sagewort and Engelmann Oaks) MM-BIO-9.1: In the Project buffer, the four individuals of Palmer's sagewort shall be flagged for avoidance and further impacts shall be avoided through implementation of the following: no unnecessary or unauthorized trespass by workers or equipment	Less than significant.

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>in the Project buffer, prohibition of staging and storage of equipment and materials, prohibition of refueling activities, and prohibition of littering or dumping debris in areas known to contain Palmer’s sagewort outside the Project area. Palmer’s sagewort shall also be planted within the Project’s potential on-site wetland/riparian restoration area.</p> <p>MM-BIO-9.2: Implementation of measures identified in MM-BIO-2 would reduce any potential indirect impacts to Engelmann oaks to less than significant.</p>	
<p>BIO-10. Suitable Cooper’s hawk, yellow warbler, and yellow-breasted chat habitat present in the Project site would be directly impacted by construction of the Project. Operation of the Project may temporarily directly impact these species when tree trimming is necessary during routine maintenance.</p>	<p>MM-BIO-10: Direct Impacts to Cooper’s Hawk, Yellow Warbler, and Yellow-Breasted Chat and Other Migratory Birds</p> <p>Under CFGC Division 4, Part 2, Chapter 1, 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,” where “take” is defined under Division 0.5, Chapter 1, Section 86 as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” In addition, the MBTA restricts the killing of migratory birds or destruction of active migratory bird nests and/or eggs. Therefore, vegetation clearing should occur outside of the typical breeding season for raptors and migratory birds (February 1 through September 1). If this is not possible, then a qualified biologist shall conduct a survey for nesting birds no more than 5 calendar days prior to construction to determine the presence or absence of nests in the Project area, and the potential need for additional Project mitigation measures. If construction is halted for more than 5 calendar days during the breeding season, then nest surveys must be repeated prior to any additional vegetation clearing.</p>	<p>Less than significant.</p>
<p>BIO-11. Temporary, indirect impacts are likely to arise from construction-generated fugitive dust accumulation on surrounding</p>	<p>MM-BIO-11: Indirect Impacts to Cooper’s Hawk, Yellow Warbler, and Yellow-Breasted Chat and Birds and Other</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>vegetation and/or noise resulting in destruction and/or avoidance of habitat by wildlife. Operation of the Project may result in permanent indirect impacts to Cooper’s hawk, yellow warbler, and yellow-breasted chat, which includes edge effects, where the Project would lead to increased lighting, noise, and exotic plant and wildlife invasion.</p>	<p>Migratory Birds</p> <p>MM-BIO-11.1: If nesting birds, including but not limited to, special-status species and those species protected by the MBTA, are detected in the Project site or Project buffer, the nest shall be flagged and no construction activity shall take place within 500 feet of the nest until nesting is complete (nestlings have fledged or nest has failed) or a Project biologist and noise specialist have confirmed that construction noise levels are less than 60 dBA L_{eq} at the nest site.</p> <p>MM-BIO-11.2: If construction activities occur at night, all Project lighting (e.g., staging areas, equipment storage sites, roadway) shall be directed onto the roadway or construction site and away from sensitive habitat. Light glare shields shall also be used to reduce the extent of illumination into adjoining areas.</p> <p>MM-BIO-11.3: Final construction plans shall detail all operational street light locations and shall be provided to the City of Escondido Planning Department for review. Operational street lights shall be directed onto the roadway and away from open space areas. When considering spacing of lighting along the roadway, special consideration shall be given to the lighting along the new bridge and in the vicinity of the riparian habitat in Escondido Creek. Lighting in the area of Escondido Creek should be avoided if possible. If lighting is necessary for safe roadway operations in the vicinity of the creek, filters, shields, automatic dusk-to-dawn sensors, and/or other commercially available devices shall be implemented so that lighting is not reflecting into the adjacent riparian habitat. Final construction plans detailing lighting shall include specifications for all proposed devices to avoid lighting impacts within the riparian habitat adjacent to the bridge. These lighting specifications shall be reviewed and approved by the City of Escondido Planning Department prior to Project implementation.</p>	

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>MM-BIO-11.4: Operational traffic noise may reduce breeding potential for the yellow warbler, yellow-breasted chat, and Cooper’s hawk within 230 feet of the centerline of the bridge and/or roadway. Noise levels shall be considered when preparing the restoration plan to allow for the planting of mature and protected trees, as required in MM-BIO-6, in areas where traffic noise levels would not be expected to impact breeding and nesting activities of foraging raptors, including Cooper’s hawk. Implementation of habitat-based mitigation for direct impacts as described in MM-BIO-1 and MM-BIO-3 would result in an overall increase in suitable habitat for yellow warbler and yellow-breasted chat, and would reduce any potential indirect noise impacts to less than significant.</p> <p>MM-BIO-11.5: Implementation of measures as identified in MM-BIO-2 would also reduce any potential indirect impacts to sensitive wildlife species and birds protected under the MBTA to less than significant.</p>	
<p>BIO-12. The Project would result in direct construction-related impacts to migratory bird populations on-site in the form of habitat destruction, and potentially death, injury, or harassment of nesting birds, their eggs, and their young.</p>	<p>MM-BIO-12: Direct Impacts to Migratory Birds Implementation of measures as identified in MM-BIO-10 would reduce any potential direct impacts to migratory bird populations to less than significant.</p>	<p>Less than significant.</p>
<p>BIO-13. Temporary, indirect impacts are likely to arise from construction-generated fugitive dust accumulation on surrounding vegetation and construction-related erosion, runoff, and sedimentation into plant communities resulting in destruction and/or avoidance of migratory bird habitat. Additionally, construction-related noise is likely to cause migratory bird nest abandonment in areas adjacent to construction in the Project site.</p>	<p>MM-BIO-13: Indirect Impacts to Migratory Birds Implementation of measures as identified in MM-BIO-11.1, BIO-11.2, and BIO-11.3 would reduce any potential indirect impacts to migratory birds to less than significant.</p>	<p>Less than significant.</p>
<p>CULTURAL RESOURCES</p>		
<p>CR-1. Evidence of human remains was discovered during the testing at Site SDI-12,209 Locus 1 by EDAW in 2008 within the Project’s APE. No other remains were identified by BFSAs during subsequent subsurface excavations conducted in the Project APE. As noted previously, there is also the indication that the Project area was used</p>	<p>MM-CR-1: Human Remains Encountered within the Construction Zone</p> <p>MM-CR-1.1: In the event of the accidental discovery or recognition of any human remains in any location other than a</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>by Native Americans for religious, ritual, or other special activities based upon the recordation of pictographs adjacent to the Project's APE. Therefore, impacts to Native American burials and sacred site elements are expected. These impacts are considered significant.</p>	<p>dedicated cemetery, the following procedures shall be followed:</p> <ul style="list-style-type: none"> A. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: <ul style="list-style-type: none"> a. A City Official is contacted. b. The Coroner is contacted to determine that no investigation of the cause of death is required, and c. If the Coroner determines the remains are Native American: <ul style="list-style-type: none"> i. The Coroner shall contact the Native American Heritage Commission (Commission) within 24 hours. ii. The Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. Previous discoveries of human remains on this project resulted in the NAHC identifying two MLDs, the KCRC for the Kumeyaay and Carmen Mojado for the San Luis Rey (Luiseño). It is reasonable to assume that the MLDs will continue in that role for the duration of the project. iii. The Most Likely Descendent (MLD) may make recommendations to the landowner or the City for the excavation work. B. The Native American human remains and associated funerary items that are removed from the Project APE may be reburied at a location mutually agreed upon by the City and the MLD(s). If reinterment of human remains cannot be accomplished at the time of discovery, the MLD(s) shall either take temporary possession of the remains or identify a location for the temporary but secure storage of 	

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>the remains.</p> <p>C. Any time human remains are encountered or suspected and soil conditions are appropriate for the technique, the use of canine forensics will be considered when searching for human remains. The decision to use canine forensics will be made on a case-by-case basis through consultation between the City representative, the Consulting Archaeologist (defined as the individual charged with the responsibility of implementing the Mitigation Monitoring and Reporting Program and directing field excavations), and the MLD(s). Because human remains require special consideration and handling, they must be defined in a broad sense. For the purposes of this document, human remains are defined as:</p> <ul style="list-style-type: none"> a. Cremations including the soil surrounding the deposit, b. Interments including the soil surrounding the deposit, and c. Associated funerary items. <p>MM-CR-1.2: In consultation with the City representative, the Consulting Archaeologist, and the MLD, additional measures, such as focused archaeological excavations, may be required to determine the extent of burials or ensure the recovery of all elements of the burial.</p>	
<p>CR-2. Should human remains or sacred/religious artifacts be encountered and subsequently removed from the construction zone, the disposition of these remains after removal from the construction area represents a significant impact to Native American religious beliefs and customs (CR-2). Consultation with Native American representatives since 2008 has provided a platform to address the issue and propose mitigation measures to address this impact.</p>	<p>MM-CR-2: Disposition of Human Remains</p> <p>The majority of Locus 1 of SDI-8280 is situated outside of the Project’s APE and is located on property owned by the City of Escondido. To ensure the preservation of the significant pictographs recorded at SDI-8280 and located adjacent to the APE (and within the City’s ownership), the City shall delineate an area for preservation that encompasses the pictographs. Furthermore, because of the high potential to recover additional human remains</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>or sensitive artifacts associated with sacred, religious, or ceremonial components of the material cultural of the prehistoric occupants of these sites, the City shall also identify this preservation area within Locus 1 of SDI-8280 as a location for the repatriation and reburial of such sacred, religious, or ceremonial artifacts or human remains identified by the MLD(s) as appropriate for reburial.</p> <p>The preservation area within Locus 1 of SDI-8280 shall be either dedicated as an open space easement to ensure the perpetual protection of the pictographs and any reburied cultural materials; or, the preservation area may be legally separated from the City’s property and ownership conveyed to the Kumeyaay Land Conservancy to provide the local Native American community direct control of the preservation area for perpetual access to the human remains reburied there and to facilitate their guardianship over this location. From the perspective of CEQA and the mitigation of impacts to cultural resources, either method of preservation would be sufficient to accomplish the goal of the mitigation program. The proposed preservation area within Locus 1 of SDI-8280 is depicted in the BFSAs technical report.</p>	
<p>CR-3. The construction project represents a source of potential indirect impacts to the significant prehistoric pictographs at Locus 1 of SDI-8280 and at SDI-12,209. Blasting, grading, dust, flying debris, and general construction activity are considered sources of potential indirect impacts to the rock art panels at these sites. The pictographs at SDI-8280 are the most likely to be indirectly affected by grading because these are approximately 20 feet from the construction zone. Furthermore, significant features and deposits of both SDI-8280 and SDI-12,209 border the APE and may be indirectly impacted by inadvertent grading or construction. Indirect impacts would be significant if construction activities stray beyond the APE.</p>	<p>MM-CR-3: Indirect Impacts to Significant Cultural Deposits and Rock Art Elements at SDI-8280 and SDI-12,209</p> <p>MM-CR-3.1: Indirect impacts to elements of SDI-8280 and SDI-12,209 that are adjacent to the construction APE shall be mitigated through fencing that will be used to isolate the work area. Notes shall be placed on the construction plans and notices posted on the job site that areas outside of the APE contain significant archaeological resources. No construction activity shall be permitted outside of the APE unless that area has been reviewed for potential impacts to cultural deposits.</p> <p>MM-CR-3.2: Concerns over the pictograph at SDI-12,209, which is situated east of the alignment, have been raised by the Native American community. The boulder with the pictograph could be</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>affected by vibrations from blasting or heavy equipment. Measures would be required to ensure indirect impacts do not cause any damage to this feature. Measures to protect the feature may include wrapping the rock with layers of fabric to protect the pictograph image. Engineering assistance will be necessary to calculate the need for any structural shoring of the rock to prevent movement. This pictograph is located on private property, and measures to mitigate potential indirect impacts may require the consent of the property owner. The status of access to the boulder at the time of construction to provide mitigation of indirect impacts is not known at this time. If access is denied, measures to protect the pictograph rock will be limited to fencing along the limits of construction.</p> <p>MM-CR-3.3: The pictographs located in Locus 1 of SDI-8280 are situated near the APE and may be affected by the grading of the new road. The southernmost of the pictographs is immediately adjacent to the road cut, and will be very near the construction activity, which represents a source of potential indirect impacts. To ensure the preservation of the pictograph, measures will be needed to secure the boulder from dust and debris, vibrations, and any damage to the surface of the boulder. The following measures shall be completed prior to the initiation of grading within 500 feet of the pictographs at Locus 1 of SDI-8280:</p> <ul style="list-style-type: none"> A. The project engineer/design consultant shall devise a method to secure the slope between the southern pictograph boulder and the proposed retaining wall immediately adjacent to the pictograph. B. The drilling of tie rods needed to secure the retaining wall adjacent and downslope from the southern pictograph shall not cause any degradation to the soil below the pictograph that might over time affect the stability of the feature. C. Dust and debris from the grading of the road will affect and potentially damage the painted surface of the pictographs. Measures shall be implemented to ensure the 	

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>surfaces of the boulders are protected. These measures shall include the wrapping of the boulder first in a cloth to cover the boulder surface. A framework of either PVC poles or lumber shall be constructed with no less than 1 foot of separation from the boulder surface. This framework will be covered with plastic or plywood sheeting that will stop dust and any flying debris from contact with the boulder. The “shrouding” of the pictographs is intended to keep all dust and debris from contact with the boulders. Additional measures may be required if the Consulting Archaeologists charged with implementation of the mitigation program, in consultation with the MLDs, determine that these measures noted above are not adequate to satisfy the intention of this mitigation measure.</p> <p>D. Following the completion of the road project, all protective materials shall be removed from the pictographs and the area returned to its natural setting.</p>	
<p>CR-4. The present study indicates that approximately 6,157 square meters of SDI-12,209 Locus 1 and 3,751 square meters of Locus 2 will be impacted by the proposed Project. Because the testing and evaluation program identified an intact subsurface deposit, the site is considered to have additional research potential. Therefore, Site SDI-12,209 is considered an important cultural resource according to the criteria listed in CEQA, Section 15064.5, and any impacts to the cultural resource will be considered significant.</p>	<p>MM-CR-4: Direct Impacts to Significant Elements of SDI-12,209</p> <p>For direct impacts to significant components of Site SDI-12,209 (Loci 1 and 2), mitigation of those impacts would be achieved through the implementation of a data recovery program. As a condition of approval for this project, and prior to the initiation of any clearing, grading or construction associated with the road project within the boundaries of the cultural sites, the City shall direct the archaeological consultant to prepare a detailed research design to orientate the research perspective, stipulate the archaeological goals, address Native American concerns, and direct the excavation process. The implementation of the research design constitutes mitigation for the proposed destruction of the significant portions of archaeological Site SDI-12,209 (Loci 1 and 2) within the alignment. The mitigation of impacts shall be achieved by the excavation and analysis of a sufficient sample of the significant</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>deposits affected to exhaust the research potential of those areas. Based on the archaeological research records for this region, and following widely applied guideline requirements from agencies in this area, mitigation of impacts through applied data recovery programs will typically target a 10 to 15 percent sample as a statistically valid recovery level for significant deposits. However, the overriding measure of the adequacy of a sample of a significant deposit is the exhaustion of research potential and achievement of a redundant artifact recovery pattern. To facilitate the periodic review of the excavation collection and assessment of the status of the information accumulated, the data recovery program will utilize a statistical sampling process that will require the evaluation of the excavation at 5 percent sample increments, or phases. At the conclusion of each phase of sampling (potentially Phases 1, 2, 3), the Consulting Archaeologist shall determine if the subsequent phase of sampling is required, using criteria listed in the research design, and potentially stratifying the subsequent sample phase to focus excavations in areas with higher research potential. The Consulting Archaeologist responsible for the mitigation program will have the latitude to adjust the stratified sampling process to maximize efforts in any particular areas that possess identified higher research potential. The sampling protocol is highlighted below, but will be presented in greater detail in the research design.</p> <p>A. The basic unit of the data recovery field program will be standard one-meter-square test units. Each unit will be excavated using common archaeological protocols for fieldwork, including the excavation of each unit in decimeter levels to a depth that exceeds the lowest depth of the cultural deposit. All excavations will be completed using hand tools and work will be approached in a careful, professional manner. All of the soil excavated from the units will be subjected to hydro-screening on-site. The use of water to separate dirt from the archaeological collections will ensure that any human remains are immediately revealed and will also enhance the recovery</p>	

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>of cultural materials that may be too small to otherwise be identified. All soils will be hydro-screened through one-eighth-inch mesh hardware cloth, with at least 10 percent of the excavated sample to be screened with one-tenth-inch mesh hardware cloth to search for those elements of the deposit that otherwise would pass through the one-eighth-inch mesh. All recovered cultural materials will be bagged by provenience, labeled, and transported to a secure location for laboratory analysis.</p> <p>B. All excavations (both archaeological and construction-related) will include monitoring by Luiseño and Kumeyaay MLDs (or their designated representatives).</p> <p>C. Detailed field maps will be completed using Global Positioning System technology with submeter accuracy to record all excavations and features encountered.</p> <p>D. Phase I of the fieldwork program will include a five percent hand-excavated sample of each identified subsurface deposit that will be directly impacted.</p> <p>E. At the completion of Phase I, the Consulting Archaeologist shall evaluate the results and consider issues of site integrity, data redundancy, spatial and temporal patterning, features, and other relevant topics in order to assess the adequacy of the initial five percent sample. Based on this assessment, the site will be stratified to delineate areas with further research potential or the potential to produce features. A second phase of field investigations would consist of an additional five percent sample of that stratified area with further research potential. Adjustments in the sample size shall be an option of the Consulting Archaeologist should the assessment of the sources of the Phase I sample indicate the Phase II sample should be less than five percent.</p>	

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>F. Implement Phase II of fieldwork, as necessary. Upon completion of the second phase of sampling, the Consulting Archaeologist will evaluate the success of the Phase II and consider the need for further sampling. Should this analysis confirm research potential remains, a third phase (Phase III) will be employed. Typically, as a product of site organization and use pattern during the Late Prehistoric period, the sampling process will identify a core area of more intense artifact concentration and variety of artifact types. The final phase (Phase III) of the stratified sample would commonly employ a large block excavation to focus Phase III efforts only upon the core deposit.</p> <p>G. Implement Phase III of sampling if determined to be necessary.</p> <p>H. Conduct an intensive laboratory program for all recovered cultural materials. All items in the collection will be subjected to standard laboratory procedures of cleaning, cataloging, data entry, and artifact analysis including lithics analysis, ceramics analysis, faunal analysis, floral analysis, assemblage analysis, and radiocarbon dating.</p> <p>I. Provide evidence to the satisfaction of the City that all archaeological materials recovered, during both the significance testing and data recovery phases, have been curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation. Agreements with the Native American representatives regarding elements of the archaeological excavation recovery will supersede curation requirements if these artifacts are requested by the tribes for repatriation,</p>	

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>relocation, and/or reburial.</p> <p>J. Complete and submit the Final Technical Report to the satisfaction of the City.</p>	
<p>CR-5. The alignment for Citracado Parkway will pass through two significant prehistoric sites and across an area used extensively by prehistoric inhabitants of this village complex. The potential exists that undocumented cultural deposits may be encountered during grading of the Project. Impacts to undocumented elements of SDI-8280 or SDI-12,209 may be significant.</p>	<p>MM-CR-5: Potential Impacts to Undocumented Cultural Deposits During Grading</p> <p>The construction of the Citracado Parkway Extension would require the implementation of a Mitigation Monitoring and Reporting Program (MMRP). The basis for this requirement is that the construction APE will include known significant cultural resources and areas where potentially important cultural deposits could be discovered. To identify any significant and previously undocumented elements of SDI-8280 and SDI-12,209, the MMRP will require the presence of an archaeological monitor, as well as Luiseño and Kumeyaay Native American monitors, during all grading and trenching associated with the project. The MMRP shall state the following:</p> <p>MM-CR-5.1: During the cutting of previously undisturbed deposits, Archaeological and Native American monitors shall be on-site full time to perform inspections of the excavations. The number of monitors will depend on the rate of excavation, the number of areas being graded at any one time, the materials excavated, and the presence and abundance of artifacts and features. The Consulting Archaeologist shall provide the City with a rationale for the number of monitors needed to comply with the mitigation measure.</p> <p>MM-CR-5.2: Isolates and clearly nonsignificant deposits will be minimally documented in the field and the monitored grading can proceed.</p> <p>MM-CR-5.3: In the event that previously unidentified and potentially significant cultural resources are discovered, the Consulting Archaeologist shall have the authority to divert or</p>	<p>Less than significant.</p>

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>temporarily halt ground disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The Consulting Archaeologist shall contact the City representative at the time of discovery. The Consulting Archaeologist, in consultation with City staff, shall determine the significance of the discovered resources. For any significant cultural resources discovered during monitoring of grading, further mitigation measures (data recovery) will be necessary to complete the impact mitigation. A detailed description of additional mitigation measures will be prepared by the Consulting Archaeologist and approved by the City, prior to implementation. If any human remains are discovered, the County Coroner shall be contacted (see MM-CR-2). In the event that the remains are determined to be of Native American origin, the MLDs shall be contacted in order to determine proper treatment and disposition of the remains.</p> <p>MM-CR-5.4: All cultural material collected during the grading monitoring program shall be processed and curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation. Agreements with the MLDs regarding elements of the archaeological excavation recovery will supersede curation requirements if these artifacts are requested by the MLDs for repatriation, relocation, and/or reburial.</p> <p>MM-CR-5.5: A section of the final data recovery report for the Citracado Extension Project shall include a description of the mitigation monitoring program and a report of all findings made during the monitoring process.</p>	
NOISE		
Construction-generated noise associated with the proposed Project would not result in significant temporary noise impacts to noise-	No construction-related temporary noise impacts to sensitive receptors were determined in the preceding analysis. As a result, no	Significant and unavoidable.

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>sensitive receptors. The proposed Project would not expose local sensitive receptors to significant temporary impacts resulting from groundborne vibrations</p> <p>NOISE-1. With implementation of the proposed Project, 2014 noise levels would range from 54 to 71 dBA CNEL; 31 receptors would be exposed to noise levels equal to or greater than 60 dBA CNEL and 10 receptors would be exposed to noise level greater than 65 dBA CNEL. Noise-level increase under the Build Condition in 2014 would range from -4 to 21 dBA over the projected 2014 No Build and 1 to 24 dBA over existing 2010 noise levels; 16 receptors would be exposed to a noise-level increases of 5 dBA or greater when comparing the 2014 Build and No Build Conditions.</p> <p>Under 2030 conditions all receptors except R33, and R39 would be exposed to noise levels in excess of 6 dBA or to noise increases over existing 2010 conditions of greater than 5 dBA. The Project would result in a cumulatively considerable substantial increase in noise levels, i.e. an increase greater than 1 dBA with Project, at receptors R22, R27, R28, R30, R31, R34, R35, R36, R37, R38. Based on the noise levels presented in Table 3.9-8, R22, R27, R28, R30, R31, R34 and R36 would be exposed to a substantial increase in noise levels and a noise level in excess of 60 dBA CNEL. Therefore, the proposed Project would cause a significant impact at R22, R27, R28, R30, R31, R34, and R36 (NOISE-1).</p>	<p>mitigation is required for Project-related temporary construction noise.</p> <p>MM-NOISE-1: Sound Walls</p> <p>Soundwalls shall be constructed as shown in Figure 3.9-3. To reduce noise levels to 65 dBA CNEL or less, soundwall 1 (SW1) and soundwall 2 (SW2) shall be 10 feet in height and soundwalls 3–5 (SW3–SW5) shall be 8 feet in height. Additionally, to achieve a noticeable reduction (i.e., 3 dBA) an 8-foot-high soundwall (SW6) shall be constructed for R24 and R31, 6-foot-high soundwalls (SW7+SW8) shall be constructed for R34 and R35, and a 12-foot-high soundwall shall be constructed for R37 (SW9).</p> <p>Mitigation was designed for R36 due to a cumulatively considerable impact but was determined infeasible, as no configuration could achieve a 3 dBA reduction due to the design and access requirements of the lot.</p> <p>While the proposed project would result in a substantial permanent increase in noise levels, with inclusion of the modeled walls in the proposed project at the specified heights, the proposed Project would not expose local noise-sensitive receptors to noise levels in excess of 65 dBA CNEL and would not exceed interior noise level standards.</p> <p>Given the City’s goal of 60 dBA, even with the implementations of proposed mitigation, the proposed project would result in a significant unavoidable impact at receptors R2, R4 through R10, R14 through R16, R18 through R20, R23, R24, R26 through R29, and R36, as noise levels would continue to exceed 60 dBA CNEL.</p> <p>As the walls for R34, R35, and R37 are located on private property, permission would be required by the property owners to construct the soundwalls. Thus, it cannot be guaranteed that the soundwalls</p>	

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	for these locations can be built. If the identified soundwalls cannot be built, impacts at these receptors would be significant and unavoidable.	
TRAFFIC AND CIRCULATION		
TR-1. For the year 2014 forecast scenario, the proposed Project would have a significant adverse impact on the operations of the intersection at Citracado Parkway and West Valley Parkway (level of service [LOS] at this intersection would decline from LOS D to LOS F with Project implementation).	It is recommended that this intersection be left unimproved until Citracado Parkway can be extended to the east to connect to Interstate 15 (I-15) and/or lane geometry improvements can be made at the intersection. No mitigation measures are proposed as a part of this Project, and this impact would remain significant and unavoidable.	Significant and unavoidable.
TR-2. For the year 2014 and year 2030 forecast scenarios, the proposed Project would have a significant adverse impact on the operations of the intersection at Del Dios Highway and Via Rancho Parkway. Year 2014 and year 2030 LOS at this intersection would be LOS F with Project implementation. The proposed Project would reduce the AM LOS value from LOS D to LOS F, and would also cause an incremental contribution to PM traffic volumes at the intersection that would result in a significant increase in motorist delay compared to the no project condition.	In the event that this intersection receives no San Diego County (County) improvements, or if the City of Escondido (City) does not complete the Citracado Parkway link to I-15, then this impact would remain significant and unavoidable. No mitigation measures are proposed as a part of this Project (although other planned improvements would likely reduce this impact), and this impact would remain significant and unavoidable.	Significant and unavoidable.
TR-3. For the 2014 forecast scenarios, the proposed Project would have a significant adverse impact on the operations of the Via Rancho Parkway street segment south of Del Dios Highway. The average daily LOS for this segment would decline from LOS D to LOS E with Project implementation.	No mitigation measures are proposed as a part of this Project, and this impact would remain significant and unavoidable.	Significant and unavoidable.
TR-4. For the 2014 forecast scenarios, the proposed Project would have a significant adverse impact on the operations of the West Valley Parkway/Del Dios Highway (where Del Dios Highway begins within the County limits) segment between Citracado Parkway and Via Rancho Parkway. The average daily LOS for this segment would be LOS F with or without Project implementation. Although the proposed Project would not reduce the LOS value (LOS F is the lowest rating), the incremental contribution of the Project to traffic volumes along the segment would exceed the County's significance criteria for a significant impact by adding 200 or more average daily trips (ADT) to a street segment performing at LOS F.	No mitigation measures are proposed as a part of this Project, and this impact would remain significant and unavoidable.	Significant and unavoidable.

Results of Impact Analysis	Mitigation	Impact Level After Mitigation
TR-5. Temporary vehicular traffic disruptions and detours during Project construction would result in a temporary short-term adverse impact on alternative transportation facilities.	MM-TR-5: A Traffic Management Plan would be prepared to address the traffic control procedures during construction of the proposed Project. The plan would include measures to provide alternate routes for bicyclists and pedestrians that would use facilities affected by Project construction. Implementation of an approved Project Traffic Management Plan would reduce this impact to less than significant.	Less than significant.

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CHAPTER 1.0 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

This Draft Environmental Impact Report (EIR) has been prepared to evaluate the environmental effects of the proposed Citracado Parkway Extension Project. The City of Escondido (City) proposes to improve and extend Citracado Parkway from West Valley Parkway to Andreasen Drive, providing an arterial connection and roadway improvements from West Valley Parkway north to Andreasen Drive as further discussed in Chapter 2. In addition, the City is proposing the annexation of three parcels in proximity to the proposed roadway extension. The parcels, Private Parcel A, Private Parcel B, and City Parcel C, will be referenced in this document as Parcels A, B, and C. The above-mentioned transportation improvements are consistent with the General Plan Circulation Element, which designates the ultimate classification of Citracado Parkway as a “Major Road.”

The proposed Project is located partially within the western limits of the City and partially within an unincorporated area of San Diego County (County), approximately 1.5 miles west of Interstate 15 and 1.5 miles south of State Route 78. Figure 1-1 is a regional location map and Figure 1-2 is a site vicinity map. Figure 1-3 shows an aerial image of the Project vicinity.

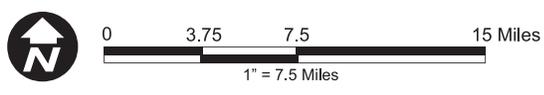
1.2 ENVIRONMENTAL REVIEW PROCESS

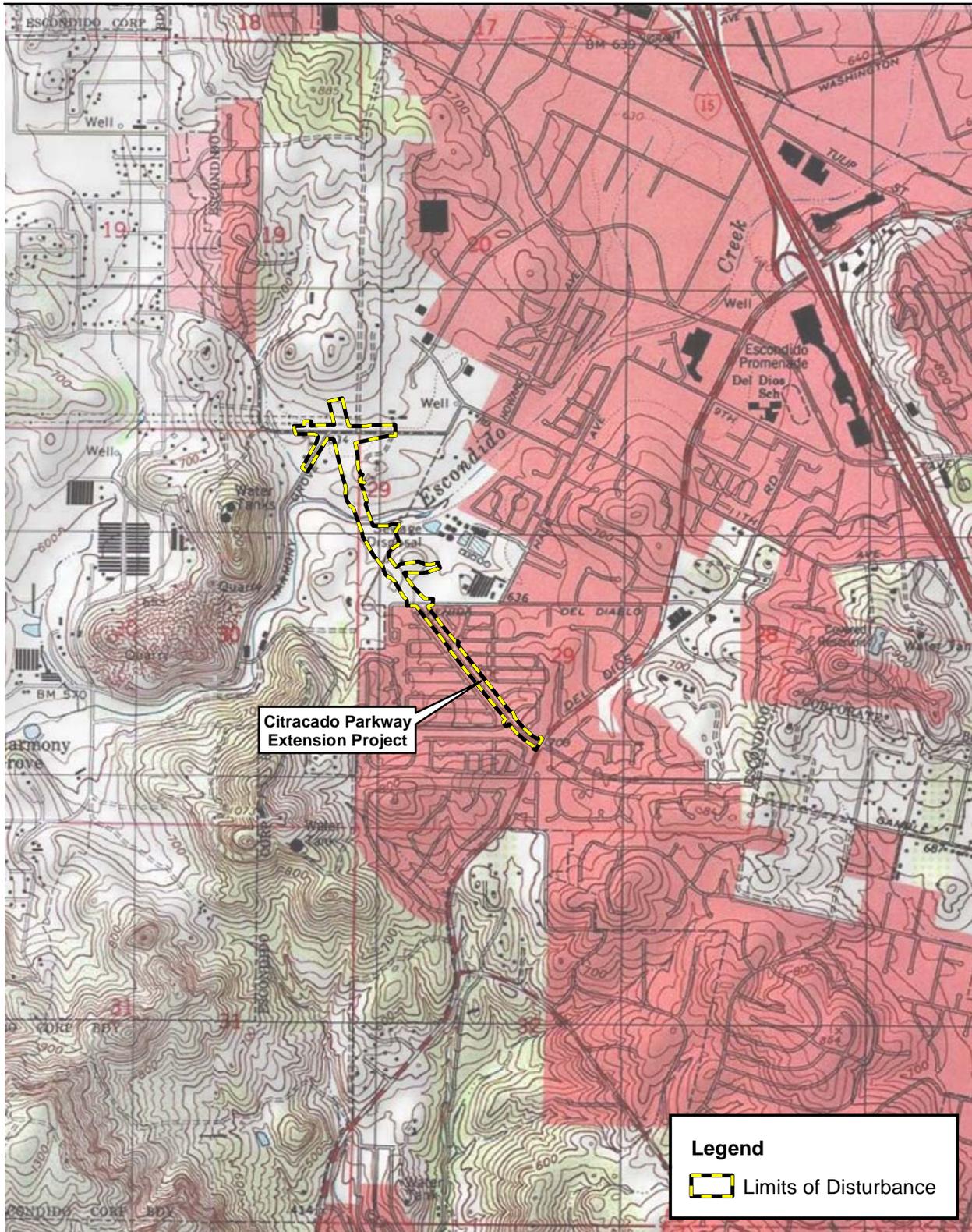
An EIR is an informational document used by the lead agency (in this case, the City of Escondido) when considering approval of a project. The purpose of an EIR is to provide public agencies and members of the general public with detailed information concerning the environmental effects associated with the implementation of a project. An EIR analyzes the environmental effects of a project, indicates ways to reduce or avoid potential environmental effects resulting from the project (i.e., mitigation measures), and identifies alternatives to the proposed project that are capable of avoiding or reducing impacts. The California Environmental Quality Act (CEQA) requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority. This EIR provides information that is to be used in the planning and decision-making process. It is not the purpose of an EIR to recommend approval or denial of a project.

Prior to approval of a project, the City, as lead agency and decision-making entity, is required to certify that the EIR has been completed in compliance with CEQA, that the information in this EIR has been considered, and that the EIR reflects the independent judgment of the City. CEQA



Figure 1-1
Regional Location Map





Source: USGS 7.5' Quadrangles, Escondido 1975, Valley Center 1975, Rancho Santa Fe 1983, San Marcos 1983; AECOM 2011

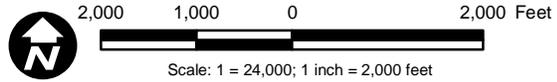
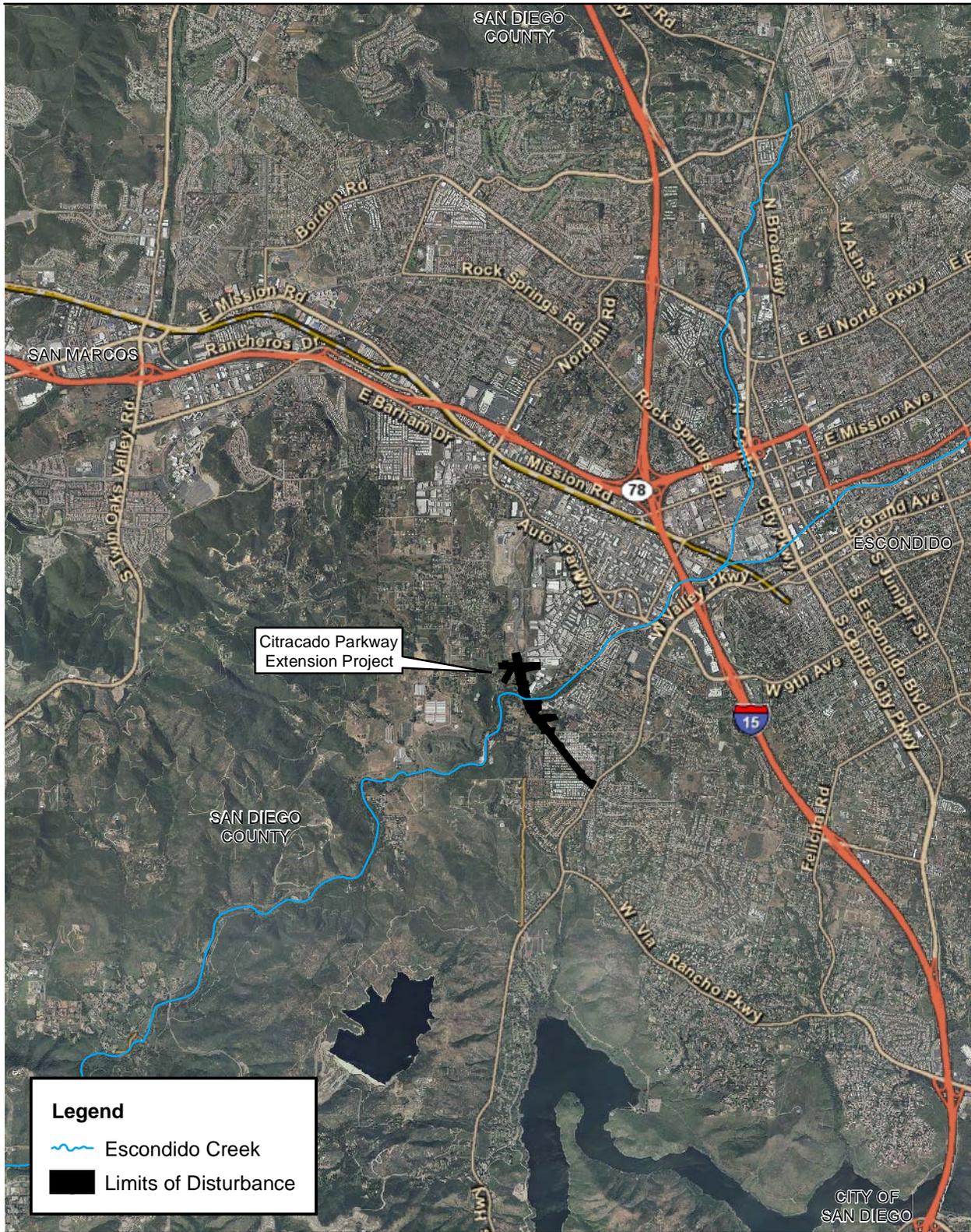


Figure 1-2
Vicinity Map

Citracado Parkway Extension Project Draft EIR

Path: P:\2006\06080144 Citracado Pkwy\GIS\MXD\2011_mxd\EIR_2011\vicinity_map.mxd, 5/25/2011, Lee J



Source: Boyle Engineering 2007; ESRI 2011; Landiscor 2010; AECOM 2011

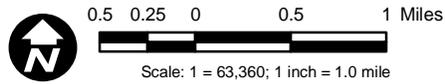


Figure 1-3
Vicinity Map - Aerial Image

Citracado Parkway Extension Project Draft EIR

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requires decision makers to balance the benefits of a proposed project against its unavoidable environmental consequences. If environmental impacts are identified as significant and unavoidable, the City may still approve a project if it believes that social, economic, or other benefits outweigh the unavoidable impacts. The City would then be required to state in writing the specific reasons for approving a project based on information in the EIR and other information sources in the administrative record. This reasoning is called a “statement of overriding considerations” (CEQA Guidelines Section 15093).

In addition, public agencies, when approving a project, must adopt a mitigation monitoring and reporting program (MMRP) describing the measures that were made a condition of project approval in order to avoid or mitigate significant effects on the environment (Public Resources Code [PRC] Section 21081.6[a][1]). The MMRP is adopted at the time of project approval and is designed to ensure compliance during and after project implementation. If the City decides to approve a project, it will be responsible for ensuring implementation of an MMRP. The MMRP will be included in Appendix A of the Final EIR.

Consistent with the requirements of CEQA, a good faith effort has been made during the preparation of the Draft EIR to contact affected agencies, organizations, and persons who may have an interest in the Project. This includes the circulation of a Notice of Preparation (NOP) on April 11, 2007, which began a 30-day comment period. A total of six comments were received during this time and were considered in preparation of the Draft EIR. The NOP and comment letters are included in this document as Appendix B.

The City filed a Notice of Completion with the Governor’s Office of Planning and Research, State Clearinghouse, indicating that this Draft EIR has been completed and is available for review and comment by the public. A Notice of Availability of the Draft EIR was published concurrently with distribution of this document. This Draft EIR is being circulated for 45 days for public review and comment. The duration of the public review is from September 1, 2011 to October 17, 2011. During this period, comments from the general public, organizations, and agencies regarding environmental issues identified in the Draft EIR and concerning the Draft EIR’s accuracy and completeness may be submitted to the lead agency at the following address:

Bill Martin, Principal Planner
City of Escondido
Planning Department
201 North Broadway
Escondido, CA 92025
(760) 839-4671

Comments may be made on the Draft EIR in writing before the end of the comment period. The City will prepare written responses to comments made in writing. Upon completion of the public review period, a Final EIR will be prepared and will include the comments on the Draft EIR received during the formal public review period, and responses to those comments.

1.3 SCOPE OF THE EIR

The initial identification of general areas of environmental impacts to be addressed in this EIR is contained in the NOP issued by the City. The comments received in response to the NOP were used to determine the scope of the EIR. The NOP identified the following issues to be evaluated for potential significant effects:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Hydrology/Water Quality
- Hazards and Hazardous Materials
- Noise
- Traffic
- Visual Resources

Subsequent evaluation of Project submittals by City staff, review of NOP comments, and the evaluation of potential environmental effects as this EIR was prepared resulted in the addition of Agricultural Resources, Municipal Services/Utilities, Land Use, and Climate Change as subjects of discussion in the Draft EIR. The analysis for this Draft EIR identified a number of areas of potential environmental concern where no significant impacts are anticipated as a result of implementing the proposed Project. Those issues for which effects were found not to be significant are Mineral Resources, Paleontological Resources, Population and Housing, Hazards and Hazardous Materials, and Recreation. These are described in Chapter 4 of this Draft EIR and are not discussed in detail (CEQA Guidelines, Section 15128).

1.4 STRUCTURE OF THE EIR

This EIR contains the chapters summarized below.

Executive Summary. This section summarizes the purpose of the EIR and the need for the Project. Environmental consequences that would result from the proposed Project are briefly addressed, and a summary table is provided that lists the Project's anticipated significant environmental impacts and recommended mitigation measures.

Chapter 1: Introduction. This chapter provides an introduction to the Project and describes the purpose of the EIR and the CEQA process.

Chapter 2: Project Description. This chapter details the Project components, including the Project's purpose and objectives, Project features, and proposed construction activities.

Chapter 3: Environmental Setting and Impact Analyses. This chapter describes the existing conditions for each of the environmental topics determined to have a potential for significant environmental impacts after preliminary analysis by the City Planning Division, states the environmental issues identified for the Project, evaluates the potential significant environmental impacts of the proposed Project, and incorporates mitigation measures to avoid or reduce the significance of potential impacts.

Chapter 4: Effects Found Not to Be Significant. This chapter analyzes potential environmental effects identified by the City Planning Division that, after preliminary analysis, were determined to not be significant.

Chapter 5: Alternatives to the Proposed Project. This chapter considers alternatives to the Project that could reduce one or more of the significant environmental impacts identified in Chapter 4. This chapter includes the No Project Alternative, No Annexation Alternative, and a Bridge over Harmony Grove Road Alternative.

Chapter 6: Cumulative Impacts. This chapter analyzes the potential significant Project effects that, when considered with other closely related past, present, and reasonably foreseeable future projects, could compound or increase environmental impacts. The impacts of global climate change are also discussed in this chapter.

Chapter 7: Other Considerations Required by CEQA. This chapter identifies the changes in the local environment that would result from implementation of the proposed Project. As required by the CEQA Guidelines, Growth Inducement provides an analysis of the ways in which the Project could foster economic or population growth, either directly or indirectly, in the surrounding area.

Chapter 8: List of Preparers and Persons Contacted. This chapter identifies the persons and organizations that participated in the preparation of the EIR.

Chapter 9: References. This chapter provides a list of the sources referenced in the EIR.

Appendices: The MMRP, NOP, several technical studies, and supplemental data prepared for the Project are provided in this section of the EIR.

CHAPTER 2.0

PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND

Escondido has experienced a pattern of consistent growth for a number of years. The City's growth and development included the redevelopment of the downtown area and the ongoing development of the outlying regions of the City, which have resulted in an intensification of land uses and increased traffic generation. As a result, the City has placed a new emphasis on completing planned transportation facility improvements. The proposed Citracado Parkway Extension Project would provide an arterial connection and roadway improvements from West Valley Parkway north to Andreasen Drive. The proposed roadway extension Project addresses needed transportation facility improvements and would also implement a planned component of the City's Circulation Element.

The proposed Project area is located partially within the western limits of Escondido and partially within an unincorporated area of San Diego County (County), approximately 1.5 miles west of Interstate 15 (I-15) and 1.5 miles south of State Route 78 (SR-78). The proposed Project area is surrounded by light industrial/heavy commercial uses to the north and east, and residential/rural residential uses within the County's Harmony Grove community to the west and south. Many of the lots slated for industrial/commercial development are either under ongoing development or are graded for anticipated development.

The City's General Plan was adopted on June 6, 1990, and includes a Circulation Element. The Circulation Element identified this proposed roadway extension as a future improvement. The General Plan identified land use designations consistent with the ongoing industrial/heavy commercial development. The General Plan Circulation Element designates the ultimate classification of Citracado Parkway as a "Major Road."

2.2 PROJECT OBJECTIVES

The City seeks to complete a critical link in the General Plan Circulation Element that enhances circulation to regional medical facilities and accommodates increased traffic generated from planned residential and industrial/commercial growth in the general area. The improvements would achieve the following primary objectives:

1. Provide more direct access for drivers traveling to recent and planned developments such as the Escondido Research and Technology Center (ERTC) and Palomar Medical Center West, Citracado High School, residential neighborhoods, and commercial developments, and areas to the southeast (including the Felicita, Del Dios, and Lake Hodges neighborhoods in south Escondido and access for I-15).
2. Provide a direct connection between SR-78 and Del Dios Highway, and eventually connect SR-78 to I-15, which will enhance freeway access for businesses and residents in the southwestern area of the City.
3. Reduce existing and projected traffic congestion on local collector and arterial streets (e.g., Harmony Grove Road, West Valley Parkway, and 9th Avenue).
4. Provide facilities to improve connectivity and travel conditions for bicyclists and pedestrians.
5. Contribute to a safe and efficiently performing circulation system.
6. Implement a planned component of the City's General Plan Circulation Element.
7. Remain within funding constraints identified in the City's capital improvement plan.
8. Streamline Project review and permit requirements by expanding the City's sphere of influence (SOI) and annexing three parcels of County land.

2.3 PROJECT CHARACTERISTICS

The City proposes to improve and extend Citracado Parkway from West Valley Parkway to Andreasen Drive. The proposed Project would require a new structure crossing over Escondido Creek. The new structure may require landform alterations, cut slopes, and fill slopes. Minor street realignments and/or grade adjustments are also proposed for the intersection of Kauana Loa Drive with Harmony Grove Road. In addition, the proposed roadway extension would be built to accommodate the pending extension of Lariat Drive from the west, and access to the Hale Avenue Resource Recovery Facility (HARRF) via a new driveway connection. A temporary construction staging area has been identified east of the proposed roadway extension and south of Escondido Creek. Potential improvements for transit, such as Americans with Disabilities Act (ADA)-compliant boarding pads and future bus stops, would be developed in coordination with North County Transit District.

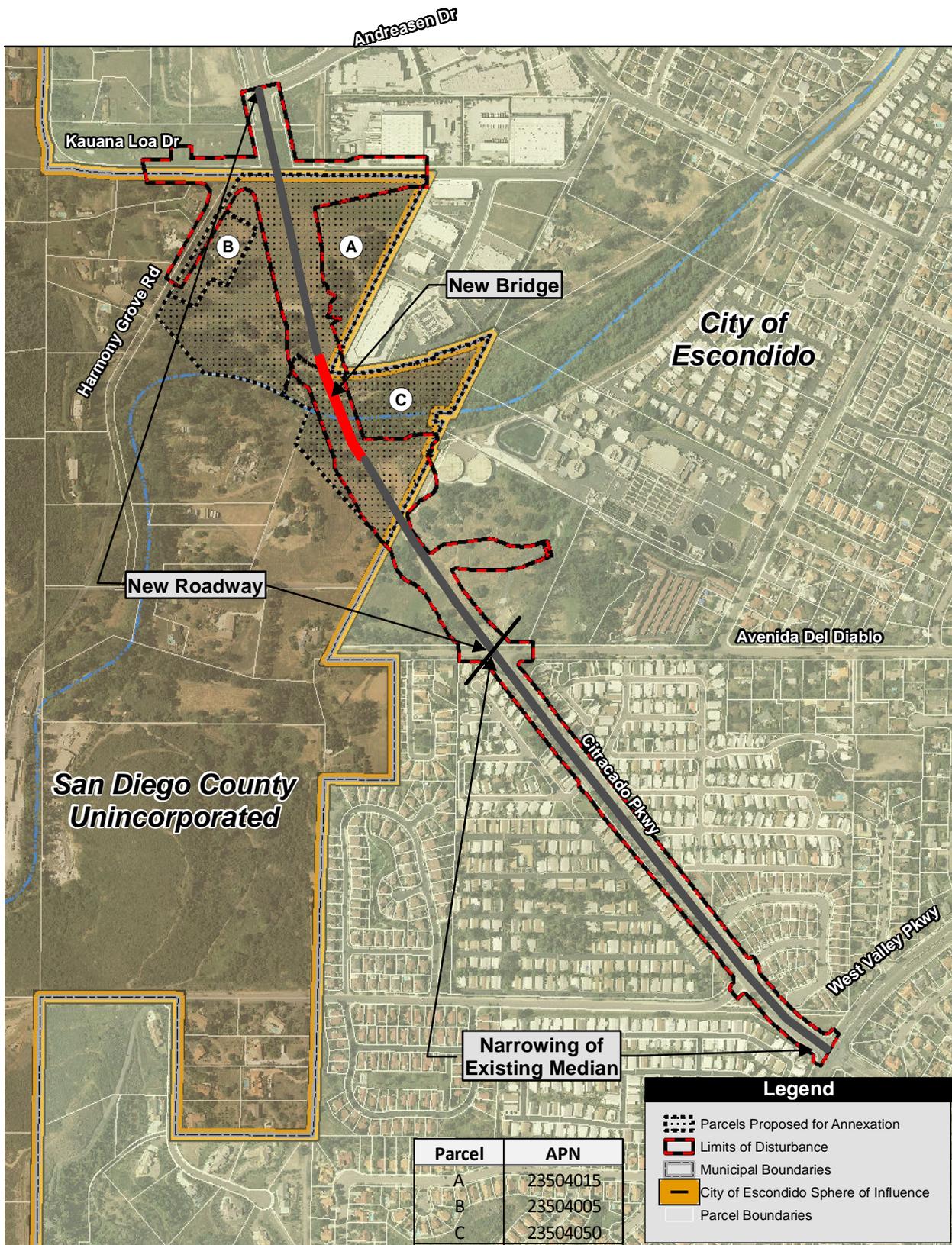
In an effort to keep the proposed roadway extension within the jurisdictional limits of Escondido, the City is also proposing the annexation of three parcels crossed by or in proximity to the proposed roadway extension. Parcels A, B, and C are shown in Figure 2-1, and correspond to APN #s 23504015, 23504005, 23504050, respectively. This would avoid the potential need for a joint jurisdictional operation and maintenance agreement between the County and the City. All three parcels are outside the City's SOI boundaries and would therefore require an SOI boundary adjustment in conjunction with the annexation.

2.3.1 Roadway Components

Citracado Parkway: Avenida Del Diablo to Andreasen Drive

The proposed extension of Citracado Parkway would be 2,700 feet (0.50 mile) in length between Avenida Del Diablo and Andreasen Drive. The typical cross section of the roadway extension would be 110 feet across, including sidewalks, a planted parkway between the sidewalks and the travel lanes, two lanes each in the northbound and southbound directions, and a landscaped median (14 feet wide) between the travel lanes. In addition, a Class 2 striped bicycle lane on Citracado Parkway would accommodate bicyclists on the roadway shoulder. The planted parkway would not be continued on the proposed bridge at Escondido Creek. The roadway extension would be built on an elevated roadbed with embankments varying in height up to 22 feet. With the embankments, the total cross section width would measure up to 180 feet. A retaining wall would be constructed on the east side of Citracado Parkway, north of the Lariat Drive intersection. The retaining wall would be a soil nail wall and would be approximately 250 feet long with a maximum height of about 12 feet. There would be a graded slope in excess of 20 feet on the north side of the HARRF driveway associated with this retaining wall. At this location, the slope would be approximately 25 feet in height. Harmony Grove Road, as shown in Figure 2-2, would be realigned to meet Kauana Loa Drive at a 90-degree angle, and would terminate in a cul-de-sac on the east side of Citracado Parkway.

In two locations, manufactured slopes would exceed 20 feet. The first location is directly associated with the retaining wall on the north side of the HARRF driveway. In this location, the slope would be approximately 25 feet in height, as described above. The second location is along the east side of Citracado Parkway, north of the Escondido Creek Bridge. In this location, the slope would be approximately 27 feet. The City of Escondido Grading Ordinance standards require approval by the Planning Commission or City Council for slopes in excess of 20 feet. Approval would be required for these two locations.



Source: SanGIS 2011; Boyle Engineering 2007; AECOM 2011; Landiscor 2010

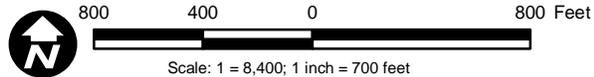
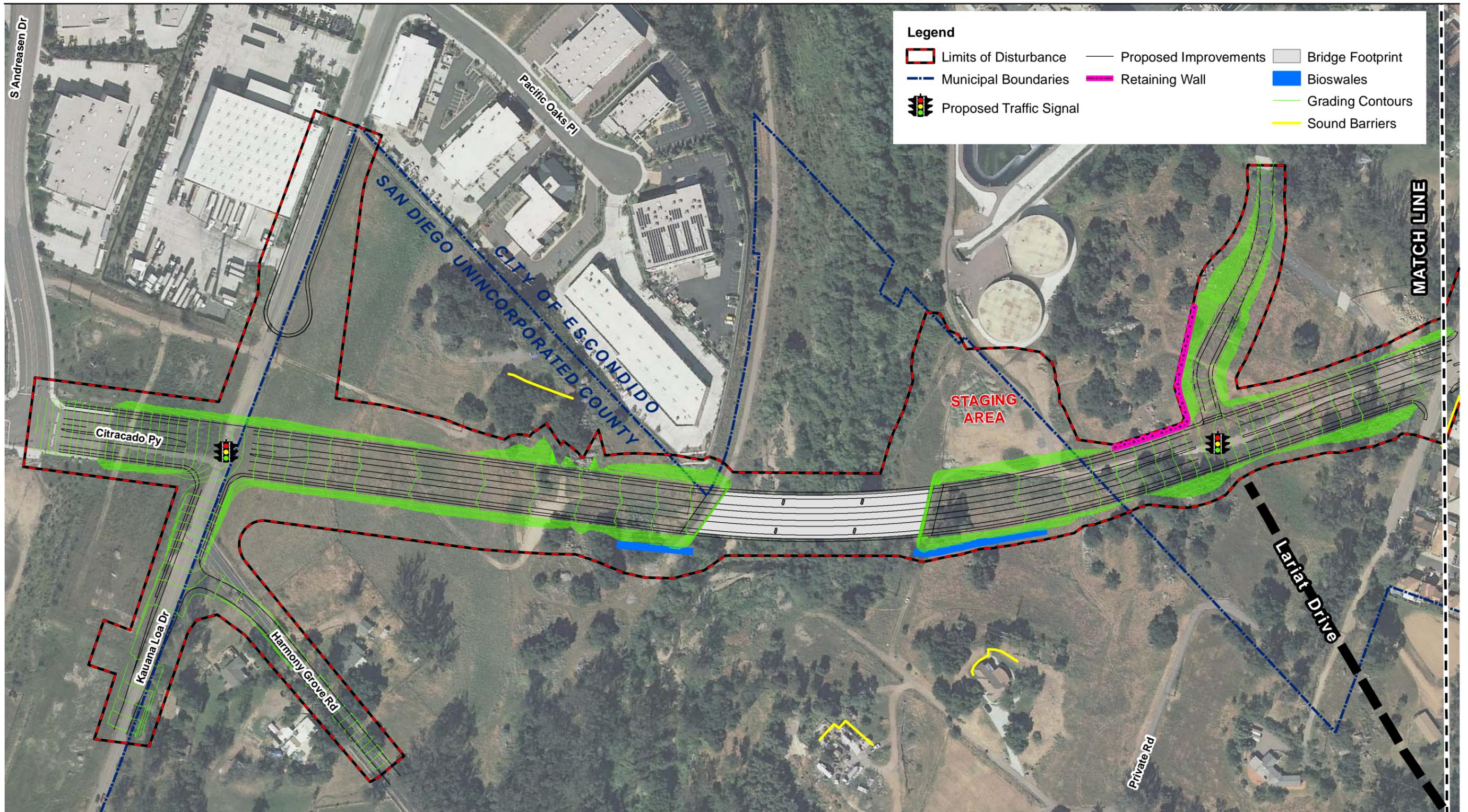


Figure 2-1
Annexation



Source: SanGIS 2011; Boyle Engineering 2007; AECOM 2011; Landiscor 2010

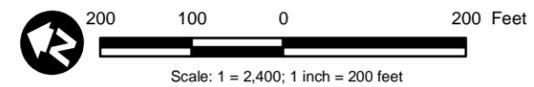


Figure 2-2
Project Features: Roadway Extension

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Escondido Creek Bridge

The bridge crossing at Escondido Creek is proposed as a three-span, cast-in-place, prestressed, concrete box girder structure with a total of four columns. The bridge would be approximately 450 feet in length with spans at 149 feet 9 inches for the two outside spans, and 162 feet 6 inches for the middle span. The bridge would be approximately 106 feet in width with an open median. The approximate bridge height would be 24 feet, with a structure depth of approximately 6 feet 6 inches. In addition, a Class 2 striped bicycle lane would accommodate bicyclists on the roadway shoulder along the outside edge of each side of the bridge. Sidewalks on the bridge would accommodate pedestrians. Utilities would be accommodated within the bridge as feasible. Design features would include earth-toned concrete, natural stone veneer, or a form-liner pattern (e.g., Antietam Dry-Stack pattern). Traffic signals are proposed at the following intersections (Figures 2-2 and 2-3) with Citracado Parkway:

- Lariat Drive
- Mountain Shadows Mobile Home Park entrance
- Harmony Grove Road

Harmony Grove Village – Lariat Drive Connection

Lariat Drive, an engineering feature of the approved Harmony Grove Village residential development, would intersect Citracado Parkway approximately 400 feet north of Avenida Del Diablo. The proposed roadway extension would be built to accommodate an intersection with Lariat Drive. This new intersection would be signalized and would provide full access from Lariat Drive to Citracado Parkway and from Citracado Parkway to Lariat Drive. In addition, the new intersection would accommodate a controlled access driveway directly across Citracado Parkway from the terminus of Lariat Drive. This controlled access driveway would be gated and would provide the City with an improved secondary access point into the HARRF. A retaining wall would be constructed on the north side of the controlled access driveway, west of the Lariat Drive and Citracado Parkway intersection. The retaining wall would be approximately 250 feet long with a maximum height of about 12 feet and would connect to the retaining wall constructed along Citracado Parkway, north of Lariat Drive.

Citracado Parkway: West Valley Parkway to Avenida Del Diablo

The existing segment of Citracado Parkway proposed for improvement extends from West Valley Parkway to Avenida Del Diablo. The proposed improvements include adding an

additional travel lane in each direction through median width reduction (35 feet to 14 feet), resulting in a four-lane roadway. The proposed improvements also include a full four-way signalization of the Mountain Shadows Mobile Home Park entrance intersection, a southbound left-turn-only pocket and a right-in/right-out-only operational restriction at Yankee Court, a northbound Citracado Parkway left-turn-only pocket and a right-in/right-out-only operational restriction at Johnston Road, and a northbound Citracado Parkway left-turn-only pocket and a right-in/right-out-only operational restriction at Avenida Del Diablo. In addition, a Class 2 striped bicycle lane would accommodate bicyclists on the roadway shoulder. Sidewalks would be provided to accommodate pedestrians. Sound walls are also proposed along this existing stretch of Citracado Parkway; walls will be located in place of the existing property line fences and will be 8 to 10 feet in height, as described in detail in Noise, Section 3.9 of this EIR. Sound walls would be consistent with the character of the Project area. Walls would be earth tones and would be decorative concrete masonry units (CMUs) in standard running bond pattern. Figure 2-3 shows the proposed improvements along the existing segment of Citracado Parkway.

2.3.2 Utilities

Several existing utility lines are located within the proposed Project area, as shown in Figure 2-4. These utilities include underground water and sewer pipelines and overhead electric, telephone, and cable lines. In most cases, these utilities will remain in place. However, the following utility realignments are proposed as a part of the Project:

1. The existing 14-inch-diameter water pipeline that travels east and then south through the proposed Project area will be abandoned in place. This water pipeline would be replaced with an approximate 20-inch-diameter water pipeline that would begin at an existing connection in Kauana Loa Drive in the north, travel east in Kauana Loa Drive, and then travel south within the roadbed of the proposed Citracado Parkway extension and a utility cell of the proposed bridge, connecting with an existing water pipeline in Citracado Parkway near Avenida Del Diablo.
2. Currently, two electric poles and one telephone pole conflict with the proposed Citracado Parkway alignment. One electric pole and one telephone pole conflict with the proposed alignment at Harmony Grove Road. These poles would be relocated as a part of the proposed Project. Pole relocation would occur within the existing utility alignments along Harmony Grove Road either east or west of the proposed Citracado Parkway extension. One electric pole conflicts with the proposed alignment of Citracado Parkway at Avenida Del Diablo. This pole would be relocated as a part of the proposed Project. Pole



Source: SanGIS 2011; Boyle Engineering 2007; AECOM 2011; Landiscor 2010

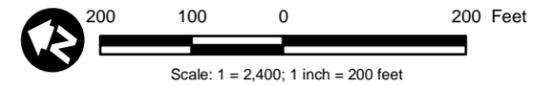
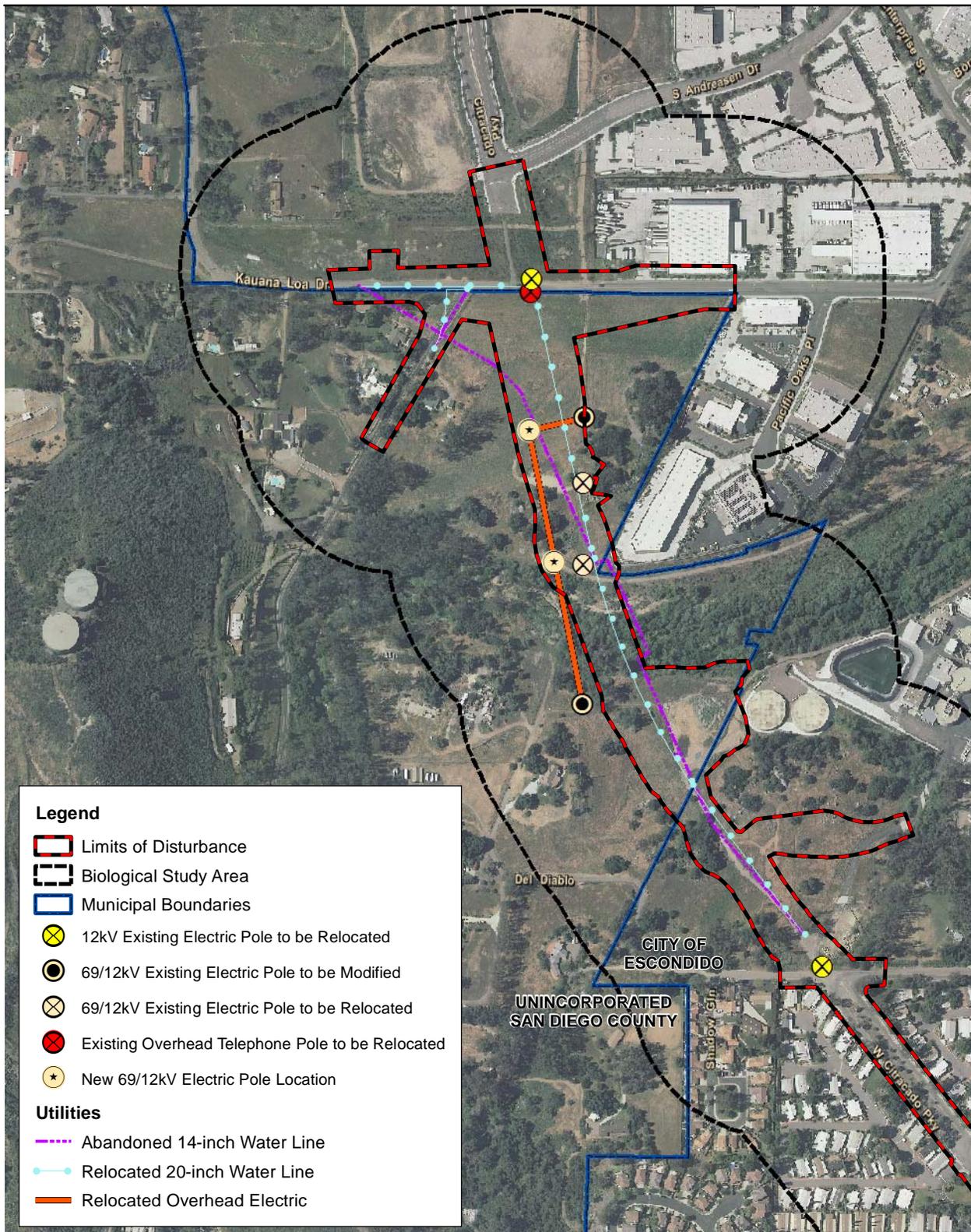


Figure 2-3
Project Features: Roadway Extension

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Source: Landiscor 2010; AECOM 2011

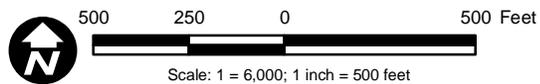


Figure 2-4
Utilities

Citracado Parkway Extension Project Project Draft EIR

Path: P:\2006\06080144 Citracado Pkwy\5GIS\MXD\2011_mxd\EIR_2011\Utilities.mxd, 5/25/2011, Lee J

relocation would occur within the existing utility alignment along Avenida Del Diablo either east or west of the proposed Citracado Parkway extension. Exact location of these poles would be determined in coordination with the utility providers.

3. A 69/12-kilovolt (kV) overhead electrical power line currently runs north/south through the proposed alignment for the Citracado Parkway extension. The City of Escondido would work with San Diego Gas & Electric (SDG&E) to determine if this line can remain in its current alignment. If it cannot remain in its current alignment with minor modification to pole locations, it would be realigned as a part of this Project. If realignment were to occur, this line would be realigned as shown in Figure 2-4, beginning 400 feet south of Harmony Grove Road, where it would cross the proposed Citracado Parkway extension and travel south to an existing electrical pole south of Escondido Creek. Realignment of these overhead utility lines would include modification of two existing poles and relocation of two existing poles to facilitate realignment. Whether this line remains in its current alignment or is realigned, no new or relocated poles would be placed within riparian habitat associated with Escondido Creek.

2.3.3 Landscaping

A Conceptual Landscape Plan has been prepared for the proposed Project, as shown in Figures 2-5a through 2-5c. The Landscape Plan includes three basic landscape themes to create a unified design along Citracado Parkway. The first thematic landscape area is located north of Escondido Creek. It transitions from the style of the adjacent streetscape to native planting at the creek. The second thematic landscape area, from Escondido Creek to Avenida Del Diablo, has a mostly native plant palette. The third landscape area, from Avenida Del Diablo to West Valley Parkway, is an area of contrast. Located within an existing neighborhood, it is defined by planted sound walls. Tying the three areas together are bands of meandering river cobble and drifts of low plantings. Landscape design for the Project includes a naturalized landscape design concept that would reflect the existing natural tree and shrub massing. Revegetation of manufactured slopes would be implemented. Landscape design for improvements to the existing Citracado Parkway segment between West Valley Parkway and Avenida Del Diablo have been designed to include a traditional/formal streetscape to enhance visual continuity.

The Project will conform to the City's new water-efficient Landscape Ordinance (Ord. 2010-01R), which is consistent with the Water Conservation in Landscaping Act of 2006. Plant materials will be selected accordingly. Sustainable plant material that can be readily established with an extended plant establishment period and limited irrigation would be used. The plant

**PROPOSED
MEDIAN TREES, SUCH AS:**

- GINKGO BILOBA, 'GINKGO'
- LAGERSTROEMIA INDICA, 'CRAPE MYRTLE'
- MAYTENUS BOARIA, 'MAYTEN'
- TRISTANIA CONFERTA, 'BRISBANE BOX'
- * TREE TO VISUALLY TIE IN WITH THE ULMUS PARVIFOLIA, 'CHINESE ELM', A TREE THAT IS CURRENTLY NOT ON THE ESCONDIDO APPROVED TREE LIST.

**PROPOSED
PARKWAY TREES, SUCH AS:**

- CAUSURINA EQUISETIFOLIA, 'HORSETAIL TREE'
- GEIJERA PARVIFOLIA, 'AUSTRALIAN WILLOW'

**PROPOSED
SHRUBS, SUCH AS:**

- ANIGOZANTHOS HYBRIDS, 'KANGAROO PAW'
- ROSMARINUS HORIZONTALIS, 'CREEPING ROSEMARY'

**PROPOSED
ACCENT SHRUBS, SUCH AS:**

- HEMEROCALLIS HYBRIDS, 'DAYLILY'
- PHORMIUM SPP., 'NEW ZEALAND FLAX'
- SALVIA LEUCANTHA, 'MEXICAN SAGE'

**PROPOSED
SLOPE STABILIZATION:**

- NATIVE HYDROSEED

**PROPOSED
MEDIAN HARDSCAPE:**

- COLORED CONCRETE AND PATTERN TO MATCH EXISTING MAINTENANCE STRIP
- NATIVE COBBLE SWATHS.



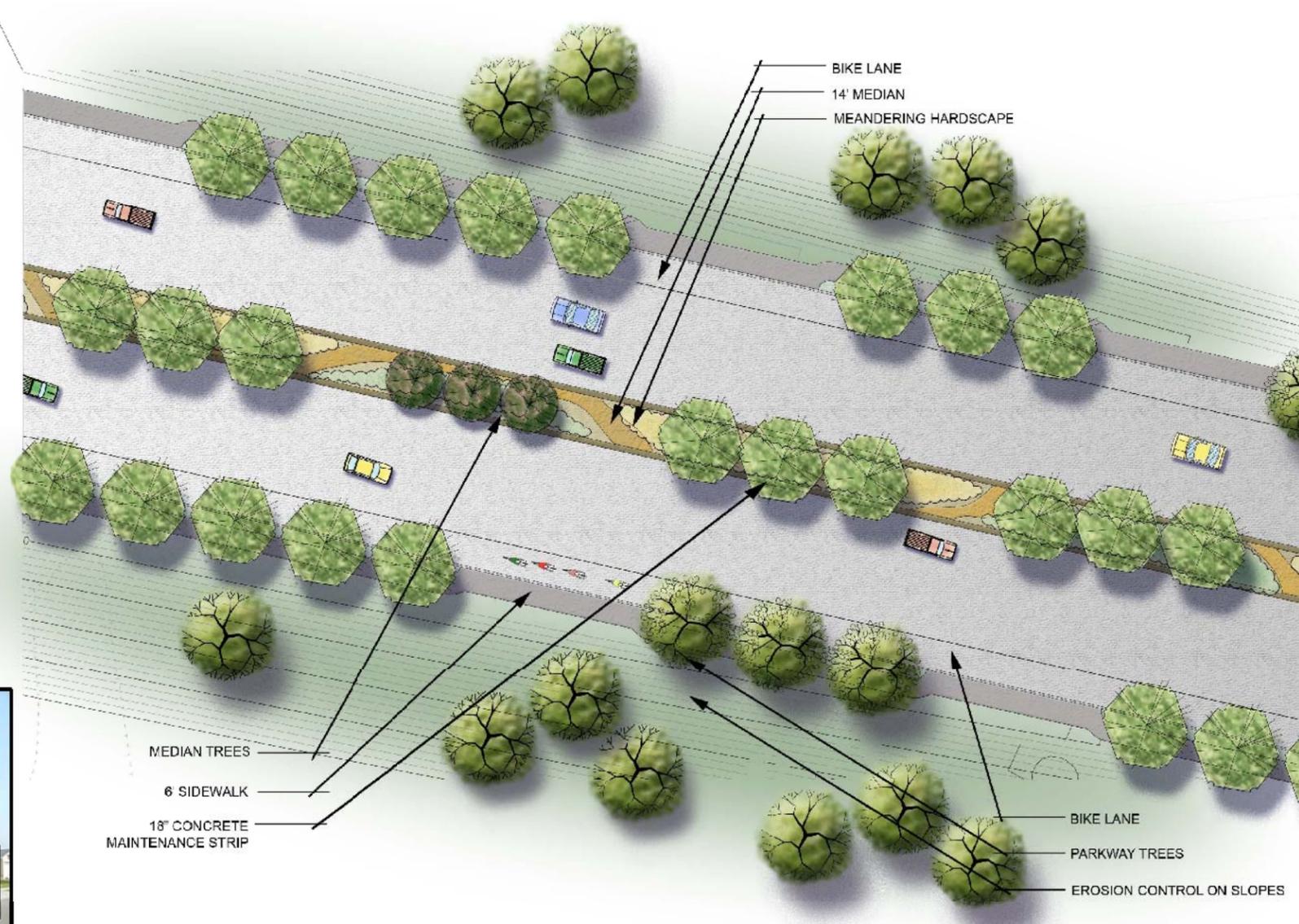
GINKGO BILOBA (MEDIAN TREE)



CRAPE MYRTLE (MEDIAN TREE)



AUSTRALIAN WILLOW (PARKWAY TREE)



KANGAROO PAW (MEDIAN SHRUB)



DAYLILY (MEDIAN ACCENT SHRUB)



EXISTING CONCRETE (MEDIAN HARDSCAPE EDGING)



NATIVE COBBLE (MEDIAN HARDSCAPE SWATHS)

Source: Garbini & Garbini Concepts 2008



**Figure 2-5a
Conceptual Landscape Plan - North**

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PROPOSED MEDIAN TREES (RIPARIAN ZONE), SUCH AS:

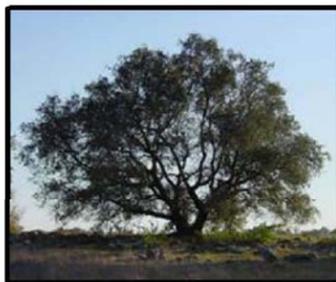
- PLATANUS ACERIFOLIA, 'LONDON PLANE TREE'
- TO BE PLANTED NEAR ESCONDIDO CREEK



LONDON PLANE TREE (RIPARIAN ZONE TREE)



COAST LIVE OAK (CHAPARRAL ZONE TREE)



PROPOSED MEDIAN TREES (CHAPARRAL ZONE), SUCH AS:

- QUERCUS AGRIFOLIA, 'COAST LIVE OAK'
- QUERCUS ENGELMANNII, 'ENGELMANN OAK'

PROPOSED NATIVE PARKWAY TREES, SUCH AS:

- QUERCUS SPECIES, 'OAKS'

PROPOSED NATIVE MEDIAN SHRUBS, SUCH AS:

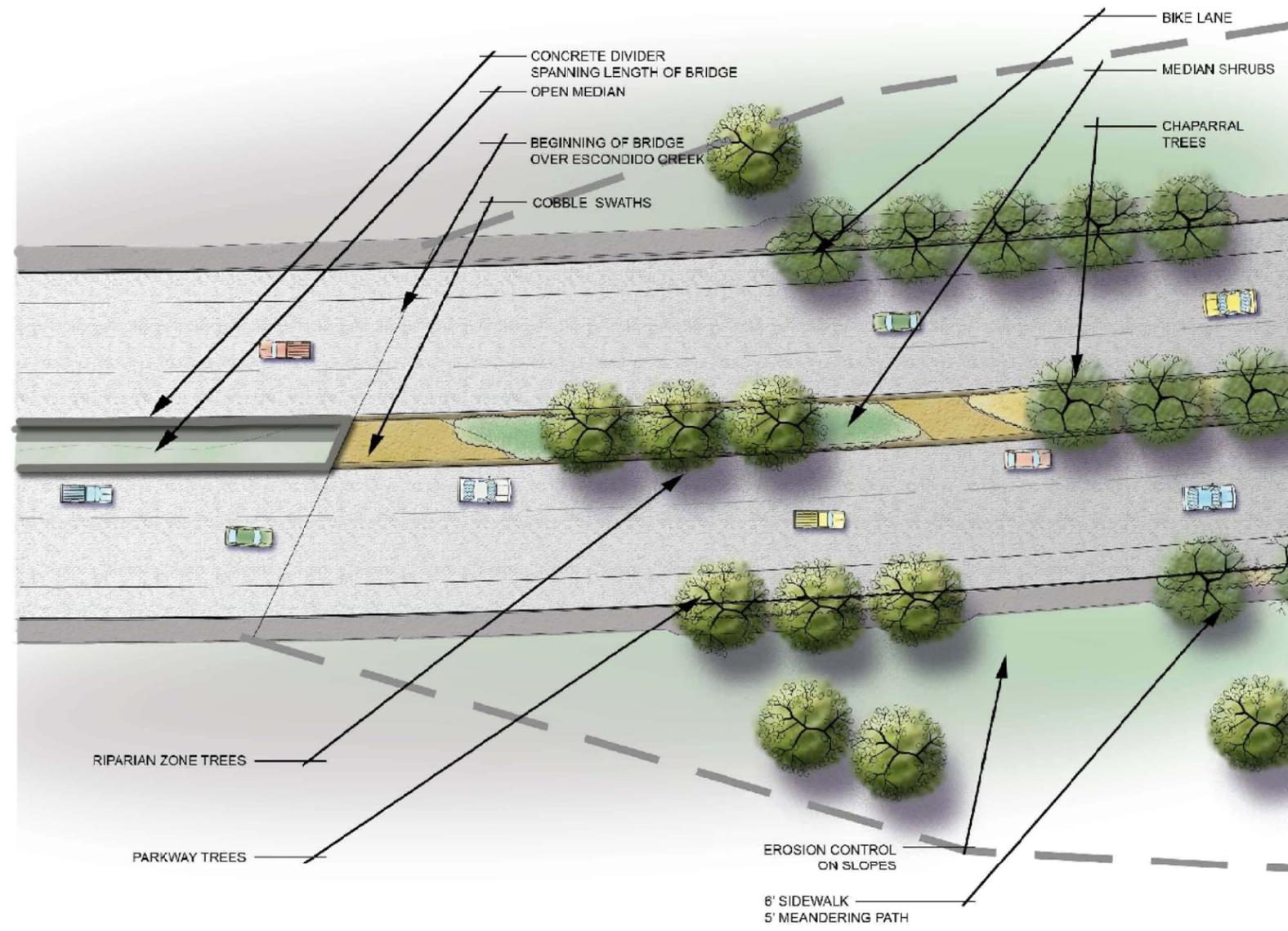
- BACCHARIS 'TWIN PEAKS', 'DWARF COYOTE BRUSH'

PROPOSED SLOPE STABILIZATION:

- NATIVE HYDROSEED

PROPOSED MEDIAN HARDSCAPE:

COLORED CONCRETE WITH COBBLED SWATHS. SPECIAL CARE TO TRANSITION THEME ACROSS THE ESCONDIDO CREEK BRIDGE



DWARF COYOTE BRUSH (NATIVE MEDIAN SHRUBS)



DWARF COYOTE BRUSH, FLOWER (NATIVE MEDIAN SHRUB)



COBBLE (MEDIAN SWATHS TRANSITION TO CONCRETE OVER BRIDGE)



COLORED CONCRETE (TRANSITION TO)

Source: Garbini & Garbini Concepts 2008

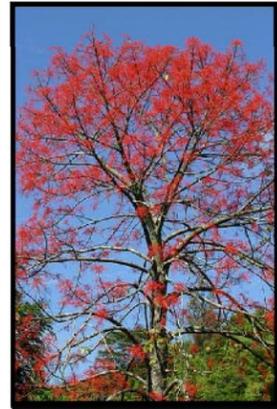


Figure 2-5b
Conceptual Landscape Plan - Middle

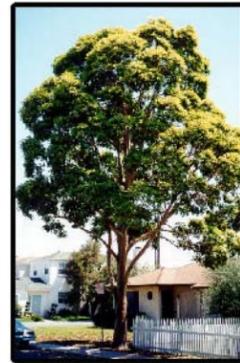
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PROPOSED PARKWAY TREES, SUCH AS:

- GEIJERA PARVIFLORA, 'AUSTRALIAN WILLOW'
- BRACHYCHITON ACERIFOLIUS, 'FLAME TREE'
- TRISTANIA CONFERTA, BRISBANE BOX



FLAME TREE (PARKWAY TREE)



BRISBANE BOX (PARKWAY TREE)



NEW ZEALAND FLAX (MEDIAN SHRUB)

PROPOSED MEDIAN SHRUBS, SUCH AS:

- ALOE SPP., 'TAGGED AT NURSERY'
- ANIGOZANTHOS HYBRIDS, 'KANGAROO PAW'
- HESPERALOE PARVIFLORA, 'RED YUCCA'
- MUHLENBERGIA RIGENS, 'DEER GRASS'
- PHORMIUM SPP., 'NEW ZEALAND FLAX'
- SALVIA LEUCANTHA, 'MEXICAN SAGE'

PROPOSED VINES, SUCH AS:

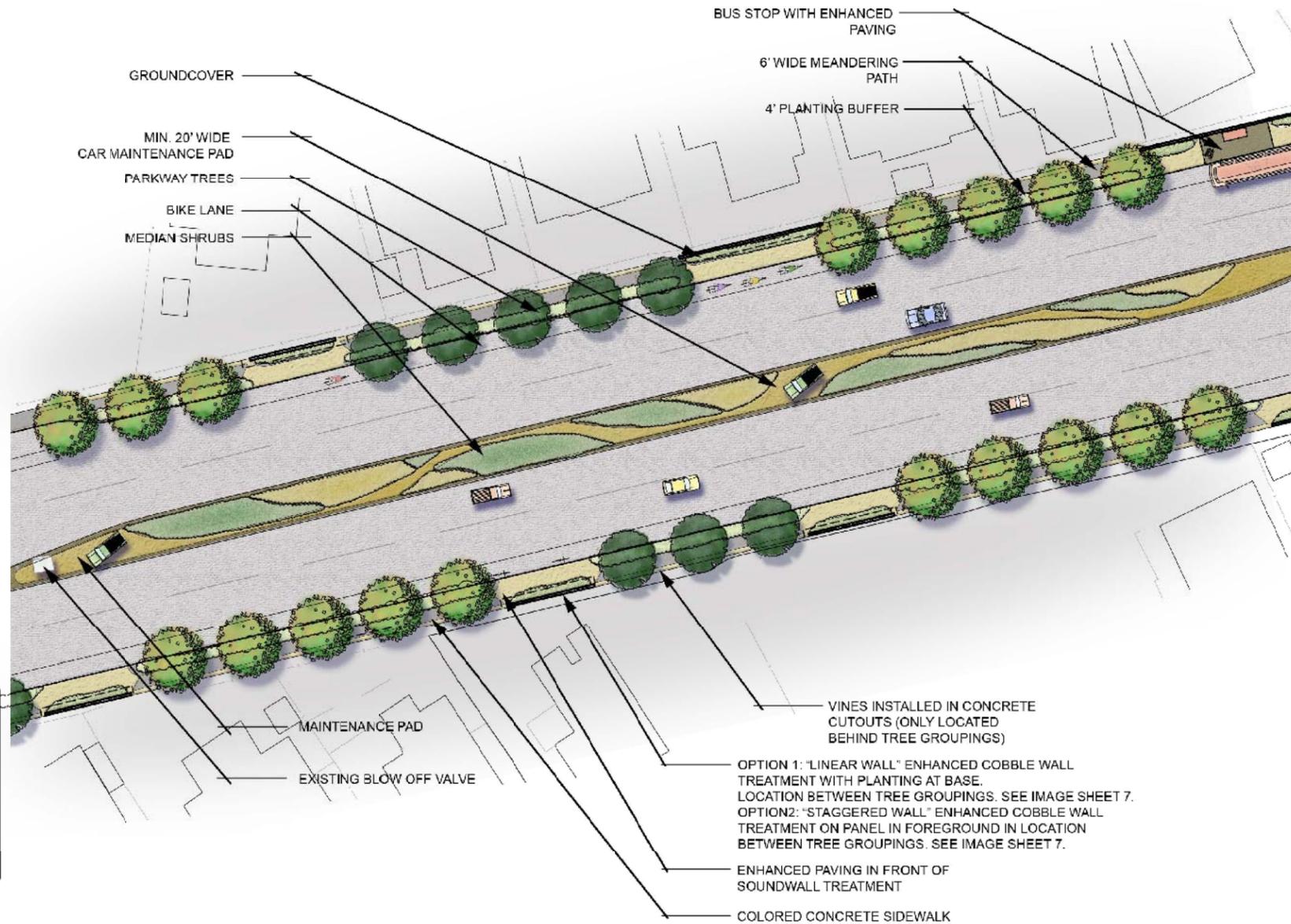
- MACFADYENA UNGUIS-CACTI, 'CAT'S CLAW'
- PARTHENOCISSUS TRICUSPIDATA, BOSTON IVY 'BOSTON IVY'
- VIGNA CARACALLA, 'SNAIL VINE'

PROPOSED MEDIAN HARDSCAPE:

COLORED PATTERNED CONCRETE TO MATCH EXISTING MAINTENANCE STRIP ON NORTHERN CITRACADO, INTEGRATED WITH NATIVE COBBLE SWATHS.

PROPOSED SOUND WALL TREATMENT:

INCORPORATE RIVER COBBLE.



DEER GRASS (MEDIAN SHRUB)



BOSTON IVY (VINE)



SOUNDWALL OPTION 1
LINEAR WALL



SOUNDWALL OPTION 2
STAGGERED WALL

Source: Garbini & Garbini Concepts 2008



Figure 2-5c
Conceptual Landscape Plan - South

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palette would consist of native trees, shrubs, and ground covers that are similar in composition to the adjacent habitats and that reinforce the landscape concept. This plant palette would be consistent with native vegetation on the hillsides in the rural residential and open space area.

Sufficient maintenance and irrigation would be provided as needed in the early years of vegetative growth. It is anticipated that the permanent benefits from the proposed plant material would be substantially effective within 10 to 15 years of implementation.

In the rural residential/open space area, sensitive design of landform alteration would be implemented to achieve natural-appearing slopes, to soften long or high slope banks, and to reduce visual scarring of the existing terrain. Tops of cut slopes, and where constructed slopes join natural grades, would be rounded to make a more naturally appearing transition. Rounding would also be employed at the toe of fill slopes to help blend the slope with the existing terrain.

2.3.4 Local Government Boundary Changes and Agency Reorganization

The Project area extends beyond the existing limits of the City's jurisdiction. To have more seamless construction, operation, and maintenance of the proposed facility, the City is proposing to adjust its designated SOI and jurisdictional boundaries and to annex, through coordination with the San Diego County Local Agency Formation Commission (LAFCO), three parcels that are crossed by or are in proximity to the proposed Citracado Parkway Extension Project area. LAFCO officially designates the proposed SOI/annexation actions as a Reorganization. The proposed Reorganization would avoid the need for a joint jurisdictional and long-term operation and maintenance agreement between the County and City, and would allow the City to assume full responsibility for road operation and maintenance.

This action would involve adjusting jurisdictional limits of County and City services. This action would include detaching law enforcement, fire, and emergency medical services from San Diego County. This would result in the City assuming those responsibilities for the annexed area; the City would attach this area to its service areas for law enforcement, fire, and emergency medical services.

2.3.5 Construction Methods, Staging Areas, and Schedule

Specific construction details would be established during the final design phase, and some details would be finalized by the construction contractor. For purposes of this environmental evaluation,

the following construction scenario was developed based on typical roadway construction projects.

Roadway Widening Construction

Widening existing Citracado Parkway between West Valley Parkway and Avenida Del Diablo would be accomplished in phases to allow the existing roadway to remain open to traffic during construction. Flagging and temporary detours through construction areas would be implemented according to an approved Traffic Management Plan (TMP). Construction would require removal of the existing median, and possibly the existing paved travelway. Paved sidewalks along this section of Citracado Parkway may have to be replaced if street tree removal damages the existing sidewalks, or where the existing sidewalk is damaged. Most street trees, those within the median and those lining the sidewalks, would be removed and different landscaping would be installed upon completion of construction. The roadway bed would be graded and paved. Traffic signals would be installed where Citracado Parkway intersects the Mountain Shadows Mobile Home Park entrance. Sound walls would be constructed near the right-of-way boundary along Citracado Parkway between West Valley Parkway and Avenida Del Diablo. Figure 2-3 shows the paving limits, sound wall locations, and intersection locations.

Typical equipment that may be used during roadway widening is as follows:

- Asphalt concrete saws
- Hydraulic hammer/rock breakers
- Excavators
- Loaders
- Backhoes
- Dump trucks
- Concrete transit mixer trucks
- Water trucks
- Concrete pumps
- Support trucks (pickup trucks)
- Asphalt concrete paving machines
- Asphalt concrete compaction rollers
- Lane closure equipment (cones, signs, etc.)

Roadway Extension and Bridge Construction

Extending Citracado Parkway would require a new roadway bed through varying terrain. Substantial landform alteration, including excavating, grading, and placing fill material, would precede roadway paving and landscaping. The bridge over Escondido Creek would be a cast-in-place structure, which would require falsework supports placed in the creek bed. Construction of the piers would require deep excavations and possibly dewatering. Any existing flowing water would most likely be channelized into a small area to allow the placement of falsework. Depending on the soil conditions and the amount of flowing water in the creek, temporary driven piles may be used to support the falsework. Flagging and temporary detours through construction areas would be implemented, as required for this phase of construction, according to an approved TMP.

Typical equipment that may be involved during roadway and bridge construction would consist of the following:

- Tracked excavators
- Loaders
- Support trucks (pickup trucks)
- Cranes
- Dump trucks
- Concrete transit mixer trucks
- Concrete pumps
- Backhoes
- Skiploaders
- Bulldozers
- Compactors
- Motor-graders
- Water trucks

Schedule

Total Project construction is expected to require approximately 18 months. The City plans to begin construction in 2012.

Staging Areas

The primary construction staging area would be located directly adjacent to the HARRF facility. Additional staging would be located along the proposed roadway, away from environmentally sensitive areas such as habitats, natural drainages, and culturally important areas, within the limits of disturbance. The primary access routes would be West Valley Parkway on the south side of the Project area, and Andreasen Drive and Citracado Parkway on the north.

2.4 INTENDED USE OF THE EIR

This EIR is intended to assess potential environmental impacts that would result from the proposed Project and to make the impact analysis available for review by the general public and public agencies. Before making a final determination on Project approval, the Escondido City Council would review and certify a final EIR after the draft document has been made available for public review.

This EIR is also intended to serve as the primary environmental documentation supporting the City's effort to adjust its jurisdictional boundary and reorganize service boundaries, as appropriate, for annexation of the three parcels noted above in Section 2.3. The San Diego LAFCO would review this EIR along with the City's Municipal Service Reorganization application package.

2.4.1 List of Agencies Expecting to Use This EIR for Decision Making

Any public agency with a potential stake in the proposed Project would be given an opportunity to review and comment on this EIR. In addition to the City of Escondido, the following agencies would use this EIR to inform one or more discretionary actions under their regulatory jurisdiction:

- Regional Water Quality Control Board (RWQCB), Region 9
- California Department of Fish and Game (CDFG)
- U.S. Army Corps of Engineers (USACE)
- San Diego LAFCO
- State Historic Preservation Office

2.4.2 List of Approvals Necessary for the Proposed Project

The roadway construction would require multiple approvals from local governments and from federal, state, and local resource agencies. The contractor would be responsible for submitting a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for coverage by the general National Pollutant Discharge Elimination System (NPDES) permit for construction. In addition, Project improvements would occur within designated “waters of the U.S.” and would affect a jurisdictional stream, Escondido Creek. This action would require permits under the California Fish and Game Code and the federal Clean Water Act (CWA). No San Diego County permits or approvals are anticipated. The following permits and approvals would be required:

Permits (all required before start of construction)

- California Fish and Game Code Section 1601 Streambed Alteration Agreement
- CWA Section 401 water quality certification
- CWA Section 404 dredge and fill permit
- City building and grading permits

Approvals (in chronological order)

- Escondido City Council EIR certification
- Emergency and municipal service providers’ approval for service boundary adjustments
- Escondido City Council approval of Annexation and Rezoning
- LAFCO approval of City’s Municipal Services Reorganization application

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CHAPTER 3.0

ENVIRONMENTAL ANALYSES

3.1 LAND USE

This section evaluates the potential land use and planning efforts of the proposed Project. This section includes an explanation of the existing land uses on the Project area and the surrounding areas, the various plans and policies from applicable jurisdictions, and an analysis of the effects of the proposed Project related to land use and planning issues.

3.1.1 Existing Conditions

Surrounding Land Uses

The proposed Project area is located in the western city limits of Escondido and a portion of unincorporated San Diego County. It is approximately 1.5 miles west of I-15 and 1.5 miles south of SR-78. The proposed Project area is surrounded by light industrial/heavy commercial uses to the north and east, and residential/rural residential to the west and south. Many of the adjacent lots that are slated for industrial/commercial development are either under ongoing development or graded for anticipated development. Citracado Parkway is identified in the City's Circulation Element as a Major Road. Surrounding land uses are described further below and can be seen in aerial photography as illustrated in Figure 1-3.

To the north of the Project area, Citracado Parkway extends from Vineyard Avenue (Auto Park Way) to Andreasen Drive through the ERTC. To the south of the Project area, Citracado Parkway extends through primarily residential neighborhoods between Avenida Del Diablo and Greenwood Place.

Escondido is divided into 21 different neighborhoods. The boundaries of each neighborhood were established based on major streets, ridge lines, topographic contours, existing development patterns, and proposed land use designations. The proposed Project is located within the Vineyard neighborhood. The Vineyard subarea encompasses approximately 1,800 acres and is located west of I-15. It is bounded on the north by SR-78, on the south by West Valley Parkway, and on the west by the existing city limits.

The topography of the Project area is varied, with the eastern portions, where development has already occurred, being flatter and with sloping areas in the south and southwestern portions. The

western portion of the Project area is characterized by two moderately sloping ridge lines with some slope areas over 30%. Existing land uses are predominately industrial. The area contains 300+ acres of vacant land, which is planned for industrial also.

This area includes the Del Dios school site and the Escondido Auto Park as well as commercial and multifamily uses. Proposed land use designations include planned and general commercial uses adjacent to I-15 and north of 11th Avenue and along a small portion of SR-78 at the western limit of the City. The remainder of the area, except for small portions designated for Estate II uses and located at the extreme western limit of the subarea, is designated for industrial uses.

The Vineyard subarea also includes the Harmony Grove Specific Plan Area (SPA). This SPA encompasses 160 acres near Kauana Loa Drive and Country Club Drive. The City's General Plan includes guidelines to ensure a high-quality industrial park for the Harmony Grove SPA. This neighborhood is designated as Tier 1 within the Growth Management Element.

Existing On-Site Land Use and Zoning

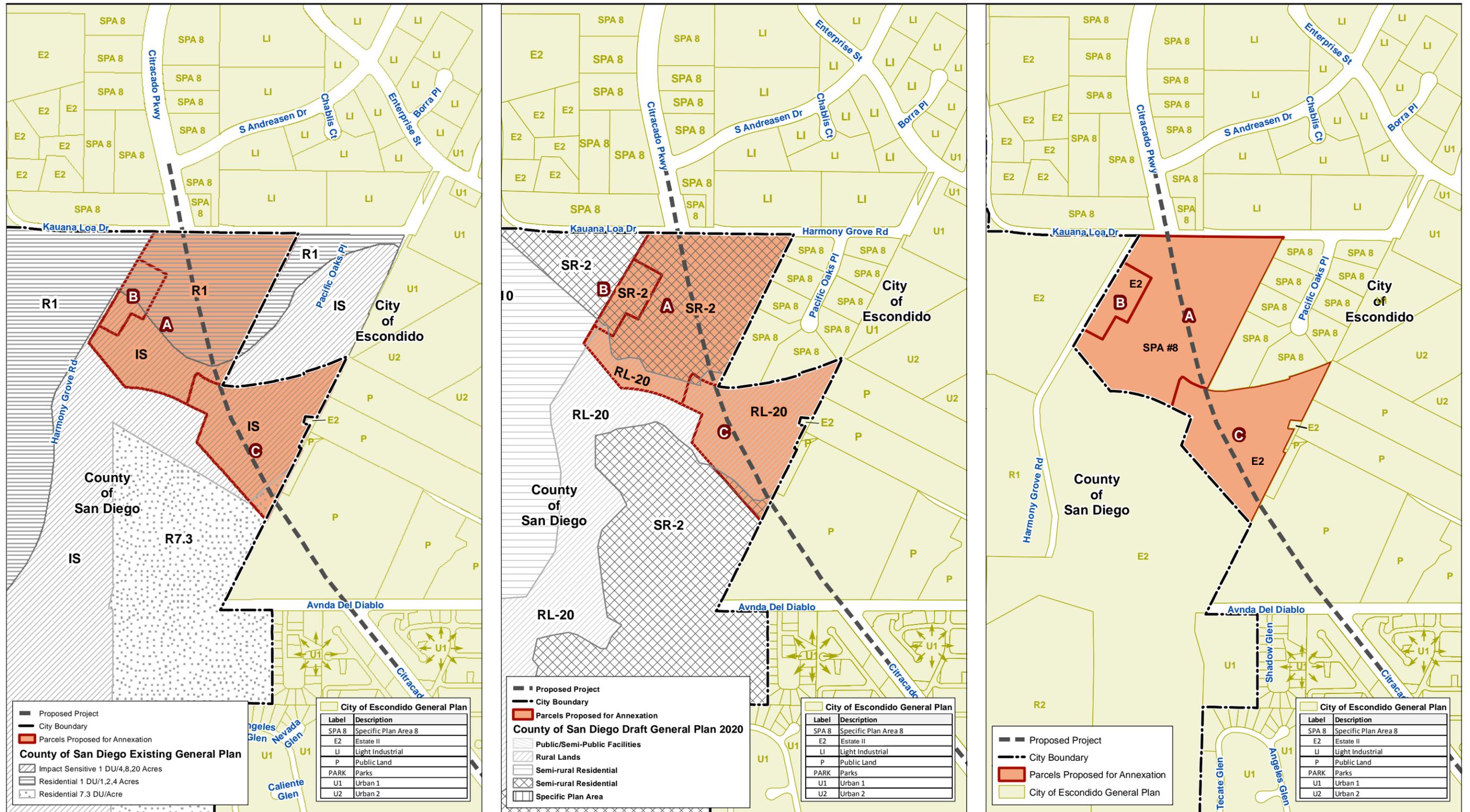
For the purposes of this existing land use discussion, the Project area has been divided into distinct areas, based on land uses and zoning designations.

Citracado Parkway: West Valley Parkway to Avenida Del Diablo

As shown in Figure 3.1-1, this segment is an existing portion of Citracado Parkway surrounded by residential uses (i.e., mobile home park and single-family residences). This segment of the Project area currently has a land use designation of Urban 1 (U1) Residential (up to 5.5 dwelling units per acre). As shown in Figure 3.1-2, this area contains several zoning designations: R-1-10 (single-family residential, minimum lot size 10,000 square feet), PD-R 5.5 (planned development), and RE-20 (residential estate, minimum lot size 20,000 square feet) (City of Escondido 1990, 2000).

Citracado Parkway: Avenida Del Diablo to Andreasen Drive

As shown in Figure 3.1-1, the southern portion of this segment is currently designated as Parks/Public Lands (P). As shown in Figure 3.1-2, the southern portion of the Project area is zoned Open Space (OS-P). Open Space is a zone designated for public and private uses related to open space, recreation, education and public facilities, and land with unique scenic or geologic value, as well as land requiring protection for unique or rare plant and/or animal habitat.



Source: SanGIS 2009; City of Escondido 2009

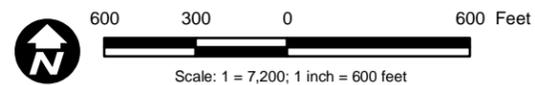
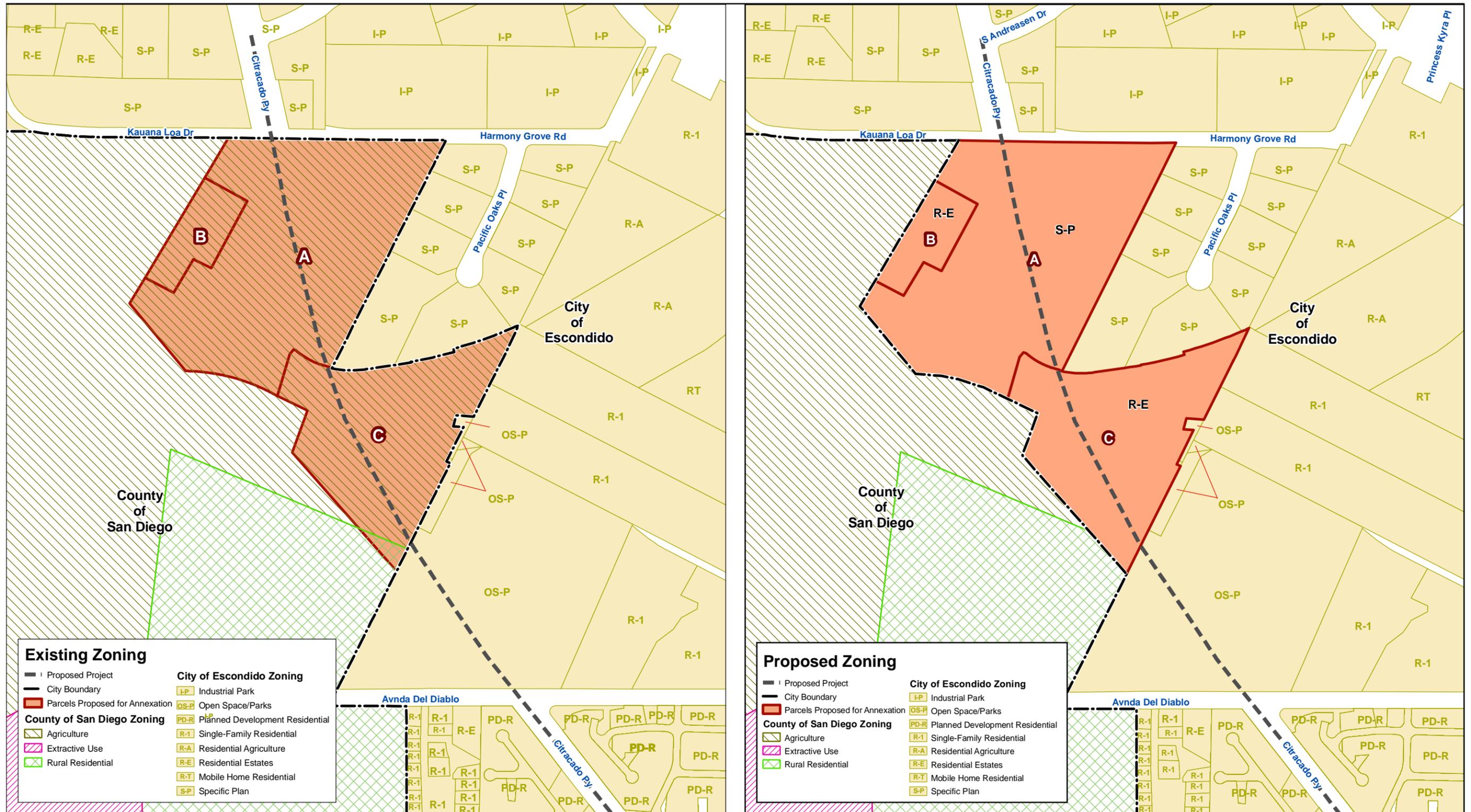


Figure 3.1-1

Existing and Proposed Land Use Designations

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Source: SanGIS 2009; City of Escondido 2009

400 200 0 400 Feet

Scale: 1 = 4,800; 1 inch = 400 feet

Figure 3.1-2
Existing and Proposed Zoning

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Additionally, properties designated as OS-P identify public parks with active recreational facilities (City of Escondido 1990).

The northern portion of this segment includes three parcels that are proposed for annexation. These three parcels are illustrated in Figure 2-1. Parcel A has one family residence and ancillary structures existing on the site, but the majority of the parcel is undeveloped and in its natural state. Parcel B has a single residential structure. Parcel C is undeveloped and predominantly in its natural state. Parcels A and B have split land use designations, with the northern portions described in the existing County General Plan as having Land Use designation “Residential 1 du/1,2,4 Acres” and the southern portions described as having Land Use designation “Impact Sensitive 1 du/4,8,20 Acres.” Parcel C is currently located in the existing County General Plan Land Use Designation “Impact Sensitive 1 du/4,8,20 Acres.” All three parcels are currently zoned as “A-70 Limited Agriculture” by the County Zoning Ordinance.

While not currently under the City’s jurisdiction, these parcels were assigned land use designations by the City in the immediate area, as depicted in the City’s General Plan, to guide the surrounding development. Parcels A and B have City-assigned land use designations: Parcel A is designated “SPA #8”, and Parcel B is designated “E2.” The “SPA #8” category refers to Specific Plan Area #8, or Harmony Grove SPA, and allows for a high-quality industrial park with attractive structures while maintaining aesthetic and natural attributes to the site. The proposed zoning for Parcel A is S-P, a zone that corresponds to the “SPA” land use designation of the City’s General Plan, which is reserved for large areas of land with unique physical and/or topographical features. A separate “Specific Plan” text, with customized development standards approved by the City Council, guides development within the zone. Extensive public improvements are required for SPA #8, including improvements of streets, particularly ones designated in the Circulation Element. Parcel C is designated “E2,” which refers to Estate II – a category reserved for single-family suburban development and rural areas.

Escondido Creek Bridge

Escondido Creek begins at the upper headwater in Bear Valley above Lake Wohlford and flows more than 26 miles to meet the Pacific Ocean at the San Elijo Lagoon in the City of Solana Beach. Escondido Creek is conveyed through Escondido in a concrete-lined channel that terminates a few hundred feet south of Harmony Grove Road; located approximately 0.5 mile east (upstream) of the Project area. At the proposed bridge site, the creek is a shallow unlined channel with a 100-year floodway width of approximately 400 feet. This area is currently designated by the County as Impact Sensitive and is zoned Agriculture (A-70).

Regulatory Framework

As mentioned above, the Citracado Parkway Extension Project area is located within the City of Escondido and unincorporated San Diego County. The following policy documents govern development and are applicable to the proposed Project.

City of Escondido General Plan

A General Plan is a statement of long-range public policy to guide the use of private and public lands within a community's boundaries. The policies within the Plan are intended to become the basis for decisions by elected and appointed officials. The Plan is both general and comprehensive in that it provides broad guidelines for development in the City while addressing a wide range of issues that will affect the City's desirability as a place to live and work. The General Plan represents both an evaluation and vision of the future, typically 15 to 20 years, and beyond. The goals and policies are aimed at guiding growth and development in that direction.

The General Plan is an internally consistent document in that the goals, objectives, policies, principles, and standards present a comprehensive, unified program for development. California planning law requires consistency between the General Plan and its implementation programs—zoning and subdivision ordinances, growth management policies, capital improvements programming, specific plans, environmental review procedures, building and housing codes, and redevelopment plans.

The City of Escondido General Plan was adopted by the City Council on June 6, 1990. While portions of the Project area are located within unincorporated San Diego County, the City's General Plan does designate land uses for those parcels, as they are within the City's Planning Area Boundary.

County of San Diego General Plan

The San Diego County General Plan, last updated in 1979, is in the process of being updated. The stated overall goal in the regional Land Use Element for the San Diego County Draft General Plan is to “focus development in and around existing unincorporated communities, which allows the County to maximize existing infrastructure, provide for efficient service delivery, and strengthen town center areas while preserving the rural landscape that helps define the unique character of the unincorporated County” (County of San Diego 2009f). The San

Diego County Draft General Plan recommends that urban growth be directed to areas within or adjacent to existing urban areas to protect natural resources and reduce sprawl.

North County Metro Community Plan

The proposed Project area that is currently under the jurisdiction of unincorporated San Diego County (Parcels A, B, and C) is included in the community of North County Metro in unincorporated San Diego County. The North County Metropolitan Community Plan is intended to promote orderly development, protect environmental and man-made resources, and implement the County's objectives for growth management and the structure of government in northern San Diego County.

This plan was prepared by County staff in cooperation with numerous involved citizens, citizen groups, businesses, and governmental agencies. This plan was adopted in January 1979.

City of Escondido Zoning Code and County of San Diego Zoning Ordinance

The purpose of Zoning Codes/Ordinances is to serve the public health, safety, comfort, convenience, and general welfare by dividing the City/County into zones by doing the following:

- (a) Regulating the use of buildings, structures, and land uses as between agriculture, industry, business, residence and other purposes;
- (b) Regulating signs and billboards;
- (c) Regulating the location, height, bulk, number of stories and size of buildings and structures; the size and use of lots, yards, courts and other open spaces; the percentage of a lot which may be occupied by a building or structure; the intensity of land use;
- (d) Establishing requirements for off-street parking and loading;
- (e) Establishing and maintaining building set-back lines;
- (f) Creating civic districts around civic centers, public parks, public buildings or public grounds and establishing regulations therefore;
- (g) Establishing general provisions and standards of development with the aim of preserving a wholesome, serviceable and attractive community; and
- (h) Establishing standards for landscaping and irrigation for commercial industrial and residential development.

Cortese/Knox/Hertzberg Local Government Reorganization Act of 2000

Established by State Law in 1963, the San Diego LAFCO is a regulatory agency with quasi-legislative authority. While having countywide jurisdiction, LAFCO is independent of county government. LAFCOs were designed to provide assistance to local agencies in overseeing jurisdictional boundary changes. LAFCOs are governed by the Cortese/Knox/Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000, et seq.).

LAFCO is responsible for coordinating, directing, and overseeing logical and timely changes to local governmental boundaries, including annexation and detachment of territory; incorporation of cities; formation of special districts; and consolidation, merger, and dissolution of districts. In addition, LAFCO is charged with reviewing ways to reorganize, simplify, and streamline governmental structure.

Resource-Specific Plans

There are various other regional plans that have jurisdiction over the Project area that contain policies and guidelines related to environmental impacts. These resource-specific plans are discussed in the appropriate issue area section, including Section 3.4, Biological Resources; Section 3.5, Cultural Resources; and Section 3.11, Visual Quality.

As stated in Section 3.4, Biological Resources, of this EIR, the Project area and surrounding area are within the County of San Diego North County Multiple Species Conservation Program (NCMSCP) and the Multiple Habitat Conservation Program (MHCP). Both the NCMSCP and the MHCP are currently in draft form. Portions of the Project area are within conservation areas referred to as Pre-Approved Mitigation Area (PAMA) under the draft NCMSCP.

3.1.2 Significance Criteria

The effects of a project on land use are considered significant if the project would violate any of the City of Escondido significance criteria. The proposed Project would result in a significant land use impact if it would do any of the following:

1. physically divide an established community;
2. conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to, the general plan, specific plan,

local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

3. conflict with any applicable habitat conservation plan or natural community conservation plan.

3.1.3 Impact Analysis

The City proposes to improve and extend Citracado Parkway from West Valley Parkway to Andreasen Drive. The proposed Citracado Parkway roadway extension would include a new structure crossing at Escondido Creek. Minor street realignments and/or grade adjustments would also be proposed for the intersection of Kauana Loa Drive with Harmony Grove Road. In addition, the proposed roadway extension would be built to accommodate the pending extension of Lariat Drive from the west. Figure 3.1-1 depicts the existing City and County land use designations within the Project area. Figure 3.1-2 depicts the existing and proposed zoning within the Project area.

Citracado Parkway: West Valley Parkway to Avenida Del Diablo

As described in the Project description, this segment of the Project area would be improved with an additional travel lane in each direction through median width reduction (35 feet to 14 feet) resulting in a four-lane roadway. Temporary disruptions of the roadways would occur during construction. To minimize this short-term impact, construction would be done in phases to allow the existing roadway to remain open to traffic during construction. The road widening would be located within the existing road footprint and would not conflict with existing surrounding or planned land uses. Construction would require removal of the existing median. Most street trees, those within the median and those lining the sidewalks, would be removed. A decorative CMU sound wall would be installed along both sides of Citracado Parkway to reduce noise impacts, as described in Section 3.9, Noise.

This segment of the proposed Project is located within the City of Escondido with a land use designation of residential use. The Project would not involve altering the existing use of this roadway. Also the road improvement would be limited to a width that is consistent with its designation as a Major Road and Class 2 striped bicycle lane in the City General Plan Circulation Element.

Citracado Parkway: Avenida Del Diablo to Andreasen Drive

Extending Citracado Parkway would require new roadway bed through varying terrain. Substantial landform alteration, including excavating, grading, and placing fill material, would precede roadway paving and landscaping. The proposed extension of Citracado Parkway would be 1,320 feet (0.25 mile) in length between Avenida Del Diablo and Andreasen Drive. The typical cross section of the roadway extension would be 110 feet across, including sidewalks, a planted parkway adjacent to the sidewalks, two lanes each in the northbound and southbound directions, and a landscaped median (14 feet wide) between the travel lanes. In addition, a Class 2 striped bicycle lane would be constructed to accommodate bicyclists on the roadway shoulder. The planted parkway would not be continued on the bridge at Escondido Creek where an open median in the bridge is proposed.

Three parcels within this segment are currently under the jurisdiction of unincorporated San Diego County. In an effort to keep the proposed roadway extension within the jurisdictional limits of the City of Escondido, the City is proposing the annexation of these three parcels crossed by or in proximity to the proposed roadway extension. This would avoid the potential need for a joint jurisdictional operation and maintenance agreement between the County of San Diego and the City. All three parcels are outside the City's SOI boundaries and would therefore require an SOI boundary adjustment in conjunction with the annexation. San Diego LAFCO has sole responsibility for establishing a city's SOI and therefore would have to approve the SOI boundary adjustment.

As described above, Parcels A and B have City-assigned land use designations: Parcel A is designated "SPA #8," and Parcel B is designated "E2." Parcel C is designated "E2."

There are no existing City zoning designations for the three parcels. The City is proposing to assign a zoning designation consistent with the City General Plan for each of the three parcels. These zoning designations include Specific Plan (S-P) for Parcel A and Residential Estates (R-E) for Parcels B and C. While the zoning designations for Parcels B and C remain generally consistent with those zoning designations currently assigned by the County of San Diego, the rezoning designation applied to Parcel A would change from the agricultural zoning designation applied to the parcel by the County to an industrial designation applied by the City, consistent with the City's General Plan SPA #8. This land use zoning change is likely to ultimately result in more intensified use of the site, through an industrial zoning designation, by facilitating future development of the site for industrial uses. Land use changes such as this are more appropriately analyzed at a General Plan level and this more intensified land use has been a part of the City's

approved General Plan since prior to 1990. Therefore, the proposed Project would be consistent with applicable approved land use policies and plans, and a less-than-significant impact to land use would result.

The three parcels would need to be within the SOI boundary before being annexed. When establishing an SOI, LAFCO includes territory that is expected to require city services within a 10- to 15-year time period and considers information regarding land use, and public facilities and services. The proposed Project would require emergency and municipal service providers' approval for service boundary adjustments and LAFCO's approval of the City's Municipal Service Reorganization application. See Section 3.8, Municipal Services/Utilities, for additional information related to public facilities and services. Since the proposed Project, including annexation of the three parcels described above, is consistent with the existing City of Escondido General Plan land use designations, land use impacts are considered less than significant.

Escondido Creek Bridge

As mentioned above, the proposed Citracado Parkway roadway extension would require a new structure crossing at Escondido Creek. The bridge crossing at Escondido Creek would be approximately 450 feet in length and approximately 106 feet in width, with an open median. The approximate bridge height would be 24 feet. The new structure would require landform alterations, cut slopes, and fill slopes. Construction activity would occur within Escondido Creek during installation of the bridge. No changes in zoning or land use designation are proposed in this area. Effects of the bridge on open space are evaluated in Section 3.4, Biological Resources. The roadway itself would result in a change in land use at the creek crossing; however, with measures identified in Section 3.4, which will allow for continued wildlife movement, land use impacts are considered less than significant.

Consistency with City of Escondido General Plan

As previously mentioned, the growth and development experienced by Escondido resulted in intensified land uses and increased traffic generation. The City of Escondido's General Plan was adopted on June 6, 1990, and includes a Circulation Element. The Circulation Element includes and has identified this proposed roadway extension as a future improvement. The proposed Project would address the City's need for transportation facility improvements in this area by providing an arterial connection and roadway improvements from the existing southern terminus at Avenida Del Diablo north to Andreasen Drive. The proposed Project would implement a planned component of the City's Circulation Element.

The General Plan has identified land use designations consistent with the ongoing industrial/commercial development. The proposed roadway improvement and extension are consistent with the City's General Plan land use designations and will implement a planned component of the Circulation Element, which designates the ultimate classification of Citracado Parkway as a Major Road. Therefore, the proposed Project would not result in a significant land use impact.

Consistency with MHCP/NCMSCP

As stated in Section 3.4, Biological Resources, of this EIR, the Project area is within the NCMSCP and the MHCP. Both the NCMSCP and MHCP are currently in draft form. Portions of the Project area are within conservation areas referred to as the PAMA under the draft NCMSCP. An analysis of the Project's consistency with the NCMSCP and MHCP is provided in Section 3.4. As indicated in Section 3.4, the proposed Project would not result in a significant land use impact associated with the NCMSCP/MHCP.

3.1.4 Mitigation Measures

The proposed Project would not result in a significant land use impact. Therefore, no mitigation measures are proposed.

3.2 AGRICULTURAL RESOURCES

This analysis includes an assessment of the impacts that development of the proposed Project would have on agricultural resources and any impact annexation and zoning changes would have on agricultural resources associated with Parcels A, B, and C.

3.2.1 Existing Conditions

Surrounding Agricultural Use

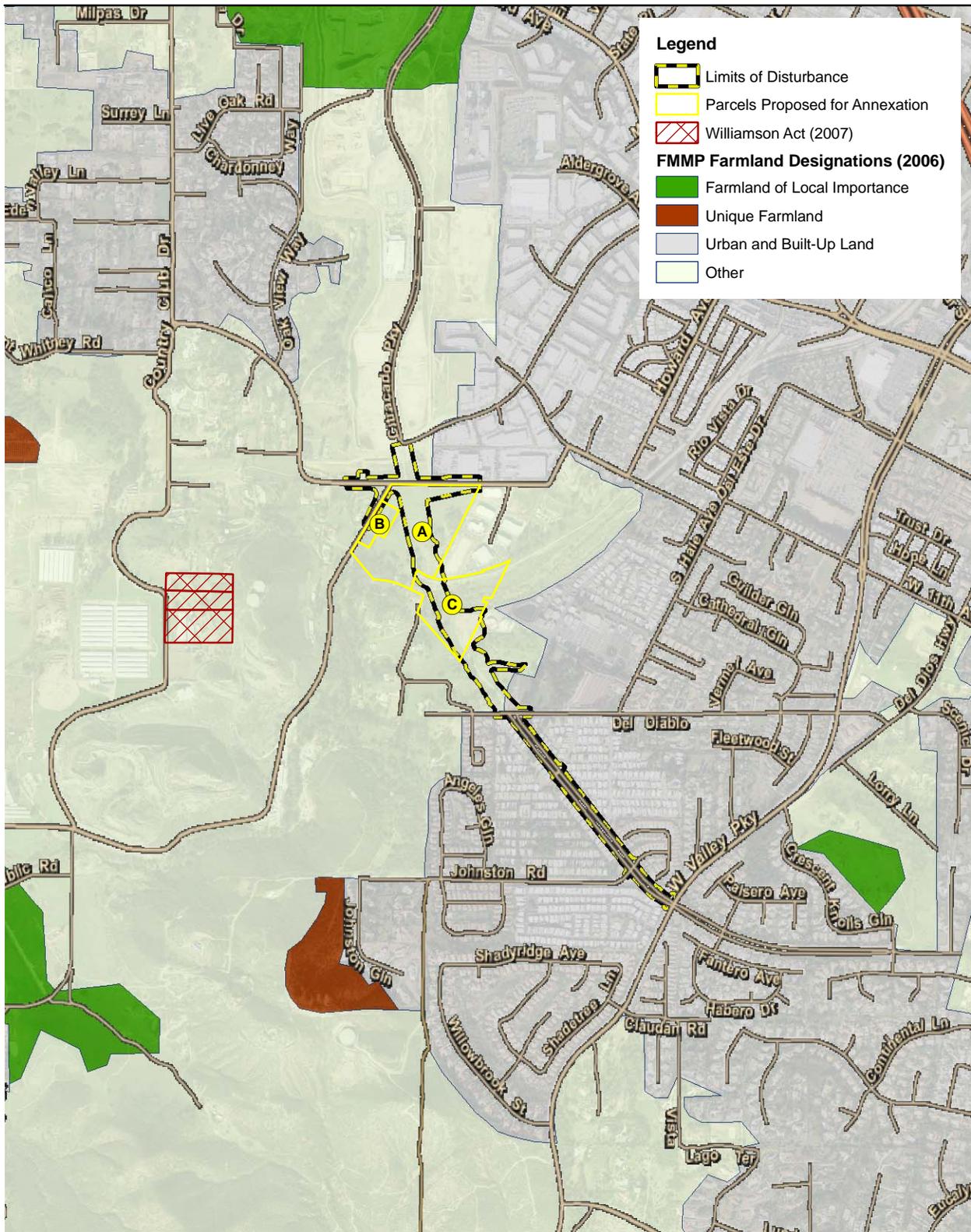
The proposed Project area is located in the western limits of Escondido and a portion of unincorporated San Diego County. It is approximately 1.5 miles west of I-15 and 1.5 miles south of SR-78. The proposed Project area is surrounded by light industrial/heavy commercial uses to the north and east, and residential/rural residential to the west and south. As can be seen in the aerial image in Figure 3.2-1, areas of unincorporated San Diego County to the west are primarily rural residential with agricultural operations scattered throughout. The Cities of Encinitas, Vista, San Marcos, and Escondido border this rural residential area in all directions and consist of more intensified residential, commercial, and industrial land uses. No active agricultural operations are located within the vicinity of the Project area.

Current and Historic On-Site Agricultural Use

None of the Project area, including the three parcels proposed for annexation, is currently used for agriculture. The Project area, as described in Section 3.1, Land Use, consists of residential and vacant lands. A review of aerial photography was completed by Kleinfelder West, Inc. in support of assessment for potential hazardous materials contamination (Kleinfelder West 2007). Review of this aerial photography dating back to 1939 indicates that the Project has historically consisted of vacant land, with the exception of the area north of Avenida Del Diablo and near the intersection of Citracado Parkway and Andreasen Drive, which were used for agricultural purposes (orchard and row crop) until some time prior to 1974. Aerial photography, post-1974, demonstrates a lack of agricultural operations on-site.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) monitors and documents land use changes that specifically affect California's agricultural land. The FMMP program classifies the land's suitability for agricultural production, which includes physical and chemical



Source: DigitalGlobe 2008; SanGIS 2006; AECOM 2010

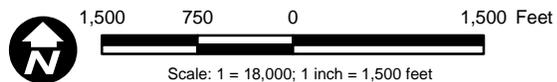


Figure 3.2-1
FMMP/Williamson Act

characteristics of soils, as well as specified land use characteristics. The FMMP classifies land as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-Up Land, and Other Land.

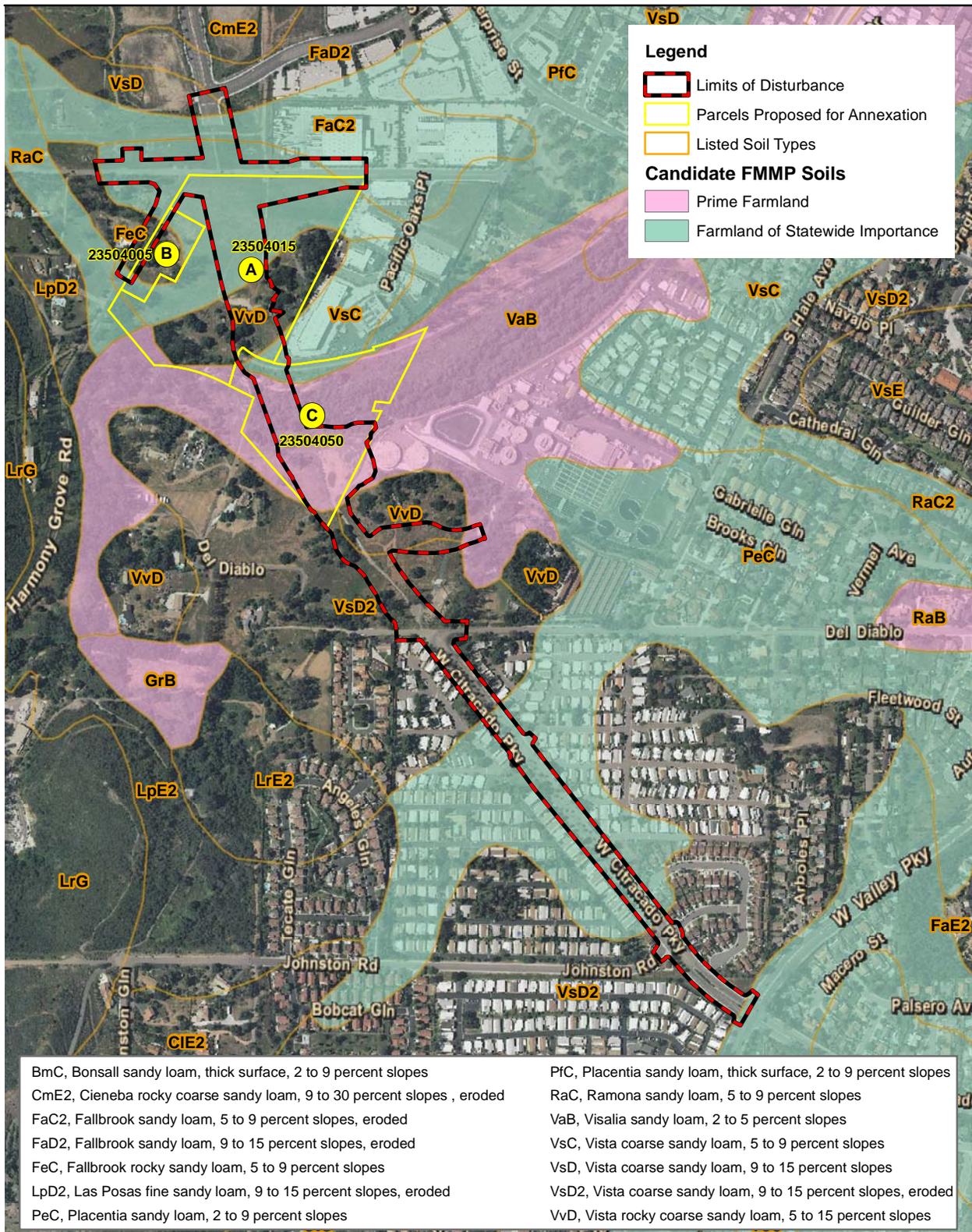
As shown in Figure 3.2-1, the Project area does not contain any classified Prime, Important, or Unique farmland or other agricultural resources (California Department of Conservation 2010). The northern half of the Project area is classified as Other Land, which does not meet the criteria of any other category, and the southern half of the site is classified as Urban and Built-Up Land, which is defined as land occupied by structures with a building density of at least one unit per 1.5 acres. In addition, the Project area is not involved in a Williamson Act contract or other agricultural land contract.

Prime Agricultural Lands

California Government Code Section 56064 defines “Prime agricultural land” as an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:

- a. Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
- b. Land that qualifies for rating 80 through 100 Storie Index Rating.
- c. Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
- d. Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.
- e. Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.

As shown in Figure 3.2-2, undeveloped parcels in the Project area include Parcels A and C. Parcel A consists of 17.54 acres of undeveloped land that is underlain approximately 50% by



Source: DigitalGlobe 2008; SSURGO 2006; AECOM 2010

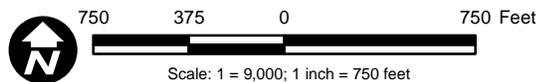


Figure 3.2-2
Soils

Citracado Parkway Extension Project Draft EIR

Path: P:\2006\06080144 Citracado Pkwy\5GIS\MXD\2010_mxd\EIR\soils_farms.mxd, 5/25/2011, LeeJ

Placentia sandy loam (PfC), a soils candidate for FMMP Statewide mapping. However, as shown in Table 3.2-1, this soil type does not meet the criteria for United States Department of Agriculture (USDA) Class or Storie Index rating, as indicated in criteria (a) and (b) above. Therefore, Parcel A is not considered to meet the California Government Code Section 56064 definition of Prime Agricultural Lands. Parcel C consists of 10.59 acres of undeveloped land that is almost entirely underlain by Visalia sandy Loam (VaB), a soil candidate for FMMP Prime Farmlands mapping. In addition, both the USDA class and Storie Index ratings meet criteria (a) and (b) for Prime Agricultural Lands. However, the site is bisected down the center with Escondido Creek. Because of the biological sensitivity of Escondido Creek, the majority of this site is considered unavailable for agricultural use due to economic and regulatory restrictions placed on agricultural operations in areas of sensitive wetland habitats.

**Table 3.2-1
Citracado Parkway Soils**

Soil Types	Acreage in Limit of Disturbance (LOD)	Acreage in parcels proposed for annexation (excluding LOD)	Candidate Soil for FMMP	Capability Class	Storie Index Rating
BmC: Bonsall sandy loam, thick surface, 2 to 9% slopes	0.17		No	IIIe	51
FeC: Fallbrook rocky sandy loam, 5 to 9% slopes	0.50		No	VIe-7	33
FaC2: Fallbrook sandy loam, 5 to 9% slopes, eroded	1.13		Statewide Candidate	IIIe-1	51
FaD2: Fallbrook sandy loam, 9 to 15% slopes, eroded	0.13		No	IVe-1	48
PeC: Placentia sandy loam, 2 to 9% slopes	3.76		Statewide Candidate*	IVe-3	49
PfC: Placentia sandy loam, thick surface, 2 to 9% slopes	7.97		Statewide Candidate	IIIe-3	60
VaB: Visalia sandy loam, 2 to 5% slopes	4.54		Prime Candidate**	IIe-1	81
VsC: Vista coarse sandy loam, 5 to 9% slopes	0.85		Statewide Candidate	IIIe-1	45
VsD: Vista coarse sandy loam, 9 to 15% slopes	0.37		No	IVe-1	43
VsD2: Vista coarse sandy loam, 9 to 15% slopes, eroded	5.96		No	IVe-1	40
VvD: Vista rocky coarse sandy loam, 5 to 15% slopes	3.53		No	VIe-7	27
Total	28.91				

*Areas of PeC on the Project site are within the developed residential area and are not currently available for agriculture.

**Approximately 50% of the prime soils VaB on the Project area directly underlay Escondido Creek. Because of the biological resource sensitivity of Escondido Creek, this area is considered unavailable for future agricultural use.

Regulatory Setting

City of Escondido General Plan Agricultural Policy H1.1

The following City General Plan policy addresses agriculture:

Policy H1.1: The City shall strive to maintain large-lot residential land uses with appropriate zoning designations in agricultural areas that are compatible with preserving agricultural productivity (City of Escondido 2009b).

City and County Zoning Ordinance

As described in Section 3.1, Land Use, zoning designations on the Project area consist of open space, residential, and agriculture. The three parcels proposed for annexation from unincorporated San Diego County to the City are currently zoned as A70 by the County of San Diego. A70 is a limited agricultural zone intended to create and preserve areas for agricultural crop production.

California Government Code 56377

San Diego LAFCO is required to consider impacts on open space and agricultural lands per Government Code Section 56377. In reviewing and approving or disapproving proposals that could reasonably be expected to induce, facilitate, or lead to the conversion of existing open-space lands to other than open-space uses, LAFCO shall consider the following policies and priorities:

- a. Development or use of land for other than open-space uses shall be guided away from existing prime agricultural lands in open-space use toward areas containing nonprime agricultural lands, unless that action would not promote the planned, orderly, efficient development of an area.
- b. Development of existing vacant or nonprime agricultural lands for urban uses within the existing jurisdiction of a local agency or within the sphere of influence of a local agency should be encouraged before any proposal is approved which would allow for or lead to the development of existing open-space lands for non-open-space uses which are outside of the existing jurisdiction of the local agency or outside of the existing sphere of influence of the local agency.

3.2.2 Significance Criteria

The effects of a project on agricultural resources are considered significant if the project would violate any of the City of Escondido significance criteria. The proposed Project would result in a significant agricultural resources impact if it would do any of the following:

1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use;
2. Conflict with California Government Code Section 56377, as it pertains to Prime Agricultural Lands;
3. Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
4. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use.

3.2.3 Impact Analysis

Direct Impacts

As described in 3.2.1, no active agricultural operations exist on the proposed Project area. Review of aerial photography indicates that any historic agriculture on the site occurred prior to 1974. The proposed Project would not directly impact agricultural operations or convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on maps prepared pursuant to the FMMP (County of San Diego 2006a), to a nonagricultural use (Criterion 1). In addition, the proposed Project would not impact lands under a Williamson Act contract.

The proposed Project includes annexation of three parcels within unincorporated San Diego County. These three parcels are currently zoned as A70 Limited Agriculture. While these lands are zoned for agricultural uses, agriculture has not existed on the parcels for over 30 years. Rather, the predominant land use in and to the west of this area consists of rural residential, which may in some cases involve small farming operations. With the proposed annexation, Parcels B and C would be zoned to Residential Estates and Parcel A would be zoned S-P Specific Plan, consistent with the City's General Plan. This proposed zoning change is not expected to alter the existing or future land uses on Parcels B and C. However, it would allow for future development of Parcel A for industrial use. Because rezoning would occur only with annexation to the City, as approved by LAFCO, to achieve consistency with the Escondido General Plan, no conflict in zoning would occur with the proposed Project (Criterion 3).

LAFCO is required to consider impacts on open space and agricultural lands per Government Code Section 56377. In reviewing and approving or disapproving proposals that could reasonably be expected to induce, facilitate, or lead to the conversion of existing open-space lands to uses other than open-space uses, LAFCO must give preference to conversion of nonprime agricultural lands over agricultural lands. In this case, while the soils in Parcel A would meet the definition of Prime Agricultural Farmlands, Escondido Creek, a biologically sensitive resource, bisects the parcel, generally making the site unavailable for farmland. Therefore, the logical development of Citracado Parkway, and annexation of three parcels that have not been farmed in recent years and are not considered Prime Farmlands, is consistent with the prioritization criterion (a) of LAFCO Policy 56377. In addition, criterion (b) recognizes the desire to develop nonprime farmlands within the City's SOI before developing open space areas outside of the City's SOI. While this Project is outside of the City's SOI, it is a logical and planned continuation of urban development and critical to the City's Circulation Element. Furthermore, an alternative location for development is not feasible, because the Project is a roadway extension project that connects two existing roadway and developed areas. Therefore, while outside of the City's sphere, development of these parcels for a roadway and integration of these parcels in the City's SOI are considered to be consistent with criterion (b) of LAFCO Policy 56377 (Criterion 2). Therefore, the proposed Project, if implemented, would have a less-than-significant direct impact on agricultural resources.

Indirect Impacts

The proposed Project would involve extension of Citracado Parkway and increased traffic circulation in the area. The proposed Project could result in intensified land uses in the area, in particular in the area of Parcel A, which is proposed to be zoned for industrial use. However, the proposed developments and land uses are consistent with the City's General Plan and represent a logical and planned development directly adjacent to urban industrial and residential land uses. No active agricultural operations have been identified directly adjacent to the proposed Project area. Therefore, the Project is not anticipated to result in the indirect conversion of agricultural lands to a nonagricultural use, or result in a land use conflict with existing agricultural operations (Criterion 4).

3.2.4 Mitigation Measures

No significant impacts to agricultural resources have been identified. No mitigation measures are proposed.

3.3 AIR QUALITY

This section includes a description of existing air quality, a summary of applicable regulations, and analyses of potential short-term and long-term air quality impacts of the proposed Project. Mitigation measures are recommended, as necessary, to reduce significant air quality impacts. Air quality calculations are provided in Appendix C of this EIR. Primary sources for existing air quality data are the California Air Resources Board (ARB), the U.S. Environmental Protection Agency (USEPA), and the San Diego Air Pollution Control District (SDAPCD).

3.3.1 Existing Conditions

The Project area is located in the City of Escondido in San Diego County, which is within the San Diego Air Basin (SDAB). The boundaries of the SDAB coincide with those of the County. Ambient concentrations of air pollutants in the SDAB are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute emissions. Natural factors that affect transport and dilution include terrain, wind speed, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by natural factors such as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

Climate

Climate is the accumulation of daily and seasonal weather events over a long period of time, whereas weather is defined as the condition of the atmosphere at any particular time and place (Ahrens 2003). The climate of San Diego County is characterized by warm, dry summers and mild, wet winters. One of the main factors that influences climate in the SDAB is a semipermanent high-pressure cell (the Pacific High) in the eastern Pacific Ocean (County of San Diego 2007a). The Pacific High is located well to the north in the summer, causing storm tracks to be directed north of California. This high-pressure cell maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation. In the Escondido area, the months of heaviest precipitation are November through April, averaging about 16 inches annually. The mean temperature is 62 degrees Fahrenheit (°F), and the mean maximum and mean minimum temperatures are 76°F and 47°F, respectively (WRCC 2010).

The Pacific High also influences the wind patterns of California. The predominant wind directions are westerly and west-southwesterly during all four seasons, and the average annual wind speed is 5.6 miles per hour (mph) (WRCC 2010).

The region's climate can also be affected by an inversion layer, which is a layer of warm air that lies over cooler, ocean-modified air and often acts as a ceiling, preventing air pollutants from escaping upward. In the summer, these temperature inversions are stronger than in winter and prevent pollutants from escaping upward and dispersing. In the winter, a ground-level or surface inversion commonly forms during the night and traps carbon monoxide (CO) emitted by vehicles during the morning rush hours. Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality (County of San Diego 2007a).

Existing Air Quality – Criteria Air Pollutants

Concentrations of ozone, nitrogen dioxide (NO₂), CO, sulfur dioxide (SO₂), respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less (PM₁₀), fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less (PM_{2.5}), and lead are used as indicators of ambient air quality conditions. These are the most prevalent air pollutants known to be deleterious to human health, and there is extensive documentation available on health-effects criteria for these pollutants. These pollutants are referred to as “criteria air pollutants.” A brief description of each criteria air pollutant, including source types, health effects, and future trends, is provided in Appendix C.

Monitoring Station Data and Attainment Area Designations

Criteria air pollutant concentrations are measured at 10 monitoring stations in the SDAB. Data from the monitoring station at East Valley Parkway in Escondido were used to characterize existing air quality at the Project area. The East Valley Parkway air monitoring station is located at 600 East Valley Parkway approximately 3 miles to the northeast of the Project area (ARB 2010a). Table 3.3-1 presents a summary of the highest pollutant values recorded at this station and compliance with federal and state standards from 2004 through 2008.

Both ARB and USEPA use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. The “unclassified” designation is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation called “nonattainment-transitional.” This designation is given to nonattainment areas that are progressing and nearing attainment. The current national and state standards are shown in Table 3.3-2.

**Table 3.3-1
Escondido, East Valley Parkway Monitoring Station – Ambient Air Quality**

Pollutant	Averaging Time	Federal Primary Standards	California Air Quality Standards	Maximum Concentrations ⁽¹⁾					Number of Days Exceeding Federal Standard ⁽²⁾					Number of Days Exceeding State Standard ⁽²⁾				
				2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Ozone	1 hour	None ⁽³⁾	0.09 ppm	0.099	0.095	0.108	0.094	0.166	0	0	0	0	0	2	1	3	0	9
	8 hour	0.075 ppm	0.070 ppm	0.086	0.079	0.096	0.077	0.098	3	1	6	3	13	9	2	11	5	23
Carbon Monoxide	1 hour	35 ppm	20 ppm	5.3	5.9	5.7	5.2	5.6	0	0	0	0	0	0	0	0	0	0
	8 hour	9 ppm	9.0 ppm	3.61	3.10	3.61	3.19	2.81	0	0	0	0	0	0	0	0	0	0
Nitrogen Dioxide	1 hour	0.100 ppm	0.18 ppm	0.08	0.076	0.071	0.072	0.081	–	–	–	–	–	0	0	0	0	0
	Annual	0.053 ppm	0.030 ppm	0.018	0.016	0.017	0.016	0.018	–	–	–	–	–	–	–	–	–	–
PM ₁₀ ⁽⁴⁾	24 hours	150 µg/m ³	50 µg/m ³	57.0	42.0	51.0	68.0 ⁽⁵⁾	82.0	0	0	0	0	0	1	0	1	2	1
	Annual	Revoked	20 µg/m ³	27.5	23.9	24.1	26.7	24.6	–	–	–	–	–	–	–	–	–	–
PM _{2.5}	24 hours	35 µg/m ³	None	67.3	43.1	40.6	126.2 ⁽⁶⁾	31.3	9	4	1	11	–	–	–	–	–	–
	Annual	15 µg/m ³	12 µg/m ³	14.0	–	11.4	13.3	–	–	–	–	–	–	–	–	–	–	–

“–” = data not available or applicable.

⁽¹⁾ Concentration units for ozone, carbon monoxide, and nitrogen dioxide are in parts per million (ppm). Concentration units for PM₁₀ and PM_{2.5} are in micrograms per cubic meter (µg/m³).

⁽²⁾ For annual standards, a value of 1 indicates that the standard has been exceeded.

⁽³⁾ The federal 1-hour ozone standard was revoked in June 2005.

⁽⁴⁾ PM₁₀ data are recorded separately for federal and state purposes because USEPA and California methods are slightly different. Federal values are shown. PM₁₀ is measured every 6 days; the number of days exceeding standards is projected to a 365-day base from the measurements.

⁽⁵⁾ PM₁₀ data for October 21–27, 2007, was designated as “exceptional event” data due to wildfires.

⁽⁶⁾ PM_{2.5} data for October 21–November 8, 2007, was designated as “exceptional event” data due to wildfires.

Sources: ARB 2010b; SDAPCD 2009

**Table 3.3-2
National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	NAAQS ¹		CAAQS ²
		Primary ³	Secondary ⁴	Concentration ⁵
Ozone (O ₃) ⁶	1-Hour	–	Same as Primary Standard	0.09 ppm (180 µg/m ³)
	8-Hour	0.075 ppm (147 µg/m ³)		0.070 ppm (137 µg/m ³) ⁹
Carbon Monoxide (CO)	8-Hour	9 ppm (10 mg/m ³)	None	9.0 ppm (10 mg/m ³)
	1-Hour	35 ppm (40 mg/m ³)		20 ppm (23 mg/m ³)
	8-Hour (Lake Tahoe)	–		6 ppm (7 mg/m ³)
Nitrogen Dioxide (NO ₂)	Annual Average	0.053 ppm (100 µg/m ³)	Same as Primary Standard	0.030 ppm (57 µg/m ³) ¹⁰
	1-Hour	0.100 ppm	–	0.18 ppm (339 µg/m ³) ¹⁰
Sulfur Dioxide (SO ₂)	Annual Average	0.030 ppm (80 µg/m ³)	–	–
	24-Hour	0.14 ppm (365 µg/m ³)	–	0.04 ppm (105 µg/m ³)
	3-Hour	–	0.5 ppm (1300 µg/m ³)	–
	1-Hour	–	–	0.25 ppm (655 µg/m ³)
Respirable Particulate Matter (PM ₁₀) ⁷	24-Hour	150 µg/m ³	Same as Primary Standard	50 µg/m ³
	Annual Arithmetic Mean	Revoked ^{note 7}		20 µg/m ³
Fine Particulate Matter (PM _{2.5}) ⁸	24-Hour	35 µg/m ³	Same as Primary Standard	–
	Annual Arithmetic Mean	15.0 µg/m ³		12 µg/m ³
Lead (Pb)	30-Day Average	–	–	1.5 µg/m ³
	Calendar Quarter	1.5 µg/m ³	Same as Primary Standard	–
	Rolling 3-Month Average	0.15 µg/m ³	Same as Primary Standard	–
Hydrogen Sulfide (H ₂ S)	1-Hour	No Federal Standards		0.03 ppm (42 µg/m ³)
Sulfates (SO ₄)	24-Hour			25 µg/m ³
Visibility Reducing Particles	8-Hour (10 AM to 6 PM, Pacific Standard Time)			Extinction coefficient of 0.23 per km-visibility of ten miles or more (0.07/30 miles for Lake Tahoe) due to particles when the relative humidity is less than 70%.
Vinyl chloride ⁹	24-Hour			0.01 ppm (26 µg/m ³)

¹ NAAQS (other than O₃, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact USEPA for further clarification and current federal policies.

² California Ambient Air Quality Standards for O₃, CO (except Lake Tahoe), SO₂ (1- and 24-hour), NO₂, PM₁₀, PM_{2.5}, and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

³ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

⁴ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

⁵ Concentration expressed first in units in which it was promulgated. Ppm in this table refers to ppm by volume or micromoles of pollutant per mole of gas.

⁶ On June 15, 2005, the 1-hour ozone standard was revoked for all areas except the 8-hour ozone nonattainment Early Action Compact Areas (those areas do not yet have an effective date for their 8-hour designations). Additional information on federal ozone standards is available at <http://www.epa.gov/oar/oaqps/greenbk/index.html>.

⁷ Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, USEPA revoked the annual PM₁₀ standard on December 17, 2006.

⁸ Effective December 17, 2006, USEPA lowered the PM_{2.5} 24-hour standard from 65 µg/m³ to 35 µg/m³.

⁹ The ARB has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

¹⁰ The nitrogen dioxide ambient air quality standard was amended to lower the 1-hr standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. These changes became effective March 20, 2008.

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; km = kilometers
Source: ARB 2010c

The SDAB currently meets the national standards for all criteria pollutants except ozone, and meets state standards for all criteria pollutants except ozone, PM₁₀, and PM_{2.5}. On April 15, 2004, USEPA issued the initial designations for the 8-hour ozone standard, and the SDAB is classified as “basic” nonattainment. Basic is the least severe of the six degrees of ozone nonattainment. SDAPCD submitted an air quality plan to USEPA in 2007; the plan demonstrated how the 8-hour ozone standard will be attained by 2009. A decision from USEPA was anticipated the summer or fall of 2009; however, USEPA is currently in the process of reclassifying California air basins for the 0.075 parts per million (ppm) 8-hour ozone standard. It is anticipated that USEPA will issue a final ruling for the new classification of the SDAB, which would then trigger a 12-month period for SDAPCD to develop an air quality attainment plan according to the new classification and nullify the previous 2007 air quality plan (Reider, pers. comm., 2010). The SDAB is currently classified as a “serious” ozone nonattainment area under state standards. Ozone precursor emissions of volatile organic compounds (VOC) and nitrogen oxides (NO_x) have decreased over the past several years because of more stringent motor vehicle standards and cleaner burning fuels. Ozone exceedance days in the SDAB have declined at a faster rate than peak levels. From 1988 to 2007, peak 8-hour ozone levels declined by 27%, while the number of California and national 8-hour exceedance days declined by 65% and 81%, respectively (ARB 2009a). According to ARB, San Diego is expected to attain the current national 8-hour standard by the year 2009; however, USEPA has not yet announced new designations for the 8-hour standard.

For PM_{2.5}, the SDAB is currently classified as a national attainment area and state nonattainment area. Direct emissions of PM_{2.5} are projected to continue increasing up to 2020 for the same reasons stated above for PM₁₀. However, the increase in PM_{2.5} is not projected to be as dramatic as that for PM₁₀. Annual average PM_{2.5} concentrations (national and state) in the SDAB have declined during the period of 2002 through 2007. The highest maximum 24-hour concentration of 239 micrograms per cubic meter (µg/m³) occurred in 2003 and was due to severe wildfires that occurred in Southern California during October (ARB 2009a).

The SDAB is classified a state nonattainment area for PM₁₀. Direct emissions of PM₁₀ are projected to almost double in the SDAB between 1975 and 2020 (ARB 2009a). This increase is primarily associated with the growth in areawide sources, specifically, fugitive dust from vehicle travel on unpaved and paved roads, dust from construction and demolition operations, and particulates from residential fuel combustion (including wood). Population growth and increases in vehicle miles traveled (VMT) within the SDAB are main factors that contribute to the growth in these areawide sources. Although ambient PM₁₀ concentrations in the SDAB are not as high as

in some other areas of the state, additional emission controls will be needed to bring this area into attainment with the state standards.

The SDAB currently falls under a national “maintenance plan” for CO, following a 1998 redesignation as a CO attainment area.

Existing Emissions – San Diego County

Table 3.3-3 summarizes the emissions inventory for criteria air pollutants within San Diego County for various source categories. With respect to the SDAB, mobile sources are the largest contributor to the estimated annual average air pollutant levels of VOC, CO, and NO_x, accounting for approximately 57%, 94%, and 93%, respectively, of the total emissions. Areawide sources account for approximately 83% and 51% of the SDAB’s PM₁₀ and PM_{2.5} emissions, respectively.

**Table 3.3-3
Summary of 2008 Emissions Inventory for Criteria Air Pollutants and Precursors
(San Diego County)**

Source Type/Category	Estimated Annual Average Emissions (Tons per Day)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Stationary Sources						
Fuel Combustion	3.31	21.77	8.60	0.38	1.81	1.67
Waste Disposal	2.13	0.10	0.26	0.04	0.09	0.07
Cleaning and Surface Coating	15.21	–	–	–	–	–
Petroleum Production and Marketing	9.04	0.01	0.01	–	–	–
Industrial Processes	2.58	0.36	0.21	0.02	6.69	4.39
Subtotal (Stationary Sources)	32.27	22.23	9.08	0.45	8.59	6.13
Areawide Sources						
Solvent Evaporation	30.62	–	–	–	0.01	0.01
Miscellaneous Processes	5.14	28.07	2.73	0.22	94.52	16.09
Subtotal (Areawide Sources)	35.76	28.07	2.73	0.22	94.52	16.10
Mobile Sources						
On-Road Motor Vehicles	51.02	531.19	100.55	0.48	5.60	4.00
Other Mobile Sources	37.59	242.67	67.20	3.60	5.82	5.33
Subtotal (Mobile Sources)	88.60	773.86	167.75	4.08	11.42	9.32
Total for San Diego County	156.64	824.16	179.56	4.75	114.53	31.55

Notes:

VOC = volatile organic compounds; CO = carbon monoxide; NO_x = oxides of nitrogen; SO_x = oxides of sulfur; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter

Totals in table may not add exactly due to rounding.

Source: ARB 2009b

Toxic Air Contaminants

Concentrations of Toxic Air Contaminants (TACs), or, in federal parlance, hazardous air pollutants (HAPs), are also used as indicators of ambient-air-quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to the *California Almanac of Emissions and Air Quality* (ARB 2009a), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter (PM) from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, *para*-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Diesel PM poses the greatest health risk among these TACs. Based on receptor modeling techniques, ARB estimated the diesel PM health risk in the SDAB in 2000 to be 420 excess cancer cases per million people. Since 1990, the health risk of diesel PM in the SDAB has been reduced by 52% (ARB 2009a).

According to the Community Health Air Pollution Information System, developed by ARB, no major stationary sources of TACs exist within 2 miles of the Project area. A bakery facility is located approximately 1 mile northeast of the Project area and a concrete mixing company is located approximately 1.5 miles southeast of the Project area. Vehicles operating on local roadways are sources of diesel PM and other TACs associated with vehicle exhaust.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

There are no existing concentrated sources of objectionable odors within 1 mile of the Project area. No major agriculture-related odor sources (e.g., livestock or dairy operations) are located within 2 miles. However, the HARRF is located approximately 600 feet east of the extension of Citracado Parkway, which could be a potential source of odors due to standing water.

Greenhouse Gases and Climate Change

Physical Scientific Basis of Climate Change

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on the earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is extremely unlikely that global climate change of the past 50 years can be explained without the contribution from human activities (Intergovernmental Panel on Climate Change 2007).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe.

Impacts of GHGs also are borne globally, as opposed to localized air quality effects of criteria air pollutants and TACs. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say, the quantity is enormous, and no single project alone

would measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climate. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

Greenhouse Gas Emission Sources

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, electric utility, residential, commercial, and agricultural sectors (ARB 2009b). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (ARB 2009b). Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N₂O is also largely attributable to agricultural practices and soil management.

California is the 12th to 16th largest emitter of CO₂ in the world (California Energy Commission 2006a). California produced 484 million gross metric tons of CO₂ equivalent (CO₂e) in 2004 (ARB 2009b). CO₂e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing emissions in CO₂e takes the contributions of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 38% of total GHG emissions in the state. This sector was followed by the electric power sector (including both in-state and out-of-state sources) (22%) and the industrial sector (20%) (ARB 2008).

Adaptation to Climate Change

According to the Intergovernmental Panel on Climate Change (IPCC), which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature is expected to increase by 3 to 7°F by the end of the century, depending on future GHG emission scenarios (IPCC 2007). Resource areas other than air quality and global average temperature could be indirectly affected by the accumulation of GHG emissions. For example, an increase in the global average temperature is expected to result

in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada (Knowles, N., and D. R. Cayan 2002). Although current forecasts are uncertain, this phenomenon could lead to significant challenges in securing an adequate water supply for a growing population. An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be stored as snow in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events. This scenario would place more pressure on California's levee/flood control system (DWR 2006).

Another outcome of global climate change is sea level rise. The sea level rose approximately 7 inches during the last century and it is predicted to rise an additional 7 to 22 inches by 2100, depending on the future levels of GHG emissions (IPCC 2007). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion, and disruption of wetlands (CEC 2006b).

The Project area elevation ranges from 600 to 660 feet above mean seal level (AMSL) and, thus, would not be directly affected by the potential sea level rise predicted to occur over the next 100 years.

Regulatory Framework

Air quality within the Project area is regulated by USEPA, ARB, and SDAPCD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although USEPA regulations may not be superseded, both state and local regulations may be more stringent.

Criteria Air Pollutants

Federal Regulations

At the federal level, the Clean Air Act (CAA) required USEPA to establish National Ambient Air Quality Standards (NAAQS). As shown in Table 3.3-2, USEPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead (USEPA 2009). The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically

to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. USEPA must review all SIPs to determine whether they conform to the mandates of the CAA and the amendments thereof, and to determine whether implementing them will achieve air quality goals. If USEPA determines an SIP to be inadequate, a Federal Implementation Plan that imposes additional control measures may be prepared for the nonattainment area. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may cause sanctions to be applied to transportation funding and stationary air pollution sources in the air basin.

State Regulations

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required ARB to establish the California Ambient Air Quality Standards (CAAQS) (Table 3.3-2). ARB established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulate matter, in addition to the above-mentioned criteria air pollutants. The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources, and provides districts with the authority to regulate indirect sources.

ARB and local air pollution control districts are currently developing plans for meeting new national air quality standards for ozone and PM_{2.5}. California's adopted 2007 State Strategy was submitted to USEPA as a revision to the SIP in November 2007.

Local Plans and Policies

San Diego Air Pollution Control District

SDAPCD seeks to improve air quality conditions in San Diego County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SDAPCD includes preparing plans and programs for the attainment of ambient air quality standards, adopting and enforcing rules and regulations, and issuing permits for stationary sources. SDAPCD also inspects stationary sources; responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements other programs and regulations required by the CAA, CAAA, and CCAA.

Regional Air Quality Strategy

As stated previously, the SDAB is designated as a nonattainment area for ozone for both national and state standards. For each nonattainment area within the state, the CCAA has specified air quality management strategies that must be adopted by the agency responsible for the nonattainment area. Each area must prepare and adopt an air quality management plan (AQMP) or regional air quality strategy (RAQS), which lays out programs for attaining the CAAQS and NAAQS for all criteria pollutants. At present, no attainment plan for PM_{2.5} or PM₁₀ is required by the state regulations. Accordingly, the San Diego RAQS was developed by SDAPCD, pursuant to CCAA requirements, and identifies feasible emission control measures to provide expeditious progress in San Diego County toward attaining the state ozone standard. The pollutants addressed are VOC and NO_x, precursors to the photochemical formation of ozone.

The San Diego County RAQS for the SDAB was initially adopted in 1991, and subsequently revised in 1995, 1998, 2001, 2004, and most recently in 2009.

SDAPCD Rules and Regulations

All land development projects are subject to SDAPCD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the proposed Project may include the following:

- Rule 51, Nuisance, states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any such persons or the public; or that cause or have a natural tendency to cause injury or damage to business or property.
- Rule 55, Fugitive Dust Control, states that no person shall engage in construction or demolition activities that discharge visible emissions of fugitive dust beyond the property line for a period or periods aggregating to more than 3 minutes within any 60-minute period. In addition, visible roadway dust from active operations shall be minimized using effective track-out/carry-out and erosion control measures, and removed at the conclusion of each work day or once every 24-hour period for continuous operations.

Toxic Air Contaminants

Air quality regulations also focus on TACs. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts may not be expected to occur. This contrasts with the criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (Table 3.3-2). Instead, USEPA and ARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology for toxics (MACT and BACT) to limit emissions.

Federal Hazardous Air Pollutant Programs

USEPA has programs for identifying and regulating HAPs. USEPA standards are different for major emission sources than for area sources of HAPs. Major sources are stationary sources with the potential to emit more than 10 tons per year (tpy) of any HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources. For major sources, USEPA has developed technology-based emission standards designed to produce the maximum emission reduction achievable. For area sources, the standards may be different, based on generally available control technology. The CAAA also required USEPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, the CAAA required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

State and Local Toxic Air Contaminant Programs

TACs in California are primarily regulated through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Tanner Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Hot Spot Act). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. Research, public participation, and scientific peer review must occur before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and adopted USEPA's list of HAPs as TACs. Most recently, diesel PM was added to the ARB list of TACs.

Once a TAC is identified, ARB then adopts an Airborne Toxics Control Measure for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic

effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions. For example, the Airborne Toxic Control Measure limits truck idling to 5 minutes.

ARB has adopted diesel-exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). Current and future milestones include the low-sulfur diesel fuel requirement and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide. Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1,3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of ARB's Risk Reduction Plan, it is expected that diesel PM concentrations will be reduced by 75% in 2010 and 85% in 2020 from the estimated year-2000 level. Adopted regulations are also expected to continue to reduce formaldehyde emissions from cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

ARB published the *Air Quality and Land Use Handbook: A Community Health Perspective*, which provides guidance concerning land-use compatibility with TAC sources (ARB 2005). Although not a law or adopted policy, the handbook offers recommendations for the siting of sensitive receptors (such as proposed residential units) near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities, to help limit the exposure of children and other sensitive populations to TACs.

At the local level, air pollution control or management districts may adopt and enforce ARB TAC control measures. Under SDAPCD Regulations II, XI, and XII, all sources that possess the potential to emit TACs are required to obtain permits from SDAPCD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new-source review standards and air toxics control measures. SDAPCD limits emissions and public exposure to TACs through a number of programs. SDAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors.

In addition to criteria air pollutants and TACs, GHGs are also air pollutants of concern. The analysis of GHG emissions from the proposed Project and their impact on climate change is discussed in Section 3.3.3.

Odors

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 41700, prohibit the emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

Greenhouse Gases

Federal Plans, Policies, Regulations, and Laws

USEPA is the federal agency responsible for implementing the federal CAA. The Supreme Court of the United States ruled on April 2, 2007, that CO₂ is an air pollutant as defined under the CAA, and that USEPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions applicable to the proposed Project at the time of writing.

State Plans, Policies, Regulations, and Laws

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA, which was adopted in 1988.

Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. Because every nation emits GHGs and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale would be required to reduce the rate of GHG generation to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Assembly Bill 1493. In 2002, then-Governor Gray Davis signed AB 1493. AB 1493 requires that ARB develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state.”

To meet the requirements of AB 1493, in 2004 ARB approved amendments to the California Code of Regulations (CCR) adding GHG emissions standards to California’s existing standards for motor vehicle emissions. California received a CAA Section 209, subsection (b) waiver from USEPA on June 30, 2009.

Executive Order S-3-05. Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050.

Assembly Bill 32, the California Global Warming Solutions Act of 2006. In September 2006, Governor Arnold Schwarzenegger signed AB 32, which establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Assembly Bill 32 Climate Change Proposed Scoping Plan. In October of 2008, ARB published its Climate Change Proposed Scoping Plan (Proposed Scoping Plan), which is the state’s plan to achieve GHG reductions in California required by AB 32 (ARB 2008). The Proposed Scoping Plan contains the main strategies California would implement to achieve reduction of 169 million metric tons (MMT) of CO_{2e}, or approximately 30% from the state’s projected 2020 emission level of 596 MMT of CO_{2e} under a business-as-usual scenario (this is a reduction of 42 MMT CO_{2e}, or almost 10%, from 2002–2004 average emissions). The Proposed Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of the state’s GHG inventory. The Proposed Scoping Plan was approved by the ARB on December 11, 2008.

Executive Order S-1-07. Executive Order S-1-07, which was signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, at over 40% of statewide emissions. It establishes a goal that the carbon intensity of transportation fuels sold in California should be reduced by a minimum of 10% by 2020.

Senate Bill 97. Senate Bill (SB) 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the California Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA by July 1, 2009. The Natural Resources Agency is required to certify or adopt those guidelines by January 1, 2010. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the CEQA Guidelines for GHG emissions, as required by SB 97. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the CCR. The Amendments became effective March 18, 2010.

Senate Bill 375. SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which would prescribe land use allocation in that MPO's Regional Transportation Plan [RTP]). ARB, in consultation with MPOs, would provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets would be updated every 8 years but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

This bill also extends the minimum time period for the Regional Housing Needs Allocation cycle from 5 years to 8 years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the RTP (and associated SCS or APS). However, new provisions of CEQA would incentivize qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

3.3.2 Significance Criteria

The effects of a project on air quality are considered significant if the project would violate any of the City of Escondido significance criteria. The proposed Project would result in a significant air quality impact if it would do the following:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3. 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 City of Escondido has adopted quantitative thresholds for determining if a project is required to conduct an EIR level analysis under CEQA. The daily thresholds, shown in Table 3.3-4, are not for determining if a significant impact has occurred; however, if a project’s air emissions are below these thresholds, the air emissions of a project would result in a less-than-significant impact.

**Table 3.3-4
Daily Emission Thresholds**

	Pounds per Day			
	VOC	NO _x	CO	PM ¹
Construction or Operation	55	55	550	150

¹ The PM standard is applied to PM₁₀ and PM_{2.5}.
Source: City of Escondido 2010e

4. Expose sensitive receptors to substantial pollutant concentrations;
5. Create objectionable odors affecting a substantial number of people;
6. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
7. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

3.3.3 Impact Analysis

Project Consistency with Air Quality Plan

Section 15125(B) of the CEQA Guidelines contains specific reference to the need to evaluate any inconsistencies between the proposed Project and the applicable AQMP, i.e., the RAQS. Included in the RAQS are Transportation Control Measures (TCMs). The RAQS and TCM plan set forth the steps needed to accomplish attainment of state and federal ambient air quality standards. ARB provides criteria for determining whether a Project conforms to the RAQS; these criteria include the following:

- Is a regional air quality plan being implemented in the project area?
- Is the project consistent with the growth assumptions in the regional air quality plan?
- Does the project incorporate all feasible and available air quality control measures?

The Project area is located in the SDAB, an area where a regional air quality plan is being implemented. The proposed Project area is divided into several different zones and general plan land use designations. The southern portion, West Valley Parkway to Avenida Del Diablo, of the Project is designated for residential use. The Project would not involve altering the existing use of this roadway. The northern portion, Avenida Del Diablo to Andreasen Drive, includes development of a new roadway. Three parcels within this segment are currently under County jurisdiction. While not currently under the City's jurisdiction, the City assigned land use designations to these parcels in the immediate area during its 1990 General Plan update to guide the surrounding development. Parcels A and B have City-assigned land use designations: Parcel A is designated "SPA #8," and Parcel B is designated "E2." The "SPA #8" category refers to Specific Plan Area 8, or Harmony Grove SPA, and allows for a high-quality industrial park with attractive structures while maintaining aesthetic and natural attributes to the site. Parcel C is designated "E2," which refers to Estate II – a category reserved for single-family suburban development and rural areas. While none of these designations includes roadways as land uses, the proposed Citracado Parkway extension is included in the General Plan Circulation Element and is shown in the Land Use map. Thus, the proposed Project has been accounted for in the Escondido General Plan.

Additionally, the proposed Project is included in the current San Diego Association of Government (SANDAG) RTP and RTIP, the 2030 San Diego Regional Transportation Plan: Pathways for the Future (2030 RTP), and the Final 2010 Regional Transportation Improvement

Program (2010 RTIP). Thus, the proposed Project is consistent with the growth assumptions in the regional transportation plans.

SDAPCD relies, to a certain degree, on land use designations contained in local general plan documents and the SANDAG RTPs to prepare air quality plans. SDAPCD refers to approved general plans to forecast, inventory, and allocate regional emissions from land use and development-related sources. These emissions budgets are used in statewide air quality attainment planning efforts. As discussed above, the proposed Project is consistent with the Escondido General Plan and the SANDAG 2030 RTP and 2010 RTIP; therefore, operational (i.e., mobile sources) emissions associated with the Project would have been accounted for when developing emission projections for the SIP and RAQS. As such, the Project would not conflict with or obstruct implementation of the applicable air quality plan (Criterion 1).

Construction Emissions

Construction-related emissions are described as “short-term” or temporary in duration and have the potential to result in a significant impact with respect to air quality, especially fugitive PM₁₀ and PM_{2.5} dust emissions. During construction of the proposed Project, criteria air pollutants would be generated from activities such as grubbing and clearing, soil excavation and utility trenching, grading and roadbed preparation, roadway construction, and paving. Specifically, fugitive PM₁₀ and PM_{2.5} dust emissions would be generated primarily from soil excavation, site grading, and other soil disturbance activities, and vary as a function of parameters such as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT by construction vehicles on- and off-site. In addition, ozone precursor emissions of VOC and NO_x, primarily associated with gasoline and diesel equipment exhaust and the off-gassing of asphalt pavement, would be generated. Sources of equipment exhaust emissions include off-road diesel equipment, heavy-duty haul trucks (i.e., soil import), material delivery trucks, and construction worker vehicles.

Project-generated, construction-related emissions of criteria air pollutants and precursors were modeled using the Roadway Construction Emissions Model, a spreadsheet program, version 6.3.2 (RCEM) (SMAQMD 2009a). Project-generated emissions were modeled based on general information provided in the Project description and default RCEM settings and parameters attributable to the construction period and site location. Where Project-specific information was not available, model defaults were used to estimate construction emissions.

For the purposes of this analysis, construction of the proposed Project is assumed to commence in 2011. This provides a conservative assumption of construction emissions because emission rates for construction equipment and vehicles would decrease with time as new technology and fleet turnover reduce average fleet emissions. Construction activities for the entire Project (i.e., southern and northern segments) would occur over an approximate 16-month period. Table 3.3-5 presents the estimated maximum daily emissions associated with each construction stage.

**Table 3.3-5
Estimated Maximum Daily Construction Emissions (pounds/day)**

Year/Construction Stage	Pollutants (pounds/day) ¹				
	VOC	NO _x	CO	PM ₁₀	PM _{2.5}
Year 2011					
Grubbing/Land Clearing	5.8	24.0	38.7	6.9	1.7
Grading/Excavation	8.0	43.8	53.5	7.7	2.5
Drainage/Utilities/Sub-Grade	5.6	21.8	34.6	7.0	1.8
Paving	3.9	14.1	17.0	1.5	1.4
Maximum daily emissions	8.0	43.8	53.5	7.7	2.5
Threshold	55	55	550	150	150
<i>Exceeds Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Note: All emissions shown represent the estimated maximum daily emissions that would occur during each construction activity and year. All stages occur sequentially and are not considered to overlap.

Detailed modeling assumptions and outputs are available in Appendix C.

As shown in Table 3.3-5, construction-related emissions generated by the proposed Project would be below the City's thresholds for all pollutants, which have been established as a level of emissions that a single project can generate without obstructing the air quality attainment and maintenance goals of the region. Thus, the impact associated with the proposed Project's construction emissions would not 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 (Criterion 3).

Area- and Mobile-Source Emissions

The proposed Project is the extension and completion of a roadway. The proposed project would not generate any new vehicle trips but rather would provide improved traffic circulation. A result of the Project is the reduction in VMT by providing a more direct connection for residences and businesses near the Project area. As shown in Table 3.3-3, mobile-source emissions are the main

contributor to VOC and NO_x emissions in San Diego County, which is a nonattainment area for ozone.

Typically, transportation projects, such as the proposed Project, are analyzed for regional air quality impacts by determining conformity with the SIP. During the preparation of the 2030 RTP and 2010 RTIP, SANDAG prepared an air quality conformity analysis that assessed all transportation-related projects in the region. If the design concept and scope of a proposed transportation project are consistent with the Project description in the 2030 RTP and 2010 RTIP, and the assumptions in the regional emissions analysis for the 2030 RTP and 2010 RTIP, then the proposed Project would conform to the SIP, and no adverse regional air quality impact would occur as a result of the Project.

SANDAG and the U.S. Department of Transportation (USDOT) have made a determination that the 2030 RTP and 2010 RTIP conform to the applicable SIP (SANDAG 2008). Conformity to the SIP means that transportation activities will not create new air quality violations, worsen existing violations, or delay the attainment of the NAAQS. Regulations also require SANDAG to conduct an air quality conformity analysis of all regionally significant projects that increase the transportation system capacity. All regionally significant capacity-increasing transportation projects, regardless of funding sources, must be included in the RTIP. The SANDAG Board of Directors made its conformity finding for the 2030 RTP on July 25, 2008 and for the 2010 RTIP on September 24, 2010. USDOT approved the air quality conformity analysis and findings for the 2030 RTP on November 17, 2008 (USDOT 2008), and for the 2010 RTIP on December 14, 2010 (USDOT 2010).

The proposed Project is included in SANDAG's 2030 RTP (SANDAG 2008) and 2010 RTIP (SANDAG 2010). The Project is identified in Appendix A of the 2030 RTP, as SANDAG ID: ESC04 (SANDAG 2007, 2008). The Project is titled in the RTP as "Citracado Parkway II," and described as "West Valley Pkwy to Harmony Grove Road - widen from two to four lanes with raised medians, construct bridge over Escondido Creek" (SANDAG 2007). The Project is identified in the 2010 RTIP on page 73 as "MPO ID: ESC04"; and described in the 2010 RTIP as "Citracado Parkway from West Valley to Harmony Grove - widen from two to four lanes with raised medians, construct bridge over Escondido Creek" (SANDAG 2010). The Project capacity category is "CI" (Capacity Increasing).

The design concept and scope of the proposed transportation Project are consistent with the Project's description in the 2030 RTP, the 2010 RTIP, and the assumptions in the SANDAG's

regional emissions analysis. Therefore, the proposed Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation (Criterion 2).

Sensitive Receptors/CO Hot Spots

Localized CO concentration is a direct function of motor vehicle activity at signalized intersections (e.g., idling time and traffic flow conditions), particularly during peak commute hours, and meteorological conditions. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals in proximity to the signalized project intersections. A CO hot spot occurs when localized CO concentrations exceed the NAAQS or CAAQS.

SDAPCD has not developed quantitative CO screening criteria; therefore, the screening method of the Sacramento Metropolitan Air Quality Management District (SMAQMD) is used (SMAQMD 2009b). The method is based on a two-tier screening approach. The first tier evaluates if the project would generate traffic that would result in the deterioration of a signalized intersection's level of service (LOS) to LOS E or F, or if the project would contribute additional traffic to a signalized intersection that currently operates at LOS E or F. This screening criterion (i.e., signalized intersections operating at LOS E or F) is also used in the *Transportation Project-Level Carbon Monoxide Protocol* (the Protocol) to evaluate if a signalized intersection requires further analysis (UCD ITS 1997).

Section 3.10, Traffic, indicates that all signalized Project intersections would operate at LOS D or better during the AM and PM peak hours under near-term future (2014) conditions with the proposed Project, with the exception of the following intersections (VRPA 2011):

- West Valley Parkway and Citracado Parkway
- Del Dios Highway and Via Rancho Parkway

Additionally, Section 3.10, Traffic, indicates that all signalized Project intersections would operate at LOS D or better during the AM and PM peak hours under cumulative (2030) conditions with the proposed Project, with the exception of the following intersection (VRPA 2011):

- Del Dios Highway and Via Rancho Parkway intersection (VRPA 2011).

All of the LOS D or better intersections would pass the first-tier screening and, therefore, would result in a less-than-significant impact to air quality with respect to localized CO concentrations.

The three LOS E or F intersections identified above would not pass the first tier of the SMAQMD screening method and would need to be evaluated for potential CO impacts using the second-tier screening method.

The second tier of the screening method evaluates whether the Project would result in any of the following:

- Contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway, or other locations where horizontal or vertical mixing of air quality is substantially limited;
- Change the mix of vehicle types at the intersection that would be substantially different from the County average (as identified by the EMFAC model); or
- Result in an affected intersection (i.e., LOS E or F) experiencing more than 31,600 vehicles per hour (vph).

The LOS E or F intersections are located in areas where horizontal or vertical mixing of air quality is not substantially limited. In addition, the proposed Project is a roadway widening and extension project, which would not involve the exclusive operation of heavy-duty trucks or any other vehicle type that would substantially differ from the County’s average vehicle mix. Finally, the peak vehicle volumes at each intersection, as shown in Table 3.3-6, would be less than the 31,600-vph threshold. Thus, the proposed Project would not exceed or conflict with any of the second-tier screening criteria. Therefore, the proposed Project would not expose sensitive receptors to substantial CO concentrations and would result in a less-than-significant air quality impact with respect to localized CO concentrations.

**Table 3.3-6
Peak-Hour Volumes at LOS E or LOS F Intersections**

Intersection	2014 Build Peak-Hour Volumes AM/PM	2030 Build Peak-Hour Volumes AM/PM
West Valley Parkway and Citracado Parkway	3,985/4,448	4,735/5,366
Del Dios Highway and Via Rancho Parkway	2,890/2,753	2,786/3,651

Source: VRPA 2011

Toxic Air Contaminants

The potential exposure of sensitive receptors to emissions of TACs from on-site sources during construction and operation of the proposed Project is discussed separately below.

On-Site Construction-Related Equipment Emissions

Construction-related activities would result in short-term, Project-generated emissions of diesel PM exhaust emissions from off-road, heavy-duty diesel equipment for site preparation (e.g., excavation, grading, and clearing), building construction, and other miscellaneous activities. Diesel PM was identified as a TAC by ARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential noncancer health impacts (ARB 2003). At this time, SDAPCD has not adopted a methodology for analyzing such impacts.

Generation of diesel PM from construction projects typically occurs in a single area for a short period. Construction of the proposed Project would occur over a multiyear period, but use of diesel-powered construction equipment in any one area would likely occur for no more than a few months and would cease when construction was completed in that area. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period or duration of activities associated with the Project. Thus, the duration of proposed construction activities near any sensitive receptor, i.e., 16 months, is approximately 2% of the total exposure period used for health risk calculation. However, current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (Bay Area Air Quality Management District 2009).

As shown in Table 3.3-5, the maximum PM₁₀ and PM_{2.5} emissions would occur during grading/excavation activities, which require the largest number of heavy-duty diesel equipment. This period would last for approximately 7 months. PM emissions would decrease for the

remaining construction period because construction activities such as roadway construction and paving would require less construction equipment. While the maximum diesel PM emissions associated with grading/excavation activities would only occur for a portion of the overall construction period, this activity represents the worst-case condition for the total construction period. This would represent less than 1% of the total exposure period for health risk calculation.

In addition to the limited exposure duration, in January 2001, USEPA promulgated a Final Rule to make emission standards more stringent for model year 2007 heavy-duty diesel engines and all subsequent model years. These emission standards represent a 90% reduction in NO_x emissions, 72% reduction in nonmethane hydrocarbon emissions, and 90% reduction in PM emissions in comparison to the 2004 model year emission standards. In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule. As such, engine manufacturers are required to meet treatment-based exhaust standards for NO_x and PM starting in 2011 that are more than 90% lower than current levels. This would put emission factors from off-road engines (e.g., construction, agricultural, and mining equipment) virtually on par with those from on-road, heavy-duty diesel engines.

Due to the short exposure period and the ongoing implementation of USEPA and ARB requirements for cleaner fuels, diesel engine retrofits, and new, low-emission diesel engine types, diesel PM generated by Project construction is not expected to create conditions where the probability is greater than 1 in 1 million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of noncarcinogenic TACs that exceed a Hazard Index greater than 1 for the Maximally Exposed Individual. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations (Criterion 4).

Long-Term Operational Toxic Air Contaminants

Following buildout of the proposed Project, operational activities would generate TAC emissions from mobile sources. Mobile sources of TACs would include all vehicles using Citracado Parkway; however, primary consideration is given to diesel-fueled vehicles. Due to the proximity of sensitive receptors, mobile sources associated with the proposed Project could expose sensitive receptors to TAC emissions.

Evaluating the environmental and health impacts from mobile sources of TACs, or mobile source air toxics (MSATs), on a proposed roadway or highway project may involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate

human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure.

The Federal Highway Administration (FHWA) and USEPA are currently working on guidance for addressing impacts of MSATs in National Environmental Policy Act (NEPA) documentation. As part of this process, FHWA has developed a tiered approach for analyzing MSATs in NEPA documents. Depending on the specific project circumstances, FHWA has identified three levels of analysis:

- No analysis for projects with no potential for meaningful MSAT effects, Category (1);
- Qualitative analysis for projects with low potential MSAT effects, Category (2); or
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects, Category (3).

Category (1) is limited to projects that qualify as a categorical exclusion under 23 Code of Federal Regulations (CFR) 771.117(c), are exempt under the CAA conformity rule under 40 CFR 93.126, or have no meaningful impacts on traffic volumes or vehicle mix.

For a project to be of the magnitude to have a higher potential for MSAT effects, Category (3), a project must do the following:

- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel PM in a single location; or
- Create new or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the average daily trips (ADT) are projected to be in the range of 140,000 to 150,000, or greater, by the design year; and also
- be proposed to be located in proximity to populated areas or in rural areas, in proximity to concentrations of vulnerable populations (e.g., schools, nursing homes, hospitals).

The proposed Project does not meet any of the Category (1) requirements.

The proposed Project would widen a segment of Citracado Parkway, thereby add capacity to this roadway segment, and construct an extension of the roadway between Avenida Del Diablo and

Andreasen Drive. While additional capacity would be facilitated, both segments of Citracado Parkway would provide an estimated maximum ADT of less than 30,000, which would be substantially less than the FHWA threshold value of 140,000 annual ADT, the minimum volume for higher potential MSAT effects (FHWA 2009). Therefore, the proposed Project would not be included in Category (3).

Therefore, by default, the proposed Project would be included in Category (2) and would have a low potential for MSAT effects. This assessment is based on FHWA guidance that projects that do not meet the criteria for Category (1) or Category (3) should be included in Category (2).

Pursuant to the FHWA Interim Guidance, the air quality impact study for this EIR includes a qualitative analysis (Category 2) of the MSAT emissions that are anticipated to occur as a result of the proposed Project. A Category 2 MSAT analysis should discuss the Project's effect on traffic volumes, vehicle mix, and routing of traffic. The analysis should also evaluate the Project's effect on MSAT indicators such as VMT, vehicle mix, and vehicle speeds.

The amount of MSATs emitted would be proportional to the VMT, assuming that other variables such as fleet mix are the same for each alternative. In addition, the most important factors affecting MSAT emissions are VMT and levels of traffic congestion. A higher level of traffic congestion and reduced vehicle speeds were found to increase emission factors of MSATs, except for diesel PM. The emission rate for diesel PM is not as dependent on speeds as the other MSATs. The Project's effect on local intersections (i.e., delay, LOS) would affect a change in MSAT emissions associated with implementation of the proposed Project. As determined in the traffic study, the proposed Project would improve the LOS of Project intersections. While some intersections would still operate at LOS F during future with Project conditions, the proposed Project would be expected to reduce MSAT emissions due to the reduction in idling time at other local intersections.

Implementation of the proposed Project is anticipated to reduce regional VMT by allowing vehicles to more directly access the regional transportation system without detouring through local street systems, which would be anticipated to increase average vehicle speeds and reduce MSAT emission rates in the Project area.

It is anticipated that the decrease in vehicle idling at local intersections and the improved accessibility to the regional transportation system will cause a net decrease in MSAT emissions associated with implementation of the proposed Project.

Regardless of Project implementation, emissions will likely be lower than present levels in the design year as a result of USEPA's national control programs that are projected to reduce MSAT emissions by 57 to 87% between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

Therefore, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations (Criterion 4).

Odors

The proposed Project could generate odor sources during construction and from vehicles operating on the new roadway. Construction-generated odors would occur from heavy-duty diesel equipment and diesel-fueled vehicles. The potential odor impacts associated with construction are discussed in the following analysis.

During construction of the proposed Project, exhaust odors from diesel engines and emissions associated with the application of asphalt may be considered offensive to some individuals. However, because odors would be intermittent and temporary (i.e., approximately 16 months) and would disperse rapidly with distance from the source, construction-generated odors would not result in the exposure of a substantial number of receptors to objectionable odorous emissions. The potential for odor impacts from the proposed Project would be less than significant.

Operations odors would be generated from mobile sources and would be similar to any roadway operation, and would be transient. Therefore, the proposed Project would not create objectionable odors affecting a substantial number of people (Criterion 5).

Greenhouse Gases

Analysis Methodology

Pursuant to full disclosure and according to OPR's CEQA Guidelines, "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project."

Construction-related GHG emissions were estimated using similar methodology to that described above for criteria air pollutants. RCEM also estimates CO₂ emissions associated with construction-related GHG sources such as off-road construction equipment, material delivery trucks, soil haul trucks, and construction worker vehicles (SMAQMD 2009a). Refer to Appendix C for detailed calculations and assumptions.

Operational emissions would be generated from vehicles using the roadway. However, the mobile-source emissions of CO₂ would not be generated as a result of the proposed Project as the Project does not include any trip-generating land uses or attractors. Additionally, the proposed Project is intended to reduce VMT by allowing vehicles to more directly access the regional transportation system without detouring through local street systems. Thus, operational characteristics of the proposed Project are anticipated to result in a net reduction in GHG emissions and no further analysis is provided.

It is to be noted that GHG emissions associated with construction and operation of the proposed Project would predominantly be in the form of CO₂. While emissions of other GHGs, such as CH₄ and N₂O, are important with respect to global climate change, the proposed Project is not expected to emit substantial quantities of GHGs other than CO₂. This is because emissions from the proposed Project would be associated with vehicular emissions (i.e., construction equipment and on-road vehicles emissions). Although vehicles also emit small quantities of N₂O and CH₄, the primary GHG emitted during fuel combustion is CO₂. Both state law and USEPA's proposed endangerment finding also include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride as important GHGs. However, these compounds are typically emitted by industrial processes and are not applicable to the proposed Project. Thus, Project-generated emissions of CO₂ are total GHG emissions, unless otherwise noted.

Construction and Operational GHG Emissions

Short-term construction of the proposed Project would generate emissions of GHGs. Construction-related emissions would be generated from off-road equipment and on-road vehicle exhaust emissions. The following analysis quantifies and evaluates the impact of the proposed Project's construction emissions.

Short-Term Construction-Related GHG Emissions. Construction-related GHG emissions associated with heavy-duty construction equipment, material delivery trucks, and construction worker trips would occur during construction of the proposed Project. Following completion of the proposed Project, construction-related GHG emissions would cease. Therefore, construction-

related GHG emissions are considered temporary and short term. Appendix C presents the GHG emissions generated during construction as well as the total GHG emissions generated during the lifetime of construction activities.

Emissions of CO₂, the primary GHG of concern associated with construction activities, were calculated using the RCEM model, using the same assumptions that were used in the air quality analysis for calculating criteria air pollutant and precursor emissions. Construction of the proposed Project would result in a net increase in GHG emissions in the amount of approximately 5,925 pounds per day of CO₂, or approximately 784 tons of CO₂ over the course of the 16- month duration construction Project. See Appendix C for air quality modeling output. The net increase in GHG emissions associated with the proposed Project would not be considered substantial, and thus this impact would be less than cumulatively considerable, and thereby less than significant. The proposed Project is not anticipated to result in a net increase in operational GHG emissions and would result in a less than substantial finite quantity of temporary construction emissions. Therefore, the proposed Project would not hinder the state's ability to attain the GHG reduction goals identified in AB 32. The Project would not conflict with the applicable plans, policies, and regulations adopted by the state for reducing GHG emissions (Criterion 7).

Conclusion

While any increase in GHG emissions would add to the quantity of emissions that would contribute to global climate change, it is noteworthy that emissions associated with the proposed Project would be short term and of a finite quantity (e.g., not reoccurring on an annual basis over the lifetime of Project operation). The proposed Project is not anticipated to result in a net increase in operational GHG emissions, and the quantity of GHGs that would be emitted during construction is small. Therefore, the Project's incremental contribution to climate change from construction emissions would not be considered substantial and is considered a less-than-cumulatively considerable contribution to global climate change. The proposed Project would not result in significant impacts to air quality.

3.3.4 Mitigation Measures

The proposed Project would not result in a significant impact to air quality. Therefore, no mitigation measures are proposed.

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3.3 BIOLOGICAL RESOURCES

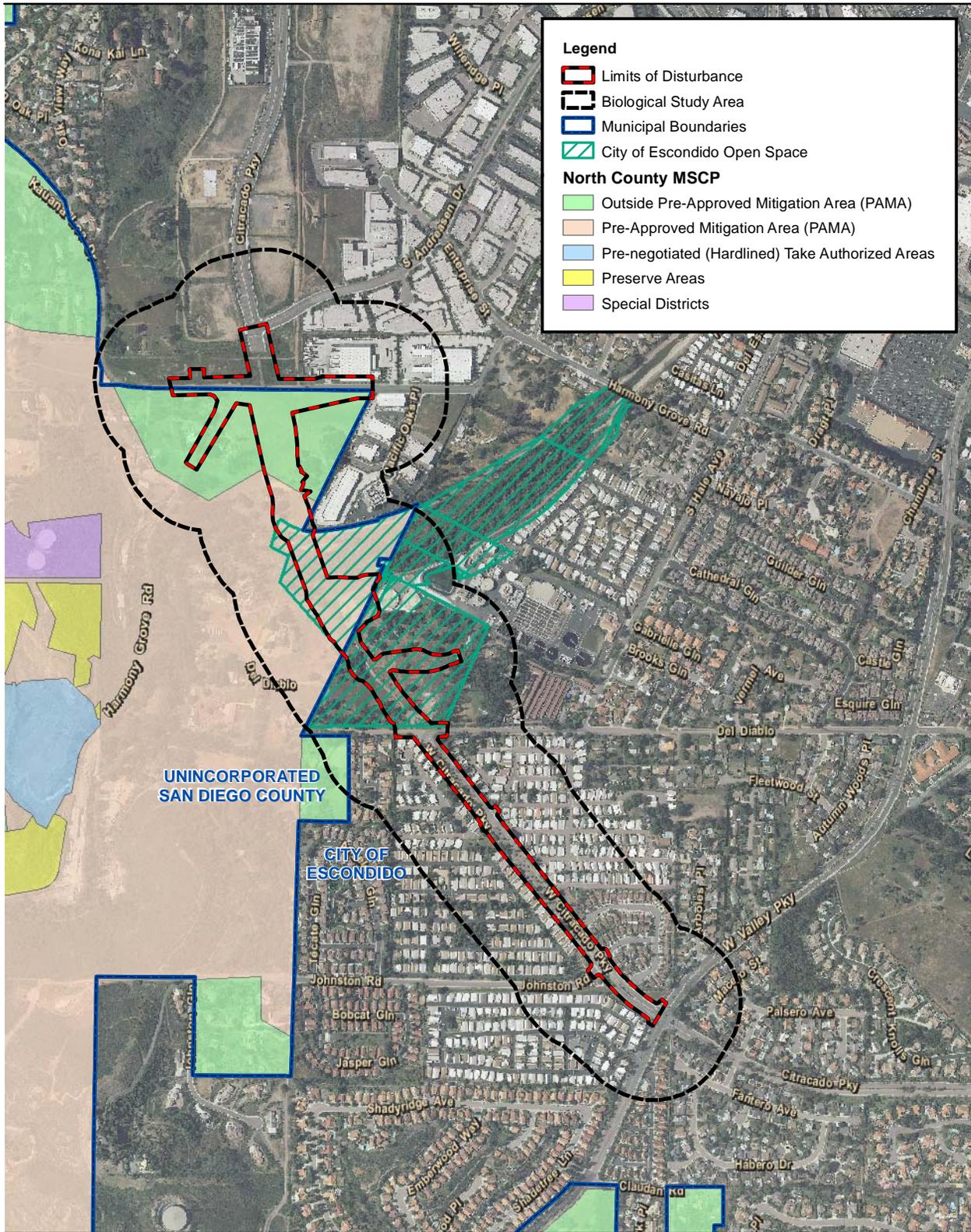
This section summarizes the potential on-site and off-site environmental impacts to biological resources that would result with implementation of the proposed Project. Information in this section is based on a Biological Resources Technical Report (BRTR) prepared for the Project and included in this EIR as Appendix D. AECOM first conducted vegetation, tree, and jurisdictional water mapping in spring 2007. Federal and state agencies require that survey results be completed within 2 years of consultation/environmental review, particularly when results are negative (as was the case in 2007). Thus, in spring 2009, special-status plant and wildlife surveys were repeated in areas surveyed in 2007. Due to changes in the Project footprint between 2007 and 2009, surveys were also conducted to determine the presence or absence of special-status plant and wildlife species in areas not surveyed during 2007. The discussion below summarizes the findings from the 2007 and 2009 surveys, assesses potential impacts resulting from the proposed Project, and identifies appropriate mitigation measures. More information on these surveys is provided in the BRTR (Appendix D).

3.4.1 Existing Conditions

The biological study area (BSA) included areas that would potentially receive direct or indirect impacts with implementation of the proposed Project. The proposed Project BSA is located between West Valley Parkway and Andreasen Drive and crosses Escondido Creek, approximately 1.5 miles west of I-15 and 1.5 miles south of SR-78. The BSA includes lands within Escondido and unincorporated areas of San Diego County.

The BSA includes approximately 30 acres that would be directly disturbed by Project construction and operation, plus an approximate 500-foot buffer to assess potential indirect impacts. The total size of the BSA is approximately 207 acres. After the BSA was established, revisions to the proposed Project alignment were made to avoid and minimize environmental impacts. The buffer encompassing the indirect impact area surrounding the proposed Project footprint is not a uniform 500-foot buffer and ranges from 450 feet to 550 feet.

As shown in Figure 3.4-1, the BSA spans two regional conservation planning areas: the NCMSCP and the County of San Diego MHCP. The City of Escondido Subarea Plan implements the NCMSCP in the area of the proposed Project and is currently in preliminary draft form. The MHCP implementing document is the City of Escondido Subarea Plan, which is also currently in draft form. Portions of the BSA are within conservation areas referred to as the



Legend

- Limits of Disturbance
- Biological Study Area
- Municipal Boundaries
- City of Escondido Open Space

North County MSCP

- Outside Pre-Approved Mitigation Area (PAMA)
- Pre-Approved Mitigation Area (PAMA)
- Pre-negotiated (Hardlined) Take Authorized Areas
- Preserve Areas
- Special Districts

Source: SanGIS 2011; Landiscor 2010

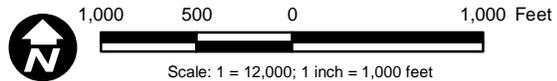


Figure 3.4-1
Regional Planning Areas

Pre-Approved Mitigation Area (PAMA) under the draft NCMSCP (County of San Diego 2009a). The BSA is outside of any conservation areas under the draft Escondido Subarea Plan (City of Escondido 2001).

Vegetation Communities and Habitats

Vegetation types or plant communities are assemblages of plant species that usually coexist in the same area. The classification of vegetation communities is based on the life form of the dominant species within that community and the associated flora. Biologically, the vegetation communities that provide the highest habitat values within the BSA are the riparian communities and the native upland communities. Figure 3.4-2 shows the locations of the vegetation communities on the Project site and at areas of off-site improvements. The BSA supports the following vegetation communities.

Riparian and Wetland Vegetation Communities

Open water, southern willow riparian forest, and southern willow scrub are considered sensitive by the County (2009) and City (2001). Riparian and wetland habitats are considered sensitive due to extensive historic losses of wetlands nationwide and the value of these habitats for sensitive species and wildlife movement. Riparian areas usually harbor greater wildlife diversity and abundance than upland areas and frequently serve as wildlife corridors due to their linear nature and the cover they provide.

Open Water

This habitat type consists of any open water body, including lakes, reservoirs, bays, flowing water within a river channel, and small ponds. Open water bodies provide important habitat for a variety of aquatic organisms and water fowl. The open water found in the Project site is Escondido Creek, which flows east to west through the Project area.

Approximately 0.04 acre of open water occurs within the BSA. At the time of survey, open water occurred only as a narrow band (approximately 3 feet wide) in the center of the Escondido Creek floodway within the Project site. During flood events, this open water may widen considerably for a temporary duration to approximately the entire floodway.

Southern Willow Riparian Forest

Southern willow riparian forest is a tall, densely vegetated riparian forest dominated by willow species. This community is generally greater than 6 meters high and occupies drainages and floodplains supporting perennially wet streams. Escondido Creek in the Project and buffer area is mostly dominated by this community.

Approximately 8.11 acres of southern willow riparian forest occur within the BSA. Within the Project site, southern willow riparian forest occurs in the floodway of Escondido Creek along the northern bank. In the buffer, southern willow riparian forest extends upstream east of this occurrence.

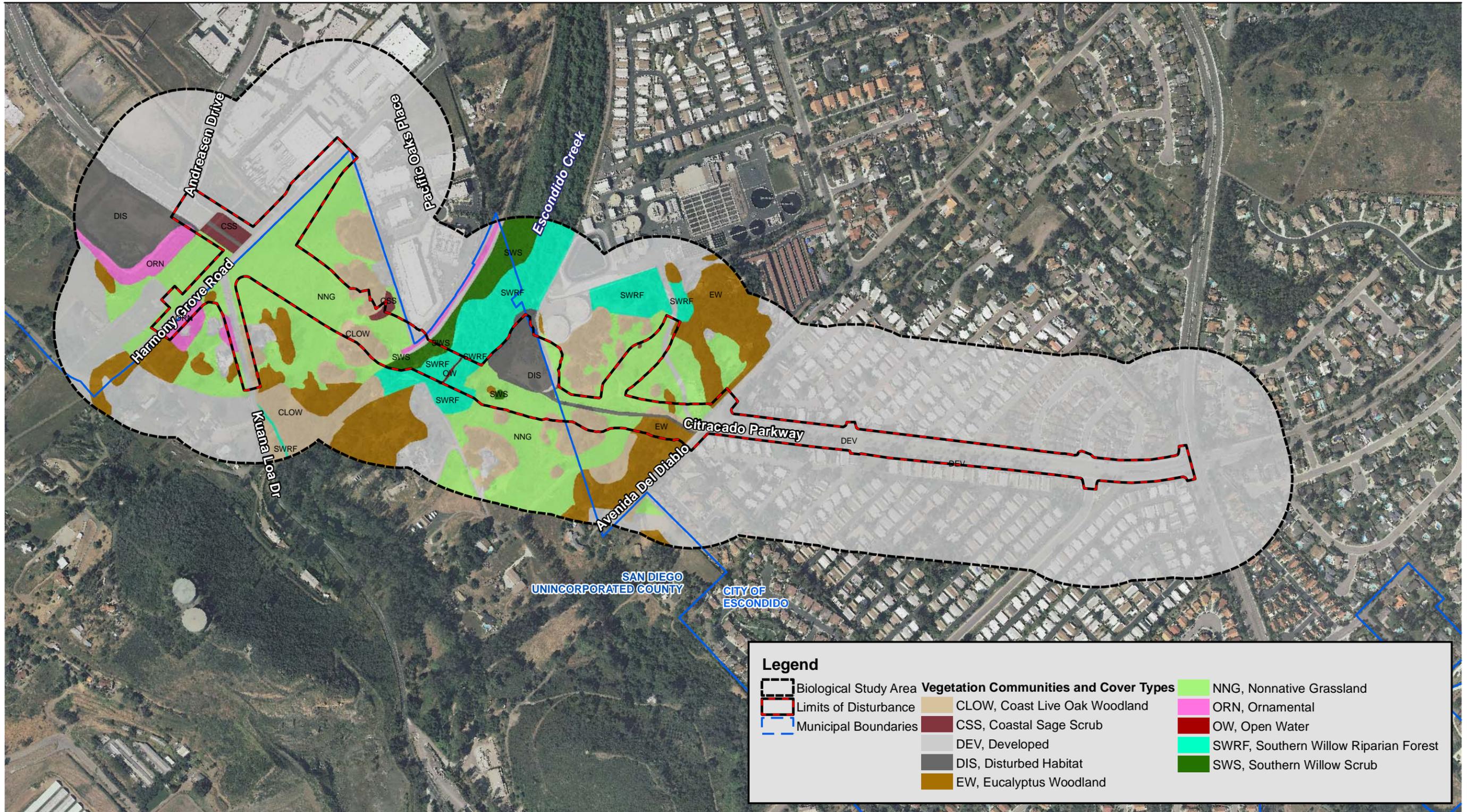
Southern Willow Scrub

Southern willow scrub occurs on the northern bank of Escondido Creek. This scrub community consists of a sparse density of the willow species of shrub-height and other shrub and herbaceous plants in varying densities.

Approximately 2.51 acres of southern willow scrub occur within the BSA. Within the Project site, southern willow scrub occurs in the floodway of Escondido Creek along the northern bank. In the buffer, southern willow scrub extends upstream east of this occurrence.

Upland Vegetation Communities

Many upland vegetation communities are considered sensitive because they provide valuable nesting, breeding, and/or foraging habitat for many special-status wildlife species. In addition, some upland vegetation communities such as coast live oak woodland and coastal sage scrub are rapidly in decline due to development. Unlike riparian corridors, which are linear (in association with riverine systems), upland habitats typically form a large matrix and provide a broad variety of species structure and composition. Dense sage scrub vegetation or dense-canopied woodlands provide useful habitat and movement corridors for wildlife. Nonnative grasslands are considered sensitive because they provide important foraging habitat for raptors and may support other sensitive wildlife and plant species. Coast live oak woodland, coastal sage scrub, and nonnative grasslands are considered sensitive by the County (2009) and City (2001).



Source: EDAW 2009; Landiscor 2010; AECOM 2011

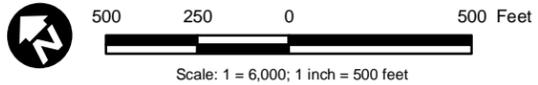


Figure 3.4-2
Vegetation Map

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Coast Live Oak Woodland

Coast live oak woodland is an open to dense tree community with coast live oak as the dominant overstory species. Coast live oak woodland can occur on mesic north-facing slopes and in canyon bottoms. The understory consists of primarily low grasses and shrubs.

This habitat is associated with large granite boulders at most of the locations in the BSA. In some portions of the site, eucalyptus trees (*Eucalyptus* sp.) have invaded and degraded the habitat value and integrity of the coast live oak woodland. Throughout the site, coast live oak (*Quercus agrifolia*) dominates the tree canopy. There are six individual Engelmann oak (*Quercus engelmannii*) scattered in portions of the woodland that is mapped under this community.

Approximately 12.40 acres of coast live oak woodland occur within the BSA. Within the Project site, portions of several groves of coast live oak woodland occur approximately 100 to 500 feet north and south of Escondido Creek within nonnative grassland outside of the riparian habitat. Within the buffer, these groves are more extensive and extend to the east and west among rocky outcrops.

Coastal Sage Scrub

Coastal sage scrub is composed of low, soft-woody subshrubs to about 1 meter high, and is one of the major shrub-dominated (scrub) communities within California. On the site, this plant community is low in shrub species diversity and is highly invaded by nonnative grasses.

Approximately 0.77 acre of coastal sage scrub occurs within the BSA. Within the Project site, a highly disturbed patch of coastal sage scrub habitat occurs on a south-facing rocky slope, north of Escondido Creek adjacent to coast live oak woodland within the Project site.

Eucalyptus Woodland

This nonnative woodland consists primarily of eucalyptus trees. Much of the understory is composed of sparse grasses and exotic forbs. Within the Project area, this community occurs in the southeastern portion of the Project site and buffer area and directly north of Escondido Creek along the western border of the Project site and buffer area.

Approximately 14.34 acres of eucalyptus woodland occur within the BSA. Within the Project site, eucalyptus woodland occurs north of Avenida Del Diablo. Within the buffer, eucalyptus woodland occurs widely throughout the upland areas of the site.

Nonnative Grassland

Nonnative grasses are common throughout the Project area and are frequent components of the understory herb layer. This community forms the matrix between patches of other habitat types.

Approximately 29.12 acres of nonnative grassland occur within the BSA. Nonnative grassland is the most prevalent vegetation community type in the Project area. Within the Project site, nonnative grassland occurs between Avenida Del Diablo and Escondido Creek and from Harmony Grove Road to Escondido Creek. Within the buffer, nonnative grassland occurs extensively throughout the upland areas to the east and west of the nonnative grassland in the Project site.

Other Cover Types

The following other land cover types are also present within the BSA. These land cover types are not considered sensitive biological resources by the County (2009) or City (2001).

Developed

Developed land cover exists within the Project area, including the HARRF, several residences, and commercial buildings. Also included under this nonnative community is a drainage basin that is artificially maintained for flood and sediment control.

Approximately 131.14 acres of developed land occur within the BSA. Within the Project site and buffer, developed land is mostly limited to the area south of Avenida Del Diablo and near Harmony Grove Road, Andreasen Drive, and Kauana Loa Drive.

Disturbed

Disturbed areas are those affected by human activities; vegetation does not usually become reestablished due to frequent disturbances. Disturbed habitat includes the dirt roads and trails and a previously graded area within the 100-year floodplain of Escondido Creek used as a staging area for the construction of the HARRF Equalization Tanks.

Approximately 6.43 acres of disturbed land occur within the BSA. Within the Project site, disturbed habitat occurs on the south side of Escondido Creek. Within the buffer, some disturbed habitat occurs in graded areas along the west side of Citracado Parkway on the northernmost part of the Project area.

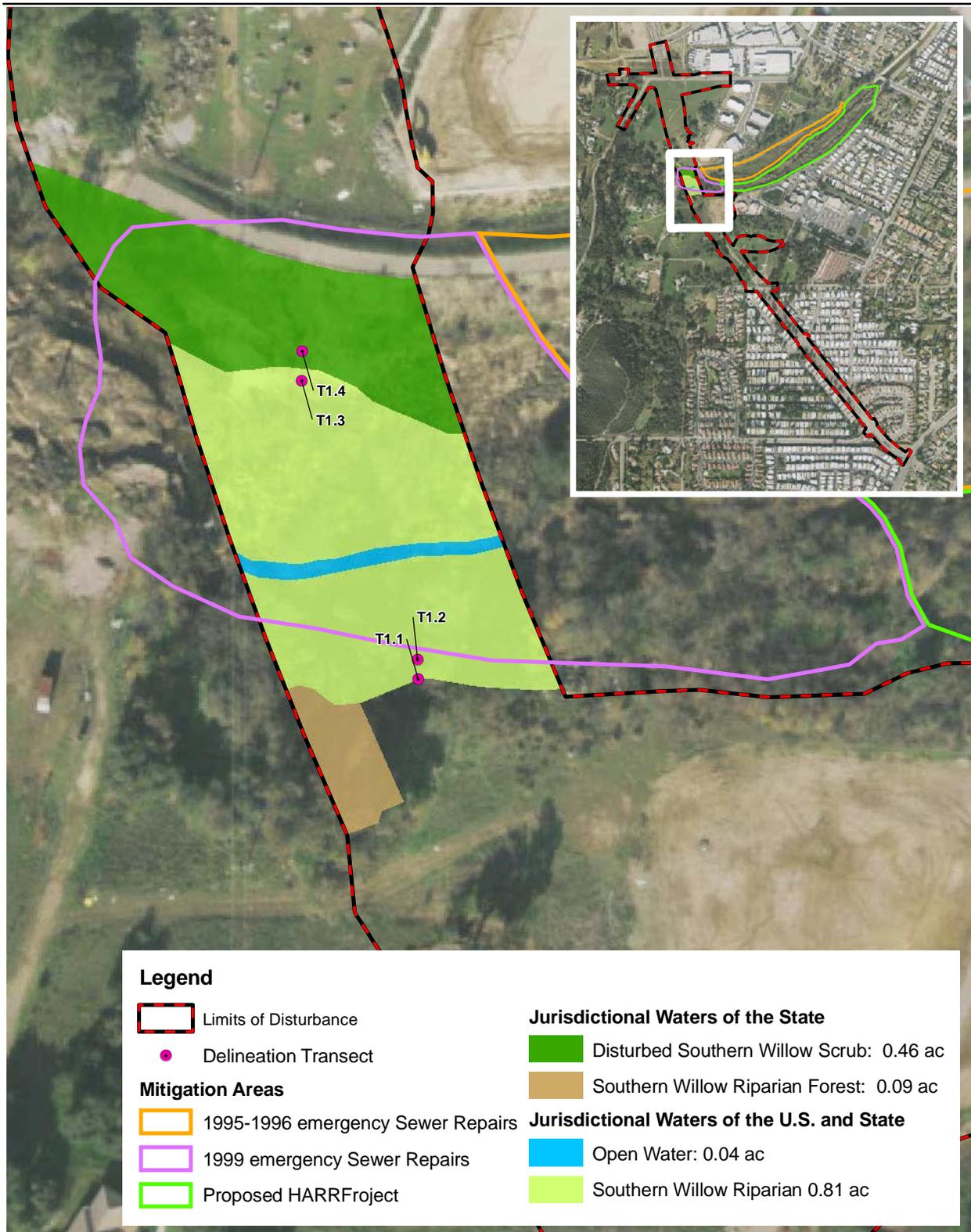
Ornamental

Ornamental vegetation is composed of exotic shrubs and trees that are planted for ornamental purposes. Ornamental vegetation is found near residences and in landscaped areas.

Approximately 2.60 acres of ornamental plantings occur within the BSA. Within the Project site, ornamental plantings occur on the west edge of Citracado Parkway on the northern terminus of the Project area and extend west from there into the buffer.

Jurisdictional Waters and Wetlands

Jurisdictional waters and wetlands are “waters of the U.S.” as defined by Section 40 CFR 230.3(s) of the CWA, which includes all interstate waters and wetlands. Open water and southern willow riparian forest within the Project limit of disturbance (LOD) were delineated as waters of the United States and state. Southern willow scrub within the Project LOD was delineated as waters of the state. A detailed analysis of the jurisdictional waters is in the *Citracado Parkway Extension Jurisdictional Delineation Letter Report* (AECOM 2010a). These jurisdictional waters of the U.S. are located within a deed restricted mitigation area. This mitigation area, as shown in Figure 3.4-3, was deed restricted by the City of Escondido in August 2002 when mitigation was completed for the HARRF emergency sewer repairs project. While a deed restriction on the property exists, it was acknowledged at that time and in the deed use restrictions that the Citracado Parkway Extension Project may overlap this mitigation area. Efforts were made within the restrictions of the *City of Escondido Design Standards and Standard Drawings* (City of Escondido 2009) and standards of the California Department of Transportation [Caltrans] Highway Design Manual (Caltrans 2006) to move the roadway westerly to minimize environmental impacts. However, even with this effort, the alignment still intersects the deed restricted area.



Source: DigitalGlobe 2008; AECOM 2010

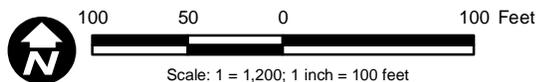


Figure 3.4-3
Jurisdictional Waters

Within the Project LOD, there is 0.85 acre of potential jurisdictional waters of the U.S.¹ (composed of 0.81 acre of southern willow riparian forest wetland and 0.04 acre of unvegetated water) and an additional 0.55 acre (composed of 0.46 acre of southern willow scrub and 0.09 acre of southern willow riparian forest) that would be considered jurisdictional waters of the state exclusively,² for a total of 1.40 acres of potential jurisdictional waters. An additional 0.05 acre of southern willow scrub is present within the Project LOD that is not jurisdictional waters because it is an isolated patch of willows disconnected from the other riparian and wetland vegetation communities.

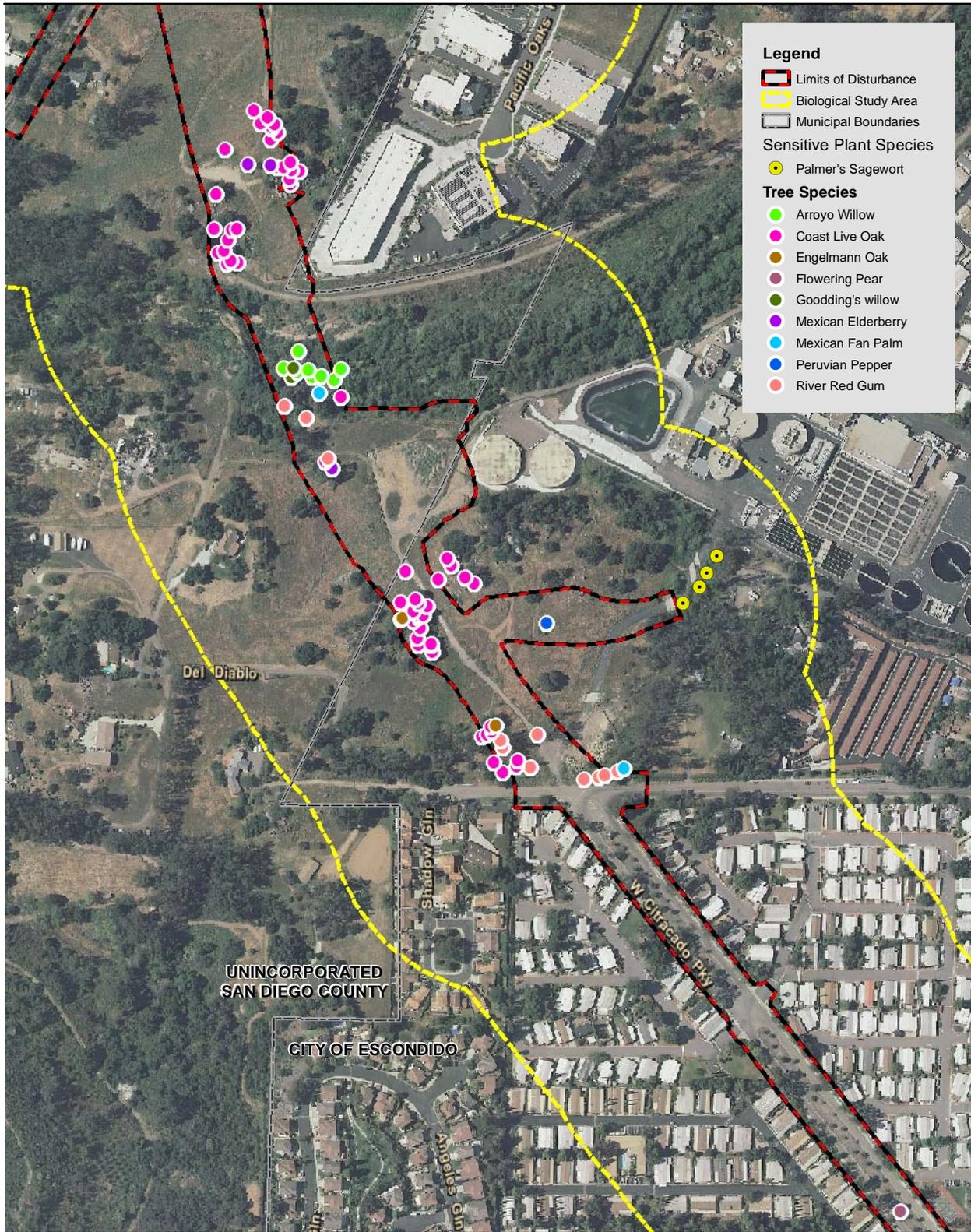
Trees

The City requires that a grading permit applicant conduct a formal tree survey and prepare a site plan showing the location and type of existing mature or protected trees. The City defines mature trees as “any self-supporting woody perennial plant, native or ornamental, with a single well-defined stem or multiple stems supporting a crown of branches. The single stem, or one of the multiple stems of any mature oak tree (*Quercus* sp.), shall have a diameter 4 inches or greater when measured at 4.5 feet above the tree’s natural grade. All other mature trees shall have a diameter of 8 inches DBH [diameter at breast height] (above natural grade), or greater, for a single stem or one of the multiple stems.” Furthermore, the City defines protected trees as “any oak (*Quercus* sp.) which has a 10-inch or greater DBH (above natural grade), or any other species or individual specimen listed on the local historic register, or determined to substantially contribute to the historic character of a property or structure listed on the local historic register, pursuant to Article 40 of the Escondido Zoning Code (2001).” According to the Escondido Zoning Code, tree surveys are conducted to preserve the natural and topographic character and identity of the environment and to guide implementation of best management practices (BMPs) to control storm water and erosion during all construction activities.

As shown in Figure 3.4-4, a total of 71 mature and protected trees were identified and mapped within the Project site. Of these, 38 trees are considered mature and 33 trees (oaks) are considered protected. A summary of the species observed and the total quantity for each is included in the BRTR. Table 3.4-1 lists the types and quantities of mature and protected trees that would be directly impacted by the proposed Project.

¹ Jurisdictional waters of the U.S. are relevant to both U.S. Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG) regulatory permitting. Final acreages of jurisdictional waters of the U.S. are based on the jurisdictional determination (JD) process per the March 30, 2007, USACE Jurisdictional Determination Form Guidebook; the June 5, 2007, Approved JD Form; the June 5, 2007, Joint Guidance Memorandum, the December 2, 2008, Guidance Memorandum; and Regulatory Guidance Letter (RGL) 08-02 (if RGL 08-02 is deemed applicable and appropriate [i.e., the permit applicant or other “affected party” can decline to request and obtain an Approved JD and elect to use a Preliminary JD instead] for this jurisdictional determination).

² Relevant to CDFG permitting only.



Source: LandisCor 2010; AECOM 2011

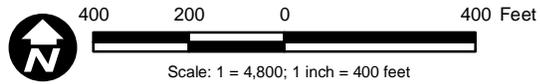


Figure 3.4-4
Sensitive Plant Species and
Mature and/or Protected Trees

**Table 3.4-1
Direct Impacts to Mature and Protected Trees within the Project Site**

Scientific Name	Common Name	Permanent Impact	Permanent Shading	Temporary Impact	Total Count
Mature					
<i>Eucalyptus camaldulensis</i>	River Red Gum	6	1	3	10
<i>Pyrus calleryana</i>	Flowering Pear	-	-	1	1
<i>Quercus agrifolia</i>	Coast Live Oak	8	-	5	13
<i>Salix gooddingii</i>	Goodding's Willow	-	2	-	2
<i>Salix lasiolepis</i>	Arroyo Willow	-	5	2	7
<i>Sambucus mexicana</i>	Mexican Elderberry	3	-	-	3
<i>Schinus molle</i>	Peruvian Pepper	1	-	-	1
<i>Washingtonia robusta</i>	Mexican Fan Palm	-	1	-	1
Mature Subtotal		18	9	11	38
Protected					
<i>Quercus agrifolia</i>	Coast Live Oak	23	-	7	30
<i>Quercus engelmannii</i>	Engelmann Oak	1	-	2	3
Protected Subtotal		24	-	9	33
Total		42	9	20	71

Sensitive Wildlife

This section discusses wildlife species detected within the BSA or with potential to occur on-site. In total, 88 wildlife species were detected in the BSA during Project surveys. Animal species present on-site were identified by direct observation or signs of their presence (tracks, scat, dens, etc.). Based on a California Natural Diversity Database (CNDDDB) search and habitat assessments, 26 special-status wildlife species have potential to occur within the BSA.

Based on survey data, two species have a high potential to occur within the BSA: the northern red-diamond rattlesnake (*Crotalus ruber ruber*) and the Coronado skink (*Eumeces skitonianus interparietalis*). Five species have a moderate potential to occur: the San Diego coast horned lizard (*Phrynosoma coronatum (blainvillei)*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), pallid bat (*Antrozous pallidus*), and California (western) mastiff bat (*Eumops perotis californicus*). Ten species have a low or very low potential to occur: the southwestern pond turtle (*Actinemys marmorata pallid*), western spadefoot toad (*Spea [Sacphiopus] hammondii*), coastal California gnatcatcher (*Polioptila californica californica*), Bell's sage sparrow (*Amphispiza belli belli*), least Bell's vireo (*Vireo bellii pusillus*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), American badger (*Taxidea taxus*), Dulzura California pocket mouse (*Chaetodipus*

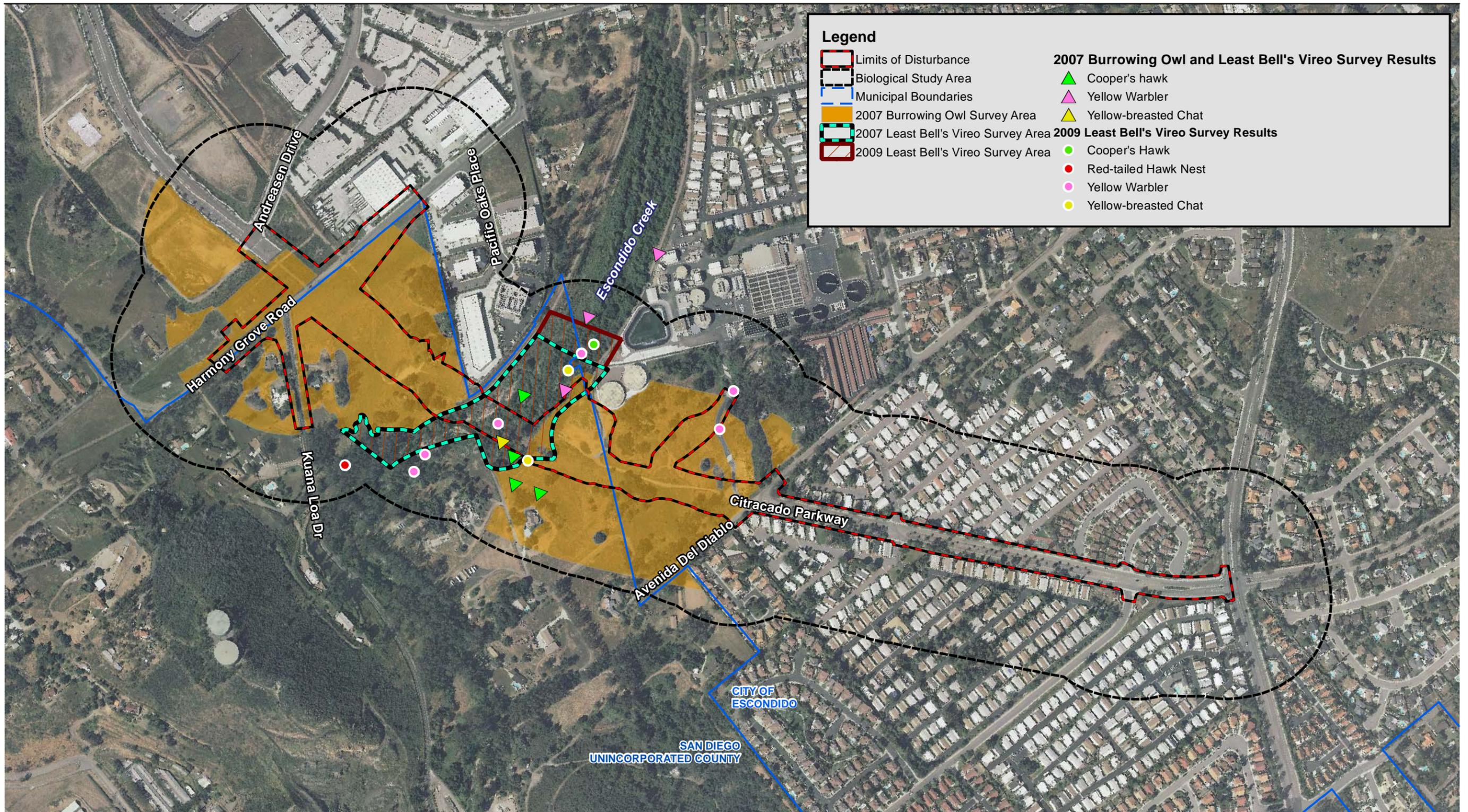
californicus femoralis), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), and western yellow bat (*Lasiurus xanthinus*). These species are not expected to occur: the San Diego fairy shrimp (*Brachinecta sandiegonensis*), burrowing owl (*Athene cunicularia*), coastal cactus wren (*Campylorhynchus brunneicapillus couesi*), white faced ibis (*Plegadis chihi*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), or San Diego desert woodrat (*Neotoma lepida intermedia*).

Focused protocol surveys were conducted in the BSA for the burrowing owl (BUOW) in 2007 and the least Bell's vireo (LBV) in 2007 and 2009. LBV is a federally listed and state-listed endangered species, and BUOW is a CDFG Species of Special Concern. No LBV were detected in the BSA in 2007 or 2009. LBV has a low potential to occur within the BSA due to the presence of marginally suitable habitat. No BUOW were detected in the BSA in 2007. In 2007, suitable habitat was present; however, no BUOW were detected throughout the BSA during the survey period. No evidence or sign of BUOW was detected around any of the burrows on-site. Several of the burrows appeared to be inactive. Other burrows appeared to be in use by California ground squirrels and other small rodents. Habitat identified as suitable for BUOW in 2007 was determined to be no longer suitable in 2009 because the habitat had been disced, mowed, and disturbed to the point that it no longer contained suitable burrows and/or habitat. BUOW is not expected to occur within the BSA due to lack of suitable habitat.

As shown in Figure 3.4-5, three sensitive wildlife species were detected within the BSA during surveys: Cooper's hawk (*Accipiter cooperii*), a CDFG Watch List species, and yellow warbler (*Dendroica petechia brewsteri*) and yellow-breasted chat (*Icteria virens*), both CDFG Species of Special Concern. These species are discussed below. Additionally, a red-tailed hawk (*Buteo jamaicensis*) nest with two juveniles was detected in a eucalyptus tree in the buffer on the west side of the BSA along Escondido Creek.

Cooper's Hawk

The Cooper's hawk is a designated animal on the CDFG Watch List. The species is a breeding resident throughout most of the wooded portion of California. In San Diego County, the Cooper's hawk occurs as a year-long resident and a winter migrant. Cooper's hawks nest primarily in oak woodlands but occasionally in willows or eucalyptus. The species prefers dense stands of oak, riparian deciduous, or other forest habitat near water. The species usually nests and forages near open water or riparian vegetation. The Cooper's hawk will catch small birds, especially young during nesting season, and small mammals. They will also take reptiles and amphibians.



Source: AECOM 2011; EDAW 2009; LandisCor 2010

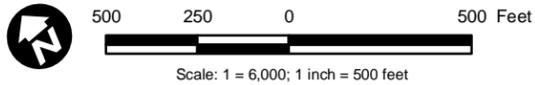


Figure 3.4-5
Sensitive Wildlife Species

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During the surveys, four Cooper's hawks were encountered within the central portion of the BSA near the riparian and wetland area. Observations of Cooper's hawks were incidental, although infrequent. Thus, this species is expected to occur within suitable riparian and wetland habitat throughout the BSA.

Yellow Warbler

The yellow warbler is a CDFG Species of Special Concern. The yellow warblers nesting in San Diego County and most migrants are *D. p. morcomi* (Unitt 2004). However, per the American Ornithologists' Union (AOU), *D. p. brewsteri* is considered not separable from *D. p. morcomi* (AOU 1953); therefore, they have been addressed as sensitive herein.

The yellow warbler breeds from northern Alaska and Canada southward to the middle United States and in the western United States southward into Mexico. This warbler winters in Mexico and Central and South America. Nest building may occur as early as April in San Diego County, with fledglings reaching independence by August (Unitt 2004). This species occurs most commonly in riparian woodlands dominated by willows.

Yellow warblers were routinely found throughout the riparian areas of the BSA during focused protocol surveys in 2007 and 2009. Observations of yellow warblers were incidental and frequent. Differentiating a female from an immature yellow warbler can be challenging; therefore, with the male yellow warblers singing throughout most of the survey periods and the visual detections of immature/female yellow warblers during the later survey periods, breeding was assumed to be successful on the survey site.

Yellow-Breasted Chat

The yellow-breasted chat is a CDFG Species of Special Concern. This species breeds across the central and eastern United States and southern Canada from South Dakota to New Hampshire and southward to eastern Texas and northern Florida. It also occurs in scattered regions across the western United States from southern Canada to very northern Mexico. In San Diego County, nest building typically occurs in May and fledging is completed by August (Unitt 2004). In California, chats require dense riparian thickets associated with watercourses, saturated soils, or standing water (lakes or ponds). They typically occur in riparian woodland/scrub with dense undergrowth. In San Diego County, this species occurs in the coastal lowlands and is strongly concentrated in the northwest portion of the County (i.e., Santa Margarita River and San Luis Rey River) (Unitt 2004).

Yellow-breasted chats were detected throughout riparian and wetland habitat during focused protocol surveys in 2007 and 2009. Observations of chats were incidental and frequent. Thus, this species is expected to nest within suitable riparian habitat throughout the BSA.

Sensitive Plant Species

Based on a CNDDDB search and habitat assessments, 25 special-status plant species have potential to occur within the BSA. The BSA was surveyed during the appropriate blooming period for the presence of sensitive plant species in April and June 2007 and May 2009. The potentially occurring sensitive plants were determined by current CNDDDB searches during each of the surveys. Surveys involved searching for target sensitive species expected in the region by walking meandering transects through all habitats within and immediately surrounding the BSA. Sensitive plant species found were quantified, mapped, and documented. All of the potentially occurring sensitive plant species would have been detectable during these surveys because their blooming periods overlap these months or they are perennial shrubs species. Two special-status plant species, Palmer's sagewort and Englemann oak, were observed within the BSA during surveys. Palmer's sagewort is a California Native Plant Society (CNPS) List 4.2 species, and Englemann oak is a CNPS List 4.2 species and a species covered under the Escondido Subarea Plan. No other federally listed, state listed, or other state sensitive special-status plant species were observed within the BSA.

Palmer's Sagewort

Palmer's sagewort is frequent and widespread in riparian habitats in coastal and foothill areas, although it is endemic to San Diego County and Baja California, Mexico. It is at the northern extent of its recorded range in the vicinity of Escondido where it has been collected and documented along Del Dios Highway, Lake Hodges, and in the San Dieguito River area. This species occurs in riparian woodlands frequently as an understory of perennial streams that also support willows, western sycamore, and riparian phases of coast live oak.

Palmer's sagewort was not recorded in the Project site. Four individual Palmer's sagewort were found in the buffer immediately south of the HARRF. This species was planted in this location as part of the Escondido HARRF wetland/riparian mitigation project in 2006. This plant species is considered sensitive by CNPS and is classified as List 4.2.

Engelmann Oak

Engelmann oak occurs from the southern base of the San Gabriel Mountains in Los Angeles County; disjunctively east to San Bernardino County; south into the foothills of Orange and west-central Riverside counties (Santa Rosa Plateau in the Santa Ana Mountains); and south through the Santa Margarita, Palomar, Cuyamaca, and Laguna mountains to Tecate, Baja California, Mexico (Roberts 1995). This species is locally common on alluvial fans and interior valleys, and occasional on slopes in southern oak woodland, oak savannah, and chaparral communities (Roberts 1995).

Engelmann oak is present in both the Project site and buffer. Three Engelmann oak trees occur within the Project site. One is approximately 200 feet north of Avenida Del Diablo. The other two Engelmann oaks are rooted in the buffer just outside the LOD, approximately 700 feet north of Avenida Del Diablo; however, the canopy of these trees does overlap the Project site. Three others are located in the buffer north of Avenida Del Diablo. This species is considered sensitive by CNPS and is classified as List 4.2. It is also a species covered under the Escondido Subarea Plan.

Regulatory Framework

Several federal, state, and local regulations have been established to protect and conserve biological resources. The descriptions below provide a brief overview of the regulations applicable to the resources that occur within or adjacent to the proposed Project site, and their respective requirements. Permits or other authorizations that could be required under these regulations if impacts would occur are noted where applicable. The final determination of whether permits are required is made by the regulating agencies.

Federal Regulations

Section 404 of the Clean Water Act

Pursuant to Section 404 of the CWA, USACE regulates the discharge of dredged or fill material into “waters of the U.S.” “Waters of the U.S.” have been defined as follows:

“(1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; (3) all

other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purposes by industries in interstate commerce; (4) all impoundments of waters otherwise defined as waters of the United States under the definition; (5) tributaries of waters identified in paragraphs (1) through (4) of this section; (6) the territorial seas; and (7) wetlands adjacent to waters identified in paragraphs (1) through (6)” (33 CFR 328.3[b]; 40 CFR 230.3[t]).

However, as a result of U.S. Supreme Court decision *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (No. 99-1178, January 9, 2001), USACE no longer has direct regulatory authority over many isolated intrastate waters, including wetlands.

USACE defines wetlands as follows:

“Those areas that are inundated or saturated by surface or groundwater 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. Wetlands generally include swamps, marshes, bogs, and similar areas” (33 CFR 328.3[b]; 40 CFR 230.3[t]).

USACE developed standard methods (USACE 1987) to identify and delineate wetland boundaries for the purpose of Section 404 regulation. A wetland determination is based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. USACE’s delineation manual uses primarily field-based indicators to determine whether the three parameters are present. The presence of positive indicators of all three parameters is necessary for a site to qualify as jurisdictional wetlands.

In the absence of wetlands, the limits of USACE jurisdiction in nontidal waters, such as rivers, streams, lakes, and ponds, extends to the ordinary high water mark (OHWM). The OHWM can also be conceptualized as the lateral extent of the active channel, usually the area just below the first terrace.

This act applies to portions of the Project that include wetlands or other waters of the U.S., such as Escondido Creek. Potential impacts to these waters are analyzed in Section 3.7.2.

Section 401 of the Clean Water Act

The RWQCB has primary authority for permit and enforcement activities under the Porter-Cologne Water Quality Control Act (Cal. Water Code 13000-13999.10) and the CWA). Section 401 of the CWA requires certification from the California RWQCB that the proposed project is in compliance with established water quality standards. Projects that have the potential to discharge pollutants are required to comply with established water quality objectives.

Under Section 401 of the CWA, the RWQCB implements the water quality certification process for any activity that requires a federal permit or license and that may result in the discharge of pollutants into waters of the U.S., including wetlands. The RWQCB reviews the proposal to determine whether the activity would comply with state water quality objectives and, subsequently, either issues a certification with conditions or denies the certification. Water quality standards, according to the CWA (40 CFR 131), include beneficial uses, water quality objectives, and the antidegradation policy.

No license or permit may be issued by a federal agency until certification required by Section 401 has been granted. Under the CWA, USACE Section 404 permits are subject to RWQCB Section 401 water quality regulation. USACE cannot issue an individual or nationwide 404 permit until a 401 certification has been obtained from the RWQCB. For the 401 certification process, the RWQCB typically uses the delineation verified by USACE as the basis for determining impacts to waters of the U.S.

Section 401 of the CWA is applicable to Project components that may result in increased sedimentation, polluted runoff, etc., which, in turn, could cause indirect effects to sensitive biological species. Section 401 certification would be required as part of the Section 404 permit authorization process and is anticipated to be issued concurrently. These indirect effects are discussed in Section 3.7.2, Hydrology and Water Quality.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) restricts the killing, taking, collecting, and selling or purchasing of native bird species or their parts, nests, or eggs. Certain game bird species are allowed to be hunted for specific periods, as determined by federal and state governments. The

intent of the MBTA is to eliminate any commercial market for migratory birds, feathers, or bird parts, especially for eagles and other birds of prey. Although no permit is issued under the MBTA, if vegetation removal within the Project area occurs during the breeding season for raptors and migratory birds (February 15 through September 15), surveys should be conducted to locate active nests within the construction area. If active raptor or migratory bird nests are detected, Project activities may be temporarily curtailed or halted.

The MBTA is relevant to the Project because migratory bird species, such as Cooper's hawk, are known to the Project site and are covered by the MBTA. Potential impacts to bird species protected under the MBTA are analyzed in Section 3.4.2.

State Regulations

Section 1600 of the California Fish and Game Code

Under Sections 1600–1607 of the California Fish and Game Code (CFG), CDFG regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFG jurisdiction are defined in the code as the “bed, channel or bank of any river, stream, or lake designated by [CDFG] in which there is, at any time, an existing fish or wildlife resource or from which these resources derive benefit.” The CCR (14 CCR 1.72) defines a stream as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.”

In practice, CDFG usually extends its jurisdictional limit to the top of a stream or lake bank, or outer edge of the riparian vegetation, whichever is wider. Riparian habitats do not always have identifiable hydric soils, or clear evidence of wetland hydrology as defined by USACE. Therefore, CDFG wetland boundaries often extend beyond USACE wetland boundaries, which sometimes include only portions of the riparian habitat adjacent to a river, stream, or lake.

The CFGC applies to portions of the Project that include the on-site creek, drainages, or riparian habitats. Potential Project impacts to these riparian areas are discussed in Section 3.7.2.

Section 1300 of the California Water Code

Pursuant to Section 13000 et seq. of the California Water Code (the 1969 Porter-Cologne Water Quality Control Act), the RWQCB is authorized to regulate activity that would result in

discharges of waste and fill material to waters of the state, including “isolated” waters and wetlands. Waters of the state include any surface or groundwater within the boundaries of the state (California Water Code § 13050[e]).

Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. CDFG is the principal state agency implementing the Natural Community Conservation Planning Act Program. Conservation plans developed in accordance with the act (i.e., Natural Communities Conservation Plans [NCCPs]) provide for comprehensive management and conservation of multiple wildlife species and identify and provide for the regional or areawide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth. Project-specific permits under the Natural Community Conservation Planning Act are not issued; however, proposed City-authorized projects must comply with the state’s Natural Community Conservation Planning Act Program.

Local Ordinances

City of Escondido General Plan Open Space/Conservation Element

Policies Regarding Biological Resources

- **Biological Policy K1.1:** Development shall be sensitive to significant biological resources within the Planning Area (including any flora or fauna of rare and/or endangered status, depleted or declining species, species and habitat types of unique or limited distribution, and/or visually prominent vegetation), and appropriate measures shall be implemented to minimize potential adverse impacts. Development proposals for projects in such areas identified as environmentally sensitive must include a detailed inventory of these resources conducted by an independent and professionally qualified wildlife biologist. The proposal shall include appropriate mitigation measures, such as buffering and setbacks and revegetation plans, to protect sensitive habitat areas to the extent feasible. In the event habitat is adversely affected, adequate replacement shall be proposed.

- **Biological Policy K1.2:** Escondido's significant riparian habitat areas shall be identified by survey and/or the environmental review process, and measures must be taken to ensure their proper management and protection.
- **Biological Policy K1.3:** Development proposals for sites containing riparian habitat areas shall include a survey of the riparian resources as well as appropriate methods for mitigating any adverse impacts of development in these resource areas. This includes mitigation of impacts associated with flood control measures. Appropriate mitigations shall be determined in consultation with the State Department of Fish and Game (U.S. Fish and Wildlife Service, if applicable) and at a minimum include buffering and/or setback requirements.
- **Biological Policy K1.4:** If the presence of humans and domestic animals will be detrimental to riparian habitat, appropriate barriers shall be constructed and maintained by the property owner or homeowners' association to restrict access to the sensitive area.
- **Biological Policy K1.5:** The following uses shall be prohibited in riparian areas: confinement of livestock, dumping or disposal of refuse, and any structural improvement other than those permitted by appropriate agencies.
- **Biological Policy K1.6:** Significant stands of trees shall not be removed unless needed to protect public safety. Removal shall be limited to the minimum amount necessary. At a minimum, the replacement value shall be equal to the vegetation removed. Replacement may occur on- and/or off-site, subject to City approval.

Policies Regarding Natural Resources

- **Natural Resources Policy G1.1:** A system of open space corridors, easement and acquisition programs, and trails shall be established. Sensitive lands including permanent bodies of water, floodways, and slopes over 35% inclination shall be preserved. Significant wetlands, riparian or woodland, and habitat for rare or endangered species shall be protected in coordination with state and/or federal agencies having jurisdiction over such areas. Density transfers shall be permitted to preserve such lands as established in the land use designation.

- **Natural Resources Policy G1.2:** The City shall establish environmental protection policies to protect sensitive habitat areas such as wetlands and oak woodlands, including coordination with state and federal agencies having jurisdiction over such areas.
- **Natural Resources Policy G1.3:** The City of Escondido shall strive to develop and implement community-wide resource conservation programs, as well as consider resource preservation areas for open space and habitat protection and enhancement.

3.4.2 Significance Criteria

The guidelines for the determination of significance are based on guidelines from the City of Escondido. The effects of a project on biological resources are considered significant if the proposed project would do the following:

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 California Department of Fish and Game or U.S. Fish and Wildlife Service;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (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/ordinance that protect biological resources (e.g. tree preservation policy or ordinance); or
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.

This EIR analyzes both direct and indirect impacts to biological resources. A map of these areas is shown in Figure 3.4-6. Direct and indirect impacts are defined below.

Direct: Any alteration, disturbance, or destruction of biological resources that would result from Project-related activities is considered a direct impact. Examples include clearing vegetation, encroaching into wetlands, diverting surface water flows, and the loss of individual species and/or their habitats.

Indirect: As a result of Project-related activities, biological resources may also be affected in a manner that is not direct. Examples include elevated noise and dust levels, soil compaction, increased human activity, decreased water quality, and the introduction of invasive wildlife (domestic cats and dogs) and plants.

Direct and indirect impacts can also be described as permanent or temporary. Permanent direct impacts to biological resources would result from a permanent loss of resources where an area is converted to another condition (e.g., developed, ornamental landscaping, agriculture). Permanent indirect impacts would result from a condition that would persist within a project site, thereby permanently affecting neighboring biological resources, e.g., edge effects or operational noise. Direct impacts may be considered temporary when an area could be restored to its pre-impact condition, thus providing habitat and wildlife functions and values effectively equal to the functions and values that existed before an area was impacted.

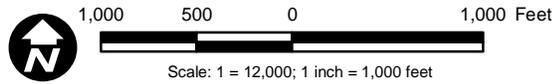
For the purposes of the following evaluation of the Project's effect on biological resources, the 30-acre BSA may be considered a direct impact area. Additionally, the 500-foot buffer that was surveyed surrounding the site is considered an area that may experience indirect permanent effects after site development from ongoing facility operations. Where relevant to the surrounding biological resources, potential indirect effects beyond the adjacent 500-foot survey area are also noted.

3.4.3 Impact Analysis

Potential impacts to sensitive habitat communities and species known to occur on-site or with a moderate to high potential to occur on-site are discussed below. No impacts to sensitive species with a low potential to occur on-site are anticipated because none were detected during multiple site surveys and their potential for occurrence is considered low. A complete list of species with a low potential to occur on-site is included in Appendix D.



Source: Aerials Express 2010; AECOM 2011



**Figure 3.4-6
Impact Zones**

Vegetation Communities

Sensitive vegetation communities and other land cover types are defined in Section 3.4.1. Impacts to sensitive vegetation communities would be considered significant. All potential jurisdictional waters, including southern willow riparian forest, southern willow scrub, and open water, are considered sensitive vegetation communities by the state. In addition, coast live oak woodland, coastal sage scrub, and nonnative grassland are considered sensitive by the County (2009) and City (2001). Impacts to nonsensitive vegetation communities and cover types would not be considered significant.

Direct Impacts to Vegetation Communities (Criterion 2)

Permanent direct impacts to both nonsensitive and sensitive vegetation communities within the Project site would occur as a result of construction activities. The permanent direct impacts would be a result of grading and installation of bridge pilings and bioswales, which would result in the permanent removal of vegetation within the Project site. Project implementation would directly and permanently impact 0.01 acre of southern willow riparian forest, 0.06 acre of southern willow scrub, 0.94 acre of coast live oak woodland, 0.60 acre of coastal sage scrub, and 6.18 acres of nonnative grassland. Shading from bridge construction would directly and permanently impact 0.02 acre of open water, 0.44 acre of southern willow riparian forest, 0.18 acre of southern willow scrub, and 0.26 acre of nonnative grassland. Shading impacts are unique because they are permanent, yet they do not completely remove the affected habitat. Shading will affect the native vegetation below the bridge by permanently altering ambient conditions. However, shading would not permanently alter the streambed itself. Thus, despite changes in plant species composition, structure, and diversity due to the shading, native vegetation will ultimately persist in this area.

Temporary direct impacts would occur as a result of stockpiling, access, and staging areas created outside the grading area. Project implementation would directly and temporarily impact 0.02 acre of open water, 0.45 acre of southern willow riparian forest, 0.28 acre of southern willow scrub, 0.83 acre of coast live oak woodland, 0.06 acre of coastal sage scrub, and 4.64 acres of nonnative grassland. Direct impacts to sensitive vegetation communities would be considered a significant impact (BIO-1).

Indirect Impacts to Vegetation Communities (Criterion 2)

Potential temporary and permanent indirect impacts to the vegetation communities surrounding the Project site would occur as a result of Project construction and operation. Grading activities

have a potential to create airborne dust, sedimentation, and erosion. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration. Runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace native plants and can lead to the eventual death of buried vegetation. The potential spread of exotic species into the surrounding vegetation communities would be considered a permanent indirect impact. Exotic species are opportunistic and could occupy disturbed soils within the Project site and spread into adjacent vegetation communities.

Operation of the Project may result in permanent indirect impacts to vegetation communities surrounding the Project site. Permanent indirect impacts to sensitive vegetation communities may include edge effects and increased exposure to exotic plants. Erosion and storm water contaminant runoff may degrade adjacent sensitive vegetation communities. Exotic plant species are opportunistic and often occupy disturbed soils such as those that will be present within the temporary direct impact area. Once introduced, these exotic plant species often outcompete natives for resources, resulting in a reduction in growth, future dispersal, and recruitment of native species and the eventual degradation of the vegetation community. Potential indirect impacts to sensitive vegetation communities would be considered a significant impact (BIO-2).

Jurisdictional Waters

Direct Impacts to Jurisdictional Waters (Criterion 3)

Within the Project site, construction and placement of the Escondido Creek Bridge would result in 0.01 acre of permanent direct impacts to potential jurisdictional waters (0.004 acre of potential jurisdictional waters of the U.S. and 0.003 acre of potential jurisdictional waters of the state). Temporary direct impacts to jurisdictional waters within the Project site would occur to 0.75 acre (0.39 acre of potential jurisdictional waters of the U.S. and 0.36 acre of potential jurisdictional waters of the state). Shading from bridge construction would directly and permanently impact 0.64 acre (0.45 acre of potential waters of the U.S. and 0.19 acre of potential waters of the state). Direct impacts to jurisdictional waters would be considered a significant impact (BIO-3).

Direct Impacts to a Deed Restricted Mitigation Area (Criterion 3)

These impacts to jurisdictional waters would occur within a deed restricted mitigation area. Implementation of the proposed Project would require amendment to the deed to remove the

bridge area from the restriction. The deed restriction acknowledged that the future Citracado Parkway Extension Project may involve impacts to this mitigation area, and identified it as an allowable use. Project impacts to a deed restricted mitigation site would be considered a significant impact (BIO-4).

Indirect Impacts to Jurisdictional Waters (Criterion 3)

Potential temporary and permanent indirect impacts to the jurisdictional waters surrounding the Project site would occur as a result of Project construction. Potential temporary, indirect impacts would occur as a result of grading activities creating airborne dust and potentially off-site erosion and sedimentation. Potential permanent indirect impacts to the jurisdictional waters surrounding the Project site could result from the alteration of drainage patterns on-site from changes in surface hydrology and installation of bioswales. This could result in off-site jurisdictional waters receiving lower or higher volumes and rates of water than current conditions. Additionally, operation of the roadway may result in erosion and storm water contaminant runoff that may degrade adjacent jurisdictional waters. Indirect impacts to jurisdictional waters would be considered a significant impact (BIO-5).

Trees

Direct Impacts to Mature and Protected Trees (Criterion 5)

Direct permanent impacts would occur to 18 mature and 24 protected trees in the planned grading areas. There are 11 mature and nine protected trees that would be directly temporarily impacted by removal or trimming associated with construction activities (e.g., staging areas) in the temporary impact zone (Table 3.4-1). There are nine mature trees that would be permanently shaded as a result of bridge construction, which is a direct impact. Direct impacts to mature and protected trees would be considered a significant impact (BIO-6).

Indirect Impacts to Mature and Protected Trees (Criterion 5)

Mature and/or protected trees were not surveyed in the buffer; however, indirect impacts may occur to those adjacent to the Project site. Potential temporary, indirect impacts to mature and/or protected trees would arise during Project construction as a result of runoff and sedimentation, erosion, and fugitive dust. Runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace native trees.

Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration.

Potential permanent indirect impacts to mature and/or protected trees may occur during Project operation. Erosion and storm water contaminant runoff may degrade adjacent habitat. Potential indirect impacts to mature and/or protected trees would be considered a significant impact (BIO-7).

Sensitive Plants

Direct Impacts to Engelmann Oaks and Palmer's Sagewort (Criterion 1)

While Palmer's sagewort was detected within the Project BSA, it was not detected within the Project site; therefore, no direct impacts to this species would result from Project construction and/or operations.

Three Engelmann oaks were detected in the Project site. Direct permanent impacts would occur to three Engelmann oaks that occur in the planned grading areas. Direct impacts to Engelmann oaks would be considered a significant impact (BIO-8).

Indirect Impacts to Engelmann Oaks (Criterion 1)

Potential temporary, indirect impacts to Palmer's sagewort and Engelmann oak would arise during Project construction as a result of runoff and sedimentation, erosion, and fugitive dust. Runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace the special-status species. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration. In addition, the introduction and establishment of exotic species within or adjacent to these plants can adversely affect native species by reducing growth, dispersal, and recruitment.

Potential permanent indirect impacts to Palmer's sagewort and Engelmann oak may occur during Project operation. Erosion and storm water contaminant runoff may degrade adjacent habitat. Introduced exotic plant species are opportunistic and often outcompete natives for resources resulting in a reduction in growth, future dispersal, and recruitment of native species.

Potential indirect impacts to Palmer's sagewort and Engelmann oak would be considered a significant impact (BIO-9).

Sensitive Wildlife

Direct Impacts to Cooper's Hawk, Yellow Warbler, and Yellow-Breasted Chat (Criterion 1)

Suitable Cooper's hawk, yellow warbler, and yellow-breasted chat habitat present in the Project site would be directly impacted by construction of the Project. Yellow warblers and yellow-breasted chats were found in the riparian habitat present on-site and are likely breeding on-site. Cooper's hawks were found in the riparian and oak woodland habitat present on-site and are also potentially breeding on-site. Operation of the Project may temporarily directly impact these species when tree trimming is necessary during routine maintenance. Direct impacts to Cooper's hawk, yellow warbler, and yellow-breasted chat, as well as their habitat, would be considered a significant impact (BIO-10).

Indirect Impacts to Cooper's Hawk, Yellow Warbler, and Yellow-Breasted Chat (Criterion 1)

Temporary, indirect impacts are likely to arise from construction-generated fugitive dust accumulation on surrounding vegetation and/or noise resulting in destruction and/or avoidance of habitat by wildlife. Indirect impacts from potential deposition of sediment loads during heavy rain events and flooding downstream of the site would impact existing habitat for Cooper's hawk, yellow warbler, and yellow-breasted chat.

Operation of the Project may result in permanent indirect impacts to Cooper's hawk, yellow warbler, and yellow-breasted chat, which includes edge effects, where the Project would lead to increased lighting, noise, and exotic plant and wildlife invasion. Nighttime lighting could disrupt species movement and/or cause increased predation rates. Street lighting along Citracado Parkway would be installed consistent with the *City of Escondido Design Standards and Standard Drawings* (City of Escondido 2009) for Major Roads. The lighting would consist of ornamental street lights using 180-watt low-pressure sodium luminaires with a maximum spacing distance of 90 feet, staggered back and forth on each side of the street.

A noise study was prepared for the proposed Project (AECOM 2010b) that describes anticipated noise levels with Project operation (vehicular traffic). Based on the noise study, noise levels in the riparian habitat are expected to be 65 A-weighted decibels (dBA) L_{eq} or greater within 110 feet from the centerline of the roadway and 60 dBA L_{eq} or lower at distances of 230 feet or

greater from the centerline of the roadway. These noise levels are based on standard propagation over a soft (vegetated) site and do not include reduction due to topographic features. Noise levels on this order have the potential to reduce the use of this habitat for breeding and nesting adjacent to the bridge.

Any potential lighting and noise indirect impacts to off-site Cooper's hawk, yellow warbler, and yellow-breasted chat breeding habitat and adjacent foraging habitat would be considered significant (BIO-11).

Migratory Birds

Direct Impacts to Migratory Birds (Criterion 4)

The Project would result in direct construction-related impacts to bird populations on-site in the form of habitat destruction, and potentially death, injury, or harassment of nesting birds, their eggs, and their young. "Take" under the MBTA is generally interpreted as the direct death or injury of birds from collisions with vehicles and other machinery. This most frequently occurs during the vegetation clearing stage of construction and involves eggs, nestlings, and recently fledged young that cannot safely avoid equipment. Other direct impacts on bird populations using the site are the same as those identified above for listed and nonlisted special-status species. Operation of the Project may temporarily directly impact these species when tree trimming is necessary during routine maintenance. Direct impacts to migratory birds would be considered significant (BIO-12).

Indirect Impacts to Migratory Birds (Criterion 4)

Temporary, indirect impacts are likely to arise from construction-generated fugitive dust accumulation on surrounding vegetation and construction-related erosion, runoff, and sedimentation into plant communities resulting in destruction and/or avoidance of migratory bird habitat. Additionally, construction-related noise is likely to cause migratory bird nest abandonment in areas adjacent to construction in the Project site. Indirect impacts from these construction-related activities would be temporary, as these impacts would end with cessation of Project construction.

Operation of the Project may result in permanent indirect impacts to migratory birds, which includes edge effects, where the Project would lead to increased lighting, noise, and exotic plant

and wildlife invasion. Nighttime lighting could disrupt species and/or cause increased predation rates. Indirect impacts to migratory birds would be considered significant (BIO-13).

Wildlife Movement

Direct Impacts

The proposed Project may result in direct impacts to local wildlife movement; however, the BSA is not critical to regional habitat connectivity due to the development north, south, and east of the BSA. Some local movement may be disrupted by the extension of the roadway; however, most movement is likely concentrated in the riparian and wetland habitat and construction of the bridge would allow wildlife to continue to use this area as a local movement corridor. For these reasons, potential direct impacts to wildlife movement are not considered significant.

Indirect Impacts

The Project would potentially result in permanent indirect impacts to local wildlife movement. Potential indirect impacts of the proposed Project and associated edge effects include, but are not limited to, altered behavior due to environmental stressors and changes in daily activity patterns. However, the BSA is adjacent to developed areas and other roadways. Species that use this area for local movement are likely habituated to anthropogenic indirect impacts already present in the BSA. For these reasons, potential indirect impacts to wildlife movement are not considered significant.

3.4.4 Mitigation Measures

Resource-specific mitigation measures for Project impacts that were determined to be potentially significant are discussed below. Incorporation of these measures shall reduce potentially significant impacts to below a level of significance.

MM-BIO-1: Direct Impacts to Sensitive Vegetation Communities

MM-BIO-1.1: To avoid incidental loss of sensitive habitat types during construction activities, environmentally sensitive area fencing shall be installed along the limits of disturbance prior to the start of construction. In addition, grading limits shall be flagged or fenced and grading shall not occur beyond this flagging/fencing. Construction crews shall be made fully aware of this boundary.

MM-BIO-1.2: Temporary impacts to sensitive upland and wetland habitats shall be mitigated through replacement on-site at a ratio of 1:1 for a total of 6.28 acres of habitat restoration (Table 3.4-2). In addition to the 6.28-acre area, any bareground post-construction (e.g., areas of ornamental, disturbed, and eucalyptus woodland habitat impacted during construction) shall be planted post-construction for erosion control purposes.

**Table 3.4-2
Mitigation for Temporary Direct Impacts to Sensitive Vegetation
Communities and Land Cover Types within the Project Area**

Sensitive Vegetation Community	Impacted Acreage	Mitigation Ratio	Total Mitigation (Acres)
Riparian and Wetlands (jurisdictional waters)			
Open water (Escondido Creek)	0.02	1:1	0.02
Southern willow riparian forest	0.45	1:1	0.45
Southern willow scrub	0.28	1:1	0.28
Subtotal Wetlands	0.75		0.75
Uplands			
Coast live oak woodland	0.83	1:1	0.83
Coastal sage scrub	0.06	1:1	0.06
Nonnative grassland	4.64	1:1	4.64
Subtotal Uplands	5.53		5.53
Total	6.28		6.28

MM-BIO-1.3: A restoration maintenance and monitoring plan for the 6.28 acres of habitat restoration, as described in MM-BIO-1.2, shall be prepared by a qualified restoration ecologist and shall incorporate an appropriate native species planting palette to blend in with the existing and surrounding habitats. Preference for habitat community restoration shall be determined based on the existing and surrounding habitats by a qualified restoration ecologist. Areas of nonnative grassland and eucalyptus woodland shall be restored in the form of native grassland and/or open oak woodland habitats. No nonnative species shall be incorporated into the restoration plan. This plan shall include details of site preparation, implementation and planting specifications, and maintenance and monitoring procedures. The plan shall also outline yearly success criteria and remedial measures should the mitigation effort fall short of the success criteria.

MM-BIO-1.4: Permanent impacts to sensitive upland habitats shall be mitigated off-site through drawdown of mitigation credits from the Daley Ranch Mitigation Bank. Mitigation shall be completed, as shown in Table 3.4-3, at ratios in accordance with the NCMSCP and Escondido

**Table 3.4-3
Mitigation for Permanent Direct Impacts to Sensitive Vegetation Communities
and Cover Types within the Project Area (acres)**

Vegetation Community	NCMSCP						City of Escondido Subarea Plan				Total Mitigation
	NCMSCP Tier	Impacted Acreage (PAMA)	Impacted Acreage (Non-PAMA)	Shaded Area (PAMA Lands)	Mitigation Ratio (PAMA/Non-PAMA)	Subtotal NCMSP	MHCP Group	Impacted Acreage	Mitigation Ratio	Subtotal City	
Riparian and Wetlands (jurisdictional waters)											
Open water (Escondido Creek)	I	-	-	0.02	2:1/1:1	0.04	Group A	-	1:1 to 3:1	-	0.04
Southern willow riparian forest	I	0.01	-	0.44	2:1/1:1	0.90	Group A	-	1:1 to 3:1	-	0.90
Southern willow scrub	I	0.06	-	0.18	2:1/1:1	0.48	Group A	-	1:1 to 3:1	-	0.48
Subtotal Wetlands		0.07		0.64		1.42					1.42
Uplands											
Coast live oak Woodland	I	0.28	0.18	-	2:1/1:1	0.74	Group B	0.48	2:1	0.96	1.70
Coastal sage scrub	II	0.05	-	-	1.5:1/1:1	0.08	Group C	0.55	1:1	0.55	0.63
Nonnative grassland	III	1.69	2.46	0.26	1:1/0.5:1	3.18	Group E	2.03	0.5:1	1.02	4.20
Subtotal Uplands		2.02	2.64	0.26		4.00					6.53
Total		2.09	2.64	0.90		5.42		3.06		2.53	7.95

Subarea Plan as the guiding regulatory documents for the proposed Project. Coast live oak woodland shall be mitigated at 2:1 inside PAMA and 1:1 outside PAMA for a total of 1.70 acres of mitigation. Coastal sage scrub shall be mitigated at 1.5:1 inside PAMA and 1:1 outside PAMA for a total of 0.63 acre of mitigation. Nonnative grassland shall be mitigated at a ratio of 1:1 inside PAMA and 0.5:1 outside PAMA for a total of 4.20 acres of mitigation. Total mitigation credit to be drawn down from the Daley Ranch Mitigation Bank shall be 6.53 acres.

MM-BIO-1.5: Permanent impacts to riparian and wetland habitats shall be mitigated at a ratio of 2:1 for a total of 1.42 acres of mitigation required. All permanent shaded areas shall be mitigated at a ratio of 2:1 with the first 0.64 acre occurring through restoration on-site, and the remaining 0.64 acre occurring off-site. All other permanent impacts (0.07 acre) shall be mitigated for off-site at 2:1 for a total of 0.78 acre off-site (0.64+0.14). Off-site mitigation in the amount of 0.78 acre shall occur directly adjacent to the Project site at the southeast portion of the HARRF Expansion Parcel.

MM-BIO-1.6: A mitigation maintenance and monitoring plan for both on-site and off-site riparian and wetland mitigation, as described in MM-BIO-1.5, shall be prepared by a qualified restoration ecologist and shall incorporate an appropriate native species planting palette to blend in with the existing and surrounding habitats. This plan shall include details of site preparation, implementation and planting specifications, and maintenance and monitoring procedures. The plan shall also outline yearly success criteria and remedial measures should the mitigation effort fall short of the success criteria.

MM-BIO-2: Indirect Impacts to Sensitive Vegetation Communities

MM-BIO-2.1: Storage of soil or fill material from the Project site shall be within the Project area or developed areas. The contractor shall delineate stockpile areas on the grading plans for review by the City.

MM-BIO-2.2: Construction access shall use existing developed areas or be within the right-of-way of proposed road improvements. If unauthorized new or temporary access routes are determined to be necessary, these areas shall be surveyed for biological resources prior to their use. Contractors shall clearly mark all access routes (i.e., flagged and/or staked) prior to the onset of construction. Implementation of erosion and sedimentation control measures as identified in MM-BIO-5 would also reduce any potential indirect impacts to sensitive vegetation communities to less than significant.

MM-BIO-2.3: The contractor shall periodically monitor the work area to ensure that construction-related activities do not generate excessive amounts of fugitive dust. Water shall be applied to the construction right-of-way, dirt roads, trenches, spoil piles, and other areas where ground disturbance has taken place to minimize dust emissions and topsoil erosion.

MM-BIO-3: Direct Impacts to Jurisdictional Waters

MM-BIO-3.1: MM-BIO-1 requires mitigation for all permanent wetland habitat impacts at a ratio of 2:1. In addition, in accordance with resource agency policies, the mitigation shall not result in a net loss of wetland habitat or wetland functions and values. Therefore, a minimum of 1:1 of the final mitigation replacement ratio shall be accomplished by wetland/riparian restoration at the southeast portion of the HARRF Expansion Parcel (0.78 acre). The proposed mitigation is subject to the resource agencies' review and discretion; thus, the mitigation obligations for the impacts to jurisdictional wetland habitats may change from those presented here.

MM-BIO-3.2: Impacts to riparian habitats and wetlands, as well as jurisdictional waters, shall require the following permits by regulatory federal and state agencies and acts: (1) USACE, CWA, Section 404 permit for placement of dredged or fill material within waters of the U.S.; (2) RWQCB, CWA, Section 401 state water quality certification/waiver for an action that may result in degradation of waters of the state; and (3) CDFG, CFGC, Section 1602 agreement for alteration of a streambed. The mitigation could occur in the form of wetland/riparian creation or restoration (which both result in a gain of wetland/riparian area), or creation or restoration combined with enhancement.

MM-BIO-4: Direct Impacts to a Deed Restricted Mitigation Area

The deed restriction shall be removed from the area underneath the bridge. In kind, a deed restriction shall be placed on all mitigation acreage proposed at the southeast portion of the HARRF Expansion Parcel. In addition, an area of equal acreage to the area being removed from the deed restriction to the west of the bridge shall be placed under deed restriction in the vicinity of the now proposed mitigation location on the HARRF Expansion Parcel.

MM-BIO-5: Indirect Impacts to Jurisdictional Waters

MM-BIO-5.1: As identified in MM-BIO-1, environmentally sensitive area fencing shall be installed at the Project site to ensure no unintentional impacts to sensitive habitats. In the area of

the HARRF access driveway, the limits of potentially jurisdictional southern willow riparian forest shall be flagged for avoidance, and silt fencing shall be installed in this location to avoid any indirect impacts to this potentially jurisdictional habitat.

MM-BIO-5.2: A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared to comply with RWQCB requirements. The SWPPP shall identify the design features and BMPs that will be used to effectively manage drainage-related issues (e.g., erosion and sedimentation) during construction. Erosion control measures shall be regularly checked by the contractor, the Project biologist, and/or the City. Specific BMP plans shall be reviewed by the City and the Project biologist and modified, if necessary, prior to implementation. Fencing and erosion control measures of all Project areas shall be inspected a minimum of once per week.

MM-BIO-5.3: Activities, including staging areas, equipment access, and disposal or temporary placement of excess fill, shall be prohibited within off-site drainages. Implementation of measures as identified in MM-BIO-2 would also reduce any potential indirect impacts to jurisdictional waters to less than significant.

MM-BIO-6: Direct Impacts to Mature and Protected Trees

MM-BIO-6.1: Prior to the start of construction, all *mature* and/or *protected* trees shall be identified by a qualified biological monitor within the temporary and permanent impact areas. Impacts to trees in the temporary work area shall be avoided to the extent feasible. Trees in the temporary impact area that can be avoided shall be temporarily fenced off at the drip line of the tree to prevent impacts during construction.

MM-BIO-6.2: If *mature* and/or *protected* trees cannot be preserved on-site, then impacts shall be mitigated as required under the City of Escondido Municipal Code (Chapter 33, Article 55). Where *mature* and *protected* trees occur in open oak woodland and/or riparian habitat, habitat-based mitigation as required under MM-BIO-1 and MM-BIO-3 will reduce impacts to less than significant. Of the 38 mature trees, a total of 16 *mature* trees are not associated with riparian and oak woodland habitats on-site. These 16 *mature* trees that cannot be preserved on-site, shall be replaced at a minimum 1:1 ratio. Of the 33 protected trees, a total of 12 *protected* trees are not associated with riparian and oak woodland habitats on-site. These 12 *protected* trees that cannot be preserved on-site shall be replaced at a minimum 2:1 ratio. The number, size, species, and location of replacement trees shall be determined on a case-by-case basis by the City of Escondido Planning Department. Replacement trees shall be incorporated into the on-site revegetation plan, as required in MM-BIO-1.

MM-BIO-7: Indirect Impacts to Mature and Protected Trees

Implementation of measures as identified in MM-BIO-2 would reduce any potential indirect impacts to *mature* and *protected* trees to less than significant.

MM-BIO-8: Direct Impacts to Sensitive Plant Species (Engelmann Oaks)

Impacts to two Engelmann oak trees shall be avoided in the temporary impact area to the extent feasible, as required in MM-BIO-5. Permanent impacts to one Engelmann oak tree (and temporary impacts to the two Engelmann oak trees, if they cannot be avoided) shall be mitigated as required for *protected* trees under the City of Escondido Municipal Code (Chapter 33, Article 55). Engelmann oaks shall be replaced at a minimum 2:1 ratio at an on-site location, or elsewhere in the City, as determined by the City Director of Planning.

MM-BIO-9: Indirect Impacts to Sensitive Plant Species (Palmer's Sagewort and Engelmann Oaks)

MM-BIO-9.1: In the Project buffer, the four individuals of Palmer's sagewort shall be flagged for avoidance and further impacts shall be avoided through implementation of the following: no unnecessary or unauthorized trespass by workers or equipment in the Project buffer, prohibition of staging and storage of equipment and materials, prohibition of refueling activities, and prohibition of littering or dumping debris in areas known to contain Palmer's sagewort outside the Project area. Palmer's sagewort shall also be planted within the Project's potential on-site wetland/riparian restoration area.

MM-BIO-9.2: Implementation of measures identified in MM-BIO-2 would reduce any potential indirect impacts to Engelmann oaks to less than significant.

MM-BIO-10: Direct Impacts to Cooper's Hawk, Yellow Warbler, Yellow-Breasted Chat, and Other Migratory Birds

Under CFGC Division 4, Part 2, Chapter 1, 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," where "take" is defined under Division 0.5, Chapter 1, Section 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." In addition, the MBTA restricts the killing of migratory birds or destruction of active

migratory bird nests and/or eggs. Therefore, vegetation clearing should occur outside of the typical breeding season for raptors and migratory birds (February 1 through September 1). If this is not possible, then a qualified biologist shall conduct a survey for nesting birds no more than 5 calendar days prior to construction to determine the presence or absence of nests in the Project area, and the potential need for additional Project mitigation measures. If construction is halted for more than 5 calendar days during the breeding season, then nest surveys must be repeated prior to any additional vegetation clearing.

MM-BIO-11: Indirect Impacts to Cooper's Hawk, Yellow Warbler, Yellow-Breasted Chat, and Other Migratory Birds

MM-BIO-11.1: If nesting birds, including but not limited to, special-status species and those species protected by the MBTA, are detected in the Project site or Project buffer, the nest shall be flagged and no construction activity shall take place within 500 feet of the nest until nesting is complete (nestlings have fledged or nest has failed) or a Project biologist and noise specialist have confirmed that construction noise levels are less than 60 dBA L_{eq} at the nest site.

MM-BIO-11.2: If construction activities occur at night, all Project lighting (e.g., staging areas, equipment storage sites, roadway) shall be directed onto the roadway or construction site and away from sensitive habitat. Light glare shields shall also be used to reduce the extent of illumination into adjoining areas.

MM-BIO-11.3: Final construction plans shall detail all operational street light locations and shall be provided to the City of Escondido Planning Department for review. Operational street lights shall be directed onto the roadway and away from open space areas. When considering spacing of lighting along the roadway, special consideration shall be given to the lighting along the new bridge and in the vicinity of the riparian habitat in Escondido Creek. Lighting in the area of Escondido Creek should be avoided if possible. If lighting is necessary for safe roadway operations in the vicinity of the creek, filters, shields, automatic dusk-to-dawn sensors, and/or other commercially available devices shall be implemented so that lighting is not reflecting into the adjacent riparian habitat. Final construction plans detailing lighting shall include specifications for all proposed devices to avoid lighting impacts within the riparian habitat adjacent to the bridge. These lighting specifications shall be reviewed and approved by the City of Escondido Planning Department prior to Project implementation.

MM-BIO-11.4: Operational traffic noise may reduce breeding potential for the yellow warbler, yellow-breasted chat, and Cooper's hawk within 230 feet of the centerline of the bridge and/or

roadway. Noise levels shall be considered when preparing the restoration plan to allow for the planting of mature and protected trees, as required in MM-BIO-6, in areas where traffic noise levels would not be expected to impact breeding and nesting activities of foraging raptors, including Cooper's hawk. Implementation of habitat-based mitigation for direct impacts as described in MM-BIO-1 and MM-BIO-3 would result in an overall increase in suitable habitat for yellow warbler and yellow-breasted chat, and would reduce any potential indirect noise impacts to less than significant.

MM-BIO-11.5: Implementation of measures as identified in MM-BIO-2 would also reduce any potential indirect impacts to sensitive wildlife species and birds protected under the MBTA to less than significant.

MM-BIO-12: Direct Impacts to Migratory Birds

Implementation of measures as identified in MM-BIO-10 would reduce any potential direct impacts to migratory bird populations to less than significant.

MM-BIO-13: Indirect Impacts to Migratory Birds

Implementation of measures as identified in MM-BIO-11.1, BIO-11.2, and BIO-11.3 would reduce any potential indirect impacts to migratory birds to less than significant.

Mitigation has been identified for impacts to sensitive vegetation communities, jurisdictional waters/wetlands, sensitive plant species, trees, and sensitive wildlife. With implementation of the above mitigation measures, impacts to all biological resources would be considered less than significant.

3.5 CULTURAL RESOURCES

The cultural resources study for the Project focused upon the identification of archaeological sites (or cultural resources) within the Project's area of potential effects (APE). This study included tasks to determine the significance of those cultural resources within the APE and evaluate potentially adverse impacts to those resources generated by the proposed Project. The following cultural resources section of the EIR will summarize the archaeology technical report *Cultural Resources Survey and Evaluation Program for the Citracado Parkway Extension Project* (Brian F. Smith and Associates 2011) prepared by Brian F. Smith and Associates (BFSA) and provided in Appendix E of this EIR. For all impacts to cultural resources, measures have been provided in this EIR section that describe how impacts will be mitigated to levels below significant.

The status of the current study was to evaluate the potential adverse impacts to cultural resources represented by the construction of the Project. The archaeological study consisted of the review of institutional records searches and the completion of an updated archaeological survey of the entire Project corridor to record and subsequently evaluate all identified cultural resources. BFSA was contracted by AECOM to conduct the cultural resources study and to subsequently prepare a technical report of findings for inclusion in the Project's environmental impact documentation to be submitted to the City, in accordance with Section 21083.2 of the California Public Resources Code (PRC) and CEQA.

3.5.1 Existing Conditions

Investigation Methodology

The presence of cultural resources within the Project was determined based upon institutional records searches, an intensive cultural resources survey of the APE, and an archaeological site testing and significance evaluation program. The Project is located on the *Rancho Santa Fe* and *Escondido* U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles in portions of Sections 29 and 30, Township 12 South, Range 2 West, of the San Bernardino Base and Meridian. The Project will extend and connect Citracado Parkway from West Valley Parkway to Andreasen Drive. The roadway will allow access to the ERTC where the new Palomar Medical Center West is under construction and the new SDG&E Palomar Power Plant is now operational.

The records searches were conducted at the South Coastal Information Center (SCIC) at San Diego State University (SDSU) and at the San Diego Museum of Man (MOM). An archival

records search was conducted at several different repositories to understand the history and prehistory of this region of the County (refer to Appendix E, Section 4.1 for details on records search references).

BFSA personnel and Native American monitors conducted the archaeological survey of the Project during the weeks of January 25, 2010, and May 9, 2010. Two archaeological sites with associated bedrock milling features, pictographs, and surface artifact scatters were observed. These two sites were previously recorded as SDI-8280 and SDI-12,209. Native American representatives of both the Kumeyaay and Luiseño were present during all fieldwork conducted for this Project. The Project and general Project area have been previously surveyed archaeologically numerous times; however, the BFSA survey was intended to perform a thorough reconnaissance focused upon the APE.

The cultural resources within the APE were tested for significance evaluations following standard professional archaeological field protocol and the guidelines of the City. The procedures used also correspond to guidelines for cultural resources studies published by the County of San Diego. The archaeological testing and significance evaluation programs were conducted by EDAW in 2007 and BFSA in 2010. (Refer to Appendix E for the testing program methodologies.)

The analysis of the existing on-site cultural resource components did indicate that Native American religious, ritual, and other special activity locations exist within the APE. As described below, archaeological work at SDI-8280 confirmed the presence of two pictographs in the APE, and one pictograph just outside of the APE at SDI-12,209. Pursuant to GC 65352.3, Native American consultation was initiated by the City. The Native American Heritage Commission (NAHC) was contacted and was provided by that office with a primary contact knowledgeable of the vicinity, as well as a list of Native American individuals, bands, and organizations potentially knowledgeable regarding cultural resources in the area. Each of these recommended sources was contacted.

Cultural Setting

According to the BFSA report, the cultures that have been identified in the general vicinity of the Project consist of a possible Paleo-Indian manifestation of the San Dieguito complex, the Archaic and Early Milling Stone horizons represented by the La Jolla complex, and the Late Prehistoric Luiseño and Kumeyaay cultures. The area was used for ranching and farming following the Spanish occupation of the region and continuing into the historic period. A

discussion of the cultural elements in the Project area is provided in Section 3.2 of the BFSA report provided in Appendix E of this EIR.

Records Search Results

According to the records on file at the SCIC and MOM, 27 cultural resources studies have been conducted within a 1-mile radius of the Project. A total of 35 cultural resources have been documented within 1 mile of the Project boundary, with several of the resource sites containing bedrock milling features. Previously recorded cultural resources identified within the Project's APE include SDI-8280 and SDI-12,209. Both of these sites were recorded as large multicomponent archaeological sites consisting of bedrock milling features; midden deposits; and dispersed scatters of prehistoric artifacts, pictographs, and historic foundations/structures. However, in the case of both of these recorded sites, the historic components of each are not within the Project's APE.

Site Survey Results

Within the Project road alignment that traverses roughly north to south, Site SDI-12,209 is situated north of Escondido Creek and Site SDI-8280 is located south of the creek. Both sites are primarily late prehistoric habitation sites that contain bedrock milling features, pictographs, multiple artifacts and habitation debris, and artifact-rich midden soil.

The archaeological testing of Sites SDI-8280 and SDI-12,209 associated with the environmental review of the Citracado Parkway Extension Project was conducted partially in 2007 by EDAW and also in 2010 by BFSA. Portions of SDI-8280 have been studied previously by BFSA for the Harmony Grove development project in 2006 (Gilbert et al. 2006). The testing of these archaeological sites for the Project was intended to supplement previous work by adding shovel test pits and test units, mapping and recording all cultural features within the alignment, and updating all records information. The excavations conducted by BFSA effectively sampled the areas of the archaeological sites within the Project's APE. Data from previous studies by AECOM and BFSA were also incorporated into this study for the purposes of subsurface site boundary identification and significance evaluation.

All collections, notes, photographs, and other materials related to this Project will be temporarily housed at the BFSA archaeological laboratory in Poway, California, until permanent curation is arranged at the San Diego Archaeological Center or other repository. Materials recovered from

the previous excavations conducted by AECOM are currently housed at SDSU under the supervision of Dr. Arion Mayes.

Testing Program Results

As noted above in Existing Conditions, two archaeological sites, SDI-8280 and SDI-12,209, were relocated and documented during field surveys of the Project. A testing program was conducted to gather sufficient data to identify all cultural features and deposits within the Project's APE, and to use that information to determine the significance of the resources. A summary of each site is provided below along with a determination as to the significance of the site, pursuant to Section 15064.5 of CEQA. A detailed discussion of each site can be found in Sections 6.0 and 7.0 of the archaeology technical report provided in Appendix E.

The testing of these archaeological sites consisted of the excavation of shovel test pits and standard (1 meter square) test units at locations where significant subsurface deposits were suggested by the shovel tests. Shovel test pits and test unit excavations effectively sampled the areas within the Project's APE that corresponded to the archaeological sites identified by the survey and records analysis. Use of the property in and around the Project's APE for rural residences and agriculture has had a negative effect on the integrity of Sites SDI-8280 and SDI-12,209 due to clearing of native vegetation and cultivation, as well as the construction of residences. The sites have also been impacted by utility lines (water and power) that pass through the site areas.

Investigation Results for SDI-8280

Site SDI-8280 is a large and complex cultural resource that will be directly impacted by the proposed Project. Site SDI-8280 was originally recorded as W-1046 in 1974 by O. T. Knutson, who recorded a large pitted boulder, a "trail shrine," a pictograph, and numerous artifacts scattered over a knoll overlooking Escondido Creek. Site SDI-8280 consists of multiple areas of focused human use, which are designed as Locus 1 through Locus 4 within the overall boundary of the site. Portions of each of these loci fall within the Project's APE. Data from previous investigations of SDI-8280 (Gilbert et al. 2006; Bowden-Renna and Apple 2008) were used to supplement the updated testing program by BFSA (Stropes and Smith 2010). The testing program conducted by BFSA in 2010 focused only on elements of the site within the APE. These current investigations consisted of the mapping and recordation of 16 bedrock milling features, relocation and further recordation of two faded pictographs at Locus 1, the excavation of 25 shovel test pits and five test units. Previous studies of this site (Gilbert et al. 2006) also included the recordation of 58 milling features, and the total excavation of 49 shovel test pits and three

test units. Discussions of the findings for each of the loci of SDI-8280 from both of the BFSA studies (Gilbert et al. 2006; Stropes and Smith 2010) are provided below and an artifact recovery summary is provided in Table 3.5-1.

- A. Locus 1 of SDI-8280 covers approximately 246,000 square feet (22,969 square meters) and includes milling features and two pictographs. Archaeologists have recorded 183 milling surfaces and 1,065 artifacts (two pottery shards and the remainder lithic artifacts) at the locus. Thirty-one shovel test pits and five test units were excavated at Locus 1, some in areas of dark midden soil. Recovered material included ground and flake stone tools, lithic waste (the predominant component of the artifact collection), and food bone and shell. No significant deposits or pictographs associated with Locus 1 of SDI-8280 were identified within the Project's APE.
- B. Locus 2 of SDI-8280 is somewhat smaller than Locus 1, measuring approximately 71,120 square feet (6,645 square meters) in size. A total of 164 milling surfaces were recorded at this locus, although it was noted that much of the outcropping at the site is exfoliated, and that more features may once have been present that are now unidentifiable. Twenty-one artifacts were collected from surface locations. Nineteen shovel test pits and one test unit were excavated at this locus; some of which were completed in areas of dark midden soil. The mapping of milling features and surface recovery were part of the 2006 study of Locus 2 by BFSA for the Harmony Grove development project west of the Citracado Parkway alignment. The 499 artifacts recovered from subsurface locations included lithic tools and flakes/waste, four pottery shards, and food bone. Within the Project's APE, the elements of Locus 2 consist of three milling features. No significant deposits or features within Locus 2 will be adversely affected by the Project, as the areas of significant deposits lie west of the APE.
- C. Locus 3 of SDI-8280 is a small milling area located west of the APE. The majority of this locus falls outside of any study areas, and the full extent of the resource has not been determined. Tests within this locus consisted of excavation of two shovel test pits and one test unit. The study resulted in the documentation of one milling feature and the recovery of 71 debitage and three pottery shards from STP 7 and Test Unit 4 within the APE at Locus 3. Within the APE, no significant deposits or features associated with Locus 3 were identified.
- D. Locus 4 of SDI-8280 is a focused milling area measuring approximately 23,870 square feet (2,229 square meters). Bedrock milling features recorded by BFSA in 2006 (Gilbert et al. 2006) included a total of 100 milling surfaces (although weathering may have contributed

to difficulty in identifying some surfaces). Seven milling features recorded by BFSa in 2006 at Locus 4 fall within the Project's APE. Ten shovel test pits were excavated at Locus 4 by BFSa in 2006, including areas outside of the Project's APE, none of which produced any cultural materials. The BFSa 2010 testing program included the excavation of one shovel test pit and one test unit within the APE at Locus 4. No significant deposits or cultural features were identified within the Project's APE at Locus 4.

**Table 3.5-1
Summary of Cultural Material Recovered/Identified from SDI-8280**

Cultural Material	Locus 1	Locus 2	Locus 3	Locus 4	Total
Ecofact:					
Bone	32.9 g	15.0 g	0	0	47.9 g
Marine Shell Unid.	9.2 g	< 0.1 g	0	0	9.3 g
Lithic Production Waste	1,035	485	71	3	1,594
Ground Stone Tools:					
Metate	0	1	0	0	1
Manos	3	0	0	0	3
Unidentifiable	1	0	0	0	1
Percussion Tools:					
Hammerstones	3	0	0	0	3
Precision Tools:					
Core Tools	0	2	0	0	2
Flake Scrapers	3	0	0	0	3
Retouched Flakes	9	1	0	0	10
Scraper Plane	1	0	0	0	1
Spoke Shave	1	0	0	0	1
Utilized Flakes	9	3	0	0	12
Perforator	0	1	0	0	1
Pottery Shards	2	4	3	0	9
Miscellaneous:					
Petrified Wood	1	0	0	0	1
Bedrock Milling Features	27	16	0	15	58
Pictograph Panels	2	0	0	0	2
Total	1,067	497	74	3	1,641

Investigation Results for SDI-12,209

Site SDI-12,209 is a large prehistoric occupation site that will be potentially impacted by the proposed Project. Site SDI-12,209 was originally recorded in the 1920s by Malcolm Rogers as the “Oakdale Site” (W-255). The site has been studied by several different researchers since 1973, but most recently, EDAW’s study of this area has confirmed the presence of significant elements of SDI-12,209 in the APE. In 2008, EDAW (Bowden-Renna and Apple 2009) began testing at SDI-12,209 for the Project. EDAW’s work included excavation of 45 shovel test pits and three test units placed within the portion of Site SDI-12,209 that would be directly impacted by the Project alignment. During this phase of the Project, EDAW identified a rich midden deposit, multiple bedrock milling features, and the presence of human remains. A summary of the data collected by EDAW can be found in Table 3.5-2.

**Table 3.5–2
Cultural Material Recovered by EDAW**

Cultural Material	STPs	Unit 1	Unit 2	Unit 3	Total
Biface	0	0	0	1	1
Ceramic	3	7	1	0	11
Clay Daub	0	1	0	0	1
Core	1	2	0	0	3
Debitage	419	530	65	209	1,223
Ground Stone	5	6	0	0	11
Projectile Point	1	7	1	0	9
Tools	2	3	0	0	5
Total	431	556	67	210	1,264
Charcoal*	1.7	15	2.8	0.01	19.51
Bone*	7.9	154.8	2	0	164.7
Fire-Affected Rock (FAR)*	407.8	1,694.4	443.4	0	2,545.6
Floral*	0	0	0.5	0	0.5
Intrusive*	87	28.2	20.5	0	135.7
Shell*	0	1.9	0.1	0	2

*Weight in grams
Bowden-Renna and Apple 2009

The portions of Site SDI-12,209 located within the APE include two loci. Locus 1 of SDI-12,209 is the larger of the two loci and is situated on the south and east sides of the site, while Locus 2 is located on the north side of the site. The portion of Locus 1 within the APE includes 57 bedrock milling features, a rich midden deposit, and a high density of surface and subsurface cultural materials. Components of SDI-12,209 outside of the APE (and on private property) have not been studied as part of this program. A pictograph was also recorded at Locus 1 just outside of

the APE. Locus 2 is separated from Locus 1 by an absence in cultural materials between the two loci. Locus 2 includes a dense lithic scatter of primarily quartz lithic production waste.

Testing of Site SDI-12,209 by BFSa (BFSa completed the testing initiated by EDAW in 2008) consisted of mapping and recordation of a pictograph panel, the removal of soils and vegetation from the margins of bedrock in search of grinding surfaces, mapping and recordation of milling features within the APE, mapping and collection of surface artifacts, and the excavation of 25 shovel test pits and three test units within the portions of the site located within the APE. A summary of artifacts recovered during the BFSa 2010 investigation of SDI-12,209 is provided in Table 3.5–3. Test information collected by EDAW in 2008 was also reviewed and included as necessary to augment the data set recovered by BFSa. The field investigations at Site SDI-12,209 were conducted using the standard methodologies described in Section 4.0 of the archaeological technical report (Appendix E).

Table 3.5–3
Summary of Cultural Material Recovered from SDI-12,209 during the BFSa 2010 Study

Cultural Material	Surface	STPs	Unit 1	Unit 2	Unit 3	Total
Angular Hammer	0	0	0	1	1	2
Angular Hammer Flake	1	0	0	0	0	1
Biface	9	0	0	1	2	12
Core	2	0	0	1	1	4
Crystal	1	0	0	0	0	1
Debitage	619	283	185	762	837	2,686
Drill	1	0	0	0	0	1
Flake Tool	2	0	0	1	0	3
Ground Stone	1	0	0	0	0	1
Mano	3	0	0	0	0	3
Projectile Point	1	0	0	2	2	5
Steep-Edged Unifacial Tool	0	0	0	2	0	2
Utilized Flake	0	0	0	1	0	1
Ceramic	19	3	0	19	1	42
Fire-Affected Rock	1	0	0	0	1	2
Historic Ceramic	0	1	0	0	0	1
Total	660	287	185	790	845	2,767
Bone*	0	1.25	0.35	43.3	1.5	46.4
Shell*	1.9	0.05	0	0	0	1.95

*Weight in grams

The investigation of the portions of Site SDI-12,209 located within the Project APE identified surface artifacts, 57 bedrock milling features, one subsurface feature, and the presence of an intact subsurface deposit. The bedrock milling features, lithic tools, and pottery present at the site indicate that activities at this location were focused on floral resource processing and arrow point manufacture and maintenance. Subsistence at the site appears to have been based on an intense reliance on botanical and faunal resources for a larger populous. In addition, the lithic artifacts recovered from the test units and several of the shovel test pits suggest the potential for buried features. A late prehistoric occupation of the site is suggested by the presence of pottery, arrow points, and pictographs. Excavations by EDAW (Bowden-Renna and Apple 2009) also identified the presence of human remains.

The present study indicates that approximately 6,157 square meters of SDI-12,209 Locus 1 and 3,751 square meters of Locus 2 will be impacted by the present development. Because the testing and evaluation program identified an intact subsurface deposit, the site is considered to have additional research potential.

3.5.2 Significance Criteria

The evaluation criteria utilized for the Project from CEQA Section 15064.5 are summarized below:

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 SS5024.1, Title 14 CCR, Section 4850 et seq.).
2. A resource included in the local register of historical resources, as defined in section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the PRC, shall 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 an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the

resource meets the criteria for listing on the California Register of Historical Resources (PRC SS5024.1, Title 14 CCR, Section 4852) including the following:

- a. Is associated with the 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. Yields, 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 section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(i) or 5024.1.

The effects of a project on cultural resources are considered significant if the project would violate any of the City of Escondido significance criteria. The proposed Project would result in a significant cultural resources impact if it would do the following:

1. Cause a substantial adverse change in the significance of an historic resource as defined in Section 15064.5;
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
3. Disturb any human remains, including those interred outside of formal cemeteries.

For most archaeological resources, Criterion (C) of CEQA involves evaluation of a given site's ability to address important research questions. For sites with built or historic components, this can involve assessment under one or more of the above-mentioned criteria.

In addition, CEQA also states that impacts to a local community, ethnic, or social group must also be considered. If a resource is determined to be not important under these criteria, it is assumed that the resource cannot be significantly impacted, and therefore mitigation measures

are not warranted. However, any resources found to be important according to these criteria must be assessed for project-related actions that could directly or indirectly impact such resources. Impacts that adversely affect important resources are considered significant impacts for which mitigation measures are warranted.

The criteria listed below for significant cultural resource impacts are based on the City's Cultural Policy, County Guidelines, and CEQA Appendix G Guidelines. The criteria apply to both Project-level and cumulative effects on cultural resources. Impacts to cultural resources would be significant if the following occurred:

1. The Project, as designed, disturbs any human remains, including those interred outside of formal cemeteries;
2. The Project, as designed, causes a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines, County Resource Protection Ordinance, and City of Escondido Cultural Policies F1.1 and F1.5; or
3. The Project, as designed, causes a substantial adverse change in the significance of an historical resource as defined in Section 15064.5 of the CEQA Guidelines, City of Escondido Cultural Policies F1.1 and F1.5, and County of San Diego cultural resources guidelines.

Criteria Sources

Criterion (1) is included because of the potential for ceremonial/habitation activity (and resultant burials) based on the identification of human remains in the AECOM test results (Bowden-Renna and Apple 2009), the presence of pictographs in the prehistoric site boundary, and CEQA Guidelines Section 15064.5(d) and the Native American Graves Protection and Repatriation Act (Publication 101-601). Criterion (2) is chosen because Sections 21083.2 and 15064.5 of CEQA require evaluation of whether a proposed action would have a significant effect on unique archaeological resources. Criterion (3) is chosen because of Section 15064.5 of CEQA, the City's Cultural Policy (F1.1 and F1.5), and the County's Guidelines (County of San Diego 2007b) require evaluation of whether a proposed action would have a significant effect on unique historical resources (sites and structures). Any project that would have an adverse (direct or indirect) impact on significant cultural resources would be considered a significant impact, pursuant to the cited sections. For the resources that fall within City jurisdiction, the prevailing guidelines are the City's Cultural Policies F1.1 and F1.5, which state that historic and cultural

resources will be considered through the environmental review process based on assessment in compliance with appropriate ordinances and regulations.

Significance Evaluation Summary

The Project will extend and improve Citracado Parkway from West Valley Parkway to Andreasen Drive. The cultural resources study for this Project included evaluation of two archaeological sites designated as SDI-8280 and SDI-12,209. In accordance with CEQA, Section 15064.5 criteria, the sites were evaluated for significance and the effects of the proposed Project on the sites. Both sites can be considered as components of a larger village complex surrounding Escondido Creek. Site SDI-8280 is located in the south portion of the Project area and Site SDI-12,209 is located in the north-central (Locus 1) to north (Locus 2) portion of the Project area. The prehistoric sites are interpreted as Late Prehistoric period occupation sites. Each of the sites has associated pictograph features.

The analysis of the archaeological information recovered during the testing programs at the two sites indicates that both sites have significant subsurface deposits, large quantities of bedrock milling, and associated pictograph loci; and, therefore, have the potential to further answer questions related to the understanding of prehistory and history for the region, state, and/or nation (CEQA: Criterion 3).

3.5.3 Impact Analysis

The proposed Project represents a source of direct and indirect impacts to cultural resources. The discussion of the potential impacts is provided below and summarized in Table 3.5–4. Measures to address these potential impacts are presented in Section 3.5.4.

**Table 3.5–4
Summary of Site Significance Evaluation and Potential Impacts**

Site	Significant within the Project APE	Potential Impacts		Mitigation
		Direct Impacts	Indirect Impacts	
SDI-8280				
Locus 1	No	Yes – Not Significant	Potential	Preservation
Locus 2	No	Yes – Not Significant	No	None
Locus 3	No	Yes – Not Significant	No	None
Locus 4	No	Yes – Not Significant	No	None
SDI-12,209				
Locus 1	Yes	Yes – Significant	Potential	Data Recovery
Locus 2	Yes	Yes – Significant	No	Data Recovery

SDI-8280 Impact Analysis

Direct impacts from the planned Citracado Parkway Extension Project will affect 11,915 square meters of SDI-8280. Approximately 1,686 square meters of SDI-8280 Locus 1, 438 square meters of Locus 2, 1,458 square meters of Locus 3, and 980 square meters of Locus 4 will be impacted by the construction of the Citracado Parkway Extension. However, of this total direct impact area of 11,915 square meters, the testing program did not identify any significant cultural features or deposits. None of the areas identified as containing significant deposits or pictographs will be directly affected by the project. Direct impacts to the 11,915 square meters of SDI-8280 that have been identified as not significant under CEQA criteria will represent nonsignificant impacts. Based on data from various studies of SDI-8280, particularly the 2006 BFSA study for the Harmony Grove Village Project (Gilbert et al. 2006), the site as a whole is considered to be significant under CEQA criteria. Given the presence of clearly definable rock art and the overall data potential for the site, it is eligible under CEQA Criterion (1) and Criterion (3). Not all areas within the site share the cultural elements that contribute to the significance evaluation of the overall site. From the perspective of addressing impacts, the area to be impacted by the project is evaluated as not contributing to the significance of the site. Site SDI-8280 is located within the boundary of the City of Escondido, and based upon the City's implementation of CEQA and the City's environmental guidelines, the site as a whole is important under City and CEQA criteria. However, the portions of Loci 1, 2, 3, and 4 that will be impacted do not contain important deposits, and the impacts will not be significant (Table 3.5–4). Based upon the conclusion that significant elements of SDI-8280 will not be directly affected by the project, measures to mitigate direct impacts will not be required.

SDI-12,209 Impact Analysis

Site SDI-12,209 is the more complex of the two cultural resources within the Project APE. The survey and testing program conducted at SDI-12,209 identified significant cultural deposits and features within both of the loci identified at the site. In addition, human remains were also recovered from the site. Therefore, based on the testing data, the site (notably portions of Loci 1 and 2) is considered to be significant under CEQA criteria. Given the presence of clearly definable rock art and the overall data potential for the site, it is significant under CEQA Criterion 3. The subsurface excavations conducted at Loci 1 and 2 within the APE identified areas containing deposits up to 90 centimeters in depth, with a range of artifacts signifying an occupation during the Late Prehistoric period by Luiseño and possibly Kumeyaay Native Americans. The site contains a single pictograph just outside of the APE, which may be subject to indirect impacts.

The investigation of the portions of Site SDI-12,209 located within the Project APE identified surface artifacts, 57 bedrock milling features, one subsurface feature, and the presence of an intact subsurface deposit. The bedrock milling features, lithic tools, and pottery present at the site indicate that activities at this location were focused on floral resource processing and arrow point manufacture and maintenance. Subsistence at the site appears to have been based on an intense reliance on botanical and faunal resources for a larger populous. In addition, the lithic artifacts recovered from the test units and several of the shovel test pits suggest the potential for buried features. A late prehistoric occupation of the site is suggested by the presence of pottery, arrow points, and pictographs. Excavations by AECOM (Bowden-Renna and Apple 2009) also identified the presence of human remains.

Impacts associated with the extension of Citracado Parkway include direct impacts to approximately 20,554 square meters of SDI-12,209. The testing program at SDI-12,209 defined areas of significant research potential, as well as areas that do not retain any significant features or deposits. Areas that will be directly impacted, and that have been identified as significant, include 6,157 square meters of SDI-12,209 Locus 1 and 3,751 square meters of Locus 2. Based on the proposed alignment, significant portions of SDI-12,209 Locus 1 and Locus 2 will be directly impacted including multiple bedrock milling features, core site areas, and potentially human remains. The pictograph at Locus 1 is located outside of the direct impact area of the road alignment; however, indirect impacts from large earth-moving equipment, blasting, chemicals, increased traffic, and dust should be considered. Because impacts to the site will be significant, measures to mitigate impacts will be required.

Human Remains Encountered within the Construction Zone (CR-1)

Evidence of human remains was discovered during the testing at Site SDI-12,209 Locus 1 by EDAW in 2008 within the Project's APE. No other remains were identified by BFSa during subsequent subsurface excavations conducted in the Project APE. As noted previously, there is also the indication that the Project area was used by Native Americans for religious, ritual, or other special activities based upon the recordation of pictographs adjacent to the Project's APE. Therefore, impacts to Native American burials and sacred site elements are expected. These impacts are considered significant (CR-1).

Disposition of Human Remains (CR-2)

Should human remains or sacred/religious artifacts be encountered and subsequently removed from the construction zone, the disposition of these remains after removal from the construction

area represents a significant impact to Native American religious beliefs and customs (CR-2). Consultation with Native American representatives since 2008 has provided a platform to address the issue and propose mitigation measures to address this impact.

Indirect Impacts to Significant Cultural Deposits and Rock Art Elements at SDI-8280 and SDI-12,209 (CR-3)

The construction project represents a source of potential indirect impacts to the significant prehistoric pictographs at Locus 1 of SDI-8280 and at SDI-12,209. Blasting, grading, dust, flying debris, and general construction activity are considered sources of potential indirect impacts to the rock art panels at these sites. The pictographs at SDI-8280 are the most likely to be indirectly affected by grading because these are approximately 8 feet from the construction zone. Furthermore, significant features and deposits of both SDI-8280 and SDI-12,209 border the APE and may be indirectly impacted by inadvertent grading or construction. Indirect impacts would be significant if construction activities stray beyond the APE (CR-3)

Direct Impacts to Significant Elements of SDI-12,209 (CR-4)

The present study indicates that approximately 6,157 square meters of SDI-12,209 Locus 1 and 3,751 square meters of Locus 2 will be impacted by the proposed Project. Because the testing and evaluation program identified an intact subsurface deposit, the site is considered to have additional research potential. Therefore, Site SDI-12,209 is considered an important cultural resource according to the criteria listed in CEQA, Section 15064.5, and any impacts to the cultural resource will be considered significant (CR-4).

Potential Impacts to Undocumented Cultural Deposits during Grading (CR-5)

The alignment for Citracado Parkway will pass through two significant prehistoric sites and across an area used extensively by prehistoric inhabitants of this village complex. The potential exists that undocumented cultural deposits may be encountered during grading of the Project. Impacts to undocumented elements of SDI-8280 or SDI-12,209 may be significant (CR-5).

3.5.4 Mitigation Measures

The following mitigation measures are recommended to reduce the significant potential impacts to prehistoric sites within the Project area. Because the resources to be affected represent important sites to local Native American tribes, tribal representatives will be included in the

mitigation program. As a matter of record, the two points of contact for Native American tribes associated with this project will be the Kumeyaay Cultural Repatriation Committee (KCRC) for the Kumeyaay and Carmen Mojado (Luiseño) for the San Luis Rey Band. The KCRC and Carmen Mojado have previously been designated as Most Likely Descendent (MLD[s]) for this project and should continue in this role and as representatives of the two Native American tribes that claim the project area as part of their traditional cultural territory. Throughout the mitigation monitoring program, the MLDs may designate other Native American tribal members to represent tribal interests. For the purposes of this mitigation discussion, the term “MLD” will be used to define the tribal representatives charged with the responsibility of determining the treatment of human remains and facilitating the monitoring of the archaeological data recovery program and grading.

MM-CR-1: Human Remains Encountered within the Construction Zone

MM-CR-1.1: In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following procedures shall be followed:

- A. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - a. A City Official is contacted.
 - b. The Coroner is contacted to determine that no investigation of the cause of death is required, and
 - c. If the Coroner determines the remains are Native American:
 - i. The Coroner shall contact the Native American Heritage Commission (Commission) within 24 hours.
 - ii. The Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. Previous discoveries of human remains on this project resulted in the NAHC identifying two MLDs, the KCRC for the Kumeyaay and Carmen Mojado for the San Luis Rey (Luiseño). It is reasonable to assume that the MLDs will continue in that role for the duration of the project.
 - iii. The Most Likely Descendent (MLD) may make recommendations to the landowner or the City for the excavation work.

- B. The Native American human remains and associated funerary items that are removed from the Project APE may be reburied at a location mutually agreed upon by the City and the MLD(s). If reinterment of human remains cannot be accomplished at the time of discovery, the MLD(s) shall either take temporary possession of the remains or identify a location for the temporary but secure storage of the remains.
- C. Any time human remains are encountered or suspected and soil conditions are appropriate for the technique, the use of canine forensics will be considered when searching for human remains. The decision to use canine forensics will be made on a case-by-case basis through consultation between the City representative, the Consulting Archaeologist (defined as the individual charged with the responsibility of implementing the Mitigation Monitoring and Reporting Program and directing field excavations), and the MLD(s). Because human remains require special consideration and handling, they must be defined in a broad sense. For the purposes of this document, human remains are defined as:
 - a. Cremations including the soil surrounding the deposit,
 - b. Interments including the soil surrounding the deposit, or
 - c. Associated funerary items.

MM-CR-1.2: In consultation with the City representative, the Consulting Archaeologist, and the MLD, additional measures, such as focused archaeological excavations, may be required to determine the extent of burials or ensure the recovery of all elements of the burial.

MM-CR-2: Disposition of Human Remains

The majority of Locus 1 of SDI-8280 is situated outside of the Project's APE and is located on property owned by the City of Escondido. To ensure the preservation of the significant pictographs recorded at SDI-8280 and located adjacent to the APE (and within the City's ownership), the City shall delineate an area for preservation that encompasses the pictographs. Furthermore, because of the high potential to recover additional human remains or sensitive artifacts associated with sacred, religious, or ceremonial components of the material cultural of the prehistoric occupants of these sites, the City shall also identify this preservation area within Locus 1 of SDI-8280 as a location for the repatriation and reburial of such sacred, religious, or ceremonial artifacts or human remains identified by the MLD(s) as appropriate for reburial.

The preservation area within Locus 1 of SDI-8280 shall be either dedicated as an open space easement to ensure the perpetual protection of the pictographs and any reburied cultural materials; or, the preservation area may be legally separated from the City's property and ownership conveyed to the Kumeyaay Land Conservancy to provide the local Native American community direct control of the preservation area for perpetual access to the human remains reburied there and to facilitate their guardianship over this location. From the perspective of CEQA and the mitigation of impacts to cultural resources, either method of preservation would be sufficient to accomplish the goal of the mitigation program. The proposed preservation area within Locus 1 of SDI-8280 is depicted in the BFSAs technical report.

MM-CR-3: Indirect Impacts to Significant Cultural Deposits and Rock Art Elements at SDI-8280 and SDI-12,209

MM-CR-3.1: Indirect impacts to elements of SDI-8280 and SDI-12,209 that are adjacent to the construction APE shall be mitigated through fencing that will be used to isolate the work area. Notes shall be placed on the construction plans and notices posted on the job site stating that areas outside of the APE contain significant archaeological resources. No construction activity shall be permitted outside of the APE unless that area has been reviewed for potential impacts to cultural deposits.

MM-CR-3.2: Concerns over the pictograph at SDI-12,209, which is situated east of the alignment, have been raised by the Native American community. The boulder with the pictograph could be affected by vibrations from blasting or heavy equipment. Measures would be required to ensure indirect impacts do not cause any damage to this feature. Measures to protect the feature may include wrapping the rock with layers of fabric to protect the pictograph image. Engineering assistance will be necessary to calculate the need for any structural shoring of the rock to prevent movement. This pictograph is located on private property, and measures to mitigate potential indirect impacts may require the consent of the property owner. The status of access to the boulder at the time of construction to provide mitigation of indirect impacts is not known at this time. If access is denied, measures to protect the pictograph rock will be limited to fencing along the limits of construction.

MM-CR-3.3: The pictographs located in Locus 1 of SDI-8280 are situated near the APE and may be affected by the grading of the new road. The southernmost of the pictographs is immediately adjacent to the road cut, and will be very near the construction activity, which represents a source of potential indirect impacts. To ensure the preservation of the pictograph, measures will be needed to secure the boulder from dust and debris, vibrations, and any damage to the surface of

the boulder. The following measures shall be completed prior to the initiation of grading within 500 feet of the pictographs at Locus 1 of SDI-8280:

- A. The project engineer/design consultant shall devise a method to secure the slope between the southern pictograph boulder and the proposed retaining wall immediately adjacent to the pictographs.
- B. The drilling of tie rods needed to secure the retaining wall adjacent and downslope from the southern pictograph shall not cause any degradation to the soil below the pictograph that might over time affect the stability of the feature.
- C. Dust and debris from the grading of the road will affect and potentially damage the painted surface of the pictographs. Measures shall be implemented to ensure the surfaces of the boulders are protected. These measures shall include the wrapping of the boulder first in a cloth to cover the boulder surface. A framework of either PVC poles or lumber shall be constructed with no less than 1 foot of separation from the boulder surface. This framework will be covered with plastic or plywood sheeting that will stop dust and any flying debris from contact with the boulder. The “shrouding” of the pictographs is intended to keep all dust and debris from contact with the boulders. Additional measures may be required if the Consulting Archaeologist charged with implementation of the mitigation program, in consultation with the MLDs, determine that these measures noted above are not adequate to satisfy the intention of this mitigation measure.
- D. Following the completion of the road project, all protective materials shall be removed from the pictographs and the area returned to its natural setting.

MM-CR-4: Direct Impacts to Significant Elements of SDI-12,209

For direct impacts to significant components of Site SDI-12,209 (Loci 1 and 2), mitigation of those impacts would be achieved through the implementation of a data recovery program. As a condition of approval for this project, and prior to the initiation of any clearing, grading, or construction associated with the road project within the boundaries of the cultural sites, the City shall direct the archaeological consultant to prepare a detailed research design to orientate the research perspective, stipulate the archaeological goals, address Native American concerns, and direct the excavation process. The implementation of the research design constitutes mitigation for the proposed destruction of the significant portions of archaeological Site SDI-12,209 (Loci 1 and 2) within the alignment. The mitigation of impacts shall be achieved by the excavation and analysis of a sufficient sample of the significant deposits affected to exhaust the research

potential of those areas. Based on the archaeological research records for this region, and following widely applied guideline requirements from agencies in this area, mitigation of impacts through applied data recovery programs will typically target a 10 to 15 percent sample as a statistically valid recovery level for significant deposits. However, the overriding measure of the adequacy of a sample of a significant deposit is the exhaustion of research potential and achievement of a redundant artifact recovery pattern. To facilitate the periodic review of the excavation collection and assessment of the status of the information accumulated, the data recovery program will utilize a statistical sampling process that will require the evaluation of the excavation at 5 percent sample increments, or phases. At the conclusion of each phase of sampling (potentially Phases 1, 2, 3), the Consulting Archaeologist shall determine if the subsequent phase of sampling is required, using criteria listed in the research design, and potentially stratifying the subsequent sample phase to focus excavations in areas with higher research potential. The Consulting Archaeologist responsible for the mitigation program will have the latitude to adjust the stratified sampling process to maximize efforts in any particular areas that possess identified higher research potential. The sampling protocol is highlighted below but will be presented in greater detail in the research design.

- A. The basic unit of the data recovery field program will be standard 1-meter-square test units. Each unit will be excavated using common archaeological protocols for fieldwork, including the excavation of each unit in decimeter levels to a depth that exceeds the lowest depth of the cultural deposit. All excavations will be completed using hand tools and work will be approached in a careful, professional manner. All of the soil excavated from the units will be subjected to hydro-screening on-site. The use of water to separate dirt from the archaeological collections will ensure that any human remains are immediately revealed and will also enhance the recovery of cultural materials that may be too small to otherwise be identified. All soils will be hydro-screened through one-eighth-inch mesh hardware cloth, with at least 10 percent of the excavated sample to be screened with one-tenth-inch mesh hardware cloth to search for those elements of the deposit that otherwise would pass through the one-eighth-inch mesh. All recovered cultural materials will be bagged by provenience, labeled, and transported to a secure location for laboratory analysis.
- B. All excavations (both archaeological and construction-related) will include monitoring by Luiseño and Kumeyaay MLDs (or their designated representatives).
- C. Detailed field maps will be completed using Global Positioning System technology with submeter accuracy to record all excavations and features encountered.

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- D. Phase I of the fieldwork program will include a 5 percent hand-excavated sample of each identified subsurface deposit that will be directly impacted.
 - E. At the completion of Phase I, the Consulting Archaeologist shall evaluate the results and consider issues of site integrity, data redundancy, spatial and temporal patterning, features, and other relevant topics in order to assess the adequacy of the initial five percent sample. Based on this assessment, the site will be stratified to delineate areas with further research potential or the potential to produce features. A second phase of field investigations would consist of an additional 5 percent sample of that stratified area with further research potential. Adjustments in the sample size shall be an option of the Consulting Archaeologist should the assessment of the sources of the Phase I sample indicate the Phase II sample should be less than 5 percent.
 - F. Implement Phase II of fieldwork, as necessary. Upon completion of the second phase of sampling, the Consulting Archaeologist will evaluate the success of the Phase II and consider the need for further sampling. Should this analysis confirm research potential remains, a third phase (Phase III) will be employed. Typically, as a product of site organization and use pattern during the Late Prehistoric period, the sampling process will identify a core area of more intense artifact concentration and variety of artifact types. The final phase (Phase III) of the stratified sample would commonly employ a large block excavation to focus Phase III efforts only upon the core deposit.
 - G. Implement Phase III of sampling if determined to be necessary.
 - H. Conduct an intensive laboratory program for all recovered cultural materials. All items in the collection will be subjected to standard laboratory procedures of cleaning, cataloging, data entry, and artifact analysis including lithics analysis, ceramics analysis, faunal analysis, floral analysis, assemblage analysis, and radiocarbon dating.
 - I. Provide evidence to the satisfaction of the City that all archaeological materials recovered, during both the significance testing and data recovery phases, have been curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation. Agreements with the Native American representatives regarding elements of the archaeological excavation recovery will supersede curation requirements if these artifacts are requested by the tribes for repatriation, relocation, and/or reburial.
 - J. Complete and submit the Final Technical Report to the satisfaction of the City.

MM-CR-5: Potential Impacts to Undocumented Cultural Deposits during Grading

The construction of the Citracado Parkway Extension would require the implementation of a MMRP. The basis for this requirement is that the construction APE will include known significant cultural resources and areas where potentially important cultural deposits could be discovered. To identify any significant and previously undocumented elements of SDI-8280 and SDI-12,209, the MMRP will require the presence of an archaeological monitor, as well as Luiseño and Kumeyaay Native American monitors, during all grading and trenching associated with the project. The MMRP shall state the following:

MM-CR-5.1: During the cutting of previously undisturbed deposits, archaeological and Native American monitors shall be on-site full time to perform inspections of the excavations. The number of monitors will depend on the rate of excavation, the number of areas being graded at any one time, the materials excavated, and the presence and abundance of artifacts and features. The Consulting Archaeologist shall provide the City with a rationale for the number of monitors needed to comply with the mitigation measure.

MM-CR-5.2: Isolates and clearly nonsignificant deposits will be minimally documented in the field and the monitored grading can proceed.

MM-CR-5.3: In the event that previously unidentified and potentially significant cultural resources are discovered, the Consulting Archaeologist shall have the authority to divert or temporarily halt ground disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The Consulting Archaeologist shall contact the City representative at the time of discovery. The Consulting Archaeologist, in consultation with City staff, shall determine the significance of the discovered resources. For any significant cultural resources discovered during monitoring of grading, further mitigation measures (data recovery) will be necessary to complete the impact mitigation. A detailed description of additional mitigation measures will be prepared by the Consulting Archaeologist and approved by the City, prior to implementation. If any human remains are discovered, the County Coroner shall be contacted (see MM-CR-2). In the event that the remains are determined to be of Native American origin, the MLDs shall be contacted to determine proper treatment and disposition of the remains.

MM-CR-5.4: All cultural material collected during the grading monitoring program shall be processed and curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate curation facility within

San Diego County, to be accompanied by payment of the fees necessary for permanent curation. Agreements with the MLDs regarding elements of the archaeological excavation recovery will supersede curation requirements if these artifacts are requested by the MLDs for repatriation, relocation, and/or reburial.

MM-CR-5.5: A section of the final data recovery report for the Citracado Extension Project shall include a description of the mitigation monitoring program and a report of all findings made during the monitoring process.

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3.6 GEOLOGY AND SOILS

This section includes a description of the existing geologic and soil conditions at the Project area. Following this discussion, an analysis of the potential geologic hazards associated with development of the Project area is provided. The information in this section is based on the Preliminary Foundation Reports prepared for the Project (Earth Mechanics, Inc. 2007).

3.6.1 Existing Conditions

Through the Project area, Citracado Parkway trends in a north-south direction on the western side of Escondido and is currently undeveloped for approximately 0.6 mile between Andreasen Drive and Avenida Del Diablo. North of the Project area, Citracado Parkway extends from Vineyard Avenue to Andreasen Drive through the ERTC. The existing segment of Citracado Parkway between West Valley Parkway and Avenida Del Diablo is developed with residential uses to the west and east.

Seismicity

The Project area is located in seismically active Southern California but has a relatively low level of historical earthquake activity. No active or potentially active faults (i.e., Earthquake Fault Zones) are known to traverse the site or exist in the vicinity. Holocene (movement within the past 11,000 years) seismic activity within the region is limited to the Whittier-Elsinore fault zone to the northeast (approximately 18 miles away) and the Newport-Inglewood/Rose Canyon fault zone to the southwest (approximately 13 miles away). The largest historical earthquake on record on the Elsinore fault is a magnitude 6.0 event in 1910. According to the California Department of Conservation, no historic rupture has occurred on the Rose Canyon fault; however, data suggest that there have been a minimum of three surface fault-rupture events in the last approximately 8,100 years. The last large earthquake is estimated to have occurred between 225 and 500 years ago (County of San Diego 2009c).

Geology and Soils

The Project area lies on the northeastern boundary of the San Diego Embayment just west of the transition between the Peninsular Range and Coastal Plain regions. The City of Escondido lies in a small valley within the foothills of the Peninsular Range region with terrain characterized by rocky, moderately hilly topography. Mountains near the Project area to the south and west rise up to 1,000 feet above the valley floor.

Escondido Creek begins at the upper headwater in Bear Valley above Lake Wohlford and flows more than 26 miles to meet the Pacific Ocean at San Elijo Lagoon in the City of Solana Beach. Escondido Creek is conveyed through Escondido in a concrete-lined channel that terminates a few hundred feet south of Harmony Grove Road, located approximately 0.5 mile east (upstream) of the Project area. At the proposed bridge site, the creek is a shallow unlined channel with a 100-year floodway width of approximately 400 feet. Previous borings and trenches investigated for the preliminary development of the ERTC, in August 2003, indicate that near the intersection of Citracado Parkway and Andreasen Drive the alluvium is less than 8 feet deep underlain by weathered Green Valley tonolite (granitic rock). The farthest southerly air track borings indicate that the granitic rock becomes marginally rippable to nonrippable at about 10 to 15 feet below natural grade. Based on the soils information from these nearby investigations, the site is anticipated to be underlain by a thin layer of colluviums and sandy alluvium overlying granitic bedrock. The colluvial soils are predominately damp to dry silty to clayey sand. The alluvial soils are predominantly sandy soils transported and deposited along the natural streambed of Escondido Creek. The bedrock beneath the site is anticipated to be relatively shallow, at depths of 15 feet or less below the natural ground surface, and consist of weathered granitic rock.

San Diego County is located along the Pacific Rim, an area characterized by island arcs with subduction zones³ forming mountain ranges and deep oceanic trenches, active volcanoes, and earthquakes. The Project area consists primarily of igneous and metamorphic basement rocks of the Santiago Peak Volcanics. Igneous rocks (from the Greek word for fire) form when hot, molten rock (magma) crystallizes and solidifies. Igneous rocks are divided into two groups, intrusive (plutonic) and extrusive (volcanic), depending upon where the molten rock solidifies. Metamorphic rocks started out as some other type of rock but have been substantially changed from their original igneous, sedimentary, or earlier metamorphic form (USGS 2010). The Santiago Peak Volcanics consist of a structurally complex, mildly metamorphosed unit composed of volcanic and volcanoclastic rocks of the Southern California batholiths, which is large emplacement of igneous intrusive rock. Cretaceous rocks of the Southern California batholiths throughout the Project area consist mostly of medium- to coarse-grained leucocratic (light-colored) granodiorite (intrusive igneous rock) and tonalite.

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of

³ The U.S. Geological Survey defines a subduction zone as any area where one lithospheric plate sinks under another. This occurs when plates move toward each other, or converge (County of San Diego 2009c).

major geological features.” Topographic and geologic features (including soil erosion and seismic hazards) are also addressed under CEQA.

In addition, standard engineering practices are important to the overall safety and stability of a project. In accordance with City requirements, prior to issuance of a grading permit, a site-specific field investigation shall be completed and a final geotechnical report that addresses site-specific geotechnical considerations shall be submitted to the City Engineer for approval. Project construction and maintenance shall comply with the recommendations of the final report and any modifications proposed by the City Engineer.

3.6.2 Significance Criteria

The effects of a project on geology and soils are considered significant if the project would violate any of the City of Escondido significance criteria. The proposed Project would result in a significant geology and soils impact if it would do the following:

1. Expose people or structures to major geologic hazards such as earthquake damage (rupture, ground shaking, ground failure, and landslides), slope and/or foundation instability, erosion, soil instability, or other problems of a geologic nature.

3.6.3 Impact Analysis

Seismicity

The Project area has a relatively low level of historical earthquake activity, and no active or potentially active faults (i.e., Earthquake Fault Zones) are known to traverse the site or exist in the vicinity. Accordingly, fault rupture is not likely at this point. Therefore, there would be no impact from exposure of people or structures to adverse effects from a known earthquake hazard zone.

In the event of a major earthquake on the Whittier-Elsinore fault, the Newport-Inglewood/Rose Canyon fault, or other faults within the Southern California region, the Project area could be subjected to moderate to severe ground shaking. However, the site is not considered to possess a significantly greater seismic risk than the surrounding area in general. In addition, the Project area does not fall in a “Near-Source Shaking Zone” as depicted in the County’s *Guidelines for Determining Significance for Geologic Hazards* (County of San Diego 2007c). Therefore, a less-than-significant impact would occur from seismic ground shaking.

The Project area is not located within a “Potential Liquefaction Area” as depicted in the *Guidelines for Determining Significance for Geologic Hazards* (County of San Diego 2007c). However, Escondido Creek is a natural, unlined channel at the proposed bridge site with groundwater anticipated to be encountered less than 10 feet below natural grade in the loose to compact alluvial soils. Due to the unconsolidated nature of the alluvial deposits and shallow groundwater table, it is anticipated that the liquefaction potential of the near-surface deposits above the bedrock is high. This is considered a potentially significant impact. The granitic bedrock that underlies the shallow alluvial deposits is not susceptible to liquefaction.

Seismically induced settlement results from liquefied soils reconsolidating following excess pore pressure dissipation, which occurs after earthquakes shaking ceases. The extent of ground surface settlement depends on several factors such as characteristics of the soil, level and duration of shaking, and extent of the liquefaction zone. Due to the anticipated shallow depth of the alluvial soils located above the bedrock that will be susceptible to liquefaction, seismically induced settlement is anticipated to be less than a few inches. Additional investigation would be required to evaluate this issue. However, the proposed bridge and roadway bed would be designed per the California Seismic Standards and the impact would be less than significant.

The recommendations to ensure the stability of the bridge are provided in *Preliminary Foundation Report Citracado Parkway Bridge* (Earth Mechanics, Inc. 2007) in Appendix F of this EIR. However, these recommendations are preliminary and may change as the details of the Project design are finalized.

Impacts of the Project-related impact to stability of the bridge, ground, or slope would be less than significant, as the Project would be designed and constructed in accordance with engineering measures that address the specific site conditions. The Project would adhere to local and state building codes, to be verified by city building inspector(s) and engineer(s). This would reduce the hazardous conditions of seismic-related events to a level less than significant.

The proposed bridge would span Escondido Creek, which conveys storm runoff from the Escondido Creek watershed. Preliminary scour analysis indicates that the near surface alluvial deposits would be susceptible to scour down to the top of the bedrock during the 100-year event. The amount of runoff from the site would be expected to increase due to additional impervious surfaces associated with development of the proposed Project. As this is a roadway widening and a roadway extension Project, the ability to reduce the impervious footprint is minimal. However, the scouring would be considered a less-than significant impact with incorporation of BMPs. Landscaped slopes and medians and bioswales (as outlined in Section 3.7, Hydrology/Water

Quality, of this Draft EIR) are proposed for this Project. The proposed Project would also be designed to treat the additional runoff generated by the Project in compliance with the Municipal Stormwater Permit and *Standard Urban Storm Water Mitigation Plan Manual* (County of San Diego 2008). The bridge would be designed per the recommendations outlined in the hydraulic and scour studies (Chang Consultants 2008) and per City and Caltrans standards, to accommodate both 50- and 100-year storm flows.

In locations where liquefaction of the sandy soils at the bridge site is expected to occur, it is in the native material below embankment slopes of the proposed structure. Embankment fills for bridge approaches placed above the groundwater table are not expected to suffer significant loss of strength during design earthquakes. Although some limited lateral deformations may be experienced, the slopes are expected to be stable during design earthquakes. The impact would be less than significant.

The Project area is not located within a “County Landslide Susceptibility Area” as depicted in *Guidelines for Determining Significance for Geologic Hazards* (County of San Diego 2007c). There would be no impact from landslides.

Geology and Soils

Extending Citracado Parkway would require a new roadway bed through varying terrain. Substantial landform alteration, including excavating, grading, and placing fill material, would precede roadway paving and landscaping. These activities could cause soil erosion from exposed soil at an accelerated rate during storm events, if not properly controlled. The amount and rate of erosion would vary depending on a number of factors, including the time of year of construction, the amount and intensity of rainfall, and the amount of natural and/or artificial fill. Therefore, implementation of the proposed Project could result in significant adverse impacts related to erosion and loss of soils. Recommendations for grading/earthwork and other pertinent geotechnical design considerations would be formulated consistent with the recommendations of the final geotechnical report and would be included in the final grading and building plans for the proposed Project. The Project would minimize potential for erosion and loss of topsoil, and would reduce any potential impact to a level less than significant. In addition, a mandated SWPPP would be prepared for the Project area, which would identify measures to retain topsoil during construction and operation of the Project.

The Project area is currently undeveloped and detailed soil survey and geotechnical investigation data are unavailable for the Project study area. Soil descriptions from the borings indicate the

near-surface soils along the creek bed consist of predominately coarse-grained sandy soils (silty sand, sand with silt, and poorly graded sand) varying in consistency from loose to very firm. The existing groundline along the proposed road alignment is relatively flat; lying near an elevation of 600 feet in the creek and 610 feet near the proposed bridge abutments. Up to 15 feet of fill will be placed at the bridge approaches to raise natural grade to the proposed roadway elevations. While a potential impact related to unstable geologic conditions could exist, standard geotechnical investigations and reporting procedures would ensure a final project design that results in a less-than-significant impact.

The Project area is not located on a “Potential Expansive Soil Area” as defined by *Guidelines for Determining Significance for Geologic Hazards* (County of San Diego 2007c). There would be no impact from expansive soils.

Drainage from the proposed Project would discharge into Escondido Creek, which empties into San Elijo Lagoon before reaching the Pacific Ocean. Sections of the creek within Escondido have been channelized to provide for flood control. As required by the Municipal Stormwater Permit, the proposed Project would implement structural and nonstructural BMPs to treat site runoff. In addition, the proposed Project would be designed to maintain pre-Project runoff peaks and duration, and, as such, would not result in substantial increased erosion or siltation on- or off-site (please refer to Section 3.7, Hydrology/Water Quality, of this Draft EIR).

3.6.4 Mitigation Measures

The proposed Project would not result in a significant impact to geology and soils. Therefore, no mitigation measures are proposed.

3.7 HYDROLOGY/WATER QUALITY

This section describes the existing hydrologic conditions within the Project area, identifies current water resource regulations, and evaluates potential water quality and hydrologic impacts associated with the implementation of the proposed Project.

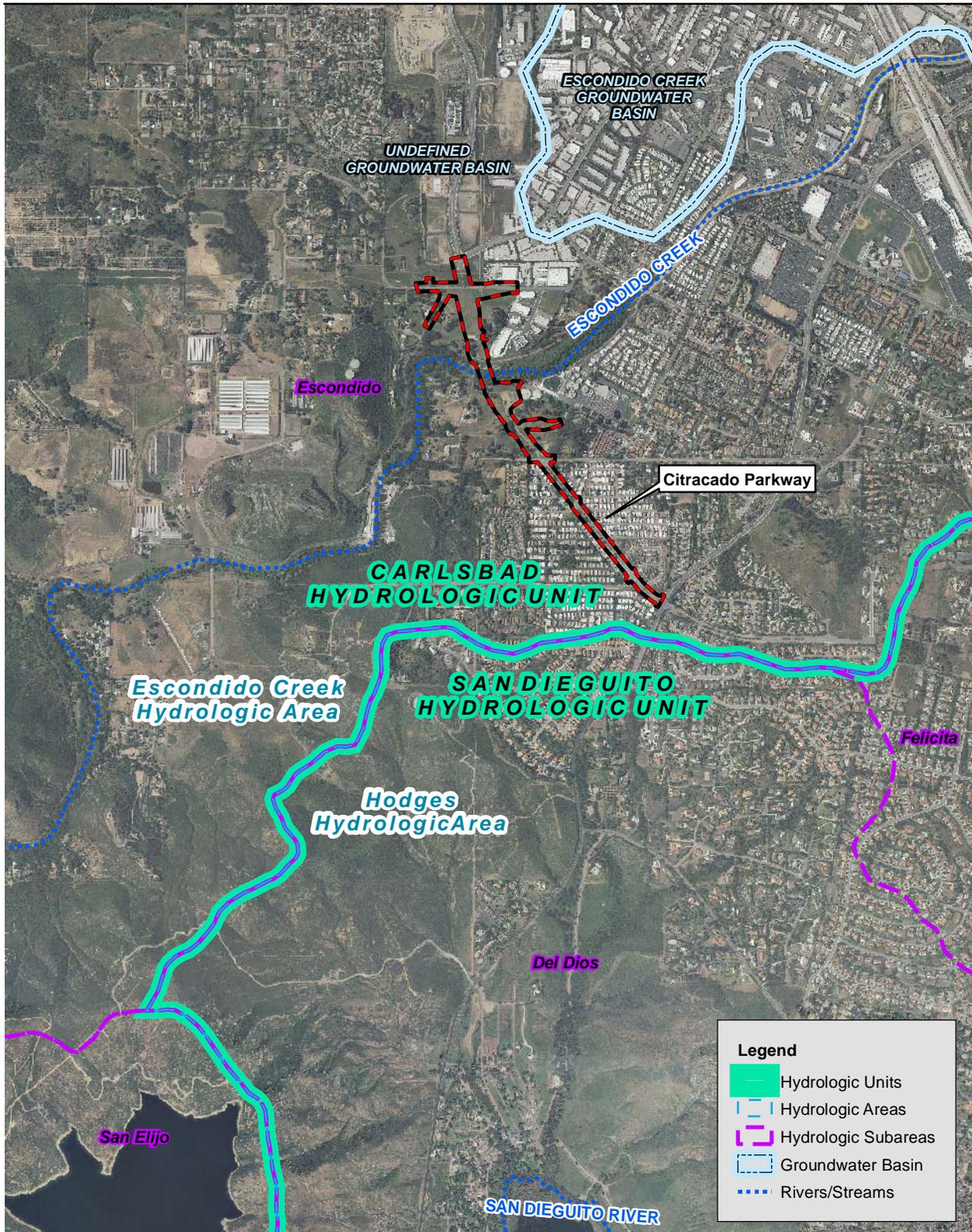
3.7.1 Existing Conditions

Along the new Citracado Parkway extension alignment, topography ranges from an approximate elevation of 710 feet in the southern portion to approximately 660 feet in the northern portion of the proposed Project area. Runoff from the site currently drains toward Escondido Creek, which ultimately discharges into the Pacific Ocean via San Elijo Lagoon. For the existing roadway portion of Citracado Parkway (beginning at the intersection with West Valley Parkway and extending north to the intersection with Avenida Del Diablo), urban and storm water runoff is currently collected into public storm drains that discharge into Escondido Creek through multiple outfalls. For the undeveloped portion of the Project (beginning at the intersection with Avenida Del Diablo and extending north to the intersection with Andreasen Drive), runoff discharges into Escondido Creek via sheet flow.

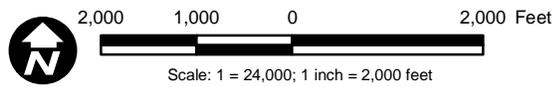
Carlsbad Hydrologic Unit 904.00

The Project area is located within the Escondido Creek Hydrologic Area (HA), which is a part of the Carlsbad Hydrologic Unit (HU) of the San Diego basin. The Carlsbad HU encompasses approximately 210 square miles (Figure 3.7-1). It extends from the headwaters above Lake Wohlford in the east, to the Pacific Ocean to the west, and from the cities of Vista and Oceanside in the north, to Solana Beach and Escondido in the south. There are numerous important surface hydrologic features within the Carlsbad HU, including four ecologically sensitive coastal lagoons, four creeks, and two large water storage reservoirs. The Carlsbad HU is composed of the following six HAs: Loma Alta, Buena Vista Creek, Agua Hedionda, Encinas, San Marcos, and Escondido Creek (RWQCB 1994).

The jurisdictional areas in the Carlsbad HU are the unincorporated San Diego County areas (66 square miles), the cities of Carlsbad (39 square miles) and San Marcos (24 square miles), and an approximately 27-square-mile portion of Escondido. Most of the Carlsbad HU is urbanized at 48%. Residential (29%), commercial/industrial (6%), freeways and roads (12%), agriculture (12%), and vacant/undeveloped (32%) compose the dominant land uses (PCW 2010).



Source: LandisCor 2010; CalHydro 2007; AECOM 2011



**Figure 3.7-1
Watershed**

Escondido Creek Hydrologic Areas 904.61–904.63

For the existing portion of Citracado Parkway, drainage from the new proposed portion will also discharge into Escondido Creek, which empties into San Elijo Lagoon before reaching the Pacific Ocean. Escondido Creek runs from below Lake Wohlford in the east to San Elijo Lagoon to the west, flowing through a portion of the proposed Project. A bridge to span the creek is included in the Project design. Most of the surface water drainage in the City of Escondido is transported by Escondido Creek and its tributaries, including Reidy Canyon Creek (Figure 3.7-1). Historically, the entire watershed flowed intermittently, but currently the lower sections beginning in the middle of Escondido have constant flow due to urban and agricultural runoff (PCW 2010).

Sections of the creek within Escondido have been channelized to provide for flood control. North of Harmony Grove Road to the eastern City limits, Escondido Creek is a concrete-lined channel. South of Harmony Grove Road for approximately 1,500 feet, Escondido Creek consists of an improved earthen channel. Fill embankments have been constructed along both sides of the creek in this area, with these structures reinforced locally by riprap. Southwest of this point, Escondido Creek consists of a predominantly natural channel (EDAW 2003).

The beneficial uses as stated in *Water Quality Control Plan for the San Diego Basin 9* (RWQCB 1994) for the Escondido Creek HA include municipal and domestic supply, agricultural supply, cold and warm freshwater habitat, contact and noncontact water recreation, wildlife habitat, and preservation of biological habitat of special significance.

Escondido Valley Groundwater Basin

The portion of the Escondido Valley Groundwater Basin in the vicinity of the proposed Project area is underlain by the Escondido Valley Groundwater Basin, which runs for 20 miles along Escondido Creek. Groundwater is extracted from a number of sources in the basin, mainly from wells that tap water stored in the fractured bedrock below. Groundwater is found at depths from 2.5 to 18.5 feet below grade. The water quality of the groundwater basin varies and has been subject to contamination by irrigation runoff and septic systems (EDAW 2003). The beneficial uses for the Escondido Valley Groundwater Basin include municipal and domestic supply, agricultural supply, and industrial service supply (RWQCB 1994). The Escondido Valley Groundwater Basin is not available in SanGIS maps and thus is not reflected in Figure 3.7-1.

San Elijo Lagoon

San Elijo Lagoon, approximately 11 miles from the proposed Project area, is the tidal marsh at the mouth of Escondido Creek. It is approximately 530 acres and is surrounded by steep coastal bluffs. The marsh is normally closed off from the ocean but is subject to tidal fluctuations and occasional opening due to high inflows from winter storms. These conditions result in relatively low salinity levels in the lagoon and limited salt marsh habitat (RWQCB 1994).

The beneficial uses as stated in *Water Quality Control Plan for the San Diego Basin 9* (RWQCB 1994) for San Elijo Lagoon include contact and noncontact water recreation; wildlife, marine, and estuarine habitat; preservation of biological habitat of special significance; migration of aquatic organisms; spawning, reproduction, and/or early development; and rare, threatened, or endangered species.

Impairments

Runoff generated from the Project area will drain into Escondido Creek, which is listed in CWA Section 303(d) as a waterbody impaired for certain pollutants. Such impaired waters are to be assigned total maximum daily loads (TMDLs) to alleviate further pollution and improve beneficial uses for the affected watersheds. As a result, the proposed Project BMPs must treat for the particular pollutants known to cause water quality impairments. The San Diego RWQCB identified ten 303(d) pollutants/stressors in the Project watershed where TMDLs are required. TMDL and 303(d) regulations are discussed in further detail in the Regulatory Setting section below. As shown in Table 3.7-1, Escondido Creek is impaired from DDT, manganese, phosphate, selenium, sulfates, and total dissolved solids (TDS); San Elijo lagoon is experiencing impairments to beneficial uses due to excessive coliform bacteria, eutrophic conditions, and sediment loading from upstream sources (RWQCB 2006).

Regulatory Setting

Regulations exist at local, state, and federal levels that guide the development and enforcement of codes to protect water resources. These regulations include, but are not limited to, those summarized below.

**Table 3.7-1
List of Watersheds and 303(d) Pollutants/Stressors**

Watershed	Hydrologic Subarea (HSA) #	Pollutant / Stressor	Source	Affected Area	Proposed TMDL Completion
Escondido Creek	904.62	DDT	Unknown	26 miles	2019
		Manganese	Unknown	26 miles	2019
		Phosphate	Unknown	26 miles	2019
		Selenium	Unknown	26 miles	2019
		Sulfates	Unknown	26 miles	2019
		TDS	Unknown	26 miles	2019
San Elijo Lagoon	904.61	Eutrophic	Nonpoint/ Point	566 acres	2019
		<i>Impairment Approx. 330 acres</i>	Nonpoint/ Point	566 acres	2008
		Indicator Bacteria	Nonpoint/ Point	566 acres	2019
		<i>Impairment Approx. 150 acres</i>	Nonpoint/ Point	566 acres	2019

Source: RWQCB 2006

Federal

Federal Clean Water Act of 1972

This is the basic federal law dealing with surface water quality control and protection of beneficial uses of water. The purpose of the CWA is to provide guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters through prevention and elimination of pollution. The CWA applies to discharges of pollutants into waters of the U.S. The CWA establishes a framework for regulating storm water discharges from municipal, industrial, and construction activities under the NPDES. Under the CWA, municipalities across the nation are issued Municipal NPDES permits. In California, the SWRCB administers the NPDES program. The following CWA sections are most relevant to this analysis.

- Section 303(d) of the CWA requires states, territories, and authorized tribes to develop a list of water bodies that are considered to be "impaired" from a water quality standpoint. Water bodies that appear on this list do not meet water quality standards even after the minimum required levels of pollution control technology have been implemented to reduce point sources of pollution. In turn, the law requires that respective jurisdictions (i.e., RWQCBs) establish priority rankings for surface water bodies on the lists and develop TMDL action plans to improve water quality. The California SWRCB publishes the list of water quality-limited segments in California.

- Section 401 of the CWA requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain a state certification that the discharge complies with other provisions of the CWA. The SWRCB administers the certification program within California through its nine RWQCBs.
- Section 402 of the CWA establishes the NPDES permit program to regulate the discharge of pollutants from point sources. The CWA defines point sources of water pollutants as “any discernable, confined, and discrete conveyance” that discharges or may discharge pollutants. These are sources from which wastewater or storm water is transmitted in some type of conveyance (pipe and channel) to a water body and are classified as municipal or industrial. Municipal point sources consist primarily of domestic treated sewage and processed water, including municipal sewage treatment plant outfalls and storm water conveyance system outfalls. These outfalls contain harmful substances that are emitted directly into waters of the U.S. Without a permit, the discharge of pollutants from point sources into navigable waters of the U.S. is prohibited. NPDES permits require regular water quality monitoring. Assessments must be completed to ensure compliance with the permit standards.
- CWA Section 403 provides that point source discharges to the territorial seas, contiguous zones, and oceans are subject to regulatory requirements in addition to the technology- or water quality-based requirements applicable to typical discharges. The requirements are intended to ensure that no unreasonable degradation of the marine environment will occur as a result of a discharge, and to ensure that sensitive ecological communities are protected. These requirements can include ambient monitoring programs designed to determine degradation of marine waters, alternative assessments designed to further evaluate the consequences of various disposal options, and pollution prevention techniques designed to further reduce the quantities of pollutants requiring disposal and thereby reduce the potential for harm to the marine environment. If CWA Section 403 requirements for protection of the ecological health of marine waters are not met, an NPDES permit will not be issued.
- Section 404 of the CWA establishes a permit program, administered by USACE, regulating discharge of dredged or fill materials into waters of the U.S., including wetlands. Activities in waters of the U.S. that are regulated under this program include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. CWA Section 404 permits are issued by USACE.

Executive Order 11988 — Floodplain Management

Executive Order 11988 directs federal agencies to avoid to the extent practicable and feasible short- and long-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. Further, the Order requires the prevention of uneconomic, hazardous, or incompatible use of floodplains; protection and preservation of the natural and beneficial floodplain values; and consistency with the standards and criteria of the National Flood Insurance Program (NFIP).

National Flood Insurance Act

The National Flood Insurance Act of 1968 established the NFIP. The NFIP is a federal program administered by the Flood Insurance Administration of Federal Emergency Management Agency (FEMA). It enables individuals who have property (a building or its contents) within the 100-year floodplain to purchase insurance against flood losses. Community participation and eligibility, flood hazard identification, mapping, and floodplain management aspects are administered by state and local programs and support directorate within FEMA. FEMA works with the states and local communities to identify flood hazard areas and publishes a flood hazard boundary map of those areas. Figure 3.7-2 shows FEMA floodway and floodplain areas for the proposed Project vicinity. Floodplain mapping is an ongoing process in the County; such maps must be regularly updated for both major rivers and tributaries, as land uses and development patterns change.

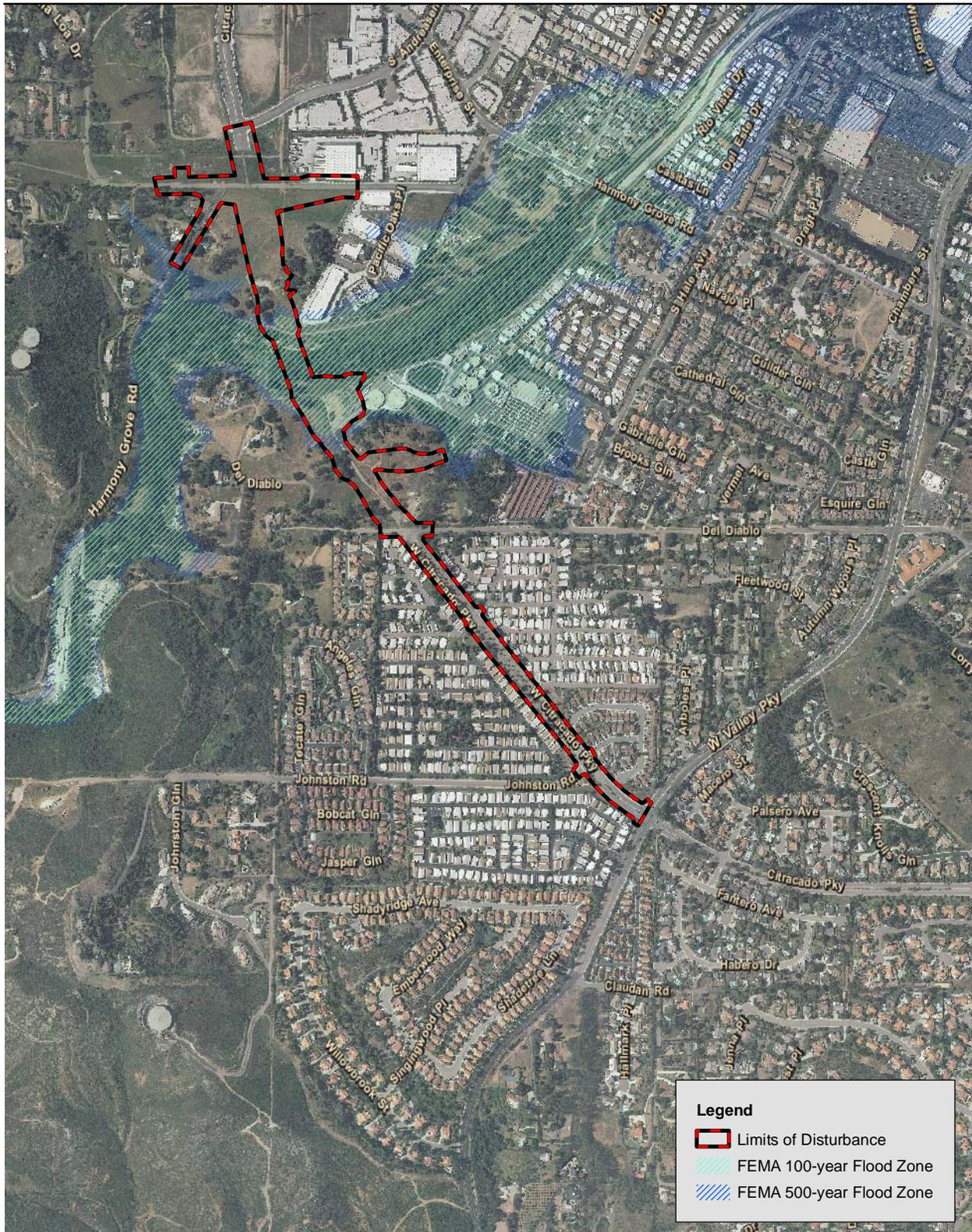
State

Porter-Cologne Water Quality Control Act of 1969

Division 7 of the California Water Code is the basic water quality control law for California. This law is titled the Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act establishes a regulatory program to protect water quality and to protect beneficial uses of the state waters.

California Department of Fish and Game Code

Under CFGC Sections 1601–1603, agencies are required to notify CDFG prior to implementing any Project that would divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake.



Source: Landiscor 2010; SanGIS 2010

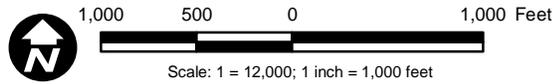


Figure 3.7-2
Flood Hazard Areas

Statewide Construction General Permit

The State of California adopted a new Construction General Permit on September 2, 2009. SWRCB Water Quality Order 2009-0009-DWQ (Construction General Permit) regulates construction site storm water management for projects that disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres. Project proponents are required to obtain coverage under the general permit for discharges of storm water associated with construction activity for such projects. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

Permit applicants are required to submit an NOI to the SWRCB and to prepare a SWPPP. The SWPPP identifies BMPs that must be implemented to reduce construction effects on receiving water quality based on potential pollutants. The BMPs identified are directed at implementing both sediment and erosion control measures and other measures to control potential chemical contaminants. The SWPPP also includes descriptions of the BMPs to reduce pollutants in storm water discharges after all construction phases have been completed at the site (post-construction BMPs).

The permit includes several new requirements (as compared to the previous Construction General Permit, 99-08-DWQ), including risk level assessment for construction sites, an active storm water effluent monitoring and reporting program during construction (for risk level II and III sites), rain event action plans for certain higher risk sites, and numeric effluent limitations as well as numeric action levels for pH and turbidity. The permit became effective and enforced as of July 1, 2010.

Local

San Diego Regional Water Quality Control Board Order R9-2007-0001

In January of 2007, under the authority of the CWA amendments and NPDES Permit regulations, the RWQCB renewed the Municipal Separate Storm Sewer Systems Permit (first issued on July 16, 1990, and then renewed on February 21, 2001) to the 18 cities within the San Diego region, the San Diego Airport Authority, and the Unified Port District of San Diego. RWQCB Order R9-2007-0001 (Municipal Stormwater Permit) requires that all jurisdictions within the San Diego region prepare Jurisdictional Urban Runoff Management Plans (JURMPs). Each of these JURMPs must contain a component addressing construction activities and a component addressing existing development.

The City of Escondido regulates water quality through a variety of ordinances and guidelines, including but not limited to the County hydrology manual and drainage design manuals, the JURMP, Standard Urban Stormwater Mitigation Plan (SUSMP), and storm water standards.

In accordance with the provisions of the Municipal Stormwater Permit, the City of Escondido updated their municipal SUSMP (City of Escondido 2010a) in compliance with the County model SUSMP (County of San Diego 2009e). The SUSMP identifies mitigation strategies required to protect storm water quality for new development and significant redevelopment within the City of Escondido.

The City's SUSMP establishes a series of source control, site design, and treatment control BMPs that are to be implemented by all priority projects. Priority projects include residential, commercial, automotive repair, restaurants, parking lots, and streets as well as some redevelopment projects that generally add 5,000 or more square feet of impervious surface.

Additionally, the County of San Diego developed a low impact development (LID) handbook for guidance in the BMP selection process (County of San Diego 2007d). Design techniques include minimizing impervious areas, conserving natural areas, and utilizing vegetation and landscaping for water quality treatment benefits.

Hydromodification Management Plan

Provision D.1.g of RWQCB Order R9-2007-0001 requires the San Diego Copermittees (the cities within San Diego County as well as the County itself) to implement a Hydromodification Management Plan "...to manage increases in runoff discharge rates and durations from all Priority Development Projects, where such increased rates and durations are likely to cause increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force."

To address this permit condition, the Copermittees proceeded with developing a Hydromodification Management Plan for all Priority Development Projects, with certain exemptions. The Hydromodification Management Plan must include standards to control flows within the geomorphically significant flow range. Interim Hydromodification Criteria were prepared and became effective (for projects 50 acres or greater in size) in November 2007. The *Draft Hydromodification Management Plan* was released in May of 2009 (Brown and Caldwell 2009). The *Final Hydromodification Management Plan* has been in effect since March 2011 and has been incorporated into local SUSMPs.

The Hydromodification Management Plan requires Priority Development Projects to implement hydrologic control measures so that post-Project runoff flow rates and durations do not exceed pre-Project flow rates and durations where they would result in an increased potential for erosion or significant impacts to beneficial uses or violate the channel standard. The Project proponent will have to do either of the following:

1. Demonstrate that there will be no net increase in impervious area and peak flow rates through incorporation of LID BMPs, preparation of continuous simulation hydrologic models, and comparison of the pre-Project and mitigated post-Project runoff peaks and durations (with hydromodification flow controls), or
2. Show that projected increases in runoff peaks and/or durations would not accelerate erosion to rehabilitated receiving stream reaches.

Construction Dewatering Permits

Construction dewatering discharges must be permitted either by the San Diego RWQCB under an NPDES general permit for construction dewatering discharge to surface waters or by the City of Escondido Public Works department for discharge into the city sanitary sewer under the Industrial Waste Pretreatment Program. Discharge via either of these mechanisms must meet applicable water quality objectives, constituent limitations, and pretreatment requirements.

3.7.2 Significance Criteria

Hydrology and water quality are principally affected by urbanization, which creates hardscape (impervious surfaces), increases the exposure to potential pollutants (operations), and enhances the transport of pollutants through the watershed (storm water conveyance systems) and ultimately to receiving waters. The primary cause of water quality impairments is the discharge of inadequately treated urban storm water runoff. Rapid growth and urbanization in Southern California have placed increased pressure on water resources and have resulted in local impacts to water quality. Such urbanization has reduced the potential for water to infiltrate into the soil and undergo natural filtration.

For roadway projects such as the proposed Project, potential pollutants (e.g., sediment, nutrients, organic compounds, metals, trash, oxygen-demanding compounds, and hydrocarbons) that can be exposed and transported by storm water runoff require the incorporation of adequate BMPs to protect surface water and groundwater quality.

The effects of a project on hydrology and water quality are considered significant if the proposed Project would violate any of the City of Escondido significance criteria. The proposed Project would result in a significant hydrology or water quality impact if it would do the following:

- (1) Violate any water quality standards or waste discharge requirements, including but not limited to increasing pollutant discharges to receiving waters (consider temperature, dissolved oxygen, turbidity and other typical storm water pollutants);
- (2) Have potentially significant adverse impacts on groundwater quality, including but not limited to, substantially depleting 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 preexisting nearby wells would drop to a level that 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 that would result in substantial/increased erosion or siltation on- or off-site;
- (4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site and/or significant adverse environmental impacts;
- (5) Cause significant alteration of receiving water quality during or following construction;
- (6) Cause an increase of impervious surfaces and associated runoff;
- (7) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- (8) Cause a potentially significant adverse impact on groundwater quality;
- (9) Cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses;
- (10) Be tributary to an already impaired water body, as listed on the CWA Section 303(d) list and can result in an increase in any pollutant for which the water body is already impaired;
- (11) Otherwise substantially degrade water quality;
- (12) Create or exacerbate already existing environmentally sensitive areas;

- (13) Create potentially significant environmental impact on surface water quality, to either marine, fresh, or wetland waters; or,
- (14) Impact aquatic, wetland, or riparian habitat.
- (15) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map (FIRM) or other flood hazard delineation map;
- (16) Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- (17) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- (18) Inundate the site by seiche, tsunami, or mudflow.

3.7.3 Impact Analysis

Construction Phase – Surface Water

The Construction General Permit requires the preparation of a site-specific SWPPP that would require the implementation of specific management practices at the time of construction. Stormwater drainage maintenance provisions would be detailed in the Project conditions. Standard BMPs would be implemented during construction to comply with all permit conditions, including adequately controlling erosion and siltation impacts to a less-than-significant level (Criterion 3). These BMPs would include, but not be limited to, the following:

- Temporary soil stabilization controls such as:
 - Scheduling
 - Preservation of existing vegetation
 - Hydraulic mulch
 - Hydroseeding
 - Soil binders
 - Straw mulch
 - Geotextiles, plastic covers, and erosion control blankets/mats
 - Wood mulching
 - Earth dikes/drainage swales and ditches
 - Outlet protection/velocity dissipation devices
 - Slope drains
 - Streambank stabilization

- Temporary sediment controls such as:
 - Silt fence
 - Sediment/desilting basin
 - Sediment trap
 - Fiber rolls
 - Street sweeping and vacuuming
 - Gravel bag berm
 - Sandbag barrier
 - Straw bale barrier
 - Storm drain protection
 - Wind erosion control
- Tracking controls such as:
 - Stabilized construction entrance/exit
 - Stabilized construction roadway
 - Entrance/outlet tire wash
- Non-storm-water management controls for:
 - Dewatering operations
 - Paving and grinding operations
 - Vehicle equipment cleaning
 - Vehicle equipment fueling
 - Vehicle equipment maintenance
 - Pile driving operations
 - Concrete curing
 - Structure demolition over or adjacent to water
- Waste management and material pollution controls such as:
 - Material delivery
 - Material use
 - Stockpile management
 - Spill prevention and control
 - Solid waste management
 - Hazardous waste management
 - Contaminated soil management
 - Concrete waste management
 - Sanitary/septic waste management
 - Liquid waste management

- Catch basin controls such as:
 - Installation of automatic retractable screens
 - Installation of connector pipe screens
 - Installation of a catch basin filter
- Scheduling to avoid construction during rainy season

Additionally, because the proposed Project will be subject to the newly adopted Construction General Permit (2009-0009-DWQ), the site-specific SWPPP would also include the following:

- Monitoring and reporting of and numeric effluent limitations for pH and turbidity in storm water discharges;
- Risk level assessments and a more stringent monitoring and reporting requirement for higher risk sites;
- A Rain Event Action Plan for higher risk sites;
- Annual reporting on monitoring activities; and
- Specific training or certifications of key personnel (e.g., SWPPP preparers, inspectors, etc.) to ensure their levels of knowledge and skills are adequate to ensure their ability to design and evaluate Project specifications in compliance with General Construction Permit requirements.

The Project SWPPP would determine and outline the full range of methods necessary to ensure water quality is not adversely affected during construction. Proper use of erosion and sediment control measures/BMPs (which are standard requirements as part of the grading permit) would reduce potential water quality impacts during construction to less than significant (Criteria 1 and 3).

Construction Phase – Groundwater

If groundwater is encountered during construction of the proposed Project, dewatering (following issuance of permit) would be required to avoid flooding in excavated areas. Grading operations associated with the Project development are not expected to impact groundwater or be a factor during removal and any recompaction on-site. The Project does not include activities that would discharge pollutants into groundwater aquifers.

Due to the short-term duration of such activity and the fact that any extracted groundwater ultimately would be returned to local drainage basins (if suitable), no associated substantial adverse impacts related to groundwater supplies, recharge, or movements would result from dewatering (Criteria 2, 5, 8, 9).

Operational Phase – Surface Water

Typical urban pollutants associated with this transportation Project include hydrocarbons (oil, grease, fuel, etc.), metals, antifreeze, trash/debris, and fertilizers and organic matter from landscaping. Under the Municipal Stormwater Permit, all development and significant redevelopment projects are obligated to implement structural and nonstructural BMPs to treat site runoff and limit urban pollutants from reaching the waters of the U.S. to the maximum extent practical (MEP).

The Municipal Stormwater Permit requires applicable new development and redevelopment projects (such as the proposed Project) to take the following steps (RWQCB 2007):

- Design the site to conserve natural areas, existing trees, and vegetation and soils to maintain natural drainage patterns, minimize imperviousness, detain runoff, and infiltrate runoff where feasible.
- Cover or control sources of storm water pollutants.
- Treat runoff prior to discharge (Section E.10 of the Municipal Stormwater Permit states: “Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water”).
- Ensure that runoff does not exceed pre-Project peaks and duration where increases could affect downstream habitat or other beneficial uses.
- Maintain treatment and flow control facilities.

Escondido Creek flows westerly through a portion of the roadway extension (Figure 3.7-1) that would include a bridge for spanning the creek. Runoff from the tops of slopes would be conveyed toward the roadway, into brow ditches and inlets conveying storm water into existing and proposed storm drains. The water would then be discharged from the storm drain systems into median bioswales and energy dissipaters prior to discharging into Escondido Creek. Riprap energy dissipaters would be used wherever possible to minimize erosion as well as contain the water within the bioswale areas. Slopes would be vegetated with native vegetation.

The amount of runoff from the site would be expected to increase upon development due to additional impervious surfaces associated with the development of the Project. As this is a roadway widening and roadway extension project, the ability to reduce the impervious footprint is minimal. However, landscaped slopes and median bioswales (as outlined above) are proposed for this Project. In compliance with the Municipal Stormwater Permit and the City SUSMP, the proposed Project would be designed to treat the additional runoff generated by the Project (Criteria 6 and 7). Median bioswales and other BMP details will be provided in the City SUSMP-compliant project Water Quality Technical Report.

The southern portion of the proposed Project, consisting of widening the existing portion of Citracado Parkway between West Valley Parkway and Avenida Del Diablo via median reductions, contains existing storm drain systems that currently discharge into Escondido Creek at two locations north of Avenida Del Diablo. The first outlet location is approximately 150 feet northeast of the Citracado Parkway/Avenida Del Diablo intersection. The second outlet location is approximately 55 feet east of the first outlet location, also on the north side of Avenida Del Diablo. Both points currently discharge into natural treatment facilities consisting of vegetation, shrubs, and rocks before reaching Escondido Creek. During the design phase of the Project, the effects of replacing a portion of the existing pervious median with a paved surface on the existing facilities and treatment process will be analyzed. It is anticipated that the current natural storm water treatment process is sufficient and there will be no need to design an improved bio-filtration system at these outlet locations. Additional runoff flows from the proposed Project conditions would be treated with adequate BMPs such that post-Project runoff peaks and durations are no greater than pre-Project peaks and durations, per City SUSMP requirements. This information would be reflected in the Water Quality Technical Report.

The bridge portion of the proposed Project over Escondido Creek would be designed per the recommendations outlined in the hydraulic and scour studies (Chang Consultants 2008). Work in Escondido Creek would be subject to permits from CDFG, USACE, and RWQCB. The bridge will be designed per City and Caltrans standards, to accommodate both 50- and 100-year storm flows. As such, the proposed Project would not alter the course of a stream or river in a manner which would result in flooding on- or off-site and/or significant adverse environmental impacts (Criterion 4).

Pre- and post-Project flows, along with the exact designs and locations of the median bioswales and drainage system would be detailed in the Water Quality Technical Report. The median bioswales will be designed per both City SUSMP and Final County Hydromodification Management Plan requirements (see inset graphic, Figure 3.7-3). Design details will be provided as part of the Water Quality Technical Report.

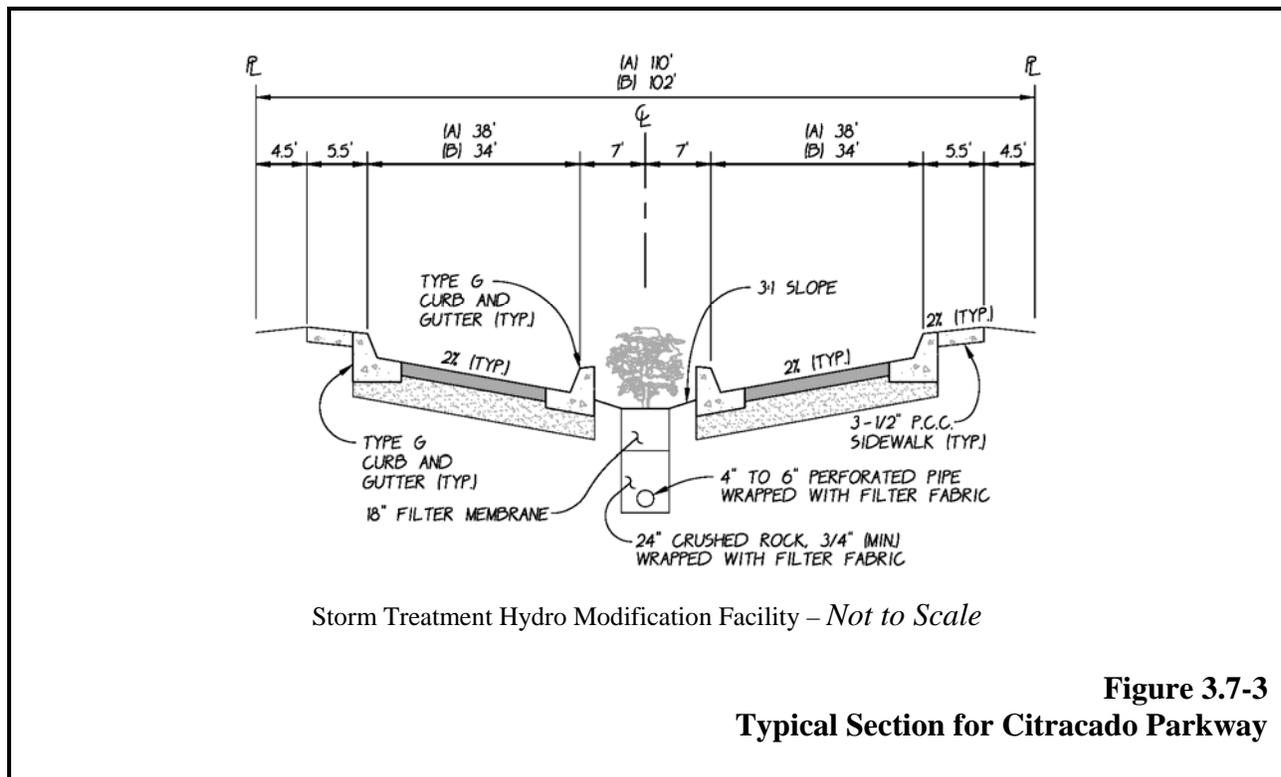


Figure 3.7-3
Typical Section for Citracado Parkway

As outlined above, the proposed Project would be required to comply with NPDES and related City standards and requirements, including storm drain and BMP sizing design standards. With these required design measures incorporated, runoff from the proposed Project would not be considered significant, water quality standards would not be violated, and the Project would not materially degrade the existing drainage facilities.

The proposed Project would be designed to maintain pre-Project runoff peaks and duration, and, as such, would not result in substantial increased erosion or siltation on- or off-site. Additionally, site design BMPs would be designed to target the 303(d)-listed pollutants of concern for Escondido Creek (metals and TDS) to the MEP. By designing Project BMPs to treat for impaired parameters expected to be generated by the Project, further impairments to Escondido Creek would be avoided (Criterion 10).

Impacts to aquatic habitats and wetlands associated with Escondido Creek are considered significant and are analyzed in Section 3.4, Biological Resources (Criterion 14).

Operational Phase – Groundwater

The proposed Project would not involve any long-term use of groundwater. Although additional impervious surfaces would be created as a result of the proposed Project, and this increase could incrementally reduce potential groundwater recharge within the Project area, no substantial adverse impacts are expected due to the use of bioswales, and consequently maintained infiltration and filtration throughout the site, to the MEP. Impacts related to groundwater would therefore be less than significant (Criteria 2, 8, 9).

Floodplains

The proposed Project would pass through a 100-year floodplain area where it crosses Escondido Creek, as identified on current FEMA FIRMs (Figure 3.7-2). The proposed Project would include a bridge structure designed to convey both 50- and 100-year flood flows, per City and County standards (County of San Diego 2005) and as outlined in the hydraulic and scour studies (Chang Consultants 2008). Additionally, for any changes to the 100-year flood areas mapped by FEMA (Figure 3.7-2), a conditional letter of map revision (CLOMR) would need to be prepared.

A CLOMR is FEMA's comment on a proposed Project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations, or the Special Flood Hazard Area. The letter does not revise an effective NFIP map, but indicates whether the Project, if built as proposed, would be recognized by FEMA.

Once a project has been completed, the City must request a revision to the FIRM to reflect the project. "As-built" certification and other data must be submitted to support the revision request.

Accordingly, and in strict compliance with hydraulic design standards, structures designed for conveying these flows would be properly designed to convey 50-year and 100-year floodwaters without impeding or redirecting flood flows that would potentially harm life and property. By incorporating these mandatory design standards in compliance with state and local regulations, flooding would not likely be exacerbated by the proposed Project. In consultation with FEMA and the City, the proposed Project would be designed per City standards to avoid impedance or redirection of flood flows to the MEP. Therefore, the proposed Project would not impede or redirect flood flows but would convey the required design flood flows (Criteria 4, 15, 16).

Flooding, Landslides, Mudflows

The proposed Project area is not subject to potential flooding, landslides, or mudflows. The proposed Project does not propose to construct a levee or dam and would not otherwise expose people or structures to a significant risk of flooding (Criterion 17). The proposed Project does not include activities that would increase the risk of inundation by seiche, tsunami, or mudflow (Criterion 18).

3.7.4 Mitigation Measures

With implementation of the measures required under existing regulations or included as part of the proposed Project (as described above), the impacts to hydrology/water quality are considered less than significant. Therefore, no mitigation measures are proposed.

3.8 MUNICIPAL SERVICES/UTILITIES

This section includes a description of the existing municipal and utility service systems serving the Project area, including fire, police, water, sewer, gas and electric services, and availability of those services and resources for the project. Following this discussion, an analysis of the potential impacts to municipal and utility services associated with development of the Project area is provided.

3.8.1 Existing Conditions

Municipal Services

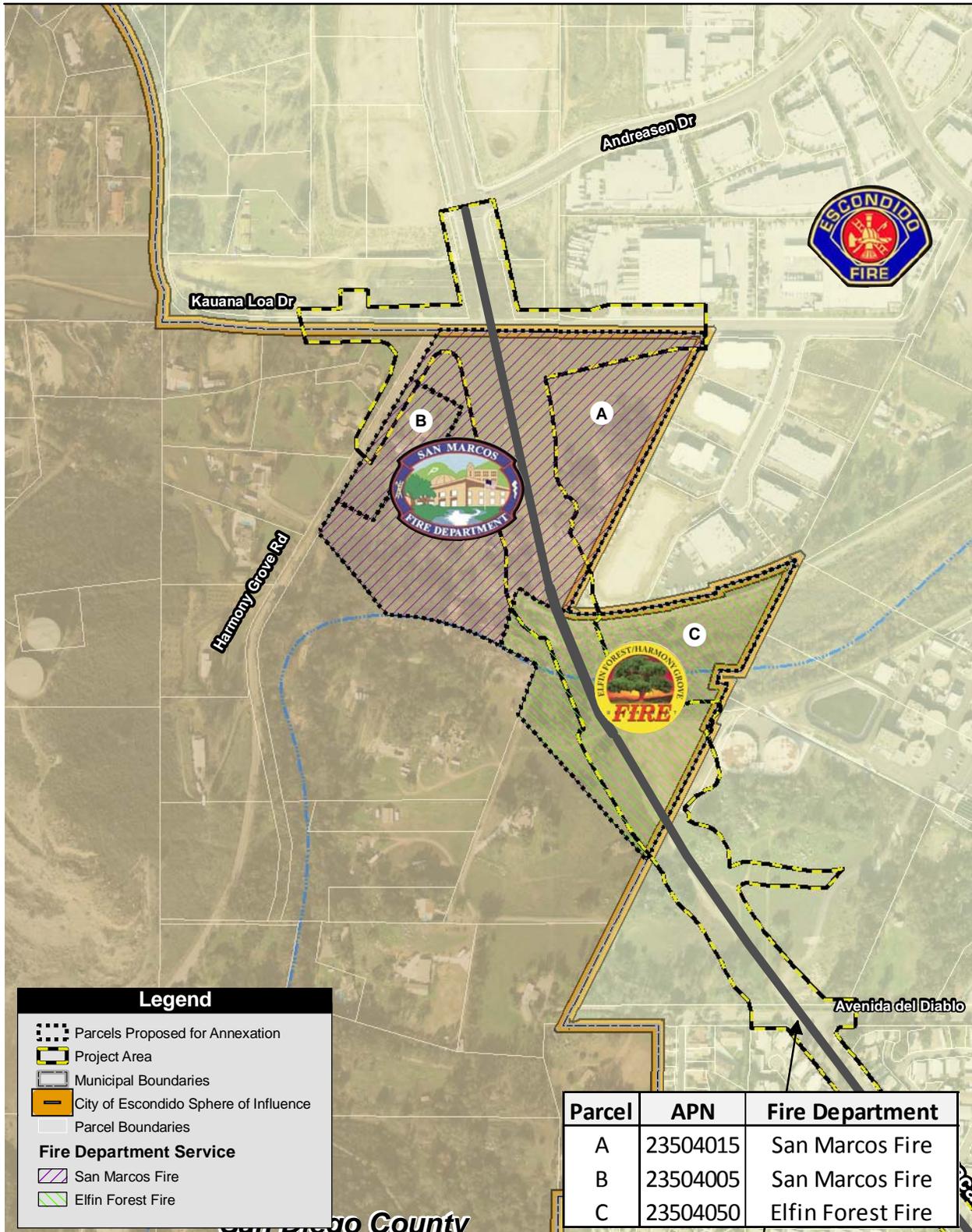
Fire and Emergency Medical

As shown in Figure 3.8-1, fire and emergency services are currently provided to the Project area by three different fire departments. The parcels within the jurisdiction of the City of Escondido are served by the Escondido Fire Department. Fire service to Parcels A and B is currently provided by the San Marcos Fire Department, via the San Marcos Fire Protection District. Fire service to Parcel C is currently provided by the Harmony Grove/Elfin Forest Fire Department.

With annexation of Parcels A, B, and C to the City of Escondido, as proposed by the Project, all fire service to the Project area would be provided by the Escondido Fire Department. The Escondido Fire Department, with a staff of 112, provides fire protection and emergency medical services to the City of Escondido and Rincon Del Diablo Fire Protection District (through a contractual arrangement established in 1984). The closest facility to the Project area is Fire Station #6, located at 1735 Del Dios Road (approximately 1 mile east). It houses one ambulance. The next two closest facilities are Fire Station #1, located at 310 North Quince (approximately 2 miles east) and Fire Station #5, located at 2319 Felicita Road (approximately 2 miles southeast). Fire Station #1 is a new 28,340-square-foot facility, with a six-story training tower and classroom, and houses one paramedic fire engine, one truck company, one ambulance, and one battalion chief. Fire Station #5 houses one fire engine and one brush engine (City of Escondido 2010b).

Police

Police services are currently provided to the proposed Project area by the City of Escondido Police Department. Police service to the three parcels located within unincorporated San Diego County is provided by the San Diego County Sheriff's office.



Source: SanGIS 2010; Boyle Engineering 2007; AECOM 2010

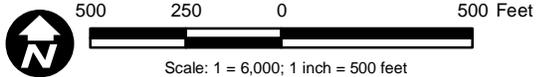


Figure 3.8-1
Fire Department Service

With annexation of the three parcels to the City of Escondido, as proposed by the Project, all police service to the Project area would be provided by the City of Escondido Police Department, located at the new Police and Fire Headquarters building located at 1163 N. Centre City Parkway. Escondido is divided into four geographical districts: North, South, East, and West. The proposed Project area is included in the West District under Lieutenant Stuard as the District Area Commander (City of Escondido 2010c).

Schools, Parks, and Libraries

Escondido Union School District, Escondido Union High School District, Palomar College, and California State University San Marcos provide educational service to the Project area. No school is located in the immediate Project area. The closest school to the Project area is Del Dios Middle School located approximately 1 mile east of the Project area at 1400 W. 9th Avenue (City of Escondido 1990).

No County or Escondido parks are located in the immediate Project area.

The Escondido Public Library serves residents at a Main Library (239 South Kalmia Street), East Valley Branch (2245 E. Valley Parkway), and the Escondido Pioneer Room (247 Kalmia Street) (City of Escondido 2010d).

Utilities

Gas and Electric

SDG&E, a Sempra Energy Utility, provides gas and electric services to the Project area. Within the Project area, as described in Section 3.9, Visual Resources, and shown in Figure 2-4 and Figure 3.11-3, overhead utility lines run north and south and traverse the proposed Citracado Parkway alignment north of Escondido Creek.

Water

The Rincon Del Diablo Municipal Water District provides water service to the Project area. The Rincon Del Diablo Municipal Water District serves an area of 42 square miles and population of 28,200 people within the greater Escondido Valley. Within the Project area as shown in Figure 2-4, a 14-inch-diameter water pipeline owned and operated by Rincon Del Diablo Municipal

Water District extends east from Kauana Loa Drive and then south where it connects with an existing water pipeline in Avenida Del Diablo.

Wastewater

The City of Escondido Utilities Department is located within the City Hall at 201 North Broadway. The Utilities Wastewater Division oversees treatment and reclamation operations and the industrial and commercial pretreatment program, operates the HARRF, and maintains the sewage collection system and sewage lift stations. Within the Project area, as shown in Figure 2-4, an existing sewer pipeline crosses the proposed Citracado Parkway extension just south of Escondido Creek.

Two of the three parcels that currently reside within the County of San Diego are on septic sewer systems, and the third is the HARRF parcel that houses the City of Escondido treatment facilities described above. The two parcels currently on septic would remain on septic, if annexed. However, once annexed to the City, individual property owners would have the option to request sewer service from the City.

Trash

Escondido Disposal, Inc. (EDI) currently provides solid waste removal service for the Escondido area. EDI also operates a solid waste transfer station at their Washington Avenue site where solid waste is consolidated into larger transfer trucks and taken to a Class III landfill for disposal.

Regulatory Setting

CEQA Section 15126.2 requires discussion of the municipal services required for a project, considering the availability of such services.

In addition, the Cortese/Knox/Hertzberg Local Government Reorganization Act of 2000 encourages orderly growth and development, which are essential to the social, fiscal, and economic well-being of the state (Government Code Section 56000, et seq.). The San Diego LAFCO is the regulatory agency that implements the Cortese/Knox/Hertzberg Local Government Reorganization Act. LAFCOs were designed to provide assistance to local agencies in overseeing jurisdictional boundary changes. Specific to the municipal services issue area, the San Diego LAFCO has a responsibility, through its Municipal Services Review program, to study the adequacy of governmental services being provided in the region or subregion

(Government Code Section 56430). These studies may be used by LAFCOs, other governmental agencies, and the public to better understand and improve provision of services.

3.8.2 Significance Criteria

The effects of a project on public services are considered significant if the proposed project would do the following:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, and the need for 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:
 - a. Fire protection
 - b. Police protection
 - c. Schools
 - d. Parks
 - e. Libraries
 - f. Gas/Electric

The effects of a project on utilities are considered significant if the proposed project would do the following:

2. Exceed wastewater treatment requirements of the applicable RWQCB;
3. 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;
4. Require, or result in, the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
5. Result in the lack of sufficient water supplies available to serve the Project from existing entitlements and resources, or require new or expanded entitlements;

6. Result in a determination by the wastewater treatment provider that serves, or may serve, the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments;
7. Be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs; or
8. Not comply with federal, state, and local status and regulations related to solid waste.

3.8.3 Impact Analysis

Municipal Services

Fire and Emergency Medical

The proposed Project would involve adjusting jurisdictional limits of County and City services, including law enforcement, emergency medical services, and fire protection. A full-time City Fire Department would provide services (including paramedic services) to the annexation area (City of Escondido 2004a). As mentioned in Section 3.8.1, the closest facility to the Project area is Fire Station #6, located at 1735 Del Dios Road. In urbanized areas of the City, the Escondido Fire Department's initial response time is 7.5 minutes for all structure fire and emergency Advanced Life Support calls and a maximum response time of 10 minutes for supporting companies (City of Escondido 1990). Parcels A and B are currently within the San Marcos Fire Protection District. Parcel C is currently within the Elfin Forest/Harmony Grove Fire Department. These parcels would detach from the San Marcos Fire Protection District and Elfin Forest/Harmony Grove Fire Department and annex into the City Fire District. Service availability has been confirmed with the Escondido Fire Department, with an anticipated response time of approximately 4 minutes.

The proposed Project would provide the City Fire Department a needed transportation connection in the area, and emergency response times in the surrounding areas may be improved with implementation of the Project. In addition, since development of the proposed Project would not result in a need for new or altered fire services or infrastructure, no adverse physical effect to the environment due to infrastructure improvements associated with providing fire services would occur. Therefore fire services impacts are less than significant (Criterion 1).

Police

Development of the Project area would result in an incremental increase in demand for police services. The Escondido Police Department's standard is to maintain an initial response time for priority 1 calls (crimes in progress or life threatening) of no more than 5 minutes and an initial response time for priority 2 calls (serious calls requiring rapid response but not life threatening incidents) of no more than 6.5 minutes. Parcels A, B, and C currently are served by the County Sheriff's Department. Upon annexation, the parcels would be served by the City of Escondido Police Department. The annexation area would be included within a police patrol "beat" and would receive regular patrols by the City's police officers, replacing patrols by the County Sheriff's Department. The Escondido Police Department has confirmed the ability to adequately serve the proposed Project. The average response time for priority 1 calls in March 2010 was 4 minutes and 53 seconds and the average response time for priority 2 calls in March 2010 was 7 minutes and 26 seconds. While the response times in March 2010 did not meet the goal of 6.5 minutes, this is not necessarily an indication that emergency response is inadequate. Rather, this could be a result of the nature of the calls received or a variety of factors.

The proposed Project would provide the City Police Department a needed transportation connection in the area, and emergency response times in the surrounding areas may be improved with implementation of the Project. In addition, the Project would not result in a need for new or altered police services or infrastructure and no adverse physical effect to the environment due to infrastructure improvements associated with providing law enforcement services would occur. Therefore police service impacts are less than significant (Criterion 1).

Schools, Parks, and Libraries

The proposed roadway extension and improvement, and bridge construction do not include housing as part of the Project. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school, park, library, or other municipal services. No changes in school, park, or library services would result with the proposed annexation. The Project would not result in a significant increase in demand on these services (Criterion 1).

Utilities

Gas and Electric

It is anticipated that wet (i.e., water, sewer, gas) and dry (i.e., telephone, cable, fiber optics) utilities would be carried by the bridge and undercrossing structures. The location of all utility

alignments would be noted on final design plans to identify the location of transmission and distribution facilities. The overhead utility lines that run north and south along the northern portion of the proposed Citracado Parkway alignment may require relocation with construction of the roadway. The Project engineer would coordinate with SDG&E to adhere to its standardized processes with construction of the road and bridge (Criterion 1). If required, overhead electric utility lines would be realigned, as described in Chapter 2.3.2 and shown in Figure 2-4. The City would coordinate any utility improvements with SDG&E to ensure that no disruption of service to customers occurs. Therefore, with coordination with SDG&E and proper relocation of electric utility lines, impacts related to gas and electric utilities would be less than significant (Criteria 1).

Water

An existing 14-inch-diameter water pipeline that runs through the Project area would be abandoned with Project implementation. This water pipeline would be replaced with water pipeline within the new Citracado Parkway extension roadway. The diameter of this new water pipeline may be up to 20 inches, depending on current Rincon Water District standards and requirements. This pipeline would be carried by the bridge and undercrossing structures. The location of all water pipeline alignments would be noted on final design plans to identify the location of transmission and distribution facilities. The Project engineer would coordinate with Rincon Del Diablo Municipal Water District to adhere to its standardized processes with construction of the road and the bridge. Compliance with these standard measures would maintain impacts to utilities below levels of significance.

Water supply for the City stems primarily from two sources: local water, derived from precipitation, and stored in Lake Henshaw and Lake Wohlford, and imported water transmitted by the San Diego County Water Authority. As described above, Rincon Del Diablo Water District is the water service provider in the Project area. The Project would require irrigation of landscaping along the roadway extension. However, water conservation measures have been incorporated into the conceptual landscape plan for the proposed Project and the minimal increase in water needed to serve the roadway extension is not anticipated to result in a significant new demand for water. In addition, no construction of new water facilities or expansion of existing facilities is proposed by the Project. The replacement pipeline may increase in diameter from 14 inches to up to 20 inches, as determined to be required by the Rincon Del Diablo Municipal Water District. However, this increase has been identified based on current design practices and does not represent an increased or new supply of water. Therefore, impacts related to water supply would be less than significant (Criteria 3 and 5).

Storm Water

New storm water drainage facilities are proposed with Project implementation, including bioswales to convey runoff from the Project area. These storm water drainage facilities are described in detail in Section 3.7, Hydrology/Water Quality, and impacts from these on-site facilities are considered throughout the EIR. No off-site drainage facility improvements are proposed. Therefore, impacts related to the construction of storm water drainage facilities would be less than significant (Criterion 4).

Wastewater

Escondido's wastewater is treated at the HARRF, conveyed via a 14-mile pipeline, and discharged through an ocean outfall. City-administered master plans ensure the adequacy of these facilities to meet the demands imposed by development projected over the General Plan horizon. The proposed Project does not include improvements that would require wastewater treatment facilities and no relocation or modification to the existing wastewater infrastructure on-site is proposed. While County parcels would have the option to apply for sewer service, individual property owners may remain on septic. There is no guarantee of sewer service to those properties through annexation, and sewer service availability would be determined at the time a property owner makes the request. Therefore, there would be no impact related to wastewater treatment. The potential impact would be less than significant (Criteria 2, 3, and 6).

Trash

Construction of the Project would require proper disposal of demolition/construction materials. Solid waste pick-up would be available for the Project by EDI during the construction phase (Cornejo 2010). Operation of the road would generate minimal, if any, solid waste. Therefore, impacts related to solid waste would be less than significant (Criteria 7 and 8).

3.8.4 Mitigation Measures

The proposed Project would not result in a significant impact to municipal services and utilities. Therefore, no mitigation measures are proposed.

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3.9 NOISE

This section analyzes the existing noise environment and the potential effects of the proposed Project. The analysis is based primarily on the *Citracado Parkway Extension Project Technical Noise Analysis* prepared for the City by AECOM in July 2010, which is included as Appendix G. This section contains a summary of the potential noise impacts due to construction of the Project and operation of the roadway. A definition of the terms and noise analysis methodologies are provided in Appendix G.

3.9.1 Existing Conditions

The following discussion describes the existing noise environment that would be affected during construction and operation of the Citracado Parkway Extension Project.

The proposed Project area is surrounded by light industrial/heavy commercial uses to the north and east, and residential/rural residential to the west, south, and east. Many of the adjacent lots that are slated for industrial/commercial development are either under ongoing development or graded for anticipated development. Citracado Parkway is identified in the City's Circulation Element as a Major Road.

Existing Noise Levels

The predominant source of noise in the Project area is traffic on Citracado Parkway and the major cross streets within the Project area. The existing ADT volumes on Citracado Parkway range from 2,700 ADT south of Avenida Del Diablo to 4,800 ADT between Johnson and West Valley Parkway. ADT volumes on West Valley Parkway range from 18,900 ADT north of Citracado Parkway to 19,300 ADT south of Citracado Parkway. ADT volumes on Avenida Del Diablo and Harmony Grove Road are 2,600 ADT and 6,300 ADT, respectively (VRPA 2011).

Noise measurements were taken along the Project corridor on July 3, 2007. The measurement locations are shown in Figure 3.9-1 and the noise monitoring results are provided in Table 3.9-1. The noise monitoring results are expressed as typical 1-hour noise levels at each measurement site, with L_{eq} representing the 1-hour average noise level, L_{max} the maximum recorded noise level, and L_{min} the minimum recorded noise level.

**Table 3.9-1
Noise Measurement Data**

Site ID*	Location	Start Time	L _{eq} (dBA)	L _{max} (dBA)	L _{min} (dBA)	Noise Sources
1	50 feet south of Citracado Pkwy. north of Escondido Views Mobile Home Park	10:11 a.m.	64.5	78.0	42.1	Traffic on Citracado Pkwy.
2	At the end of S. Mammoth Place, 50 feet from Citracado Pkwy., 21 feet from wall	10:48 a.m.	52.1	68.9	37.0	Traffic on Citracado Pkwy., dogs, and birds
3	At the end of N. Mammoth Place, 50 feet from Citracado Pkwy., 25 feet from 4-foot wall along Citracado Pkwy.	11:19 a.m.	44.4	58.0	37.4	Traffic on Citracado Pkwy.
4	Tennis Court at Mountain Shadows Trailer Park, 110 feet from Citracado Pkwy., and 50 feet from wall to the southeast	11:50 a.m.	51.6	66.3	37.7	Traffic on Citracado Pkwy., residents talking, birds
5	Along cul-de-sac of street in mobile home park, 100 feet from Citracado Pkwy.	1:18 p.m.	60.9	81.5	40.3	Traffic on Citracado Pkwy., trash truck
6	Along cul-de-sac of street in mobile home park, 100 feet from Citracado Pkwy.	1:57 p.m.	54.4	71.4	41.9	Traffic on Citracado Pkwy.
7	Along street in mobile home park, 150 feet from Citracado Pkwy.	2:39 p.m.	46.5	60.9	43.0	Traffic on Citracado Pkwy.
8	At Casa de Amigo clubhouse, 12 feet from roadway	3:06 p.m.	66.3	85.2	49.3	Trash truck
9	Along eastbound Johnston Road, 150 feet south of Citracado Pkwy.	3:34 p.m.	51.3	63.2	39.2	Traffic on Citracado Pkwy. and air traffic
10	Adjacent to Escondido Creek upslope west of Citracado Pkwy. terminus	4:09 p.m.	46.2	62.7	37.3	Distant traffic
11	At backyard boundary of property – 2327 Harmony Grove Road, 400 feet from road	4:38 p.m.	45.7	55.9	38.0	Traffic on Harmony Grove Road

*The Site ID corresponds to locations shown in Figure 3.9-1.

All measurements were taken on Wednesday, July 3, 2007, for approximately 20 minutes, which was sufficient time to represent a 1-hour equivalent noise level (L_{eq}).

In addition to measured noise levels, noise patterns or contours can be depicted using noise models. In 1990, noise contours were developed for the City of Escondido, which included the Project area. The proposed Project is located within the 60 dBA Community Noise Equivalent Level (CNEL) contour or greater.



Figure 3.9-1
Noise Monitoring Locations

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The relationship of CNEL to average daytime noise levels is dependent on the proportions of daily traffic that occur in the daytime, evening, and nighttime. For most urban and suburban roadways, CNEL is conservatively assumed to be equal to the peak-hour noise level and 2 dBA greater than the average daytime noise level.

Regulatory Setting

California Environmental Quality Act

Under CEQA, lead agencies are directed to assess conformance to local or other agency noise standards, measure and identify the potentially significant exposure of people to (or generation of) excessive groundborne vibration or noise levels, and measure and identify potentially significant permanent or temporary increases in ambient noise levels.

California Department of Transportation

Caltrans provides vibration level thresholds for architectural and structural damage and human perception thresholds. The proposed Project is not subject to Caltrans requirements; however, for reference, these requirements are included in Appendix G.

California Administrative Code

Title 24 of the California Administrative Code requires that residential structures, other than detached single-family dwellings, be designed to prevent the intrusion of exterior noise so that the interior CNEL, with windows closed, attributable to exterior sources shall not exceed 45 dBA in any habitable room.

Local Standards

City policies and ordinances with respect to noise are included in Chapter 17, Article 12, Noise Abatement and Control, of the Municipal Code (City of Escondido 2004b) and the Noise Element of the City's General Plan (City of Escondido 1990).

City of Escondido Noise Element

The Noise Element of the City's General Plan establishes a number of policies to provide an acceptable noise environment for new noise-sensitive developments within Escondido (City of Escondido 1990). These policies include exterior and interior noise-level guidelines; site compatibility review; site design considerations; the use of noise barriers where applicable; restriction of truck traffic on residential streets; and coordination with other local, regional, state, and federal agencies. The City's noise compatibility guidelines are provided in Table 3.9-2.

**Table 3.9-2
Noise/Land Use Compatibility Guidelines**

Land Use Category	Community Noise Exposure L _{dn} or CNEL, dB						
	55	60	65	70	75	80	85
Residential							
Transient Lodging – Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business, Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable			

Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

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.

New construction or development should generally not be undertaken.

Source: City of Escondido 1990

Noise Policy E.1.1 states “[n]ew projects shall be required to meet acceptable exterior noise level standards as established in the noise and land use compatibility guidelines,” which are presented in Table 3.9-2 of this analysis. As shown in Table 3.9-2, the City’s goal for residential areas is 60 dBA CNEL or less. However, the City does recognize that this goal is not always achievable within the realm of economic and aesthetic feasibility. Thus, Noise Policy E.1.2 states, “This goal should be applied where outdoor use is a major consideration (e.g., back yards and single-family housing developments, and recreation areas in multifamily housing developments). The goal should generally be applied at 10 feet from the backyard property line. However, in certain cases, such as on estate lots where backyards are typically very large, the goal could be applied approximately one-half the distance between the back of the main residential structure and the rear property line. The outdoor standard should not normally be applied to balconies or patios associated with residential uses.” Noise Policy E.1.3 sets noise-level limits for interior noise levels from exterior sources at 45 dBA or less. Noise Policy E.1.4 identifies the Noise Ordinance as the proper regulation for controlling non-traffic-related noise associated with a development, and specifically excludes the noise/land use compatibility guidelines for use in assessing impacts associated with noise generated from a project site to surrounding properties. Noise Policy E.1.4 also states that a proposed project should not increase ambient noise levels by more than 5 dBA, even if the resulting noise level would be below noise-level limits identified in the Noise Ordinance. Noise Policy E.1.5 states that the City will use the Noise Ordinance to control non-traffic-related noise sources. Noise Policy E.1.6 provides site planning methods to reduce potential noise impacts on new developments.

City of Escondido Noise Ordinance

The City has jurisdiction over noise regulation, as stated in the City’s Municipal Code, Chapter 17, Article 12 Noise Abatement and Control (City of Escondido 2004b). Noise-level limits between adjacent properties are governed by Section 17-229. The applicable sound level limits are shown in Table 3.9-3.

Section 17-229(c) allows for the following corrections to the sound level limits in Table 3.9-3:

If the noise is continuous, the L_{eq} for any hour will be represented by any lesser time period within that hour. Noise measurements of a few minutes only will thus suffice to define the noise level.

**Table 3.9-3
Sound Level Limits**

Zone	Time	Applicable Limit 1-Hour Average Sound Level (dBA)
Residential zones	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
Multi-residential zones	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
Light industrial/Industrial park zones	Anytime	70*
General industrial zones	Anytime	75*

*Subject to provisions of Section 17-229 (c)(5).

If the noise is intermittent, the L_{eq} for any hour may be represented by a time period typical of the operating cycle. Measurement should be made of a representative number of noisy/quiet periods. A measurement period of not less than 15 minutes is, however, strongly recommended when dealing with intermittent noise.

In the event that the alleged offensive noise, as judged by the enforcement officer, contains a steady, audible sound such as a whine, screech, or hum, or contains a repetitive impulsive noise such as hammering or riveting, the standard limits set forth in Table 3.9-3 shall be reduced by 10 dB or to the ambient noise level when such noises are not occurring.

If the measured ambient level exceeds that permissible, the allowable noise exposure standard shall be the ambient noise level. The ambient level shall be measured when the alleged noise violations source is not operating.

The sound level limit at a location on a boundary between two land use classifications is the limit applicable to the receiving land use, provided, however, that the 1-hour average sound level limit applicable to extractive industries, including, but not limited to, borrow pits and mines, shall be 75 dB at the property line regardless of the zone where the extractive industry is actually located.

Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise-level limits of this section, measured at or

beyond 6 feet from the boundary of the easement upon which the equipment is located (Ord. No. 90-8, § 2, 3-28-90).

3.9.2 Significance Criteria

The noise effects of a project are considered significant if the project would exceed any of the City of Escondido significance criteria. The effects of a project on noise are considered significant if the proposed project would result in the following:

1. expose persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
2. expose persons to, or generation of, excessive groundborne vibration or groundborne noise levels;
3. cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
4. cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

According to the City of Escondido's General Plan Noise Policy and Noise Ordinance guidelines, a project would cause a significant impact if it results in increased noise levels of 5 dB or greater, or results in increased noise levels that would result in incompatible noise levels. As described in Noise Policy E.1.1 in Section 3.9.1, the City's goal is 60 dBA CNEL for residential areas. In accordance with the City's goal and for CEQA purposes, noise impacts are considered significant when a project contributes readily perceptible noise level increases (+5 dBA) or noise levels exceed 60 dBA CNEL at exterior use areas associated with residential land uses. However, noise levels of 65 dBA CNEL or lower are considered to be conditionally compatible with residential uses as typical construction, with windows closed, can typically provide sufficient noise attenuation to comply with the interior noise level standard.

3.9.3 Impact Analysis

Noise impacts associated with the proposed Project would be related to construction and operation of traffic on the roadway. Construction noise would be related primarily to the use of heavy equipment, construction workers, and materials deliveries. Operation noise would be

limited to traffic noise, as no other long-term noise sources are associated with the proposed Project.

Construction Noise Impact Assessment

For purposes of noise assessment, construction equipment can be considered to operate in two modes: stationary and mobile. Stationary equipment operates in one location for 1 or more days at a time with either a fixed-power operation, such as pumps, generators, and compressors, or a variable noise operation, such as pile drivers, rock drills, and pavement breakers. Mobile equipment moves around the construction site with power applied in a cyclic fashion, such as bulldozers, graders, and loaders (FTA 2006). Noise impacts from stationary equipment are assessed from the center of the equipment, while noise impacts for mobile construction equipment are assessed from the center of the equipment activity or construction site. For roadway construction, noise is assessed from the centerline of the alignment and center of the active work area.

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation (FTA 2006). Typical duty cycles and noise levels generated by representative pieces of equipment are listed in Table 3.9-4.

The proposed Project site would be developed in stages; for the most part, each stage would occur sequentially. For the new portion of the alignment, it is assumed that construction phases would include clearing and grubbing, grading and excavation, trenching, road base installation, and paving. For the portion between West Valley Parkway and Avenida Del Diablo, construction would include roadway scarifying, asphalt breaking and removal, grading, trenching, road base installation, and paving. It is assumed for purposes of this analysis that construction activities would cover a minimum 300-foot linear portion of the roadway each day.

Construction noise would be generated on local roadways by workers commuting to and from the job site and by construction material deliveries. On-site, noise would be generated by construction equipment during site preparation and construction activities. It is estimated that construction activities would require an average of 16 workers per day and an average of 31 truck trips per day for material deliveries. These vehicles would access the Project site via West Valley Parkway from the south and Citracado Parkway from the north. It has been estimated that 66 trips would occur during the AM peak traffic period. This increase in volume

**Table 3.9-4
Typical Maximum Construction Equipment Noise Levels**

Equipment	Noise Level (dBA) at 50 Feet	Typical Duty Cycle
Auger Drill Rig	85	20%
Backhoe	80	40%
Blasting	94	1%
Chain Saw	85	20%
Clam Shovel	93	20%
Compactor (ground)	80	20%
Compressor (air)	80	40%
Concrete Mixer Truck	85	40%
Concrete Pump	82	20%
Concrete Saw	90	20%
Crane (mobile or stationary)	85	20%
Dozer	85	40%
Dump Truck	84	40%
Excavator	85	40%
Front End Loader	80	40%
Generator (25 KVA or less)	70	50%
Generator (more than 25 KVA)	82	50%
Grader	85	40%
Hydra Break Ram	90	10%
Impact Pile Driver (diesel or drop)	95	20%
Insitu Soil Sampling Rig	84	20%
Jackhammer	85	20%
Mounted Impact Hammer (hoe ram)	90	20%
Paver	85	50%
Pneumatic Tools	85	50%
Pumps	77	50%
Rock Drill	85	20%
Scraper	85	40%
Tractor	84	40%
Vacuum Excavator (vac-truck)	85	40%
Vibratory Concrete Mixer	80	20%
Vibratory Pile Driver	95	20%

Source: Thalheimer 2000

KVA = kilovolt amps

and change in vehicular mix would result in a less than 1 dBA L_{eq} increase in noise levels along West Valley Parkway and Citracado Parkway during the AM peak period. A 1 dBA L_{eq} noise level increase is not generally considered a perceivable change in noise level, and would be considered a less-than-significant impact.

Typical heavy construction equipment would include bulldozers, excavators, dump trucks, front-end loaders, graders, and industrial/concrete saws. It is assumed that diesel engines would power

all construction equipment. Peak noise levels measured at a distance of 50 feet from an individual piece of construction equipment can reach as high as 90 dBA (FTA 2006). However, with construction equipment moving around the Project site and pausing for measurements and worker breaks, average hourly noise levels would be 84 L_{eq} at 50 feet, as measured from the center of the construction site or activity. Noise levels from construction activities are typically considered as point sources and would drop off at a rate of 6 dB per doubling of distance over hard sites, such as streets and parking lots. The drop-off rate would increase slightly over soft sites, such as grass fields and open terrain with vegetation. For this analysis, a conservative drop-off rate of 6 dBA per doubling of distance has been used.

As the Project site is currently a roadway or undeveloped land, there are no on-site noise-sensitive receptors. The nearest noise-sensitive receptors, for construction assessment purposes, are the single-family residences located east and west of Citracado Parkway. Additional residences are located along the proposed alignment north of Avenida Del Diablo; however, these residences are at greater distances and the intervening terrain would be considered acoustically soft, increasing the attenuation rate to 7.5 dBA per doubling of distance. The residences located along Citracado Parkway between West Valley Parkway and Avenida Del Diablo are approximately 50 feet from the edge of Citracado Parkway. Considering the linear distance equipment would likely move during various activities, the effective center of construction would be approximately 125 feet from nearby residences. At these distances, short-term construction noise levels from roadway construction are estimated to reach 69 dBA L_{eq} at the residences without shielding. Maximum noise levels at these residences could reach as high as 83 dBA for short periods when equipment is under maximum load and adjacent to the property lines. Maximum construction noise levels at the nearest residences would be heard above the existing noise levels and could create temporary annoyance; however, maximum noise levels would typically last a few minutes, would occur only sporadically, and are not considered significant. While these maximum noise levels do not represent a significant impact, they may be a nuisance to local residences. All other receptors are farther away; thus, noise levels at those locations would be less than noise levels at the identified receptor points.

The City has identified construction noise levels of 75 dBA L_{eq} at exterior locations of residential uses as acceptable during daytime hours. While typical construction would occur between 7:00 a.m. and 6:00 p.m., Monday through Friday, construction might occasionally occur on Saturday between 9:00 a.m. and 5:00 p.m., as allowed by Sections 17-234 and 17-238 of the City's Municipal Code. No construction would occur on Sundays or federal holidays. Thus, construction of the proposed Project would comply with the City's Noise Ordinance. Since construction noise would not exceed 75 dBA L_{eq} at the nearest residence and would comply with

the time limits of the Noise Ordinance, construction of the proposed Project would not result in significant noise impacts to noise-sensitive receptors.

Construction Vibration Impact Assessment

A quantitative assessment of potential vibration impacts from construction activities, such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation, may be conducted using equations as described in detail in Appendix G. Table 3.9-5 shows typical vibration levels for various pieces of construction equipment (FTA 2006).

**Table 3.9-5
Vibration Levels Measured during Construction Activities**

Equipment		PPV	Approximate L_v ¹ VdB
		at 25 Feet (in/sec)	at 25 Feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Hydromill (slurry wall)	Soil	0.008	66
	Rock	0.017	75
Clam Shovel Drop (slurry wall)		0.202	94
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

¹ rms velocity in decibels (VdB) re 1 micro-inch/second

PPV=Peak Particle Velocity

Source: FTA 2006

Although it is possible for vibrations from construction projects to cause building damage, the vibrations from construction activities are almost never of sufficient amplitude to cause more than minor cosmetic damage to buildings (FTA 2006). Groundborne vibration generated by

construction projects is usually highest during pile driving, soil compacting, jackhammering, and demolition-related activities.

The vibration data are provided in Table 3.9-6 and the propagation equations for structural damage and human annoyance indicate that construction equipment vibration levels, with the exception of pile drivers, are well below the threshold of damage at distances ranging beyond 65 feet and below the threshold for vibration perception beyond 80 feet. The nearest sensitive receptors would be the residences along the existing alignment of Citracado Parkway, approximately 50 feet from the nearest point of construction. At this distance, these receptors would be exposed to approximately 0.03 peak particle velocity (ppv) inches per second (in/sec) during grading and scarifying operations. Vibration levels of this magnitude would be perceivable but would be well below the levels required to cause architectural damage; thus, local receptors would not be exposed to substantial vibration during project construction. All other receptors are farther away; thus, vibrations at those locations would be less than at these receptors. Therefore, the proposed Project would not expose local sensitive receptors to significant impacts resulting from groundborne vibrations.

**Table 3.9-6
Vibration Levels Measured during Construction Activities**

Equipment		PPV	Approximate L_v ¹ VdB
		at 25 Feet (in/sec)	at 25 Feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Hydromill (slurry wall)	Soil	0.008	66
	Rock	0.017	75
Clam Shovel Drop (slurry wall)		0.202	94
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

¹rms velocity in decibels (VdB) re 1 micro-inch/second
Source: FTA 2006

Operation Noise Impact Assessment

Noise impacts were assessed using FHWA Traffic Noise Model (TNM), version 2.5, to predict existing and future peak-hour traffic noise levels at specific receptor locations within the Project site (FHWA 2004). Peak-hour traffic volumes in the Project traffic report were evaluated, and the greatest peak-hour volume generally occurs during the PM peak hour; thus, this was used in the noise model. The vehicle mix used in the model was developed from traffic counts taken during the noise measurements. Traffic speeds were taken from SANDAG's Transportation Forecast Information Center website and were assumed to be actual traffic speeds for purposes of modeling (SANDAG 2010). The model outputs are noise levels at the selected receptor points. Receptors evaluated in the model are shown in Figure 3.9-2.

The primary source of noise in the Project area is traffic. Table 3.9-7 presents the existing peak-hour traffic volumes for Citracado Parkway. The traffic noise levels for this Project were estimated using TNM. TNM determines a predicted noise level through a series of adjustments to a reference sound level. These adjustments account for traffic flows, speed, truck mix, varying distances from the roadway, length of exposed roadway, and noise shielding. The long-term Project-related noise analysis is based on traffic projections contained in the Project traffic report (VRPA 2011). Based on available traffic data, the CNEL is estimated to be 1 dBA higher than the loudest hour noise level calculated by TNM. Modeled traffic noise levels are presented in Table 3.9-8.

Noise levels under the 2010 existing condition range from 38 to 63 dBA CNEL. Under existing conditions, noise levels equal or exceed the City's 60 dBA CNEL goal for residential uses at four receptors. No receptors are exposed to noise levels in excess of 65 dBA CNEL.

Year 2014

Under the No Build alternative, noise levels in 2014 would range from 39 to 69 dBA CNEL. Seventeen receptors would be exposed to noise levels of greater than 60 dBA CNEL and two receptors would be exposed to noise levels in excess of 65 dBA CNEL. Noise-level increase under the No Build alternative in 2014 would range from 0 to 13 dBA over existing noise levels, and 18 receptors would be exposed to a noise-level increase of 5 dBA or greater. Increased traffic and related noise levels would be the result of ambient growth of traffic in the Project area from planned projects, such as the Harmony Grove Village Development.

**Table 3.9-7
Citracado Parkway – PM Peak-Hour Traffic Volumes**

Street/Segment	Existing 2010	2014 No Build	2014 Build	2030 No Build	2030 Build
Citracado					
North of Andreasen Drive	109	670	3,296	664	2,358
Andreasen Drive to Harmony Grove Road/Kauana Loa Drive	0	0	2,973	0	2,460
Harmony Grove Road/Kauana Loa Drive to Lariat Drive	0	0	2,303	0	2,063
Lariat Drive to Avenida Del Diablo	0	297	2,598	665	2,572
Avenida Del Diablo to Driveway	238	801	2,883	1,851	2,538
Driveway to Johnston Road	238	801	2,883	1,851	2,538
Johnston Road to West Valley Parkway	315	887	2,733	1,922	2,743
South of West Valley Parkway	124	246	538	1,898	2,254

Source: VRPA 2011

**Table 3.9-8
Predicted Traffic Noise Impacts**

Receiver ID	Location or Address	Type of Development	Predicted Existing Noise Level (CNEL)	Future 2014					Future 2030				
				No Build		Build			No Build		Build		
				Predicted Noise Level (CNEL)	Change Less Existing (CNEL)	Predicted Noise Level (CNEL)	Change Less Existing (CNEL)	Change Less No Build (CNEL)	Predicted Noise Level (CNEL)	Change Less Existing (CNEL)	Predicted Noise Level (CNEL)	Change Less Existing (CNEL)	Change Less No Build (CNEL)
R1	1758 Macero Street	Single-family Residential	57	59	2	60	3	1	64	7	64	7	0
R2	1773 Macero Street	Single-family Residential	63	64	1	65	2	1	66	3	66	3	0
R3	2126 Fantero Avenue	Single-family Residential	56	58	2	58	2	0	61	5	62	6	1
R4	2142 Fantero Avenue	Single-family Residential	60	62	2	62	2	0	65	5	65	5	0
R5	1758 South Mammoth Place	Single-family Residential	61	64	3	68	7	4	67	6	67	6	0
R6	Escondido Views, 2400 West Valley Parkway	Mobile Home	58	61	3	65	7	4	64	6	63	5	-1
R7	2160 Johnston Road	Single-family Residential	57	61	4	63	6	2	64	7	62	5	-2
R8	1763 South Mammoth Place	Single-family Residential	58	63	5	66	8	3	66	8	66	8	0
R9	2142 Yankee Court	Single-family Residential	59	62	3	66	7	4	66	7	65	6	-1
R10	2159 Johnston Road	Single-family Residential	54	61	7	64	10	3	66	12	65	11	-1
R11	Casa De Amigos Mobile Home Estates, 1751 Citracado Parkway	Mobile Home	55	60	5	59	4	-1	64	9	63	8	-1
R12	Casa De Amigos Mobile Home Estates,	Mobile Home	51	55	4	59	8	4	59	8	58	7	-1
R13	Casa De Amigos Mobile Home Estates	Mobile Home	50	55	5	58	8	3	58	8	57	7	-1
R14	Casa De Amigos Mobile Home Estates	Mobile Home	57	62	5	66	9	4	66	9	66	9	0
R15	2156 North Mammoth Place	Single-family Residential	56	61	5	66	10	5	65	9	65	9	0
R16	Mountain Shadow Mobile Home Park, Tennis Court	Mobile Home	61	67	6	71	10	4	70	9	70	9	0
R17	Casa De Amigos Mobile Home Estates,	Mobile Home	51	56	5	60	9	4	59	8	60	9	1
R18	Mountain Shadow Mobile Home Park	Mobile Home	56	69	13	65	9	-4	66	10	65	9	-1
R19	Casa De Amigos Mobile Home Estates	Mobile Home	57	62	5	67	10	5	66	9	67	10	1
R20	Mountain Shadow Mobile Home Park	Mobile Home	57	62	5	66	9	4	66	9	66	9	0
R21	Casa De Amigos Mobile Home Estates	Mobile Home	52	57	5	62	10	5	61	9	62	10	1
R22	Casa De Amigos Mobile Home Estates	Mobile Home	51	56	5	62	11	6	60	9	62	11	2
R23	Mountain Shadow Mobile Home Park	Mobile Home	54	59	5	65	11	6	63	9	64	10	1
R24	Casa De Amigos Mobile Home Estates	Mobile Home	58	59	1	65	7	6	62	4	63	5	1

Receiver ID	Location or Address	Type of Development	Predicted Existing Noise Level (CNEL)	Future 2014					Future 2030				
				No Build		Build			No Build		Build		
				Predicted Noise Level (CNEL)	Change Less Existing (CNEL)	Predicted Noise Level (CNEL)	Change Less Existing (CNEL)	Change Less No Build (CNEL)	Predicted Noise Level (CNEL)	Change Less Existing (CNEL)	Predicted Noise Level (CNEL)	Change Less Existing (CNEL)	Change Less No Build (CNEL)
R25	Mountain Shadow Mobile Home Park	Mobile Home	55	60	5	65	10	5	64	9	65	10	1
R26	Casa De Amigos Mobile Home Estates	Mobile Home	56	61	5	62	6	1	64	8	61	5	-3
R27	Mountain Shadow Mobile Home Park	Mobile Home	57	61	4	67	10	6	65	8	67	10	2
R28	Mountain Shadow Mobile Home Park	Mobile Home	56	60	4	66	10	6	63	7	65	9	2
R29	Casa De Amigos Mobile Home Estates	Mobile Home	57	62	5	63	6	1	65	8	61	4	-4
R30	Mountain Shadow Mobile Home Park	Mobile Home	57	57	0	64	7	7	62	5	65	8	3
R31	Casa De Amigos Mobile Home Estates	Mobile Home	53	56	3	64	11	8	59	6	62	9	3
R32	Casa De Amigos Mobile Home Estates	Mobile Home	51	56	5	60	9	4	60	9	59	8	-1
R33	2343 Avenida Del Diablo	Single-family Residential	57	57	0	58	1	1	57	0	58	1	1
R34	2368 Avenida Del Diablo	Single-family Residential	39	42	3	63	24	21	45	6	63	24	18
R35	2358 Avenida Del Diablo	Single-family Residential	38	39	1	57	19	18	42	4	57	19	15
R36	2327 Harmony Grove Road	Single-family Residential	59	59	0	63	4	4	58	-1	62	3	4
R37	2207 Harmony Grove Road	Single-family Residential	44	45	1	61	17	16	46	2	58	14	12
R38	1277 Pacific Oaks Place	Commercial	45	45	0	54	9	9	46	1	51	6	5
R39	2208 Harmony Grove Road	Commercial	53	54	1	56	3	2	54	1	54	1	0
R40	1040 Andreasen Drive	Commercial	45	46	1	55	10	9	46	1	52	7	6

Note: **Bolded** numbers represent potential impacts due to absolute noise levels (i.e. greater than 60 dBA CNEL) or substantial increase (i.e. 5 dBA or greater)
 All noise levels were calculated as loudest hour and adjusted upward 1 dBA to reflect the CNEL



Source: DigitalGlobe 2008.



Figure 3.9-2
Modeled Noise Receptors

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With implementation of the proposed Project, 2014 noise levels would range from 54 to 71 dBA CNEL; 28 receptors would be exposed to noise levels greater than 60 dBA CNEL and 10 receptors would be exposed to noise levels greater than 65 dBA CNEL. Noise-level increase under the Build Condition in 2014 would range from -4 to 21 dBA over the projected 2014 No Build and 1 to 24 dBA over existing 2010 noise levels; 16 receptors would be exposed to a noise-level increase of 5 dBA or greater when comparing the 2014 Build and No Build Conditions.

Year 2030

Under the No Build Condition, noise levels in 2030 would range from 42 to 70 dBA CNEL; 26 receptors would be exposed to noise levels of greater than 60 dBA CNEL and 10 receptors would be exposed to noise levels greater than 65 dBA CNEL. Under the No Build Condition in 2030, noise-level increase would range from -1 to 12 dBA over existing noise levels and 31 receptors would be exposed to a noise-level increase of 5 dBA or greater.

With implementation of the proposed Project, 2030 noise levels would range from 51 to 70 dBA CNEL. Thirty receptors would be exposed to noise levels of greater than 60 dBA CNEL and eight receptors would be exposed to noise levels in excess of 65 dBA CNEL. Noise-level increase under the proposed Project in 2030 would range from -4 to 18 over the projected 2030 No Build and 1 to 24 dBA over existing 2010 noise levels and five receptors would be exposed to a noise-level increases of 5 dBA or greater when comparing the 2030 Build and No Build. Based on the predicted noise levels, there would be fewer impacts under the 2030 Build condition than in 2014 due to the projected redistribution of local traffic (VRPA 2011).

The majority of the impacted receptors are residences located along Citracado Parkway south of Avenida Del Diablo. Primarily, these residences are located in the Casa De Amigos Mobile Home Estates and the Mountain Shadow Mobile Home Park and share common areas. The residences fronting Yankee Court, Mammoth Place, Fantero Avenue, and Macero Street are single-family residences and do not share a common area for recreation. Similarly, the residences along the proposed extension are single-family residences. These are located on large lots as compared to those along the existing alignment. Air conditioners or mechanical venting was observed at all of the residences visited during field surveys and it is assumed that all residences in the Project area are equipped with air conditioners or mechanical venting and can keep windows closed when desired.

The City's goal is 60 dBA CNEL for residential areas; thus, for CEQA purposes, noise levels greater than 60 dBA CNEL are considered a significant noise impact. Additionally, noise levels at the majority of residences would increase by 5 dBA CNEL or greater, which is considered a substantial increase in noise levels and would be considered a significant noise impact. Thus, the proposed Project would cause a significant impact where the predicted noise level would exceed 60 dBA CNEL and noise level increases would equal or exceed 5 dBA under the 2014 Build conditions.

As shown in Table 3.9-8, noise levels at R1, R2, R4 through R10, R14 through R32, R34, R36, and R37 would equal or exceed 60 dBA CNEL, and noise levels would increase by 5 dBA CNEL or more at R15, R19, R21 through R25, R27, R28, R30, R31, R34, R35, R37, R38, and R40. However, R38 and R40 are not noise-sensitive receptors. Therefore, the proposed project would cause a significant impact to R1 through R10, R14 through R16, R18 through R31, and R34 through R37 (NOISE-1). As many of these receptors represent multiple residences, or are located in-line with several other residences, some sound walls would provide attenuation to a larger area than the single receptor point.

Under 2030 conditions, all receptors except R33 and R39 would be exposed to noise levels in excess of 60 dBA or to noise increases over existing 2010 conditions of greater than 5 dBA. While impacts would occur when comparing the 2030 conditions to the 2010 conditions, traffic-related noise levels between West Valley Parkway and Andreasen Drive would be lower due to reduced traffic volumes between the 2014 Build and the 2030 Build conditions. The reduced traffic volumes would be the result of future improvements in the local and regional transportation network (VRPA 2011). The Project would result in a cumulatively considerable substantial increase in noise levels, i.e., an increase greater than 1 dBA with Project implementation, at receptors R22, R27, R28, R30, R31, R34, R35, R36, R37, R38, and R40. It is not practical to reduce noise levels to ambient noise levels; thus, the goal would be to ensure noise levels at these locations are compatible with the land uses. Based on the noise levels presented in Table 3.9-8, R22, R27, R28, R30, R31, R34 and R36 would be exposed to a substantial increase in noise levels and a noise level in excess of 60 dBA CNEL. Therefore, the proposed Project would cause a significant impact at R22, R27, R28, R30, R31, R34, and R36 (NOISE-1).

The proposed Project also involves annexation of three parcels to the City. These parcels would be rezoned consistent with the City's General Plan. Two parcels would be rezoned consistent with their existing County Zoning (Rural Residential to Estate) and one parcel (APN # 23504015) would be rezoned to Industrial Park from Rural Residential. Noise analysis considers

only existing structures and land uses when analyzing impacts of the proposed Project. Any future industrial park development on that parcel would be required to comply with CEQA and the City's Noise Policies when considering a proposed industrial development adjacent to existing rural residential and other land uses. When considering projected traffic noise levels from the Citracado Parkway extension and a proposed industrial land use zone, no land use conflict exists, since industrial land uses are subject to higher noise level standards than rural residential, as shown in Table 3.9-2.

Off-Site Traffic Noise

Off-site traffic impacts were assessed based on ADT volumes presented in the traffic study (VRPA 2011) for the following roadway segments: Citracado north of Andreasen and south of Valley Parkway, Harmony Grove, Valley Parkway south of Citracado Parkway and north of Citracado Parkway, Avenida Del Diablo, and Kauana Loa Drive. The 2014 and 2030 Build versus No Build conditions along these segments were analyzed for potential noise impacts. This analysis indicates increases of less than 5 dBA CNEL along all affected off-site roadways with Project implementation, with the exception of Citracado Parkway north of Andreasen Drive where noise levels would increase by approximately 7 dBA. The existing land uses along Citracado Parkway north of Andreasen Drive are industrial, and no noise-sensitive land uses exist. Thus, while this 7 dBA CNEL increase would represent a substantial increase in noise levels, impacts related to noise along this segment are considered less than significant because no noise-sensitive land uses are present.

3.9.4 Mitigation Measures

Construction

No construction-related noise impacts to sensitive receptors were determined in the preceding analysis. As a result, construction-related noise impacts would be less than significant.

Operation

Based on the preceding analysis, the proposed Project would result in potentially significant impacts at receptors located along the existing and proposed alignment. Therefore, mitigation measures are required to reduce predicted noise levels. Locations of proposed sound walls are shown in Figure 3.9-3. The proposed sound walls along the existing segment of Citracado Parkway are located at the same location as existing walls/fences along the alignment or at the

edge of the future right-of-way. In addition, three walls are proposed on private property at R34, R35, and R37. Table 3.9-9 presents the noise-level reduction associated with various wall heights.

Initially, all mitigation was designed to reduce noise levels to 60 dBA CNEL or less at every receptor; however, noise level reductions of this nature would require wall heights equal to or greater than 14 feet for many locations. Walls of this height would result in additional environmental impacts, including impacts associated with construction of more substantial footings, shading/lighting impacts, visual impacts, and traffic safety impacts due to limited sight distances. Noise levels of 65 dBA CNEL can be compatible with residential uses as typical construction, with windows closed, can provide sufficient noise attenuation to comply with the interior noise level standard of 45 dBA CNEL (FHWA 1995). Therefore, mitigation has been designed to reduce noise levels to 65 dBA CNEL where predicted noise levels would exceed 65 dBA CNEL or where noise level increases would equal or exceed 5 dBA under 2014 Build conditions as compared to 2014 No Build conditions. Where noise level increases would equal or exceed 5 dBA under 2014 Build conditions as compared to 2014 No Build conditions, mitigation was designed to achieve a noticeable attenuation, defined as 3 dBA, regardless of absolute noise level. See Table 3.9-10 for a summary of all proposed soundwall lengths in the proposed Project area.

MM-NOISE-1: Sound Walls

Soundwalls shall be constructed as shown in Figure 3.9-3. To reduce noise levels to 65 dBA CNEL or less, soundwall 1 (SW1) and soundwall 2 (SW2) shall be 10 feet in height and soundwalls 3–5 (SW3–SW5) shall be 8 feet in height. Additionally, to achieve a noticeable reduction (i.e., 3 dBA) an 8-foot-high soundwall (SW6) shall be constructed for R24 and R31, 6-foot-high soundwalls (SW7+SW8) shall be constructed for R34 and R35, and a 12-foot-high soundwall shall be constructed for R37 (SW9).

Mitigation was designed for R36 due to a cumulatively considerable impact but was determined infeasible, as no configuration could achieve a 3 dBA reduction due to the design and access requirements of the lot.

While the proposed project would result in a substantial permanent increase in noise levels, with inclusion of the modeled walls in the proposed project at the specified heights, the proposed Project would not expose local noise-sensitive receptors to noise levels in excess of 65 dBA CNEL and would not exceed interior noise level standards.



Legend

-  Soundwalls
-  Municipal Boundaries

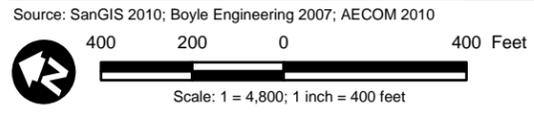


Figure 3.9-3
Soundwall Locations

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Given the City's goal of 60 dBA, even with the implementations of proposed mitigation, the proposed project would result in a significant unavoidable impact at receptors R2, R4 through R10, R14 through R16, R18 through R20, R23, R24, R26 through R29, and R36, as noise levels would continue to exceed 60 dBA CNEL.

As the walls for R34, R35, and R37 are located on private property, permission would be required by the property owners to construct the soundwalls. Thus, it cannot be guaranteed that the soundwalls for these locations can be built. If the identified soundwalls cannot be built, impacts at these receptors would be significant and unavoidable.

**Table 3.9-9
Predicted Noise Level Reductions for Sound Walls at Various Heights**

Soundwall	Benefited Receptors	2014 Noise Level, w/o Wall dBA L _{eq}	Wall Height = 6 Feet		Wall Height = 8 Feet		Wall Height = 10 Feet		Wall Height = 12 Feet		Wall Height = 14 Feet	
			Noise Level dBA L _{eq}	Reduction dBA	Noise Level dBA L _{eq}	Reduction dBA	Noise Level dBA L _{eq}	Reduction dBA	Noise Level dBA L _{eq}	Reduction dBA	Noise Level dBA L _{eq}	Reduction dBA
SW1	R5	68	EC	NA	66	-2	63	-5	61	-7	60	-8
	R8	66	EC	NA	64	-2	62	-4	61	-5	60	-6
SW2	R9	66	EC	NA	63	-3	61	-5	60	-6	59	-7
	R15	66	EC	NA	65	-1	64	-2	63	-3	62	-4
SW3	R11	59	EC	NA	57	-2	55	-4	54	-5	53	-6
	R12	59	EC	NA	58	-1	58	-1	56	-3	56	-3
	R13	58	EC	NA	57	-1	57	-1	56	-2	56	-2
	R14	66	EC	NA	63	-3	61	-5	60	-6	58	-8
	R17	60	EC	NA	59	-1	57	-3	56	-4	58	-2
	R19	67	EC	NA	63	-4	60	-7	59	-8	58	-9
	R21	62	EC	NA	60	-2	59	-3	58	-4	57	-5
SW4	R22	62	EC	NA	60	-2	60	-2	60	-2	60	-2
	R16	71	66	-5	65	-6	63	-8	60	-11	58	-13
	R18	65	EC	NA	62	-3	59	-6	57	-8	56	-9
SW5	R20	66	EC	NA	63	-3	61	-5	59	-7	58	-8
	R23	65	EC	NA	62	-3	61	-4	60	-5	59	-6
	R25	65	EC	NA	62	-3	60	-5	59	-6	58	-7
	R27	67	EC	NA	63	-4	60	-7	59	-8	58	-9
	R28	66	EC	NA	63	-3	61	-5	60	-6	59	-7
SW6	R30	65	EC	NA	58	-7	57	-8	55	-10	54	-11
	R24	65	EC	NA	62	-3	60	-5	59	-6	58	-7
	R26	62	EC	NA	61	-1	60	-2	59	-3	58	-4
	R29	63	EC	NA	62	-1	60	-3	59	-4	59	-4
	R31	64	EC	NA	60	-4	58	-6	57	-7	56	-8
SW7	R32	60	EC	NA	60	0	59	-1	57	-3	56	-4
	R34	63	57	-6	55	-8	53	-10	52	-11	51	-12
SW8	R35	57	51	-6	50	-7	49	-8	49	-8	48	-9
SW9	R37	61	61	0	60	-1	59	-2	58	-3	57	-4

Notes: EC = Existing Condition, NA = Not Applicable

Bold data indicate feasible noise abatement (i.e., a 5 dBA or greater reduction).

Shaded column represents proposed wall height.

**Table 3.9-10
Summary of Soundwall Lengths**

Soundwall	Affected Receptors	Length (Feet)
SW1	R5, R8	420
SW2	R9, R15	380
SW3	R11-14, R17, R19, R21, R22	1,005
SW4	R16, R18, R20	1,200
SW5	R23, R25, R27, R28, R30	815
SW6	R24, R26, R29, R31, R32	935
SW7	R34	135
SW8	R35	150
SW9	R37	140

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3.10 TRAFFIC/CIRCULATION

This section analyzes the existing traffic environment and forecasts future traffic levels both with and without construction of the proposed Project. The analysis is based primarily on the *Citracado Parkway Extension Traffic Technical Report* prepared for the City by VRPA Technologies in June 2011 (VRPA 2011) and provided in Appendix H.

The proposed Project would require construction within existing roadways and intersections. Additionally, construction traffic would use existing local roadways to access construction locations. Operation of the proposed Project would introduce new through movements at existing intersections and would also add capacity to the existing system via a new Major Road connection. Seven key intersections and associated roadway segments affected by the proposed Project were evaluated in the Traffic Technical Report. This discussion also examines a broader area where the circulation network in southwestern Escondido influences existing and projected traffic distribution near the proposed Project. However, adverse traffic impacts resulting from the proposed Project are not anticipated to occur outside the study area for the Traffic Technical Report (VRPA 2011).

3.10.1 Existing Conditions

The following discussion describes the roadway segments and intersections that would be affected during construction and operation of the Citracado Parkway Extension Project.

Existing traffic conditions at the seven intersections were analyzed using the Highway Capacity Manual (Transportation Research Board 2010). Peak-hour (AM and PM) intersection operations are described in terms of level of service (LOS), ranging from LOS A (light traffic, minimal delays) to LOS F (significant traffic congestion, long delays at intersections). The City established LOS “C” as the community’s goal for acceptable LOS. However, the City’s criteria for determining significant traffic impacts indicate a significant impact occurs when LOS falls below LOS D. Therefore, study area intersections operating at existing LOS A through LOS D were considered to be uncongested. The goal of this traffic study was to analyze the impacts of the proposed extension of Citracado Parkway based on these existing levels of operation. Table 3.10-1 lists the intersections studied and current LOS.

Projected Traffic Conditions

Forecasts of No Build conditions were conducted to determine the future baseline conditions on the adjacent street system if the Citracado Parkway extension is not built.

**Table 3.10-1
2014 and 2030 Project Impacts on Intersection**

Intersection	Existing		2014 No Build		2014 Build		2030 No Build		2030 Build		Significant Impact?
	LOS AM/PM	Avg. Delay AM/PM (sec)	LOS AM/PM	Avg. Delay AM/PM (sec)	LOS AM/PM	Avg. Delay AM/PM (sec)	LOS AM/PM	Avg. Delay AM/PM (sec)	Build LOS AM/PM	Avg. Delay AM/PM (sec)	
Andreasen Drive and Citracado Parkway	#		#	#	D/D	42.1/38.9	#	#	D/D	38.2/42.9	No
Kauana Loa Drive and Harmony Grove Road	B/B	10.1/12.0	B/B	10.1/12.0	B/D	13.7/>26.5	C/B	15.9/14.8	A/B	9.8/10.7	No
Avenida Del Diablo and Citracado Parkway	B/B	12.0/11.1	B/B	11.6/10.5	C/C	25.0/17.8	C/D	18.3/34.1	C/*	17.0/*	No
Mountain Shadows Mobile Home Park entrance and Citracado Parkway	B/B	10.2/10.7	C/C	19.1/21.6	D/D	35.4/43.8	F/F	>80.0/>80.0	C/D	32.4/36.6	No
Johnston Road and Citracado Parkway	B/B	12.5/12.1	D/D	29.1/26.2	B/C	13.6/17.8	F/F	>80.0/>80.0	B/C	14.1/15.4	No
West Valley Parkway and Citracado Parkway	C/C	29.8/28.7	D/D	42.3/49.3	F/F	>80.0/>80.0	D/F	53.4/>80.0	D/D	45.4/53.2	Yes
Del Dios Highway and Via Rancho Parkway	C/E	32.9/57.0	D/F	35.1/>80.0	F/F	>80.0/>80.0(1)	F/F	>80.0/>80.0	F/F	>80.0/>80.0(1)	Yes**

#Existing intersection operates in free-flow condition.

*Traffic signal not warranted. LOS D assumed.

**The increase in vehicle delay at this intersection caused by the Project is significant, even though the intersection would operate at LOS F for the 2014 No Build PM scenario and the 2030 No Build scenario, since traffic at this intersection may result in a greater than 2-second delay.

Source: VRPA 2011

2014 No Build

The year 2014 No Build lane geometry was assumed to be the same for those intersections that already exist in the study area, with the exception that it was assumed that Lariat Drive would be extended to Citracado Parkway and that the Citracado Parkway/Avenida Del Diablo intersection would be improved in connection with the development of the Harmony Grove Village Project. Traffic conditions for the year 2014 were determined using a growth factor of 2% and assumed completion of several projects near the proposed Project: Palomar Medical Center West, ERTC, the Harmony Grove Village Project, and Citracado High School. Table 3.10-1 shows the projected year 2014 baseline operating conditions for the study area intersections.

2030 No Build

The year 2030 No Build lane geometry was assumed to be the same as that projected for the 2014 No Build scenario, with the exception that Citracado Parkway would be extended from West Valley Parkway to I-15 and that one lane in each direction of travel would be added to West Valley Parkway/Del Dios Highway from Citracado Parkway to Via Rancho Parkway. Traffic conditions for the year 2030 were determined based on year 2030 traffic forecasts from the traffic forecasting model prepared by SANDAG, which does not consider the proposed Project improvements for Citracado Parkway from Andreasen Drive to West Valley Parkway. The model run obtained does include the four developments mentioned for No Build 2014 conditions above. Peak-hour turning movements were calculated through a post-processing methodology based on existing turning movements, existing ADT values, and future ADT values. Table 3.10-1 shows the projected year 2030 baseline operating conditions for the study area intersections.

In addition to intersections, roadway segments were analyzed with regard to the Project's impact on the ADT per segment. Similar to the intersection analysis, street segment operations are described in terms of LOS, ranging from LOS A (light traffic moving at posted speed limits, minimal restrictions on maneuverability due to traffic) to LOS F (significant congestion with traffic moving slower than posted speed limits, restrictions on maneuverability due to traffic). LOS D is considered an acceptable level of traffic congestion, and this level was used as the standard for evaluation of the study area street segments. Therefore, study area street segments operating at existing LOS A through LOS D were considered uncongested. The goal of this traffic study was to analyze the impacts of the proposed extension of Citracado Parkway based on these existing levels of operation. Table 3.10-2 lists the street segments studied and current average daily LOS.

**Table 3.10-2
Existing, 2014, and 2030 Project Impacts on Street Segments**

Segment	Existing LOS Daily Average	2014 No Build LOS Daily Average	2014 Build LOS Daily Average	2030 No Build LOS Daily Average	2030 Build LOS Daily Average	Significant Impact?
Citracado Parkway						
North of Andreasen Drive	A	A	C	A	B	No
Avenida Del Diablo to Mountain Shadows Mobile Home Park entrance	A	A	C	B	C	No
Mountain Shadows Mobile Home Park entrance to Johnston Road	A	A	C	B	C	No
Johnston Road to Valley Parkway	A	A	C	B	C	No
South of Valley Parkway	A	A	A	A	B	No
Andreasen Drive						
East of Citracado Parkway	A	B	A	C	C	No
Kauana Loa Drive						
West of Harmony Grove Road	A	A	B	A	A	No
Harmony Grove Road						
South of Lariat Drive	B	B	D	C	C	No
Lariat Drive						
West of Citracado Parkway	#	C	C	F	D	No
Avenida Del Diablo						
East of Citracado Parkway	A	A	A	A	B	No
Valley Parkway						
East of Citracado Parkway	B	C	C	B	B	No
West of Citracado Parkway	F	F	F	D	D	Yes*
Via Rancho Parkway						
South of Del Dios Highway	D	D	E	B	B	Yes

#Roadway segment does not exist in this scenario.

*The increase in ADT on this segment caused by the Project is significant, even though the segment would operate at LOS F for the 2014 No Build scenario.

Source: VRPA 2011

Regulatory Setting

The City's General Plan Circulation Element sets roadway operation standards that should be maintained to achieve an efficient transportation network. The City policies address street network operations and roadway improvements needed due to development. The proposed improvements for Citracado Parkway are examined in this section for consistency with the City's policies concerning these issue areas.

The new transportation link would add capacity to the system while also changing the local travel patterns. This would affect street network operations. Specifically, traffic congestion could decrease in some areas while increasing in others. The City's General Plan Circulation Policy D2.3 states:

The City shall establish level of service "C" as the community's goal for acceptable level of service. Level of service "C" represents stable traffic flow which is at the beginning range of conditions where individual users become significantly affected by the interaction of others in the traffic stream. Due to physical design characteristics, environmental resource considerations, existing development, freeway interchange impacts and incomplete system improvements, level of service "C" may not be feasible in all areas at all times. However, level of service "C" should be pursued in the ultimate implementation of the circulation system.

The policy above allows some flexibility in traffic conditions deviating from the desired LOS. The City's criteria for determining significant traffic impacts, listed below in Section 3.10.2, indicates a significant impact occurs when LOS falls below LOS D.

In addition to the operating standards, the City's goal is to encourage orderly development of a street system designed to serve the existing and proposed communities. Developments near the proposed Project warrant transportation improvements. The General Plan Circulation Policy D3.3 states:

The City should give high priority to funding capital improvement projects which complete links on the circulation system, relieve existing congestion in the urbanized tier, correct unsafe conditions on existing streets, or improve the regional circulation system.

In the Project vicinity there are County of San Diego roads that may be affected by the proposed Project. Therefore, policies within the County General Plan (County of San Diego 1991) should be considered. The Public Facilities Element of the County General Plan, Policy 1.1, states:

New development shall provide needed roadway expansion and improvements on-site to meet the demand created by the development, and to maintain a Level of Service "C" on Circulation Element Roads during peak traffic hours. New development shall provide off-site improvements designed to contribute to the overall achievement of the Level of Service "D" on Circulation Element Roads.

The City and County policies above offer guidance for traffic impact analysis, and these policies are reflected in the City's adopted significance criteria.

3.10.2 Significance Criteria

The effects of a project on traffic are considered significant if the project would violate any of the City's significance criteria. The proposed Project would result in a significant traffic impact if it would do the following:

1. Cause the LOS of a circulation element street to fall below LOS D and/or add more than 200 ADT to a circulation element street with an LOS below LOS D yet above LOS F.
2. Exceed, either individually or cumulatively, an LOS standard established by the county congestion management agency for designated roads and highways;
3. Result in a change of air traffic patterns, including either an increase in traffic levels or in a location that results in substantial safety risks or increased hazards due to a design feature; or
4. Result in inadequate emergency access or parking capacity, or conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks), and
5. Result in a significant delay (i.e., cause an increase of more than 2 seconds) at a failing intersection. An intersection is considered to be failing if operating at LOS E or F.

3.10.3 Impact Analysis

The proposed Project should be analyzed with respect to the first, second, and fourth significance criteria. The third criterion does not apply to this Project. This section assesses the first and second criteria. The emergency access component of the fourth criterion is addressed in Section 3.8, Municipal Services/Utilities.

The Traffic Technical Report analyzed the existing (year 2010) and projected (year 2014 and year 2030) traffic environment for *without project* (No Build) conditions within the vicinity of the proposed roadway extension. The Project's potential traffic impacts are assessed below by comparing the future *with project* (Build) conditions to the future No Build conditions. The following scenarios were analyzed: 2014 Build and 2030 Build. For assessing project impacts,

the future 2014 Build scenario represents a worst-case assessment of potential impacts. The 2010 Build scenario was considered but would have fewer traffic impacts than the 2014 Build assessment and is therefore not discussed further within this section.

Operation Impacts

The proposed Project is anticipated to be open to traffic by 2014 and would thereafter add roadway capacity and route choices for motorists traveling within southwestern Escondido. This transportation facility would modify the operations of the study area intersections from their existing condition. The discussion below summarizes the potential impacts to intersection and street segment operations due to the proposed Project.

2014 Build

Analysis of 2014 Build conditions was conducted to determine the impacts of the proposed Citracado Parkway extension on study area intersections. The 2014 Build conditions lane geometry was assumed to be the same as the 2014 No Build geometry, except for the addition of the proposed Project. Traffic conditions for year 2014 were determined using a linear interpolation of the SANDAG 2030 traffic forecasting model that factored into intersection turning movement calculations. In addition, traffic generated from proposed projects (Palomar Medical Center West, ERTC, the Harmony Grove Village Project, and Citracado High School) were factored into the projected traffic conditions.

2030 Build

Analysis of 2030 Build conditions was conducted to determine the impacts of the proposed Citracado Parkway extension on study area intersections. The 2030 Build conditions lane geometry was assumed to be the same as the 2014 Build geometry, except for the assumed construction of one lane in each direction of travel on West Valley Parkway/Del Dios Highway from Citracado Parkway to Via Rancho Parkway. Traffic conditions for year 2030 were determined using a linear interpolation of the SANDAG 2030 traffic forecasting model that factored into intersection turning movement calculations. Traffic generated from proposed projects included in the 2014 Build analysis (Palomar Medical Center West, ERTC, the Harmony Grove Village Project, and Citracado High School) were *not* factored into the projected 2030 Build traffic conditions. A different methodology was used to project future traffic levels for year 2030, based on regional modeling, which did not require discrete trip generation data to be used from cumulative projects. However, trips generated from the proposed 17.48-acre

business lot development located east of Citracado Parkway and south of Harmony Grove Road were factored in the 2030 Build traffic conditions. This development was not accurately included in the SANDAG 2030 traffic forecasting model and therefore was factored into the 2030 Build conditions for project analysis using a trip generation table from SANDAG (VRPA 2011). Tables 3.10-1 and 3.10-2 show the year 2014 and year 2030 impacts on intersections and street segments affected by the Project.

Summary of Adverse Impacts due to Project Operations

The proposed Project would result in the following significant impacts to intersection operations:

Inadequate LOS (Criterion 1 and Criterion 5)

For the year 2014 forecast scenario, the proposed Project would have a significant adverse impact on the operations of the intersection at Citracado Parkway and West Valley Parkway. The Traffic Technical Report indicates the LOS at this intersection would decline from LOS D to LOS F with Project implementation. For the year 2030 PM forecast scenario, improvements to the adjacent circulation network (specifically, linking Citracado Parkway from West Valley Parkway to I-15) would improve operations at this intersection from LOS F to LOS D (TR-1).

Inadequate LOS (Criterion 2 and Criterion 5)

For the year 2014 and year 2030 forecast scenarios, the proposed Project would have a significant adverse impact on the operations of the intersection at Del Dios Highway and Via Rancho Parkway. The Traffic Technical Report indicates the year 2014 and year 2030 LOS at this intersection would be LOS F with Project implementation. The proposed Project would reduce the AM LOS value from LOS D to LOS F, and would also cause an incremental contribution to PM traffic volumes at the intersection that would result in a significant increase in motorist delay (greater than 2 seconds) compared to the no project condition. The impact to this intersection, for both the 2014 year and 2030 year scenarios, would result from traffic using the Citracado Parkway Extension to access the ERTC. Traffic sources would be I-15 via Via Rancho Parkway, and Del Dios Highway via the communities to the west including Rancho Santa Fe and Fairbanks Ranch (TR-2).

Inadequate LOS (Criterion 1 and Criterion 2)

For the 2014 forecast scenarios, the proposed Project would have a significant adverse impact on the operations of the Via Rancho Parkway street segment south of Del Dios Highway. The Traffic Technical Report indicates that the average daily LOS for this segment would decline from LOS D to LOS E with Project implementation (TR-3).

For the 2014 forecast scenarios, the proposed Project would have a significant adverse impact on the operations of the Valley Parkway/Del Dios Highway (where Del Dios Highway begins within the County limits) segment between Citracado Parkway and Via Rancho Parkway. The Traffic Technical Report indicates that the average daily LOS for this segment would be LOS F with or without Project implementation. Although the proposed Project would not reduce the LOS value (LOS F is the lowest rating), the incremental contribution of the Project to traffic volumes along the segment would exceed the County's significance criteria for a significant impact by adding 200 or more ADT to a street segment performing at LOS F (TR-4).

Improvements to Local Traffic Operations

Considering that the goal of this Project is to improve traffic conditions in the southwestern portion of the City, it is important to note the positive effects of the Project within the local circulation system. As indicated in the traffic study, the proposed Project would improve traffic conditions along the existing portion of Citracado Parkway between Avenida Del Diablo and West Valley Parkway. This would be the result of adding an extra travel lane in each direction, and signaling the intersection at Citracado Parkway and the driveway for the Mountain Shadows Mobile Home Park.

In addition, intersections and roadway segments outside the traffic study area would experience reduced traffic congestion with the proposed Project. Specifically, traffic levels on West 9th Avenue, Hale Avenue, and Harmony Grove Road would all be lower with the proposed Project, as opposed to the No Build conditions. These roadways currently receive through traffic traveling between central Escondido or I-15 and the ERTC area. This traffic would partially be diverted to the new roadway link. A Traffic Impact Analysis prepared for the Palomar Medical Center West Project (LLG 2005) identifies several planned roadway improvements near the ERTC (where the Medical Center is located). These include widening of Nordahl Road/Citracado Parkway between Country Club Drive and the SR-78 Eastbound Ramps from the current four lanes to six lanes; extension of Citracado Parkway from Andreasen Drive to Avenida Del Diablo and widening of Citracado Parkway between Avenida Del Diablo and West

Valley Parkway (the proposed Project); widening Harmony Grove Road from the current two lanes to four lanes; widening West Valley Parkway between Via Rancho Parkway and 11th Avenue from the current two lanes to four lanes; and restriping and intersection improvements along 9th Avenue and Hale Avenue. The projected 2030 LOS values for roadway segments near the ERTC decrease when these improvements are factored into the analysis. Harmony Grove Road is expected to operate in the near term at a minimum of LOS F; factoring in local roadway improvements, this level improves to a minimum of LOS C. Additionally, West 9th Avenue between Hale Avenue and West Valley Parkway is expected to operate in the near term at a minimum of LOS F; factoring in local roadway improvements, this level improves to a minimum of LOS B. Finally, West Valley Parkway between 11th Avenue and Citracado Parkway is expected to operate in the near term at a minimum of LOS F; factoring in local roadway improvements, this level improves to a minimum of LOS C.

Although the incremental contribution to the improvements in local traffic circulation due to the Citracado Parkway Extension Project have not been calculated, it can be assumed that without the additional roadway capacity and routing options this link would provide, LOS forecasts for the local circulation system would decrease without the proposed Project improvements.

Construction Impacts

Construction of the proposed Project would disrupt current traffic operations in the Project area as a result of heavy equipment operating within or adjacent to public streets. Construction activities are assumed to occur within an 8-hour shift per day (typical 8-hour construction schedule with 30-minute lunch: 7:00 a.m. to 3:30 p.m.). Potential short-term traffic impacts would include the generation of vehicle trips related to construction activities, and the disruption of traffic (vehicular, bicycle, and pedestrian) for construction along the existing section of Citracado Parkway between, and including, the intersections at Avenida Del Diablo and West Valley Parkway. Chapter 2, Project Description, describes the proposed traffic control measures to be implemented during construction, including flagging and temporary detours through construction areas.

Traffic related to construction activity may vary, depending on the location and type of construction. Based on similar construction activities within the City, it has been estimated that average traffic associated with the proposed roadway construction would include approximately 66 vehicles to and from the construction site.

Summary of Adverse Impacts due to Project Construction

Conflict with Alternative Transportation Facilities (Criterion 4)

Temporary vehicular traffic disruptions and detours during Project construction would result in a temporary short-term adverse impact (TR-5).

3.10.4 Mitigation Measures

Potentially significant impacts to traffic at two intersections and two street segments would result from operation of the proposed Project. Mitigation measures to reduce impacts are identified below.

MM-TR-5: Traffic Management Plan

To address temporary construction impacts, a Traffic Management Plan would be prepared to address the traffic control procedures during construction of the proposed Project. The plan would include measures to provide alternate routes for bicyclists and pedestrians that would use facilities affected by Project construction. Implementation of an approved Project Traffic Management Plan would reduce this impact to less than significant.

3.10.5 Significant Unavoidable Impacts

The following significant and unavoidable traffic impacts would occur as a result of the proposed Project. Various mitigation measures were considered but were not carried forward because the City determined them infeasible due to factors such as cost, right-of-way constraints, and future transportation improvements to improve the overall circulation system. The measures that were considered to address the significant and unavoidable impacts are discussed below. The City would prepare a Statement of Overriding Considerations for the City Council to approve prior approval of this EIR.

TR-1: Mitigation Infeasible – Citracado Parkway and West Valley Parkway Intersection

For opening year 2014 conditions, the intersection of Citracado Parkway and West Valley Parkway is expected to operate at LOS F in the AM and PM peak hours. To improve the operating conditions at this intersection, additional northbound turn lanes would be required to accommodate eastbound and westbound West Valley Parkway traffic accessing the proposed

Project improvements. Carrying out these improvements would require additional right-of-way acquisition and would likely result in additional environmental impacts, including relocation of private residences. The potential for additional significant environmental impacts and additional funding required to complete these improvements would override the potential traffic impacts at this intersection due to the Project. In addition, a future improvement planned for Citracado Parkway would link the roadway between West Valley Parkway and I-15; this improvement would reduce congestion at the West Valley Parkway/Citracado Parkway intersection and would result in an LOS D year 2030 operating condition as shown in Table 3.10-1.

It is recommended that this intersection be left unimproved until Citracado Parkway can be extended to the east to connect to I-15 and/or lane geometry improvements can be made at the intersection. No mitigation measures are proposed as a part of this Project, and this impact would remain significant and unavoidable.

TR-2: Mitigation Infeasible – Del Dios Highway and Via Rancho Parkway Intersection

For year 2030 and year 2014 build conditions, the intersection at Del Dios Highway and Via Rancho Parkway would operate at LOS F conditions according to the intersection capacity analysis. This intersection already has an operating traffic signal. Reducing the Project's impact on this intersection would require additional through lanes in both directions and/or an additional right-turn lane to accommodate westbound traffic on Via Rancho Parkway. Such improvements at this intersection are already planned by the County to mitigate for the County's Harmony Grove Village residential development. In addition, the Citracado Parkway link to I-15 would reduce the Project's impact at this intersection in the year 2030 scenario; however, in this scenario the year 2030 impact would still be considered significant, and the City would mitigate the year 2030 impact with a fair-share contribution to the County's improvements at the intersection.

In the event that this intersection receives no County improvements, or if the City does not complete the Citracado Parkway link to I-15, then this impact would remain significant and unavoidable.

No mitigation measures are proposed as a part of this Project (although other planned improvements would likely reduce this impact), and this impact would remain significant and unavoidable.

TR-3: Mitigation Infeasible – Via Rancho Parkway Street Segment

For year 2014, the proposed Project would result in a significant impact to the street segment of Via Rancho Parkway south of Del Dios Highway. To improve the operating conditions along this segment, the road would need to be widened to four lanes. Carrying out these improvements would require excessive right-of-way acquisition and substantial additional City funding. In addition, these improvements could potentially result in additional significant environmental impacts. This roadway improvement is considered in the City's General Plan; however, no Project has been approved or funded beyond the general planning stage.

No mitigation measures are proposed as a part of this Project, and this impact would remain significant and unavoidable.

TR-4: Mitigation Infeasible – West Valley Parkway/Del Dios Highway Street Segment

For year 2014, the proposed Project would result in a significant impact to the street segment of West Valley Parkway/Del Dios Highway between Citracado Parkway and Via Rancho Parkway. To improve the operating conditions along this segment, the road would need to be widened to four lanes. Carrying out these improvements at this time would require excessive right-of-way acquisition and substantial additional City funding. In addition, these improvements could potentially result in additional significant environmental impacts. This roadway improvement is considered in the City's General Plan; however, no project has been approved or funded beyond the general planning stage.

No mitigation measures are proposed as a part of this Project, and this impact would remain significant and unavoidable.

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3.11 AESTHETIC AND VISUAL QUALITY

This section addresses the existing visual character of the Project area, including the natural and human-made features of the landscape that contribute to the public's visual experience of the Project area and surrounding environment. Visual resources are defined in terms of physical characteristics and visibility. This analysis addresses the extent to which the Project's presence would contribute to the perceived visual character and quality of the environment.

3.11.1 Existing Conditions

Project Area

The proposed Project is located within the Vineyard subarea of Escondido. The topography varies between flat broad river valley, rolling hills, and relatively steep slopes with exposed granite outcroppings. The visual setting of the immediate Project area is primarily characterized by a rural to semirural environment and varies with the nearby land-use type.

The southern portion of the existing stretch of Citracado Parkway bisects West Valley Parkway and ends at Avenida Del Diablo. This area is surrounded by residential uses, namely, mobile home parks and single-family residential developments. Numerous small roads and foot trails extend north and northwest of Avenida Del Diablo down an area of various sloping terrain. North of Avenida Del Diablo and south and east of Harmony Grove Road, residences are primarily single-family rural homes on estate lots with residential livestock keeping and small-scale private farming. Escondido Creek generally runs northeast to southwest through the northern section of this area. Although the creek is channeled in areas east of the Project site, it is in a more natural state in the Project area.

The area between Avenida Del Diablo and Escondido Creek is designated as Open Space, with public and private uses related to open space, recreation, education and public facilities, and land with unique scenic or geologic value, as well as land requiring protection for unique or rare plant and/or animal habitat. Open fields of grasses are interrupted by clusters of rock outcrops and oak trees, which are denser near the creek and in the western portion of the Project area along Harmony Grove Road. Riparian vegetation covers much of Escondido Creek.

East and north of the Project site, light industrial and heavy commercial uses are located on flatter areas. These uses consist of low-density buildings and surface parking lots. The HARRF is located directly east of the Project site. Many of the adjacent lots that are slated for

industrial/commercial development are either under ongoing development or graded for anticipated development.

The western portion of the Project area, near Harmony Grove Road, is characterized by various sloping terrain and the riparian habitat of Escondido Creek. Residential properties, small roads, and foot trails are scattered among the hills and valleys.

Project Viewshed

A viewshed is composed of all the surface areas visible from an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views from the proposed Project. The Project viewshed boundary is shown in Figure 3.11-1.

Due to the visual complexity of the Project area and the vastly different scenic experiences of Citracado Parkway, the Project viewshed is a composite of three experiences. The viewshed tends to be linear and sight distances are varying and constrained by existing development, topography, and existing vegetation. The viewshed is the landscape that is visible from the areas of the existing segment of Citracado Parkway from West Valley Parkway to Avenida Del Diablo, and the proposed extension of Citracado Parkway from Avenida Del Diablo to South Andreasen Drive. The viewshed experienced along Citracado Parkway from West Valley Parkway to Avenida Del Diablo is a blend of natural and human-made visual components. Views to the east and west are constrained by street trees and residential development. Views to the north broaden as Avenida Del Diablo is approached to include more expansive views across the undeveloped parcels and to surrounding hillsides in the distance.

The viewshed experienced from the site of the proposed Citracado Parkway extension, from Avenida Del Diablo to Harmony Grove Road, is more complex and varying. Looking east, views are dominated by natural features such as trees, grasses, and hills with rock outcroppings, and human-made features such as dirt roads and footpaths, utility corridors, and fence posts. These views are constrained by topography and existing vegetation. Views looking west from the proposed Project site include grasses, hills, and riparian vegetation along Escondido Creek. Views west are also constrained by existing mature vegetation and topography. These views also include human-made structures such as fence posts and structures on the north and south sides of the creek. Moving northward, the viewshed changes to include the existing segment of Citracado Parkway and the surrounding commercial/industrial development, which becomes a dominant feature as Harmony Grove Road is approached.



Source: EDAW 2009; DigitalGlobe 2008

500 250 0 500 Feet

Scale: 1 = 6,000; 1 inch = 500 feet

Legend

-  Viewshed Boundary
-  Industrial Landscape Unit
-  Rural/Open Space Landscape Unit
-  Escondido Creek Landscape Unit
-  Residential Landscape Unit

Figure 3.11-1
Viewshed Boundary and Landscape Units Map

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Landscape Units

Views selected for analysis are often considered within the context of a landscape unit, or portion of the surrounding landscape that can be thought of as an outdoor room, exhibiting a distinct visual character. Landscape units further define the visual character and influence the visual experience of a particular place. Four unique landscape units were identified within the Project study area. The following landscape units are shown in Figure 3.11-1:

- Rural/Open Space Landscape Unit
- Escondido Creek Landscape Unit
- Industrial Landscape Unit
- Residential Landscape Unit

Rural/Open Space Landscape Unit

This landscape unit includes the undeveloped land between Avenida Del Diablo and Harmony Grove Road. The character of this landscape unit is dominated by open expanses of grassland pastures, rolling topography, rock outcroppings, and stands of mature trees. This landscape unit is bordered by the Industrial Landscape Unit to the north, and bisected by the Escondido Creek Landscape Unit and the Residential Landscape Unit to the south. The proposed Project would introduce a new roadway facility that would both physically and visually bisect the landscape unit, altering the existing visual continuity and intactness of the visual character.

Escondido Creek Landscape Unit

This landscape unit bisects the undeveloped land between Avenida Del Diablo and Harmony Grove Road. The character of this landscape unit is defined by densely populated mature trees and riparian vegetation composed in a meandering but consistent pattern throughout the river basin. In addition to providing textural interest along the view corridor, the vegetation provides a vertical scale that provides balance to the surrounding rolling topography to the east and west.

Industrial Landscape Unit

This landscape unit includes the industrial and commercial development within the ERTC east of Citracado Parkway and north of Harmony Grove Road. The character of this landscape unit is dominated by groups of multistory rectilinear structures, ornamental landscaping, and parking facilities. This landscape unit is bordered by the Rural/Open Space Landscape Unit to the south.

Residential Landscape Unit

This landscape unit is located between West Valley Parkway and Avenida Del Diablo and is bordered by the Rural/Open Space Landscape Unit to the north. The character of this landscape unit is defined by relatively dense single-family homes, a mobile home development, and mature street trees along the existing roadway. The Residential Landscape Unit possesses a unique character created by a mixture of development patterns and ornamental streetscape treatments.

Existing Visual Quality

The existing visual quality of the Project area varies depending on viewer location. Viewers located along Citracado Parkway to the south of Avenida Del Diablo experience a visual environment of low to moderate visual quality due to a lack of memorable landscape features, cohesion and unity of development, and overall visual composition. The vividness, intactness, and unity of the visual experience are low to moderate.

Viewers located to the north of Avenida Del Diablo experience segments of varying visual quality ranging from moderate to moderately high. Parcels of undeveloped land between Avenida Del Diablo and Harmony Grove Road have moderately high vividness, intactness, and unity due to the presence of mature vegetation, rock outcroppings, and other memorable landscape features. The portion of the Project area north of Harmony Grove Road has a moderate level of visual quality due to the consistency in vividness, intactness, and unity of the industrial park development.

Existing Visual Character

The existing visual character of the Project area is a combination of natural and constructed elements that range from relatively undisturbed riparian vegetation to a small number of single-family residences east and west of the proposed Project area. The primary visual character ranges from suburban at the southern extent of the Project area to a semirural landscape defined by a succession of medium-density single-family homes, large-lot residential properties, unmaintained open parcels and mature vegetation, and a riparian corridor running east to west.

Moving north through the Project area, the visual character transitions to a rural, undeveloped landscape of rolling topography before transitioning once more to a semiurban character defined by industrial and commercial development.

Viewer Response

The quality of a visual landscape is largely determined by the extent of the public's interest in and concern for a particular view. To establish a measurable threshold for this concern, views are assigned a value of visual sensitivity. Visual sensitivity refers to the likelihood of a particular view to be adversely affected by a change in existing visual character or quality. The public is generally concerned about areas that have a high degree of visual sensitivity and these views are typically composed of highly visible or memorable landscape elements. Views from residential areas are generally considered to have greater visual sensitivity than views in and of more urbanized or otherwise developed locations. Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, the type of viewer activity, the duration of the view, the speed at which the viewer moves, and position of the viewer. A viewer's distance from landscape elements plays an important role in determining an area's visual quality. Landscape elements are considered higher or lower in visual importance based on their position relative to the viewer. Generally, the closer a resource is to the viewer, the more dominant and, therefore, visually important, it is to the viewer. Three general viewing distances have been established for this analysis: foreground views (up to one-quarter mile), middle-ground views (one-quarter to 3 miles), and background views (3 miles or greater).

Viewer Groups

Two general viewer groups were considered for the evaluation of viewer exposure, awareness, and response: vehicular viewers and residential viewers. Motorists on Citracado Parkway would have extended exposure and awareness of the proposed Project's changes to existing roadway features and the introduction of a new roadway across Escondido Creek. Vehicular viewers would typically have a high awareness of the proposed Project, but their exposure to the Project would be of short duration and consistent with the expectations of a transportation corridor. Viewer sensitivity within this group is generally low to moderate due to the short duration of viewer exposure.

Community residents immediately adjacent to the proposed Project site south of Escondido Creek have direct foreground views of the site, but the proposed Project does not introduce a new roadway in this location. A small number of the surrounding residents north of Escondido Creek have middle-ground views; however, these views are limited by existing mature vegetation and intervening topography depending on location and the distance from the proposed Project site. Viewer sensitivity within this group is generally moderate to high due to the long duration of viewer exposure.

Key Views

Because it is not feasible to analyze all of the views from which the proposed Project would be seen, it is necessary to select key viewpoints that would most clearly represent the visual effects of the proposed Project. Key views also represent the primary viewer groups that would potentially be affected by the proposed Project. Each key view below is described and evaluated for its existing and proposed change to visual quality and character, probable viewer response, and resulting visual impact. Key view locations are shown in Figure 3.11-2.

Key View 1

This key view, as shown in Figure 3.11-3, faces northwest along Citracado Parkway south of Avenida Del Diablo and is located within the Residential Landscape Unit. This view represents the view experienced by motorists and surrounding residents while traveling northwest on Citracado Parkway. Existing visual character in this location is defined by mature street trees, residential development, and a wide, densely planted roadway median in the foreground and middle-ground views. Mountain Shadows Mobile Home Park is located east and west of the roadway and frames views along this corridor. An undeveloped parcel of land lies north and provides a contrasting element within the landscape. There are no scenic vistas or unique landscape features within this viewshed. The dominant landscape features are the mature eucalyptus street trees and mobile home parks. The existing visual quality and character are low to moderate in this location.

Key View 2

This key view, as shown in Figure 3.11-3, faces north across an open parcel toward the ERTC and northernmost built segment of Citracado Parkway. Key View 2 is located north of Escondido Creek near the end of Pacific Oaks Place and is situated within the Rural/Open Space Landscape Unit. Foreground views consist of undeveloped, seminaturalized open space of varied and rolling topography with mature vegetation, pronounced rock outcroppings, and fence lines. Middle-ground and background views are more typified by a modified landscape that includes roadways and commercial and industrial development. The dominant landscape features are the pronounced rock outcroppings to the east and the industrial development. The existing visual quality and character are moderate.



Source: EDAW 2009; DigitalGlobe 2008

500 250 0 500 Feet

Scale: 1 = 6,000; 1 inch = 500 feet

Legend

-  Viewshed Boundary
-  Key View Location

Figure 3.11-2
Key View Location Map

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Key View 1 - View facing northwest along Citracado Parkway



Key View 2 - View facing north across currently undeveloped parcel toward Citracado Parkway

Figure 3.11-3
Key Views 1 and 2
Existing Conditions

Regulatory Background

A number of planning documents set forth goals, policies, and restrictions that relate to the visual environment of the Citracado Parkway Extension Project. The applicable plans are described below.

Escondido General Plan

The Escondido General Plan has a number of goals and policies related to visual resources, specifically viewshed protection. Particular to the Project is Viewshed Policy E1.5: Development proposals shall maintain public views of creeks, lakes, their shores, and their adjoining riparian features as much as possible.

City of Escondido SPA 8 (Harmony Grove Specific Planning Area)

The northern segment of the Project site is located in Specific Planning Area 8 (SPA 8), or the Harmony Grove Specific Planning Area. Provisions for SPA 8 include designating the riparian area along Escondido Creek as a desired visual amenity.

ERTC Specific Plan

The ERTC Specific Plan is located within SPA 8, as described above. The ERTC Specific Plan outlines architectural and landscape features for the developing industrial and medical office center located north of Harmony Grove Road. The proposed Project site includes the southern end of Citracado Parkway, which is the main road through the ERTC Specific Plan Area. The ERTC Specific Plan includes a landscape program that calls for restoration of wetland vegetation in mitigation for jurisdictional waters, buffering of wetlands with natural sage scrub habitats, and use of drought-tolerant landscaping to mark the transition from natural open spaces to an industrial use environment. The ERTC Specific Plan designates Citracado Parkway as a greenbelt amenity that provides continuity to the improved landscape. Design standards for entryways into the industrial park include increasing the right-of-way to 130 feet in width, adding a double row of street trees, and constructing a meandering sidewalk.

3.11.2 Significance Criteria

CEQA establishes that it is the policy of the state to take all actions necessary to provide the people of the state “with...enjoyment of aesthetic, natural, scenic, and historic environmental qualities” (California PRC Section 21001[b]).

Based on the CEQA Guidelines in Appendix G, the proposed Project would have a significant impact on aesthetics if it would do 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, or resources designated as important by an agency with jurisdiction in the Project area;
3. substantially degrade the existing visual character or quality of the site and its surroundings; or
4. create a new source of substantial light or glare that would adversely affect day or nighttime views in the areas.

Analysis Methodology

To begin the assessment process, a visual limit of the study area was established through the development of a Project viewshed, or the extent of the areas from which the Project area can be viewed. The Project viewshed was determined in the field and through analysis of topography, geographical information, and aerial photographs. The existing visual quality and character of the Project area were documented and evaluated through field and aerial reconnaissance, photographic record, and review of previously prepared site surveys. Viewer groups and key view locations were determined through field observations and review of land use maps and other planning documents. The key views encompass the most sensitive viewpoints, typical views encountered in the existing landscape, and special Project and landscape features that are of importance in evaluating the overall visual effect of the proposed Project.

Visual simulations were prepared to illustrate the visual effects of the proposed Project. The simulations were created through photographing the Project area and surroundings with high-resolution digital photography, developing a three-dimensional topographical model that included proposed Project features, and conducting viewshed analysis on the model.

A number of contributing factors affect the overall visibility, change to existing visual quality/character, and ultimately any potentially significant impacts from implementation of the Project. The level of visual change was identified for each key view where Project features would be visible. To objectively assess the level of visual impact, the following four principal steps were performed:

- A. Define the Project setting and viewshed.
- B. Identify key views for visual assessment.
- C. Analyze existing visual resources and viewer response.
- D. Propose methods to mitigate significant visual impacts.

The methodology used to assess visual impacts followed the USDOT, FHWA's *Visual Impact Assessment for Highway Projects (1981)*. The methodology and key terms are summarized below.

Identify Visual Character

Visual character is descriptive and qualitative, which means it is based on defined attributes that are neither good nor bad. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. If there is public preference for the established visual character of a regional landscape and resistance to a project that would contrast with that character, then changes in the visual character can be evaluated.

Assess Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the viewshed. FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach is particularly useful in roadway planning because it does not presume that a roadway project is necessarily an eyesore. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of a project. The three criteria for evaluating visual quality can be defined as follows:

Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual human-made components in the landscape.

Each phase introduces unique visual effects that have been considered, including the duration of viewer exposure. These impacts typically occur as a result of landform alteration, vegetation removal, and other project features that would modify in a noticeable way the existing visual quality or character of an area, or have an adverse effect on a scenic vista. The resulting visual quality of the post-project condition is then compared to existing visual quality and viewer sensitivity in a particular location to determine the level of visual impact as it relates to the guidance provided in Appendix G of the CEQA Guidelines. Four levels of impact are considered: low, moderate, moderately high, and high.

Low suggests minor adverse change to the existing visual resource, with low viewer response to change in the visual environment, and may or may not require mitigation. Under CEQA, low could be considered synonymous with a *less-than-significant* impact.

Moderate suggests adverse change to the visual resource with moderate viewer response. Project design features (PDFs) would reduce change in visual quality/character within 5 years. Under CEQA, moderate could be considered synonymous with a *less-than-significant* impact.

Moderately high suggests moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Despite the incorporation of PDFs, reduction to overall change in visual quality/character will generally take longer than 5 years. Under CEQA, moderately high could be considered synonymous with a *potentially significant* impact and would require specific and perhaps extraordinary mitigation measures.

High suggests a high level of adverse change to the resource or a high level of viewer response to the visual change such that architectural design and landscape treatment alone cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid highly adverse impacts. Under CEQA, high could be considered synonymous with *significant and unavoidable* impact.

3.11.3 Impact Analysis

The analysis presented in this section is described for each of the key views. This discussion is followed by a comparison of the anticipated visual effects against the thresholds of significance, including an analysis of the various Project impacts.

Temporary Visual Effects

Temporary changes to existing visual quality and character would occur during construction activities at both key views and throughout the Project area. These effects would occur due to the presence of construction equipment (bulldozers, cranes, etc.), grading operations and associated temporary equipment/erosion-control products, and removal of existing vegetation. They would also occur as a result of specific Project requirements, including nighttime lighting used during construction operations and for security. Construction activities are dynamic and would have a limited effect on existing form, lines of sight, and textural pattern. Construction would be phased throughout the Project area, and views of construction activity would be of short duration.

Because of these factors, construction activities are considered to have a low or *less-than-significant* visual impact and would not substantially damage scenic resources (Criterion 2) or degrade the existing visual character or quality of the site and its surroundings (Criterion 3). While lighting would be used for nighttime construction activities, these activities would not permanently create a new source of substantial light or glare that would adversely affect day or nighttime views (Criterion 4).

Permanent Visual Effects

Key View 1

This key view faces northwest along Citracado Parkway south of Avenida Del Diablo and is located within the Residential Landscape Unit. The Project proposes signalization of the four-way intersection of Citracado Parkway and entrance to Mountain Shadows Mobile Home Park, a substantial reduction of the existing median (35 feet to 14 feet) to accommodate an additional travel lane and a Class 2 striped bicycle lane in each direction, construction of sound walls, and removal of mature trees. Additional PDFs include a comprehensive landscape plan that proposes to incorporate evergreen and flowering street trees, native grasses, and ground covers, and decorative hardscape treatments to the parkways adjacent to the sidewalk and in the median. To accommodate these improvements, removal of existing mature street trees will occur. Grading would be extremely limited within the Residential Landscape Unit and would consist of fine grading for horizontal control between existing and proposed roadway elements. The proposed changes to Key View 1 are depicted in a visual simulation in Figure 3.11-4.

Motorists traveling along Citracado Parkway would experience short-duration foreground and middle-ground views of the proposed Project, and viewers facing northwest would experience an



Key View 1 Existing View



Key View 1 Visual Simulation

Figure 3.11-4
Key View 1
Existing and Proposed Conditions

altered background view as the proposed roadway extends into a currently undeveloped parcel. Residents would experience long-duration foreground views of the proposed Project.

Vehicular viewers are considered to have a low sensitivity to change of existing visual quality/character because of their distance, angle, duration, and expectation of views. Residential viewers are considered to have a high sensitivity to change in existing visual quality/character because of the relatively long duration and expectation of views. Due to the increased capacity of the roadway and the removal of existing mature vegetation, the changes to existing character would be highly apparent to passing motorists and surrounding residents for a number of years following implementation. However, through the incorporation of PDFs, including ornamental streetscape planting, the visual quality would be continuously improved as plant materials mature.

No scenic vistas or designated scenic resources have been identified in this location within the Project area (Criteria 1 and 2). The proposed Project would, however, constitute a moderate change to the existing visual quality/character of Key View 1 and would be considered a *less-than-significant* visual impact due to PDFs, including a comprehensive landscape plan.

Key View 2

This key view faces north along the Project site and is located within the Rural/Open Space Landscape Unit just north of Escondido Creek near the end of Pacific Oaks Place. At this location, the Project would introduce a new segment of Citracado Parkway to connect the previously constructed segments. This segment of Citracado Parkway is proposed to be 110 feet across and would include sidewalks, a planted parkway between the sidewalks and the travel lanes, two lanes each in the northbound and southbound directions, and a 14-foot-wide landscaped median between the travel lanes. A retaining wall would be constructed on the east side of Citracado Parkway, north of the Lariat Drive intersection. The retaining wall would be approximately 250 feet long with a maximum height of about 12 feet. In addition, a Class 2 striped bicycle lane would accommodate bicyclists on the roadway shoulder. The roadway extension would be built on an elevated roadbed with embankments varying in height up to 22 feet. With the embankments, the total cross-section width would measure up to 180 feet. Foreground and middle-ground views of Key View 2 would change due to the Citracado Parkway extension, and the viewpoint would be altered slightly by the elevated roadbed. The proposed changes to Key View 2 are depicted in Figure 3.11-5.

Motorists traveling along Citracado Parkway would experience short-duration foreground and middle-ground views of the proposed Project, and viewers facing northwest would experience an



Key View 2 Existing View



Key View 2 Visual Simulation

Figure 3.11-5
Key View 2
Existing and Proposed Conditions

altered background view as the proposed roadway extends into a currently undeveloped parcel. Residents would experience long-duration foreground views of the proposed Project and would be most affected due to the current land use and access restrictions on the parcel.

Vehicular viewers are considered to have a low sensitivity to change of existing visual quality/character because of their distance, angle, duration, and expectation of views. Residential viewers are considered to have a high sensitivity to change in existing visual quality/character because of the relatively long duration and expectation of views. Due to the introduction of a new roadway facility and the removal of existing mature vegetation, the changes to existing character would be highly apparent to surrounding residents for a number of years following implementation. Motorists traveling along the proposed Project corridor would not be particularly affected by the change in visual quality/character because views from this location are not currently experienced by vehicular viewers. The visual effects of constructing the proposed Project would be tempered by the incorporation of PDFs, including ornamental streetscape planting, and the visual quality would be continuously improved as plant materials mature.

No scenic vistas have been identified in this location within the Project area (Criterion 1), and impacts to scenic resources (rock outcroppings) have been minimized or wholly avoided through engineering refinements, including adjustments to roadway geometry (Criterion 2). The proposed Project would, however, constitute a moderate change to the existing visual quality/character of Key View 1 and would be considered *less than significant* (Criterion 3). Street lighting, including intersection signals and street lights, is proposed for the facility improvements to Citracado Parkway, but this lighting would be confined within the Project site. The proposed Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views and would be considered *less than significant* (Criterion 4).

Summary of Impacts

Generally, the expectations are for a cohesive scenic experience with minimal distractions and disruptions from the presence of traffic. The primary viewers within the Project area and the larger viewshed would be motorists and surrounding residents. Impacts would vary in location and magnitude.

The existing visual quality/character of the viewshed of the proposed Project is low to moderate in the Residential Landscape Unit between West Valley Parkway and Avenida Del Diablo, and moderate in the undeveloped Rural/Open Space Landscape Unit from Avenida Del Diablo to

Harmony Grove Road. This is due primarily to the lack of scenic vistas or unique landscape features in the Residential Unit, and general visual cohesiveness of the Rural/Open Space Landscape Unit. In the Residential Landscape Unit where the proposed Project would make improvements to the existing Citracado Parkway corridor, the change to existing visual quality to the immediate area would be more pronounced, as motorists would experience a change in foreground and middle-ground views. In the Rural/Open Space Landscape Unit, where the proposed Project would extend Citracado Parkway from Avenida Del Diablo to Harmony Grove Road, the proposed Project would make existing views accessible to motorists, while potentially altering views for a small number of residents near the Project site.

The changes to visual quality/character for the overall Project would be moderate, primarily due to the loss of existing vegetation and increased capacity of the existing segment of Citracado Parkway between West Valley Parkway and Avenida Del Diablo. The replacement of mature street trees with younger trees would cause the greatest contrast with the existing visual environment following Project implementation. The paving and construction of the proposed Citracado Parkway extension and the Escondido Creek Bridge would also modify the existing environment by disturbing and removing vegetation and adding a substantial amount of paved surface area to an undeveloped parcel. The proposed Project would result in moderate change to the existing visual character or quality of the site and its surroundings but would be considered to have a *less-than-significant* impact due to PDFs, including a comprehensive landscape plan.

3.11.4 Mitigation Measures

The Project would not result in significant impacts to aesthetic and visual quality; therefore, no mitigation measures are proposed.

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CHAPTER 4.0

EFFECTS FOUND NOT TO BE SIGNIFICANT

As allowed by Section 15128 of the CEQA Guidelines, effects found not significant need not be discussed in detail in the EIR. Rather, a brief discussion as to why various possible effects of a Project were determined not to be significant is appropriate. The following issue areas were determined, based on preliminary review, not to have a significant effect on the environment: Hazards and Hazardous Materials, Mineral Resources, Population and Housing, and Recreation. The rationale for these conclusions is outlined below.

4.1 HAZARDS AND HAZARDOUS MATERIALS

Hazardous substances are defined by state and federal regulations as substances that must be regulated to protect the public health and the environment. Such hazardous materials have certain chemical, physical, or infectious properties that cause them to be hazardous. The locations of known hazardous materials sites can be found in various regulatory agency databases. The Environmental Data Resources, Inc. (EDR) database was reviewed, and findings were summarized in a Hazardous Materials Technical Study (Kleinfelder 2007).

A database search indicated no facilities within a 0.25-mile radius of the site are believed to represent an environmental concern for the site. From the observations made, there are several potentially affected areas:

- An approximately 200-gallon aboveground storage tank filled three-fourths with a liquid that emitted a petroleum odor,
- Several unknown and unidentifiable pipes that may be related to former agriculture,
- A wooden shed that houses a water well, and
- Two mounted transformers observed on the sidewalk.

Aerial photographs and topographic maps were used to examine the history of the Project area to supplement regulatory agency database records. Beginning with the earliest photograph from 1939 showing vacant and agricultural lands within and around the Project area, there are no significant changes in the aerial photographs taken until a 1974 photograph reveals the development of portions of Citracado Parkway. The Project area itself was relatively vacant land

with the exception of the northern and central portions that were formerly used for agricultural purposes (orchard and row crop). It is possible that agricultural chemicals (i.e., pesticides, herbicides, insecticides) have been used on the site, which has resulted in impacts to the subsurface soils. Prior to site redevelopment involving activities where significant soil disturbance is to occur, sampling of the soil for agricultural chemicals is recommended. In the 1989 aerial photograph, the Project area appears to resemble its present-day configuration.

Near the Project area, the addition of the sewage disposal facility east of the site is visible in the 1963 aerial photograph. Further residential development along Citracado Parkway, between West Valley Parkway and Avenida Del Diablo, is visible in the 1974, 1995, and 2002 aerial photographs.

Based on review of the EDR environmental database report, no facilities involved with routine transport, use, or disposal of hazardous materials are located within the Project area or vicinity. In addition, although facilities with reported unauthorized releases of hazardous materials are listed within 0.25 mile of the area, none of these facilities are located within the area or adjacent properties. Given their distances and direction (gradient) from the area, it is concluded that these facilities do not represent an environmental concern to the area. Therefore, the Project would have no public health and safety impacts associated with exposure to hazardous materials.

4.2 MINERAL RESOURCES

The southern half of the proposed Project area is located within a residential area and the northern half is undeveloped. The Project area is surrounded by light industrial/heavy commercial uses north and east, and residential/rural residential west and south. Many of the lots slated for industrial/commercial development are either under ongoing development or are graded for anticipated development. According to the USGS Mineral Resources Data System (2005), no known locally important mineral resource recovery site is located in the Project area or within the vicinity of the Project area. Parcels A, B, and C are designated as a Mineral Resource Zone 3 (MRZ-3) (County of San Diego 2009d). MRZ-3 indicates areas containing mineral deposits whose significance cannot be evaluated from available data. Accordingly, the Project area does not contain a recognized significant aggregate resource. The Project would not change the existing availability of mineral resources that would be of value to the region and residents of California. Therefore, there would be no impact to known locally important mineral resources.

4.3 PALEONTOLOGICAL RESOURCES

Paleontological resources are the remains and/or traces of prehistoric life, exclusive of human remains, and including the localities where fossils were collected and the sedimentary rock formations from which they were obtained/derived. The defining character of fossils is their geologic age. Fossils or fossil deposits are generally regarded as older than 10,000 years, the generally accepted temporal boundary marking the end of the last late Pleistocene glacial event and the beginning of the current period of climatic amelioration of the Holocene (County of San Diego 2009g). A review of the Geologic Map of the Escondido Quadrangle (USGS 1999) indicates that the project site is underlain by Green Valley tonalite and, in the area of Escondido Creek, younger alluvial floodplain deposits. These geologic units have been identified as having no potential to low potential for paleontological resources (County of San Diego 2009g). Therefore, no significant impacts to paleontological resources are anticipated with the proposed project.

4.4 POPULATION AND HOUSING

The City has been experiencing a pattern of consistent growth for a number of years and it has resulted in an intensification of land uses and increased traffic generation. As a result, the City has placed a new emphasis on completing planned transportation facility improvements, including the proposed Project. In addition, the proposed Project would implement a planned component of the City's Circulation Element. It may increase the traffic traveling through the Project area due to the improved/new circulation system but it is anticipated that the population within the surrounding area would not incrementally increase as a result of this Project. Also, the proposed Project would not displace existing housing or rental units within the Project area. Therefore, the proposed Project would not have a significant impact on population and housing in the area.

4.5 RECREATION

The proposed Project involves expansion of roadways and construction of a bridge and sidewalks. Also a Class 2 striped bicycle lane is proposed to accommodate bicyclists on the roadway shoulder. Therefore, the Project would not 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. In addition, the Project area currently is not used for recreational activities and the proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. There would be no impact on recreational facilities in the area.

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CHAPTER 5.0

PROJECT ALTERNATIVES

5.1 RATIONALE FOR ALTERNATIVE SELECTION

The Citracado Parkway Extension Project has been described and analyzed in the previous chapters with an emphasis on potentially significant impacts and recommended mitigation measures to avoid these impacts. The environmental analysis in this EIR found that the proposed Project could result in less-than-significant Project impacts to issues including land use, air quality, geology/seismicity, hydrology/water quality, municipal services/utilities, and visual resources. Significant impacts were identified for biological resources, cultural resources, noise, and traffic. Impacts to biological resources and cultural resources can be mitigated to below a level of significance with the incorporation of the mitigation measures in Chapter 3 of this EIR. Noise and traffic/circulation impacts would remain significant and unavoidable with Project implementation.

The CEQA Guidelines direct lead agencies that the “range of potential alternatives to the proposed Project shall include those that could feasibly accomplish most of the basic objectives of the Project and could avoid or substantially lessen one or more of the significant effects” (Section 15126.6[c]). This chapter provides a comparative analysis of two Project alternatives, including a “No Project” alternative in Section 5.2 and a “Construct without Annexation” alternative in Section 5.3 that could lessen or avoid significant impacts identified in Chapter 3. Several other Project alternatives were considered but not carried forward for further evaluation; these alternatives are discussed in Section 5.4 below. The alternative analysis evaluates each issue area in comparison to the proposed Project.

5.2 NO PROJECT ALTERNATIVE ANALYSIS

The following discussion presents the No Project alternative to the proposed Citracado Parkway Extension Project.

5.2.1 No Project Alternative - Description

The No Project scenario would not involve any construction within the proposed Project limits shown in Figure 2-2 and Figure 2-3, along the existing Citracado Parkway or in the undeveloped

area between Avenida Del Diablo and Andreasen Drive. A new crossing at Escondido Creek would not be constructed. The existing roadway system would remain as it currently operates. The City would not adjust its SOI, nor would it annex into its boundary the three parcels affected by the Project. The Citracado Parkway Extension Project would remain a proposed transportation improvement in the Circulation Element of the City's General Plan.

The No Project alternative would not meet most of the Project objectives discussed in Chapter 2. Not constructing this planned transportation improvement would not reduce congestion or provide increased access in this area of Escondido. In addition, not constructing the Project would fail to implement the City's General Plan and would not provide additional travel facilities for bicyclists and pedestrians.

5.2.2 No Project Alternative – Impacts

The No Project alternative would result in the continued operation of the existing roadway infrastructure and would not provide a new transportation link in this portion of Escondido. Although short-term environmental impacts would be avoided, a long-term adverse impact to the City's transportation system would occur. The following discussion addresses the impacts of the No Project alternative on environmental resources.

Land Use

The No Project alternative would not change existing land use. Current land use designations as administered by the County or City would remain in effect. No loss of lands with rural residential or agricultural designations would occur. The land use intensity would not increase as it would with the proposed Project. Therefore, compared to the proposed Project, the No Project alternative would have no impact on land use.

Air Quality

The No Project alternative would not expand the current circulation system and would therefore not change the regional VMT from existing conditions. Without an improved transportation link in this area, vehicular traffic would be constrained to the existing roadway system. This would limit the potential for a reduction in mobile-source air contaminant emissions that would result from the proposed Project's transportation improvements. However, compared to the proposed Project, the No Project alternative would not expose new areas or receptors to increased mobile-source emissions. Although the proposed Project would result in a less-than-significant impact to

new receptors, some level of air quality impact would still occur. Therefore, compared to the proposed Project, the No Project would likely have a similar impact on air quality.

Biological Resources

The No Project alternative would have no direct or indirect impact on biological resources. No disturbance of sensitive habitat or wetlands would occur. In addition, no permanent structures, or associated shading effects, would be constructed within or over Escondido Creek. Compared to the proposed Project, the No Project alternative would result in no impact on biological resources.

Cultural Resources

The No Project alternative would have no direct or indirect impact on cultural resources. No disturbance of recorded historic or archaeological sites would occur. In addition, there would be no potential for discovering new sites as a result of construction activity. Compared to the proposed Project, the No Project alternative would result in no impact on cultural resources.

Geology/Seismicity

As the No Project alternative would not involve ground disturbance, there would be no risk of encountering geologic or seismic hazards as a result of roadway construction. In addition, the absence of a new roadway and bridge structure would eliminate similar hazards to operation of a new roadway. However, the geologic and seismic risks, as identified in Chapter 3, would be minimal with the proposed Project after implementing feasible measures required under existing regulations or included as part of the proposed Project. Therefore, compared to the proposed Project, the No Project alternative would result in no impact concerning geologic and seismic hazards.

Hydrology/Water Quality

As the No Project alternative would not involve ground disturbance, there would be no change and no impact to hydrology/water quality as a result of roadway construction. In addition, the absence of a new roadway would result in greater pervious surface when compared to the proposed Project. Hydrology and water quality would remain unchanged. However, no significant impacts to hydrology/water quality, as identified in Chapter 3, would result from the proposed Project. Compliance with existing regulations would reduce any potential impacts to

less than significant. Therefore, compared to the proposed Project, the No Project alternative would result in no impact concerning hydrology/water quality.

Noise

The No Project alternative would have no direct effect on sensitive noise receptors in the Project area. Traffic levels along the existing portion of Citracado Parkway between West Valley Parkway and Avenida Del Diablo would remain substantially the same. In addition, no vehicular traffic would be introduced into currently undeveloped areas and therefore would not result in disturbance to sensitive noise receptors, including sensitive habitat, in this area. Compared to the proposed Project, the No Project alternative would result in no impact to noise.

Traffic/Circulation

The No Project alternative would not modify the existing transportation system. Current and projected traffic would be required to use existing roadways to access the new developments in southwestern Escondido. While the proposed Project would result in some significant traffic impacts, as described in Chapter 3, the no project alternative may cause substantial traffic impacts to the circulation system as a whole. As described further in Chapters 3 and 6, cumulative impacts from other developments rely on planned infrastructure improvements such as this Project to reduce and improve overall circulation. Under the No Build alternative, intersections and roadway segments outside the traffic study area for this Project would continue to experience traffic congestion. Specifically, traffic levels on West 9th Avenue, Hale Avenue, and Harmony Grove Road would all be higher without implementation of the Project. These roadways currently receive through traffic traveling between central Escondido or I-15 and the ERTC area. This traffic would partially be diverted to the new roadway link. A Traffic Impact Analysis prepared for the Palomar Medical Center West Project (LLG 2005) identifies several planned roadway improvements near the ERTC (where the Medical Center is located) that would improve local traffic conditions, including the proposed Project.

Although the incremental contribution to the improvements in local traffic circulation due to the Citracado Parkway Extension Project have not been individually calculated, it can be deduced that without the additional roadway capacity and routing options, the local circulation system would operate under worse conditions than those of the proposed Project. Therefore, even though the proposed Project would have an adverse effect on traffic, the No Project alternative would result in a greater impact on traffic when considering the local circulation network as a whole.

Visual Resources

The No Project alternative would retain the semirural setting of the existing landscape. No new built features, including nighttime lighting, would be introduced to the Project area. Therefore, compared to the proposed Project, the No Project alternative would have no impact on visual resources.

Municipal Services/Utilities

The No Project alternative would involve no reorganization of municipal service areas. Current service performance would stay the same for law enforcement, fire and emergency response, and water supply. The City departments indicated their capacity to include additional service areas for the proposed Project, so, compared to the proposed Project, the No Project alternative would have no impact on municipal services.

5.2.3 Rationale for Selecting the Proposed Project over the No Project Alternative

The No Project alternative was rejected in favor of the proposed Project because the No Project alternative does not meet the goals and objectives of the Project. The No Project alternative would result in fewer overall environmental impacts than the proposed Project. However, significant unavoidable impacts to traffic would still occur. Considering the inability to meet Project goals and the likely adverse impact to traffic resulting from selecting the No Project alternative, the proposed Project is preferred.

5.3 CONSTRUCT WITHOUT ANNEXATION ALTERNATIVE

The following discussion presents the Construct without Annexation alternative to the proposed Citracado Parkway Extension Project.

5.3.1 Construct without Annexation Alternative – Description

The Construct without Annexation alternative scenario would include all construction components discussed in Chapter 2 for widening and extending Citracado Parkway. The Project would still require approximately 18 months to construct and would result in a new transportation connection in the southwestern portion of Escondido. This alternative scenario would not include the City's adjustment of its SOI, nor would it proceed with the annexation of three parcels into its boundary. All municipal service areas would remain as they currently exist.

This alternative would achieve all of the Project objectives but would accomplish these objectives at a greater cost to the City in terms of land use authority. This alternative would require the City to enter into a long-term operation and maintenance agreement with the County of San Diego and may result in additional costs associated with construction, operation, and maintenance of a facility that is partially outside City jurisdiction. In addition, without annexation, the likelihood of expansion of industrial and commercial development into Parcel A, as identified in the General Plan, would be reduced, since County zoning for Parcel A is currently A70.

5.3.2 Construct without Annexation Alternative – Impacts

The Construct without Annexation alternative would result in an improved roadway infrastructure and would provide a new transportation link in the southwestern portion of Escondido. The following discussion addresses the impacts of the No Project alternative on environmental resources.

Land Use

The Construct without Annexation alternative would not change existing land use. The roadway is considered a compatible land use with the existing zoning and land use designations for both the City of Escondido and the County of San Diego. Approval of this alternative with the current land use designations administered by the County or City would be contingent on approvals from the County Board of Supervisors and Escondido City Council. Some loss of lands with rural residential or agricultural designations would still occur with the roadway extension. The zoning and land use designations in the Project area would remain unchanged. In this alternative, the zoning for Parcel A would remain A70. Under the proposed Project, the zoning would be revised consistent with the City's General Plan to Specific Plan. Therefore, while no significant land use impacts have been identified under this alternative nor under the proposed Project, the land use intensity under this alternative would not have the potential to increase to the extent it would with the proposed Project, as industrial development would be precluded under a County zone of A70 without a zoning and General Plan amendment from the County of San Diego. Therefore, compared to the proposed Project, the Construct without Annexation alternative would have less of an impact on land use.

**Air Quality, Biological Resources, Cultural Resources, Geology/Seismicity, Hydrology/
Water Quality, Noise, Traffic/Circulation, Visual Resources**

As the Construct without Annexation alternative would result in the same transportation improvements that would occur with the proposed Project, the direct effects of roadway construction and the effects, both direct and indirect, of roadway operation would be substantially the same for both the Construct without Annexation alternative and the proposed Project. Therefore, compared to the proposed Project, the Construct without Annexation alternative would result in a similar impact on these environmental resources. While impacts are considered similar, the Construct without Annexation alternative would be required to comply with County regulations and policy for those components of the Project that fall within the three County parcels. A brief review of the Construct without Annexation alternative under major County policies for biological resources, cultural resources, and noise is provided below.

Biological Resources

Two primary regulations in the County of San Diego regulate the protection of biological resources: the Resource Protection Ordinance (RPO) and the Habitat Loss Permit (HLP). The 2007 RPO includes special controls on development for the County's wetlands, floodplains, steep slopes, sensitive habitat lands, and prehistoric and historic sites. The RPO is a compilation of Ordinance Numbers 7968, 7739, 7685, and 7631, which strengthen methods adopted by the County to guarantee the preservation of sensitive lands (Ordinance No. 9842). This ordinance protects sensitive lands by requiring a Resource Protection Study for certain discretionary projects. If the Resource Protection Study identifies RPO wetlands, RPO wetland buffers, or RPO sensitive habitat lands, then avoidance or avoidance to the maximum extent feasible and mitigation are required, as specified under the code.

According to Sec. 86.602 of Chapter 6 RPO, wetlands and wetland buffers are defined as follows:

“(q). ‘Wetland’:

(1) Lands having one or more of the following attributes are ‘wetlands’:

(aa). At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);

(bb). The substratum is predominantly undrained hydric soil; or

(cc). An ephemeral or perennial stream is present, whose substratum is predominantly non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

(r). ‘Wetland Buffer’: Lands that provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community. Buffer widths shall be 50 to 200 feet from the edge of the wetland as appropriate based on the above factors. Where oak woodland occurs adjacent to the wetland, the wetland buffer shall include the entirety of the oak habitat (not to exceed 200 feet in width).”

The RPO applies to the Construct without Annexation alternative because the site contains wetlands, wetland buffers, floodplains, steep slopes, sensitive habitat lands, and cultural resources. The RPO allows encroachment into RPO wetlands and wetland buffers under specific, limited circumstances. Encroachment for required infrastructure is required to meet specific criteria, as described below:

aa. There is no feasible alternative that avoids the wetlands.

The RPO wetlands that exist on the Project site traverse the property in such a manner that it is impossible to install the Citracado Parkway Extension without crossing the wetlands.

bb. The crossings are limited to the minimum number feasible.

Only one roadway crossing is proposed.

cc. The crossings are located and designed in such a way as to cause the least impact to environmental resources, minimize impacts to sensitive species, and prevent barriers to wildlife movement (e.g., crossing widths shall be the minimum feasible and wetlands shall be bridged where feasible).

The roadway has been designed to include a bridge over Escondido Creek. The bridge has been designed to minimize permanent impacts to the creek.

dd. The least damaging construction methods are utilized.

As with the proposed Project, installation of the bridge would be completed outside of the bird breeding season or noise attenuation measures would be required, all staging areas would be located outside of sensitive areas, and temporary impacts would be minimized within wetland habitat to the greatest extent feasible.

ee. The applicant shall prepare an analysis of whether the crossing could feasibly serve adjoining properties and thereby result in minimizing the number of additional crossings required by adjacent development.

Citracado Parkway occurs in a relatively developed portion of Escondido and Unincorporated San Diego County. While Citracado Parkway will serve adjoining developments, no additional crossings in the vicinity are likely to be developed. Therefore, it is not expected to increase nor decrease the number of adjacent crossings.

ff. There must be no net loss of wetland and any impacts to wetlands shall be mitigated at a 3:1 ratio (this shall include a minimum 1:1 creation component, while restoration/enhancement of existing wetlands may be used to make up the remaining requirements for a total 3:1 ratio).

The current project proposes mitigation at a ratio of 2:1 for all wetland impacts, consistent with the North County MSHCP and County of San Diego MHCP. To be in compliance with the County RPO, under the Construct without Annexation alternative, mitigation for wetland impacts would be required at a ratio of 3:1.

In summary, with increased mitigation for wetland impacts, the Construct without Annexation alternative would not conflict with the County RPO.

San Diego County Ordinance Numbers 8365, 8380, and 8608 provide for the issuance of an HLP under certain circumstances. These ordinances regulate losses of diegan coastal sage scrub prior to issuance of certain grading permits, improvement plans, and grading and clearing permits.

Because the Citracado Parkway property is located outside of the adopted portions of the County Multiple Species Conservation Program area, an HLP will need to be obtained pursuant to the listing of the coastal California gnatcatcher under the 4(d) ruling of the federal Endangered Species Act (Interim Habitat Loss Permit) and pursuant to the provisions of the County Habitat Loss Ordinance (October 22, 1997). As part of this process, the County is required to make

findings on the issuance of the HLP pursuant to Section 86.104 of the County of San Diego Ordinance No. 8365 (N.S.) and Section 4.2.g of the Coastal Sage Scrub Natural Communities Conservation Plan Process Guidelines. Findings include if the habitat loss will (1) not preclude connectivity between areas of high habitat values, (2) not preclude or prevent the preparation of the subregional NCCP, (3) be minimized and mitigated to the maximum extent practicable in accordance with Section 4.3 of the NCCP Process Guidelines, (4) not appreciably reduce the likelihood of survival and recovery of listed species in the wild, and (5) be incidental to otherwise lawful activities.

The HLP is applicable to the proposed Construct without Annexation alternative because it would impact a small amount of disturbed coastal sage scrub. Because there would be a loss of coastal sage scrub, an HLP would be required under the Construct without Annexation alternative.

Cultural Resources

The Construct without Annexation alternative would not result in any substantial changes to the evaluation of cultural resources within the project or to the recommended mitigation measures needed to address adverse impacts to cultural resources. The application of County of San Diego Cultural Resources Guidelines and the RPO to portions of the Citracado Parkway Extension Project within the County's jurisdiction would result in findings identical to the Project evaluations of cultural resource significance and mitigation recommendations. While both the City of Escondido's and the County's evaluation criteria are essentially evolved from CEQA significance criteria, the County of San Diego has added or enhanced significance criteria and, in the case of highly significant sites, established the RPO significance rating to reflect cultural resource sites that are examples of intense occupation or contain human remains and/or rock art.

In the case of the Construct without Annexation alternative, the area of SDI-12,209 (north of Escondido Creek) would fall within the County's jurisdiction, and would require evaluation using the County's guidelines. The County of San Diego cultural resource evaluation criteria guidelines, including RPO, are listed below.

San Diego County Local Register of Historical Resources (Local Register)

The County requires that resource importance be assessed not only at the state level as required by CEQA, but at the local level as well. If a resource meets any one of the following criteria as outlined in the Local Register, it will be considered an important resource:

- 1) Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
- 2) Is associated with the lives of persons important to the history of San Diego or its communities;
- 3) Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- 4) Yields, or may be likely to yield, information important in prehistory or history.

Additionally, projects under County of San Diego jurisdiction are required to apply criteria listed in the RPO, as described below:

San Diego County Local Resource Protection Ordinance

The County of San Diego's RPO protects significant cultural resources. The RPO defines "Significant Prehistoric or Historic Sites" as follows:

Location of past intense human occupation where buried deposits can provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, State, or Federal importance. Such locations shall include, but not be limited to: any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places or the State Landmark Register; or included or eligible for inclusion, but not previously rejected, for the San Diego County Historical Site Board List; any area of past human occupation located on public or private land where important prehistoric or historic activities and/or events occurred; and any location of past or current sacred religious or ceremonial observances protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, and natural rocks or places which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The RPO does not allow nonexempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific

investigation authorized by the County. All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites. Noncompliance would result in a project that is inconsistent with County standards.

Cultural Resources Summary for the Construct without Annexation Alternative

Based upon the County's evaluation criteria, prehistoric site SDI-12,209 is identified as a significant cultural resource. The quantity and variation of artifacts within the deposit, the quantity of bedrock milling features, and a pictograph panel all attest to the focused occupation at this location by prehistoric occupants of the area. Given the elements of SDI-12,209 identified on the project, including rock art and human remains, as well as intact cultural deposits, this site would also qualify as an RPO-significant site. Such RPO-significant cultural sites are typically required to be preserved in accordance with the County of San Diego RPO protocol; however, changing the road alignment for the Citracado Parkway Extension Project to avoid SDI-12,209 is not feasible given the two fixed points of termination for the road and constraints associated with engineering and safety criteria. Furthermore, because road construction projects such as Citracado Parkway are exempt from RPO for cultural resources, the RPO-significance designation for SDI-12,209 is not applicable. Site SDI-12,209 would remain as a CEQA significant cultural resource. Site SDI-8280, located within the jurisdiction of the City of Escondido, would not be affected by this alternative, and the site would remain evaluated as a significant site under CEQA criteria.

The Construct without Annexation alternative will not have an effect on the evaluation of site significance for cultural resources within portions of the APE that fall within County jurisdiction. Because realignment of the roadway to avoid direct impacts to cultural resources is not feasible and avoidance of RPO-significant sites under County jurisdiction is not required where road/transportation projects are RPO-exempt, the mitigation program devised for the Citracado Parkway Extension Project will meet County guideline protocols for impact mitigation through data recovery at site SDI-12,209.

Noise

Two primary regulations in the County of San Diego regulate noise: the Noise Ordinance of the County Code and the Noise Element of the County General Plan. The Noise Ordinance regulates noise generated between properties and includes property line noise level limits and noise level limits for specific events or activities. The Noise Element provides goals and policies to protect

existing and future noise-sensitive land uses from excessive noise and noise level compatibility standards for these uses.

County of San Diego Noise Ordinance

The County Noise Ordinance, Section 36.404, sets limits on the noise levels generated from one property to another, such as from mechanical equipment, and Sections 36.409 and 36.410 govern noise generated by construction activities.

Section 36.404. Sound Level Limits

The County of San Diego Noise Ordinance, Section 36.404, sets limits on the noise levels generated from one property to another, such as from mechanical equipment. Unless a variance has been applied for by an applicant and granted by the County, it is unlawful for a person to cause or allow noise generated on a particular property to exceed the 1-hour average sound level at any point on or beyond the boundaries of the property. The noise level limits vary with the zoning of the properties concerned. The Project site is currently zoned Agricultural A-70 and A-72. The sound level limit is 50 dBA L_{eq} during daytime hours and 45 dBA L_{eq} during nighttime hours.

Section 36.404 of the noise ordinance would not apply to the Construct without Annexation alternative, as the roadway would not generate noise and the noise generated by vehicles operating on the roadway are regulated by the state, which preempts local regulations.

Section 36.409

Except for emergency work, it is unlawful for any person to operate construction equipment or cause the construction equipment to be operated, exceeding an average sound level of 75 dBA for an 8-hour period, between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received (County of San Diego 2006c).

Based on the analysis of construction noise, noise associated with construction of the Construct without Annexation alternative would comply with 75 dBA L_{eq} at all receivers. Thus, the proposed Project would comply with Section 36.409 of the County Code.

Section 36.410

In addition to the general limitations on sound levels in Section 36.404 and the limitations on construction equipment in Section 36.409, Section 36.410 (b) limits maximum noise levels from impulsive sources used in the construction of public roads to 85 dBA L_{max} at residentially zoned properties and 90 dBA L_{max} at agriculturally, commercially, or industrially zoned properties for a maximum of 15 minutes in any given hour.

Based on the analysis of construction noise, noise associated with construction of the Construct without Annexation alternative would generate a maximum of 82 dBA L_{max} at the nearest residences, approximately 125 feet from the roadway. Receptors R34 through R37 are located at distances of 200 feet or greater from the proposed Project. Thus, maximum noise levels during construction would comply with Section 36.410 of the County Code.

County of San Diego General Plan

Policy 4.b of the Noise Element of the County General Plan sets a standard for exterior noise levels at noise-sensitive land uses of 60 dBA CNEL (County of San Diego 2006b). Policy 4.b states,

“Because exterior community noise equivalent levels (CNEL) above 60 decibels and/or interior CNEL above 45 decibels may have an adverse effect on public health and welfare, it is the policy of the County of San Diego that:

1. Whenever it appears that a new development may result in any (existing or future) noise sensitive land use being subject to noise levels of CNEL equal to 60 decibels (A) or greater, an acoustical analysis shall be required.
2. If the acoustical analysis shows that noise levels at any noise sensitive land use will exceed CNEL equal to 60 decibels, modifications shall be made to the development that reduce the exterior noise level to less than CNEL of 60 decibels (A) and the interior noise level to less than CNEL of 45 decibels (A).
3. If modifications are not made to the development in accordance with paragraph 2 above, the development shall not be approved unless a finding is made that there are specifically identified overriding social or economic considerations that warrant approval of the development without such modification; provided, however, if the acoustical study shows that sound levels for any noise sensitive land use will exceed a CNEL equal to 75

decibels (A) even with such modifications, the development shall not be approved irrespective of such social or economic considerations.”

The policy further describes that, in the case of single-family residential detached noise sensitive land uses, exterior noise shall be measured at an outdoor living area that adjoins and is on the same lot as the dwelling, and that contains at least the following minimum area:

1. Net lot area up to 4,000 square feet: 400 square feet
2. Net lot area 4,000 square feet to 10 acres: 10% of net lot area
3. Net lot area more than 10 acres: 1 acre

For all actions, exterior noise shall be measured at all exterior areas provided for group or private usable open space (County of San Diego 2006b).

Receptors R34 through R37 are located within the County. As shown in Table 3.9-8, traffic noise levels under future conditions with the extension of Citracado Parkway would be below 60 dBA CNEL at R35 and R37 under the 2030 Build condition. Noise levels would exceed 60 dBA CNEL at R34 and R36, and increases associated with the Construct without Annexation alternative (i.e., increases over the No Build condition) would be 24 dBA at R34 and 4 dBA at R36. Thus, noise impacts during operation of the Citracado Parkway extension would exceed the County standards at R34 and R36. Based on the analysis of potential mitigation measures, noise levels could be reduced below County Noise Element requirements at R34, but not at R36. Thus, noise levels at R36 under the Construct without Annexation alternative would require a finding that specifically identifies overriding social or economic considerations for noise levels at this location to be in compliance with the County Noise Element.

Municipal Services/Utilities

The Construct without Annexation alternative would involve no reorganization of municipal service areas. Current service performance would stay the same for law enforcement, fire and emergency response, and water supply. The City departments indicated their capacity to include additional service areas for the proposed Project, so, compared to the proposed Project, the Construct without Annexation alternative would likely have a similar impact on municipal services.

5.3.3 Rationale for Selecting the Proposed Project over the No Annexation Alternative

The No Annexation alternative was rejected in favor of the proposed Project because of the City’s desire to maintain the roadway extension within the jurisdictional limits of Escondido to avoid the potential need for a joint jurisdictional operation and maintenance agreement between the County and the City. Table 5-1 summarizes the comparative impacts of all three Project alternatives.

**Table 5-1
Comparative Impacts on Environmental Resources from Project Alternatives**

Environmental Resources	Potential Environmental Impact	Comparative Impact Levels		
	Proposed Project	No Project Alternative	Construct without Annexation Alternative	Construct with Bridge over Harmony Grove to Escondido Creek
Land Use	Less than significant	No impact	Less impact	Similar
Air Quality	Less than significant	Similar	Similar	Greater impact
Biological Resources	Less than significant	No impact	Similar	Less impact
Cultural Resources	Less than significant	No impact	Similar	Less impact
Geologic/Seismic Hazards	Less than significant	No impact	Similar	Similar
Hydrology/Water Quality	Less than significant	No impact	Similar	Similar
Noise	Significant	No impact	Similar	Greater impact
Traffic	Significant	Greater impact	Similar	Greater impact
Visual Resources	Less than significant	No impact	Similar	Greater impact
Municipal Services	Less than significant	No impact	Similar	Similar

5.4 CONSTRUCT WITH BRIDGE OVER HARMONY GROVE TO ESCONDIDO CREEK (CONSTRUCT WITH BRIDGE ALTERNATIVE)

The following discussion presents the Construct with Bridge alternative to the proposed Citracado Parkway Extension Project.

5.4.1 Grade Separated Span over Harmony Grove Road Continuing across Escondido Creek – Description

This Project alternative would involve construction of a bridge that would begin at Citracado Parkway in the north and cross Harmony Grove Road. The bridge would continue south across Escondido Creek. South of the creek and north of Lariat Drive, the bridge would terminate and Citracado Parkway would continue south, at grade, to Avenida Del Diablo. This bridge would extend for approximately 2,000 feet and would be approximately 106 feet wide. Bridge construction would include pre-cast segmental bridge construction or other innovative bridge construction method to avoid and minimize impacts to both cultural and biological resources in the area. Under this alternative, a minimum of 20 bridge columns (bridge would consist of side-by-side columns with 10 on each side) would be installed, but no grading, cut, or fill would be required within the area of the bridge. With innovative construction methodology, false work would be also avoided. This alternative would require relocation of several utility lines, including increasing the height of a large 500-kV electric transmission line that currently runs east/west parallel to and just north of Harmony Grove Road.

This alternative would achieve all of the Project objectives, except objective number 7 to remain within funding constraints identified in the City's capital improvement plan. This alternative would require increased use of capital improvement funds for bridge construction. A typical at-grade roadway such as the proposed Project would cost approximately \$30 to \$40 per square foot, whereas a bridge such as proposed under this alternative would cost anywhere from \$175 to \$300 per square foot (FHWA 2010; Ty Lin 2007). In addition, relocation and realignment of large utility lines would add substantial additional cost to the project. A bridge of this length and width could result in an overall project cost increase of \$30 to \$55 million dollars.

5.4.2 Construct with Bridge over Harmony Grove to Escondido Creek Alternative – Impacts

The Construct with Bridge alternative would result in improved roadway infrastructure and would provide a new transportation link in the southwestern portion of the City. It would also minimize impacts to biological and cultural resources in the northern half of the Project area. The following discussion addresses the impacts of the Construct with Bridge alternative on environmental resources.

Land Use

The Construct with Bridge alternative would not change existing land use when compared to the proposed Project. The roadway, whether in the form of a bridge or at grade, is considered a compatible land use with the existing zoning and land use designations for both the City and County of San Diego. Approval of this alternative with the current land use designations administered by the County or City would be contingent on approvals from the Escondido City Council and LAFCO. Some loss of lands with rural residential or agricultural designations would still occur with the roadway extension. The zoning and land use designations in the Project area would be the same as with the proposed Project. Therefore, compared to the proposed Project, the Construct with Bridge alternative would have a similar impact on land use.

Air Quality

The Construct with Bridge alternative would result in similar operational air quality impacts as the proposed Project, since vehicular traffic would remain the same under both scenarios. However, the Construct with Bridge alternative would result in a longer construction duration for transportation improvements than the proposed Project and, with the increased emissions associated with construction activities, impacts on air quality would be greater for the Construct with Bridge alternative. Therefore, compared to the proposed Project, the Construct with Bridge alternative would result in a greater impact on air quality.

Biological Resources

The Construct with Bridge alternative would minimize direct impacts on biological resources. Bridge columns would be constructed instead of an at-grade road, minimizing direct impacts to sensitive vegetation communities, jurisdictional waters and wetlands, mature and protected trees, migratory birds, and sensitive plant and wildlife species. However, the bridge would still result in some permanent impacts to habitats under the bridge by shading those habitats from direct sunlight. Indirect impacts associated with construction (e.g., noise, dust) would be greater than the proposed Project because the construction duration would be longer. Although indirect impacts would increase, the overall impact to biological resources would be less than the proposed Project because, with advanced construction techniques, much of the habitat could remain in place under the bridge. Therefore, compared to the proposed Project, the Construct with Bridge alternative would result in less of an impact on biological resources.

Cultural Resources

The Construct with Bridge alternative would minimize direct or indirect impacts on cultural resources. Similar to the proposed Project, the alternative design would be located in areas of known cultural resource sensitivity. However, fewer impacts would occur due to substantially less ground disturbance under this alternative. Compared to the proposed Project, the Construct with Bridge alternative would result in less of an impact on cultural resources.

Geology/Seismicity

The Construct with Bridge alternative would have the same level of risk of encountering geologic or seismic hazards as the proposed Project. The geologic and seismic risks, as identified in Chapter 3, would be minimal with the Construct with Bridge alternative after implementing feasible measures required under existing regulations. Therefore, the Construct with Bridge alternative would result in a similar impact concerning geologic and seismic hazards.

Hydrology/Water Quality

The Construct with Bridge alternative would have the same amount of impervious surface as the proposed Project. Although the Construct with Bridge alternative would reduce the number of street trees and other landscaping designed to minimize impacts to water quality and hydromodification, the alternative would be constructed in compliance with storm water regulations and would be required to install other treatment BMPs acceptable to the City and RWQCB to reduce any potential impacts to less than significant. Therefore, compared to the proposed Project, the Construct with Bridge alternative would result in a similar impact concerning hydrology/water quality.

Noise

The Construct with Bridge alternative would have a direct effect on sensitive noise receptors in the Project area. Traffic levels along Citracado Parkway would remain substantially the same as with the proposed Project. However, truck traffic due to construction would continue for a longer duration, resulting in greater disturbance to sensitive noise receptors, including sensitive habitat, during construction. Compared to the proposed Project, the Construct with Bridge alternative would result in a greater impact related to construction noise.

Traffic/Circulation

The Construct with Bridge alternative would result in similar transportation improvements as would occur with the proposed Project. In the Construct with Bridge alternative, Citracado Parkway would extend over Harmony Grove Road. Harmony Grove Road would continue as a through road and would not be converted into a cul-de-sac on the eastern side of the proposed Citracado Parkway extension, as planned in the proposed Project. Because Harmony Grove Road is not an access road, and east/west traffic is dispersed in that area over several roads, the continuation of Harmony Grove Road as a through road is not a significant redistribution of traffic. Other traffic patterns and service levels would be similar to that of the proposed Project.

Although fewer trucks would be needed to bring dirt on-site during construction, as necessary for the proposed Project, additional trucks would be needed to deliver concrete, steel, and other materials necessary for bridge construction in the Construct with Bridge alternative. Related to construction traffic, traffic would be affected for a longer period of time because there is longer duration of construction for a bridge rather than an at-grade roadway. Therefore, traffic impacts due to construction would be greater than the proposed Project.

Visual Resources

The Construct with Bridge alternative would create an elevated structure that would obstruct views across open space. An at-grade roadway is considered less intrusive visually. Therefore, compared to the proposed Project, the Construct with Bridge alternative would have a greater impact on visual resources.

Municipal Services/Utilities

The Construct with Bridge alternative would involve relocation and realignment of heavy utility lines and increasing the height of a large 500-kV electric transmission line that currently runs east/west parallel to and just north of Harmony Grove Road in order to comply with SDG&E standards. Current service performance would stay the same for law enforcement, fire and emergency response, and water supply. While the Construct with Bridge alternative would require more utility relocation, service levels would remain the same. All improvements would be done in coordination with SDG&E. Therefore, while additional utility infrastructure would be required, impacts related to municipal services/utilities would be similar to the proposed Project.

5.4.3 Rationale for Selecting the Proposed Project over the Construct with Bridge over Harmony Grove to Escondido Creek Alternative

The Construct with Bridge alternative was rejected in favor of the proposed Project because of the costs associated with construction of the bridge and realignment of the 500-kV utility line. Construction of a bridge that would minimize environmental impacts to biological and cultural resources is estimated to cost anywhere from \$30,000,000 to \$50,000,000 more than the proposed Project. See Table 5-1 for a summary of the comparative impacts of the three Project alternatives.

5.5 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

This section outlines alternatives that were considered during the evaluation process but were not carried forward through environmental analysis. In accordance with CEQA Guidelines (Section 15126.6[c]), factors that may be used to eliminate alternatives from detailed consideration in an EIR include (1) failure of the alternative to meet most of the basic Project objectives, (2) infeasibility of the alternative, or (3) inability of the alternative to avoid significant environmental impacts. The seven proposed Project objectives are stated in Chapter 2 of this EIR. Factors that may be taken into account when considering the feasibility of Project alternatives include site suitability; economic viability; availability of infrastructure; consistency with general plans or other plans or regulatory limitations; and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (CEQA Guidelines 15126.6[f][1]).

5.5.1 Grade Separated Span over Harmony Grove Road

A build alternative was considered that would have allowed the continuation of Harmony Grove Road to the western connection with Kauana Loa Drive by passing underneath the new Citracado Parkway extension. This alternative may have resulted in increased circulation system connectivity but may have required an increase in the area disturbed for construction. Ultimately, this alternative was eliminated from further consideration because the grade separated span over Harmony Grove Road does not allow the minimum vertical clearance, stated by SDG&E, from the adjacent overhead high-voltage transmission lines.

5.5.2 Four-Way Intersection at Citracado Parkway and Harmony Grove Road

A build alternative was considered that would have planned for a four-way intersection at Harmony Grove Road and Citracado Parkway, instead of the three-way intersection planned as part of the proposed Project. This alternative would have created an eastern connection from Citracado Parkway to Harmony Grove Road. Various iterations of this four-way connection were analyzed but all were eliminated from further consideration due to excessive right-of-way costs that would have been incurred for Project implementation. In addition, the Circulation Element of the City's General Plan does not identify a connection from Citracado Parkway to the east along Harmony Grove Road. The Circulation Element does identify a Harmony Grove Road connection to the west, which is accomplished by the proposed Project via the intersection with Kauana Loa Drive.

CHAPTER 6.0

CUMULATIVE IMPACTS

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed Project. A cumulative effect assessment looks at the collective impacts posed by two or more individual projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time (CEQA Guidelines, Section 15355[b]).

Cumulative impacts to resources in the Project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion of rural lands to more intensive use. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts.

6.1 AFFECTED ENVIRONMENT

The following eight steps provided guidance for the analysis of cumulative impacts:

1. Identify and define the Project-specific resources to consider in the cumulative analysis. If a project would not cause direct or indirect impact on a resource, it would not contribute to a cumulative impact on that resource and need not be further evaluated.
2. Define the geographic boundary or resource study area (RSA) for each environmental topic or resource to be addressed in the cumulative impact analysis as the boundaries of RSAs for cumulative impact analysis are also often broader than the boundaries used for analyzing the project's direct impacts.
3. Describe the current health and condition of each topic or resource by providing historical context for how the resource has reached its current state.

4. Identify the direct and indirect impacts of the proposed Project that might contribute to a cumulative impact associated with the identified topic or resource with consideration of minimization and/or mitigation measures.
5. Identify other current and reasonably foreseeable probable future actions or projects and their associated environmental impacts for consideration of their contribution to a cumulative impact.
6. Assess the potential cumulative impacts. Make a determination or conclusion for each topic or resource regarding whether there is currently a cumulative impact on the topic or resource in the RSA and if the impacts from the project would contribute to that impact.
7. Report and explain the results of the cumulative impact analysis.
8. Assess the need for mitigation and/or recommendations for actions by other agencies to address a cumulative impact.

Information on past, present, and reasonably foreseeable probable future projects, and identified project impacts were gathered at the County of San Diego Department of Planning and Land Use and the City of Escondido Planning Division through review of available environmental documentation (conducted in July 2009 and March 2010). The RSA used for the cumulative Project analysis is approximately 1 mile, though projects within 3 miles were assessed for applicability. For the purposes of the cumulative traffic impact analysis, the RSA is the same as the study area considered for the impact analysis conducted in Section 3.10, Traffic/Circulation. It includes select intersections and street segments within 1 mile of the proposed Project.

The cumulative impact analysis focuses on (1) those topics or resources impacted to some level by the proposed Project or (2) resources currently in poor or declining health or at risk even if the Project impacts are relatively small. Topics or resources affected by the proposed Project are land use (Section 3.1), agricultural resources (Section 3.2), air quality (Section 3.3), biological resources (Section 3.4), cultural resources (Section 3.5), hydrology and water quality (Section 3.7); municipal services and utilities (Section 3.8); noise (Section 3.9), traffic and circulation (Section 3.10), and visual resources (Section 3.11). No topics or resources in addition to those listed above would be considered in poor or declining health.

6.2 PRESENT AND REASONABLY FORESEEABLE PROJECTS

The discussion of present and reasonably foreseeable probable projects focuses on those development projects that are similar in nature to the proposed Project and/or would occur in the same general vicinity as the proposed Project. Development projects proposed in the vicinity of the Project are included in Table 6-1.

6.3 ENVIRONMENTAL IMPACTS

As required by CEQA, the discussion below addresses the incremental effect of the proposed Project on environmental resources.

6.3.1 Land Use

The proposed Project is located within the Escondido General Plan Planning Area Boundary and the Vineyard neighborhood. Escondido has rapidly transformed from a rural agricultural town into a vibrant urbanizing community. The Vineyard subarea encompasses approximately 1,800 acres and is located west of I-15. It is bounded on the north by SR-78, on the south by Valley Parkway, and on the west by the existing city limits. The growing process has brought thoroughfares and freeways; major shopping centers; a downtown revitalization effort, including streetscape and façade improvements; a new city hall; a transit center; and a regional cultural and performing arts center.

Current and foreseeable projects in this area of Escondido would contribute to transforming land uses toward more intensive residential and industrial uses. These developments would be consistent with the City's General Plan land use goals for this area and would not contribute individual effects to land use that have not already been discussed in existing specific plans or the City's General Plan and associated EIRs.

The proposed Project area is surrounded by light industrial/heavy commercial uses to the north and east, and residential/rural residential to the west and south. Many of the lots slated for industrial/commercial development are either under ongoing development or graded for anticipated development. However, portions of the Project area are undeveloped. Implementing the proposed plans for this area would intensify land use. Completing the link in Citracado Parkway would contribute to that intensification. Because Project implementation is in planning documents dating back to the 1990 General Plan, it would not result in a cumulative land use

**Table 6-1
Present and Reasonably Foreseeable Projects**

	Project Name	Project Status	Location/ APN	Project Description	Potentially Cumulative Environmental Impacts	Lead Agency
1	Harmony Grove Village Specific Plan	California Department of Fish and Game (CDFG) approved Streambed Alteration Agreement on 10/12/2007. The Specific Plan and other discretionary plans that are linked to it are done. They were approved on 2/7/07. There may be open ministerial permits, but County project processing has been completed as of 3/19/10.	240 1104 900; 240 1105 000; 240 1115 100; 240 1115,	The project is a mixed-use residential village. It is composed of 468 acres located both north and south of the intersection of Harmony Grove Road and Country Club Drive in Harmony Grove.	Traffic Wetlands Cultural Resources	San Diego County Department of Planning and Land Use
2	Escondido Research and Technology Center (ERTC)	A Supplemental EIR was approved in 2005. Phase 1 is complete. Phases 2 and 3 are under construction. Palomar Medical Center West is under construction.	224-260-23	The ERTC includes a specific plan that will guide commercial and industrial development in western Escondido. The ERTC is currently in the City's permitting and approval process; a Final EIR was completed in 2002 and construction is expected to continue through 2012. Recently, the City approved a plan for a 44,000-square-foot medical office building within the ERTC footprint.	Traffic Air Noise Biological Resources Water Quality Cultural Resources Noise Visual	Escondido, City of

	Project Name	Project Status	Location/ APN	Project Description	Potentially Cumulative Environmental Impacts	Lead Agency
3	Citracado High School, Escondido Union School District	A Notice of Preparation (NOP) was published on 8/24/09. A preliminary site assessment was completed in January 2010. The school is expected to open in 2013; EIR in progress.	236-381-03	Career technology high school with 800 students on a 34-acre District-owned parcel	Visual Air Quality Biological Resources Cultural Resources Water Quality Land Use Noise Traffic	Escondido, City of
4	Hidden Valley Ranch Residential Subdivision: TR 932, 2005-47-PZ/PD/DA/GE, 2005-02-GPA, 2001-05-An and ER 2005-34	The mitigated negative declaration was approved 3/1/07. Development services agreement was extended through 2017.	Lehner Avenue and Vista Verde Drive	The project involves a proposed 179-lot residential subdivision on a 149.9-acre site located east of Vista and Lehner avenues. The project proposes 101 clustered units with a mix of one- and two-story houses.	Agricultural Resources Biological Resources Wetlands	Escondido, City of
5	Citracado Business Park, Specific Plan	The tentative map was only submitted as of April 2010. The project is not yet approved.	On-site	The project involves six industrial lots.	Not known at this time.	Escondido, City of
6	Harmony Grove Residential Project	Approved	Adjacent to project area	The project involves 4.87 acres with a 22-lot single-family residential subdivision.	Biological Resources Wetlands Traffic	Escondido, City of

impact. The proposed changes in land use are consistent with previously approved plans and adjacent developments in the Project area. Cumulative impacts to land use would be less than significant.

6.3.2 Agricultural Resources

Although a portion of the Project area is designated for agricultural land use, the site has no active agricultural operations. The most recent agricultural use of the property would have occurred prior to 1974. This area currently maintains a rural residential character and does not offer regional value as agricultural land. Other current and foreseeable projects (e.g., the Hidden Valley Ranch Residential Subdivision) may result in the direct loss of agricultural land to development. These impacts, however, would not be exacerbated by the proposed Project's change in zoning from agricultural to industrial as proposed by the Project, because no agricultural operations have occurred in recent history or are planned to occur in the area of the proposed Project in the future. Therefore, no significant cumulative impacts would result from the proposed Project.

6.3.3 Air Quality

The proposed Project was found to be in conformity with regional air quality management plans. Assuming that foreseeable projects would also comply with regional plans, implementing the proposed Project would not result in significant cumulative impacts to air quality.

6.3.4 Biological Resources

Ongoing industrial, commercial, residential, and highway development in the Project area would result in significant and adverse direct and indirect impacts to sensitive vegetation communities, jurisdictional waters, mature and/or protected trees, sensitive plant and wildlife species and their habitats, and migratory birds. Although the use of mitigation measures will lessen some Project-related impacts, greater intensification of land uses will likely result in cumulative unavoidable direct or indirect impacts to existing species populations, in particular Engelmann oaks, Palmer's sagewort, Cooper's hawk, yellow warbler, yellow-breasted chat, and migratory bird species. Cumulative impacts from current and foreseeable projects could be minimized by identifying and avoiding sensitive vegetation communities, impacts to jurisdictional waters, and habitats of sensitive plant and wildlife species. Direct and indirect impacts on wildlife movement by the proposed Project are not considered significant due to existing surrounding development.

The proposed Project will use mitigation measures to reduce direct or indirect impacts below a level of significance by avoiding sensitive habitats and species and with on- or off-site replacement or restoration of sensitive upland and wetland/riparian habitats. Temporary impacts to sensitive upland and wetland habitats will be mitigated through replacement on-site at a ratio of 1:1 for a total of 6.28 acres of habitat restoration. Permanent wetland habitat will have a final mitigation ratio of a minimum of 1:1. Where mature trees cannot be preserved on-site, they will be replaced at a minimum 1:1 ratio. Where protected trees cannot be preserved on-site, they will be replaced at a minimum 2:1 ratio. A restoration maintenance and monitoring plan will be prepared by a qualified restoration ecologist and will incorporate an appropriate native species planting palette to blend in with the existing and surrounding habitats. Additionally, a SWPPP will be prepared to identify the design features and BMPs that will be used to effectively manage drainage-related issues (e.g., erosion and sedimentation) during construction.

Current and foreseeable projects, including the development projects identified in Table 6-1, may affect biological resources in the RSA. These projects would be required to implement mitigation and monitoring measures similar to those previously discussed for the proposed Project, particularly for sensitive vegetation communities such as upland and wetland/riparian habitats. Upon implementation of such measures, the proposed Project would not contribute to a significant cumulative impact to biological resources.

6.3.5 Cultural Resources

Ongoing development in the vicinity of the Project would result in the loss of important cultural resources. Mitigation measures and BMPs would help minimize Project-specific impacts. However, cumulative impacts would be unavoidable as intensification of land use would likely result in the discovery and disturbance of cultural resources. Cumulative impacts from current and foreseeable projects could be minimized by identifying and avoiding sensitive historic, prehistoric, and archaeological sites.

The proposed Project has taken many steps to avoid and minimize impacts to sensitive cultural resources, including redesign of the proposed roadway alignment. The proposed Project would result in significant impacts to prehistoric sites, including potential direct and indirect impacts if human remains are discovered during data recovery or during grading. Such impacts would be mitigated through timely consultation among the City representative, the Principal Investigator, and the Native American Monitor. Specific measures may be required to determine the extent of burials or ensure the recovery of all elements of the burial. In addition, the City will also isolate

an area to relocate any human remains or ceremonial items that the Native American community may wish to reburial within the village complex.

The proposed Project would also implement a Data Recovery Program and an MMRP. These programs would guide the construction and mitigation process with respect to subsurface cultural resources and would address Native American concerns. The MMRP would require the presence of an archaeological monitor, as well as Luiseño and Kumeyaay Native American monitors, during all grading and trenching associated with the Project. These measures would mitigate Project-specific impacts to cultural resources to less-than-significant levels.

Other current and foreseeable projects may affect cultural resources in the Project vicinity. The development projects identified in Table 6-1 all have potential to impact previously undocumented cultural resources. Specifically, the Citracado Business Park, located immediately adjacent to the proposed Project, would add to the potential for direct impacts to cultural resources identified in Section 3.5 of this EIR. However, this Project, and other similar projects, would be required to implement robust mitigation and monitoring measures similar to those previously discussed for the proposed Project. Therefore, the proposed Project would not contribute to a significant cumulative impact to cultural resources.

6.3.6 Geology and Soils

No significant impacts related to geology and soils were identified with implementation of the proposed Project. No adjacent projects have been identified that would create cumulative impacts to geology and soils within the Project area. Therefore, no cumulative impacts are anticipated as a result of the proposed Project.

6.3.7 Hydrology/Water Quality

The Project is located within the Carlsbad Watershed. The Carlsbad Watershed is approximately 210 square miles and extends from the headwaters above Lake Wohlford in the east to the Pacific Ocean in the west at the San Elijo lagoon. Approximately 48% of the watershed is urbanized and large population increases are expected in the near future.

Current and foreseeable projects in this area would contribute to the increase in impervious surface area and the need for storm water treatment features. These projects would be required to conform to local regulations such as the County hydrology manual and drainage design manuals,

the City's JURMP, the SUSMP, and other RWQCB storm water standards. Conformity with these regulations would result in less-than-significant impacts to hydrology or water quality.

The proposed Project improvements would occur within partially previously undisturbed areas. The proposed Project, however, would not substantially change long-term drainage patterns. Urban runoff levels would essentially remain unchanged through the use of permanent storm water BMPs like detention basins or bioswales. Application of standard design measures and BMPs would reduce any impacts associated with increased erosion and sediment runoff during construction. Therefore, the proposed improvements would not contribute to significant cumulative water quality impacts.

6.3.8 Municipal Services and Utilities

No significant impacts related to municipal services and utilities were identified with implementation of the proposed Project. No adjacent projects have been identified that would create cumulative impacts to municipal services and utilities within the Project area. Therefore, no cumulative impacts are anticipated as a result of the proposed Project.

6.3.9 Noise

The proposed Project would result in potentially significant impacts at receptors located along the existing and proposed alignment. Mitigation has been identified to reduce potentially significant impacts. However, even with proposed sound walls, impacts may remain significant at numerous receiver sites, where residences would be exposed to noise levels in excess of 60 dBA CNEL. The Project would result in a cumulatively considerable substantial increase in noise levels, i.e., an increase greater than 1 dBA with the Project, at receptors R22, R27, R28, R30, R31, R34, R35, R36, R37, R38, and R40. It is not practical to reduce noise levels to ambient noise levels; thus, the goal would be to ensure noise levels at these locations are compatible with the land uses. Based on the noise levels presented in Table 3.9-8, R22, R27, R28, R30, R31, R34, and R36 would be exposed to a substantial increase in noise levels and a noise level in excess of 60 dBA CNEL.

There would be fewer noise-related impacts due to traffic under the 2030 Build condition than in 2014 due to the projected redistribution of local traffic. According to predicted traffic noise analysis, noise levels at many receptor locations under the 2030 Build condition would be less than noise levels without the Build condition. While impacts would remain cumulatively

considerable, mitigation in the form of noise walls would reduce noise levels to at or below 65 dBA CNEL, a level compatible with surrounding land uses.

6.3.10 Traffic/Circulation

During construction activities, cumulative impacts to traffic would not be expected, as the City coordinates public infrastructure projects to avoid excessive construction in a given area. This would serve to reduce or avoid short-term cumulative traffic circulation impacts.

While significant traffic impacts have been identified in the Project area with implementation of the proposed Project, the proposed Project would improve traffic circulation overall. The proposed Project is critical to reducing existing and future traffic congestion on local collector streets caused by drivers navigating around the existing break in Citracado Parkway.

With Project implementation, intersections and roadway segments outside the traffic study area would experience reduced traffic congestion with the proposed Project. Specifically, traffic levels on West 9th Avenue, Hale Avenue, and Harmony Grove Road would all be lower with the proposed Project, as opposed to the No Build conditions. These roadways currently receive through traffic traveling between central Escondido or I-15 and the ERTC area. This traffic would partially be diverted to the new roadway link. A Traffic Impact Analysis prepared for the Palomar Medical Center West Project (LLG 2005) identifies several planned roadway improvements near the ERTC (where the Medical Center is located) that would improve local traffic conditions. These include widening of Nordahl Road/Citracado Parkway between Country Club Drive and the SR-78 Eastbound Ramps from the current four lanes to six lanes; extension of Citracado Parkway from Andreasen Drive to Avenida Del Diablo and widening of Citracado Parkway between Avenida Del Diablo and West Valley Parkway (the proposed Project); widening Harmony Grove Road from the current two lanes to four lanes; widening West Valley Parkway between Via Rancho Parkway and 11th Avenue from the current two lanes to four lanes; and restriping and intersection improvements along 9th Avenue and Hale Avenue. The projected 2030 LOS values for roadway segments near the ERTC improve when these improvements are factored into the analysis. Harmony Grove Road is expected to operate in the near term at a minimum of LOS F; factoring in local roadway improvements, this level improves to a minimum of LOS C. Additionally, West 9th Avenue between Hale Avenue and West Valley Parkway is expected to operate in the near term at a minimum of LOS F; factoring in local roadway improvements, this level improves to a minimum of LOS B. Finally, West Valley Parkway between 11th Avenue and Citracado Parkway is expected to operate in the near term at a minimum of LOS F in 2014; factoring in local roadway improvements, this level improves to a minimum of LOS C.

Although the incremental contribution to the improvements in local traffic circulation due to the Citracado Parkway Extension Project have not been individually calculated, it can be deduced that without the additional roadway capacity and routing options this link would provide, LOS forecasts for the local circulation system would decrease without the proposed Project's improvements.

Even though the local circulation network would benefit from the proposed Project, the redistribution of existing and projected traffic, as discussed in Section 3.10, would contribute to individual deteriorating intersection and street segment operations in year 2030. The impacts calculated for the year 2030 scenario were based on regional modeling, which assumes additional traffic demand resulting from cumulative projects. The proposed Project would result in an overall improvement to the City's circulation system but would result in significant unavoidable cumulative impacts, based on the 2030 traffic conditions, at the intersection of Del Dios Highway and Via Rancho Parkway, the segment of Del Dios Highway/West Valley Parkway west of Citracado Parkway, and the segment of Via Rancho Parkway south of Del Dios Highway. These impacts to traffic would be partially offset by reduced congestion at local collector street intersections discussed above, and increased access for vehicles traveling between the regional freeway system and the ERTC.

6.3.11 Visual Resources

The Citracado Parkway Extension Project is a critical link in the General Plan Circulation Element that enhances circulation to regional medical facilities and accommodates increased traffic generated from planned residential and industrial/commercial growth in the area. These projects will continue to alter the existing residential and rural residential/open space visual quality and character of the area. However, these developments would be consistent with the City's General Plan land use goals for this area and would not contribute individual effects to aesthetics and visual quality that have not already been discussed in existing specific plans or the City's General Plan and associated EIRs.

The aesthetic change resulting from the proposed development would be compatible and typical within the existing visual environment and the reasonably foreseeable future development of the ERTC and other planned uses. Development in the cumulative study area is regulated through the zoning codes and General Plan requirements to help to ensure that scenic resources are protected. Future development proposed in the cumulative study area would be subject to these regulations and requirements.

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CHAPTER 7.0 OTHER CONSIDERATIONS REQUIRED BY CEQA

7.1 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Implementation of the proposed Project would result in significant irreversible environmental impacts that could not be avoided by the Project in several issue areas evaluated in this Draft EIR. Significant impacts would occur in the areas of:

- Biological Resources
- Cultural Resources
- Noise
- Traffic

Project commitments such as preparation of a TMP, safe construction practices plan, and design of the roadway to minimize impacts to cultural resources along with the mitigation measures, reduce impacts to biological and cultural resources to below a level of significance. As described in Chapter 3, impacts to traffic and noise cannot be reduced to less than significant through feasible mitigation and would remain significant and unavoidable with Project implementation.

7.2 GROWTH-INDUCING IMPACTS

A discussion of the proposed Project's growth-inducing impacts is required under CEQA Guidelines Section 15126(d). A project may be growth inducing if it does the following:

- directly or indirectly fosters economic or population growth or the construction of additional housing,
- removes obstacles to population growth,
- taxes community service facilities to the extent that the construction of new facilities would be necessary, or
- encourages or facilitates other activities that cause significant environmental effects.

A new transportation facility allows increased access at a local or regional level, which may enhance the attractiveness of surrounding land available for development. In addition, the

services required for operation and maintenance for such a facility (e.g., street cleaning, landscape watering, and law enforcement and emergency services) may extend beyond the current service capacity of the managing jurisdiction.

Whether a project contributes to a growth-inducing impact is generally dependent on the availability of existing utilities and public services in an area. The availability of such services, and the associated growth in development, may or may not be anticipated in local land use planning documents. If a project stimulates development of unanticipated urban uses, or stimulates increased housing densities or new commercial or industrial developments, it would have a significant growth-inducing effect. If a project accommodates planned growth as identified in local plans, it may still lead to a significant growth-inducing impact if analysis of the impacts due to growth was deferred or left unmitigated at the time of local plan approval.

The proposed Project would result in linear transportation improvements that would increase the efficiency of travel on the existing system and introduce a new transportation link in western Escondido. The Project improvements would reduce congestion on local streets and would reduce the travel time cost for those traveling through and within this area of the City. The proposed improvements are intended to benefit existing and projected roadway users traveling to and from the planned residential, commercial, and industrial uses surrounding the Project. The benefits of the Project noted above would likely increase the potential for development on nearby lands and would directly and indirectly result in the need for additional city services such as utilities, law enforcement, and emergency services. The Citracado Parkway Extension Project would have a growth-inducing impact.

However, the proposed roadway improvements constitute a planned component of the City's General Plan Circulation Element. A 1990 EIR prepared by the City assessed at a programmatic level the growth-inducing impacts of implementing the elements of the General Plan. The City issued a Statement of Overriding Considerations. In light of the City's current adopted plans, current approved development efforts surrounding the Project, and planned future developments in the vicinity of the Project, the transportation improvements included in this Project would accommodate future planned growth in this area, and would not result in a new growth inducing impact.

CHAPTER 8.0
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