



Natural Environment Study

SR-74 (Ortega Highway)

San Juan Capistrano City Widening

Calle Entradero to City of San Juan Capistrano/County Line

12-ORA-74-KP 1.7/3.0 (PM 1.0/1.8)

EA 086900

June 2007



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Summary

The project proposes to widen State Route 74 (SR-74), also known as Ortega Highway, from two lanes to four (through) lanes from Calle Entradero [Kilopost (KP) 1.7/Postmile (PM) 1.0] in the City of San Juan Capistrano to the City of San Juan Capistrano/County of Orange boundary (KP 3.0/PM 1.8). Project features include improvements to pedestrian and bicycle facilities, drainage improvements, construction of retaining walls and soundwalls, utility improvements, and landscaping. The Biological Study Area (BSA) contains primarily disturbed conditions typical of roadside shoulders on the north side of SR-74; the south side of SR-74 contains primarily City of San Juan Capistrano landscaped areas. This Natural Environment Study (NES) describes the existing site conditions and survey results of the BSA, along with habitat and any sensitive species effected by the proposed project. Avoidance, minimization, and/or mitigation measures are included in this NES as a result of coordination with the US Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), National Marine Fisheries Service (NMFS), United States Fish and Wildlife Service (USFWS), County of Orange (County), and Rancho Mission Viejo (RMV).

The widening of SR-74, within the County boundary, has been evaluated as part of the RMV's Ranch Plan Environmental Impact Report No. 589, for which the County of Orange is the Lead Agency. In June 2006, the Project Team decided that the California Department of Transportation (Caltrans or Department) should evaluate the widening of SR-74 only within the City of San Juan Capistrano limits (City). The City portion of the project is referred to as proposed project, project area, or Biological Study Area (BSA), hereafter. The Department/FHWA is the lead for the environmental document that is being prepared for the widening of SR-74 within the City of San Juan Capistrano (City; proposed project) and the County of Orange is the Lead Agency for the widening of SR-74 within the County of Orange. The BSA contains the disturbance limit for the proposed project, including such activities as cut, fill, and grading.

From January 2001- May 2006, the Department coordinated with the resource agencies. A history of coordination, events, and survey findings is contained with this NES and also within Appendix F to the NES. The County will prepare the resource agency permits for the proposed project. The Department will review these resource agency permits for impacts and conditions associated with SR-74 itself. The County is responsible for mitigation and monitoring commitments for any impacts to

biological resources associated with the proposed project. At the time the County prepares the project plans, the County will determine appropriate project mitigation, in coordination with the resource agencies. No mitigation will be planted within the state right-of-way, to account for impacts to biological resources.

The BSA is located in the City of San Juan Capistrano, United States Geological Survey (USGS) San Juan Capistrano quadrangle. The BSA is considered valuable due to its inclusion in regional planning efforts including : the Army Corps of Engineer's Special Area Management Plan (SAMP) for the San Juan Creek Watershed along with the Southern Subregion Natural Community Conservation Plan (NCCP)/Master Streambed Alteration Agreement (MSAA)/Habitat Conservation Plan (HCP) for southern Orange County. The BSA is located just west of Planning Area 1 of RMV. The City of San Juan Capistrano, as a SAMP Participant, would be required to adhere to SAMP Long-Term Individual Permits/Letters of Permission (LOP) procedures and applicable conditions of the NCCP/MSAA/HCP. A Streambed Alteration Agreement/Master Streambed Alteration Agreement from CDFG and 401 Water Quality Certification from the San Diego Regional Water Quality Control Board, are required for the proposed project.

Of the 11 possible federal or state threatened or endangered species that may occur in the BSA, none were present during surveys of the BSA primarily due to the lack of suitable habitat. Invasive/exotic species within the BSA include iceplant (*Carpobrotus edulis*) and pampas grass (*Cortaderia selloana*), both found on the California Exotic Plant Pest Council lists. In addition, numerous non-native species occur within the BSA. The proposed project may result in long-term, beneficial effects including the removal of exotic species within the BSA. No invasive species will be planted within the BSA, upon completion of project work, in accordance with Executive Order 13112 *Invasive Species*. Non-sensitive wildlife, including raptors, have the potential to occur in the BSA including red-shouldered hawk (*Buteo lineatus*) and red-tailed hawk (*Buteo jamaicensis*). A total of 0.134 acre of riparian/atypical wetland habitat, that may be used by nesting birds/raptors, will be permanently removed by the proposed project. A total of less than a dozen oak trees (*Quercus agrifolia*) will be impacted by the proposed project. Approximately 41 mature trees (City of San Juan Capistrano landscaped areas), including the removal of less than a dozen oak trees, will be directed removed or impacted through work within the drip line of the trees. These trees may provide marginal nesting and foraging habitat. An estimated total of 70 trees will be removed on the north side.

Direct effects to wildlife include the permanent loss of habitat from clearing and grubbing work to prepare for widening activities; however, any impacts within the City portion of the project will be mitigated by the County. A total of 0.134 acre of ACOE and CDFG jurisdictional area, in the form of riparian vegetation and atypical wetland, will be permanently impacted from the widening activities. The habitat areas have limited function and value, in very small areas next to the roadway shoulder. A total of 0.052 acre of this jurisdictional area is riparian vegetation. As Route 74 is an existing roadway, habitat will not be further fragmented in the BSA. The placement of median barriers will not impact wildlife from crossing the existing road as wildlife likely utilize the adjacent San Juan Creek area as a wildlife corridor. Indirect effects to wildlife, related to incidental disturbance of biological resources beyond the area of direct effect, resulting from construction include construction operation noise, effects of invasive species and dust, increased potential for soil erosion/siltation, are temporary in nature. Any displacement would be temporary as areas of open space exist adjacent to the BSA, in RMV. Long-term effects to wildlife or natural communities will not occur. With anticipated project mitigation by the County, there will be no net loss of wetlands.

The widening of SR-74 will increase automobile and pedestrian traffic, as well as possibly increasing human presence with the path proposed along the northern portion of the road. With the implementation of the project noise walls, levels of noise will remain very similar to those of pre-construction.

All existing drainages would be modified and extended to intercept at the proposed edge of pavement. An additional ten drainages would be added on the north side of the highway in the BSA. A total of three existing drainages are jurisdictional “atypical wetlands” based on ACOE and CDFG guidelines, with these drainage areas filled due to north side roadway widening. These drainages eventually discharge into San Juan Creek, located less than a mile east and south of the BSA.

Cumulative impacts are the collective result of any number of related or unrelated projects ongoing or proposed within a geographical area that, together, have a greater impact on biological resources than any one project considered individually. The proposed project may result in contributions to regional (or cumulative) effects, which include: impacts to jurisdictional ACOE and CDFG areas, the potential for the introduction to nonnative invasive plant species into drainage areas that discharge into San Juan Creek, and impacts to hydrologic function, water quality, erosion/sedimentation potential and groundwater resources within the San Juan Creek

watershed. With application of Best Management Practices (BMPs) mentioned in the Stormwater Pollution Prevention Plan (SWPPP), the proposed project would only minimally contribute to the cumulative effect on the water quality and hydraulic function of the San Juan Creek Watershed. The proposed project would not contribute substantially to the cumulative impacts on sensitive biological resources. Wildlife and natural resources are widely distributed in RMV and southern California. The cumulative effects on biological resources would be minimized by using the avoidance and minimization measures outlines in this NES. Since SR-74 is an existing roadway and no median barriers are proposed, the proposed project would not result in further habitat fragmentation. No invasive species will be planted in the BSA in compliance with Executive Order 13112 on *Invasive Species*.

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List of Abbreviated Terms

ACOE	Army Corps of Engineers
ADA	American Disability Act
BRCPP	Biological Resources Construction Plan
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CMP	Corrugated metal pipe
dbh	Diameter at breast height (~4 ft)
DS	Drainage systems
EIR	Environmental Impact Report
EIS	Environmental Impact Study
EO	Executive Order
EPA	Environmental Protection Agency
ERDC	Engineer Research Development Center (SAMP)
FHWA	Federal Highway Administration
ft	foot/feet
FWS	Fish and Wildlife Service
GPA	General Plan Amendment
HCP	Habitat Conservation Plan
HRMP	Habitat Reserve Management Program
IA	Implementation Agreement
km	kilometer(s)
KP	kilometer post
LOP	Letters of Permission (SAMP)
m	meter(s)
mi	mile(s)
MSAA	Master Streambed Alteration Agreement
NCCP	Natural Community Conservation Plan
NOAA Fisheries	National Marine Fisheries Service
NMFS	National Marine Fisheries Service
PM	post mile

RMV	Rancho Mission Viejo
SAA	Streambed Alteration Agreement (CDFG)
SAMP	Special Area Management Plan
USFWS	United States Fish and Wildlife Service
ZC	Zone Change

Chapter 1. Introduction

SR-74 is a major east-west arterial in southern Orange County. It extends from Interstate 5 (I-5) in San Juan Capistrano northeast to the Orange/Riverside County Line, eventually intersecting with Interstate 15 (I-15). It ultimately extends further northeast towards Palm Desert in Riverside County.

The existing SR-74 consists of four lanes from I-5 to approximately 100 meters (330 feet) east of Calle Entradero, in the City of San Juan Capistrano. It transitions to and continues on with two lanes east of Via Cordova. The proposed project is to widen SR-74 from two lanes to four (through) lanes from Calle Entradero [Kilopost (KP) 1.7/Postmile (PM) 1.0] in the City of San Juan Capistrano to the City/County boundary KP 3.0/PM 1.8. The proposed project is located entirely within the City of San Juan Capistrano (City).

1.1. Project History

SR-74 was constructed in 1930/1932. The road was originally designed to be two lanes; each lane was 6.7 meters wide, with a maximum grade of six percent in the mountainous areas, for vehicle speeds of 40 km/h to 65 km/h. In 1959 this route was included in the State Freeway and Expressway System. Currently Ortega Highway provides interregional access between south Orange County and Riverside County. The proposed project area has commuter traffic from the adjacent residential communities along with the interregional recreational traffic. The corridor contains San Juan Creek, and it meanders under Ortega Highway in various locations. It is the only major highway in southern Orange County that traverses to Riverside County.

The purpose of this project is to improve the traffic flow within the study area which begins in the City of San Juan Capistrano, at Calle Entradero [Kilopost (KP) 1.7/Postmile (PM) 1.0] and extends to the City of San Juan Capistrano/County of Orange boundary [KP 3.0/PM 1.8]. The proposed project has the following objectives to improve: the flow of traffic, drainage facilities, intersection operations, and driveway access. The Annual Average Daily Traffic (AADT) and Peak Hour Volume for this segment of SR-74 are 24,000 and 2,360, respectively for 2005. Truck traffic is estimated to be 8 percent of total traffic. The 2030 volumes are

expected to increase to 42,000 vehicles per day (ADT) and 3,390 vehicles during peak hour for both directions. The forecasted Peak Hour Volume of 3,390 vehicles in year 2030 relates to level of service (LOS) F. The roadway capacity used to determine the LOS is 1,700 vehicles per hour per lane (Austin-Foust, 2006).

The following documents are applicable for the proposed project: *Joint Programmatic EIR/EIS and Draft Implementation Agreement (IA) for the Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (Southern Subregion NCCP/MSAA/HCP)* (County of Orange, July 2006), *Draft Environmental Impact Statement, San Juan Creek and Western San Mateo Creek Watershed Special Area Management Plan (SAMP)* (US Army Corps of Engineers, November 2005), *Addendum No. 1 (PA06-0023) for Final EIR No. 589 The Ranch Plan Planning Area 1* (Bonterra Consulting, May 2006), and *Final Environmental Impact No. 589 General Plan Amendment/Zone Change (EIR/GPA/ZC)(PA 01-114) The Ranch Plan Certified Draft EIR Orders and Approvals, Technical Appendices, Comments and Responses* (SCH No. 2003021141) (County of Orange, November 2004). The County is to apply for resource agency permits for the City widening of SR-74 (proposed project); the boundaries within the County of Orange are herein referred to as study area. The County of Orange is the lead agency for the Ranch Plan EIR/GPA/ZC. A further description of these applicable documents is found in Chapter 2, Study Methods, of this NES.

The County of Orange will prepare resource agency permits for the proposed project. The Department will review these resource agency permits for impacts and conditions associated with SR-74 itself. The County is responsible for mitigation and monitoring commitments for any impacts to biological resources associated with the proposed project. At the time the County prepares the project plans, the County will determine appropriate project mitigation, in coordination with the resource agencies.

The City of San Juan Capistrano, as a SAMP Participant, would be required to adhere to SAMP Long-Term Individual Permits/Letters of Permission (LOP) procedures and applicable conditions of the NCCP/MSAA/HCP. A Streambed Alteration Agreement/MSAA from CDFG and Water Quality Certification from the San Diego Regional Water Quality Control Board, are required for the proposed project.

The County of Orange Board of Supervisors certified the Final EIR for the NCCP/MSAA/HCP and approved the HCP in October 2006. The USFWS distributed the Final EIS for public review on November 13, 2006. The IA was signed by the

Participating Landowners (the County, RMV, and SMWD) in December 2006. The USFWS signed the IA, approved the HCP, and issued Incidental Take Permits to each of the participating landowners on January 10, 2007. The Southern HCP assumed the Ranch Plan development. Coordination with CDFG on the NCCP/MSAA is ongoing. The USACE released for public review a Draft EIS for the SAMP in November 2005. The USACE anticipates releasing the Final EIS and issuing RMV a long-term 404 permit after completion of a Section 7 consultation with the USFWS on the SAMP.

The following is a summary of environmental coordination activities between Department, County, Resource Agencies, and Consultant, for the proposed project through the end of 2006:

Environmental Coordination Meetings: June 19, 2006, June 26, 2006, August 15, 2006, August 29, 2006, September 12, 2006, September 18, 2006, September 26, 2006, October 17, 2006, November 7, 2006, November 21, 2006, and December 4, 2006

August 15, 2006 & September 12, 2006: County will be the lead for obtaining any resource agency permits in the City portion of SR-74. The drip line of oak trees will likely be flagged as ESA. The soundwall construction is to include the minimal removal of vegetation.

September 26, 2006: City resource agency permits are separate from both the RMV and PA 1 permits. Caltrans is not a signatory on either the City or County permits; however, Caltrans will be provided a review opportunity of the permits. The County of Orange is the lead agency for the preparation of any resource agency permits for Ortega Highway.

October 17, 2006: Environmental Coordination meeting occurred with representatives from RMV, County of Orange, Biology Consultants. The County is to provide the Department with verification from the resource agencies of concurrence with the County permits/approvals covering the Ortega project impacts under the County permits and regional planning efforts (also discussed during June 19, 2006, September 26, 2006 meetings).

November 7, 2006: The Department is to reference applicable conditions of the SAMP and NCCP/MSAA avoidance/mitigation measures in the environmental document. In addition, a bioswale may be constructed just east of the intersection of SR-74 at Strawberry Lane. The City of San Juan Capistrano has a tree removal

policy that must be followed for any plants over 4” diameter. The County is to maintain any trails at the Lower San Juan Creek Bridge.

November 21, 2006: There is limited space to mitigate for proposed impacts to trees within the BSA; however, the trees will be replanted close to the BSA, in the City of San Juan Capistrano in compliance with the City’s Tree Removal Guidelines. In addition, a separate 401 will be required for the proposed project as the activities within the City portion aren’t covered under the PA 1 Water Quality Certification

Caltrans has conducted surveys, including and in proximity of the BSA, since 1990’s, during various phases for projects proposed along SR-74. The surveys have primarily focused on the areas at the Lower San Juan Creek Bridge, just east of the proposed project BSA. In order for an understanding of the Regional Context of the BSA, a summary of surveys has been included in this NES. In chronological order, the following occurred, along SR-74, for the study area:

- **1992 Biological Assessment for the Lower San Juan Creek Bridge (Bridge) Replacement was completed by Caltrans.** Caltrans conducted bridge surveys in 1992 that indicated the presence of raptors including red-tailed hawks, red-shouldered hawks, Cooper’s hawks, barn owls, and screech owls. The area was also utilized by many smaller birds including the acorn woodpecker, Nuttall’s woodpecker, scrub jay, dark-eyed junco, plain titmouse, yellow-rumped warbler, bushtit, and Bewick’s wren. Tri-colored and red-winged blackbirds, belted kingfisher, rufous-sided towhee, and yellow-rumped warbler, were also seen. Grey fox, raccoon, bobcat, and mountain lion are known to occur within the study area but were not observed during the surveys (Caltrans, 1992).

- **Project construction at the Lower San Juan Creek Bridge began in October 1994.** About December 30, 1995, while attempting to divert the stream, an operator for the contractor went outside of the project limits and graded. Impacts to sand/cobble bar, wetlands and willow/riparian habitat occurred. The replacement of the Lower San Juan Creek Bridge was necessary due to structure instability. A Section 404 Permit #95-110-BH and #93-607-BH and Streambed Alteration Agreement (SAA) #5-155-93 were obtained. A total of 0.01 acre of willow riparian scrub, 0.03 acre of wetlands, and 0.13 acre

of cobble/sandbar were impacted outside of the project area. Section 7 consultation with USFWS, for least Bell's vireo (LBV) and arroyo toad (ARTO), was started in 1996.

- **As a result of contractor events at the Lower San Juan Creek Bridge in 1995, mitigation planting for permanent impacts to wetlands and vegetation was provided at an off-site location on Canada Gobernadora (GERA).** Just east of BSA, at the first crossing of SR-74 over San Juan Creek, least Bell's vireo, arroyo toad, tri-colored blackbird, arroyo chub, orange-throated whiptail, San Bernardino Ringneck Snake, and two-striped garter snake were present (Caltrans, 1996). A total of 0.31 acre of impacted wetland was mitigated at 3:1 replacement and 0.545 impacted upland habitat was mitigated at 2:1 for an off-site total of 1.85 acres. On-site revegetation totaled 0.96 acre at a 1:1 replacement ratio, at the east and west bank areas of the Lower San Juan Creek Bridge. Revegetation was completed in early 1996 at the Bridge and consisted primarily of mulefat (*Baccharis glutinosa*), arroyo willow (*Salix lasiolepis*), Fremont's cottonwood (*Populus fremontii*), Alder (*Alnus rhombinofolia*), California Sycamore (*Platanus racemosa*), Coast live oak (*Quercus agrifolia*), and broad-leaved cattail (*Typha latifolia*) (Caltrans, 1998).
- **1996 Biological Opinion issued to the Department (1-6-96-F-13)** for the Unauthorized Dredge and Fill Activities and impacts to least Bell's vireo (LBV) (*Vireo bellii pusillus*) and arroyo southwestern toad (AT) (*Bufo microscaphus*), with the result of "not likely to jeopardize the continued existence" of either species and the subject action would not adversely modify the critical habitat. The El Nino season of the late 1990s destroyed a horse trail that was constructed under the bridge. During 2002, the Department noted a large pipe that was discharging from the horse property into San Juan Creek and reported this "violation" to the resource agencies.
- **2001 Biological Surveys conducted for the Department at the Lower San Juan Creek Bridge, for LBV, ARTO, and southwestern willow flycatcher (SWWF).** Surveys were conducted

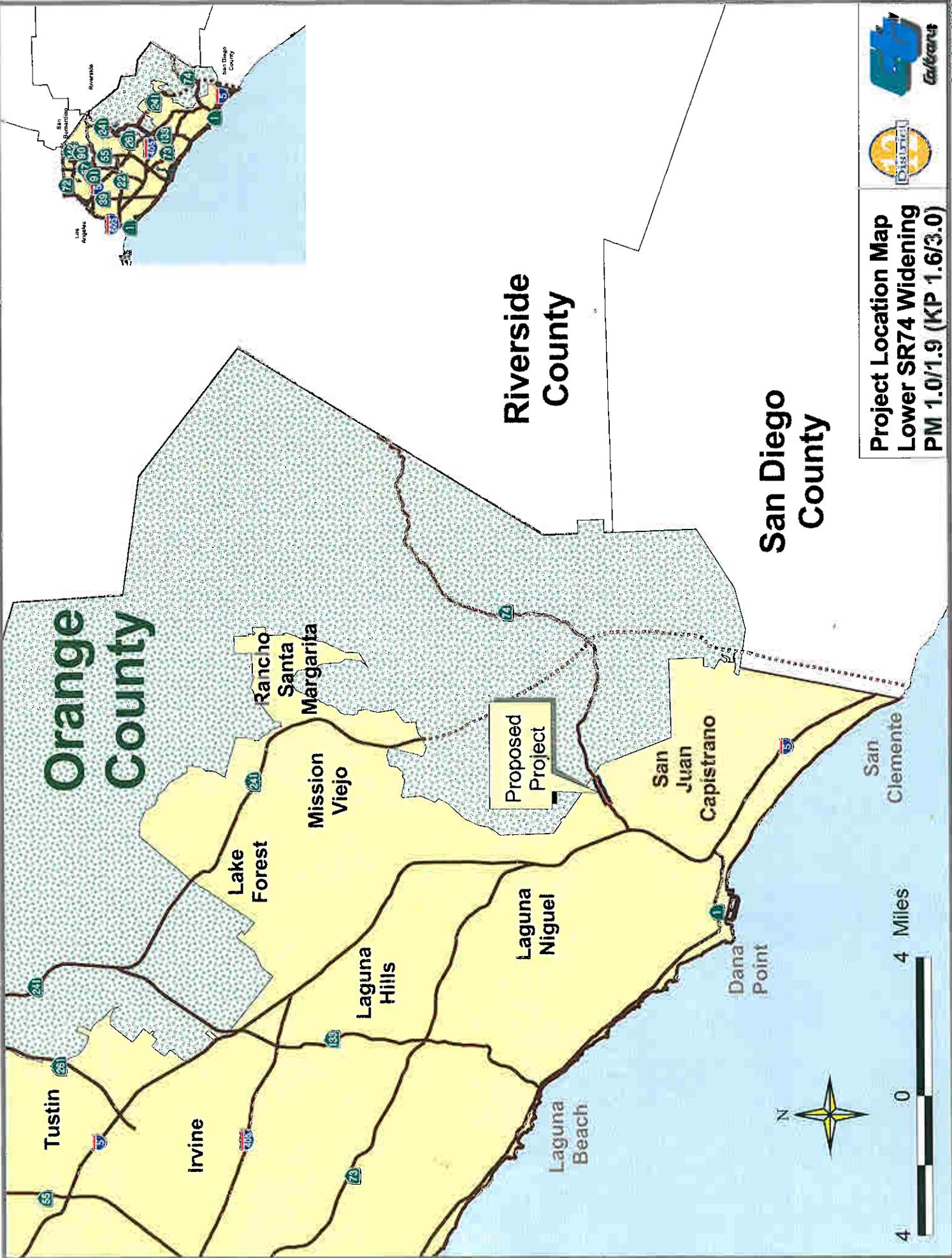
to account for indirect impacts. Surveys indicated the absence of these sensitive species.

- **2004 Caltrans conducted surveys, from Calle Entradero to 0.43 kilometers (km) (0.69 miles) east of the SR-74/La Pata Intersection (KP 1.7/4.7, PM 1.0/2.9).** Biological Surveys of the Study Area were conducted within the state right-of-way, within inclusion of surveys for the widening of the Lower San Juan Creek Bridge (Br. No. 55-0850). Focused protocol surveys for southwestern willow flycatcher, least Bell's vireo, arroyo southwestern toad, and coastal Californian gnatcatcher, were conducted within the state right-of-way, approximately 50 feet north and south of the existing bridge (due to private property access restrictions). Both 2001 and 2004 surveys indicated absence of these species. In 2004, a revised wetland delineation was also conducted, at the Lower San Juan Creek Bridge.

1.2. Project Description

The Build Alternative proposes improvements to the existing two lanes of Ortega Highway to improve traffic flow, from Calle Entradero to the City of San Juan Capistrano/County of Orange boundary line, in the City of San Juan Capistrano. The proposed additional lanes, shoulders, drainages, driveways and sidewalks have been developed in consistency with the Department of Transportation's Highway Design Manual standards. The project features would be built on both the north and south sides of the highway.

The Build Alternative proposes improvements to the existing two lanes of SR-74 to improve traffic flow. This alternative would result in the roadbed changing from the current varying width of 19 m at Calle Entradero and 7.5 m at the County Line to a maximum of 21.3 m (70 feet) including lanes, shoulders, and median. Project construction is estimated at 18 months beginning as early as February 2008. There are no staging areas within the project limits.



**Project Location Map
Lower SR74 Widening
PM 1.0/1.9 (KP 1.6/3.0)**

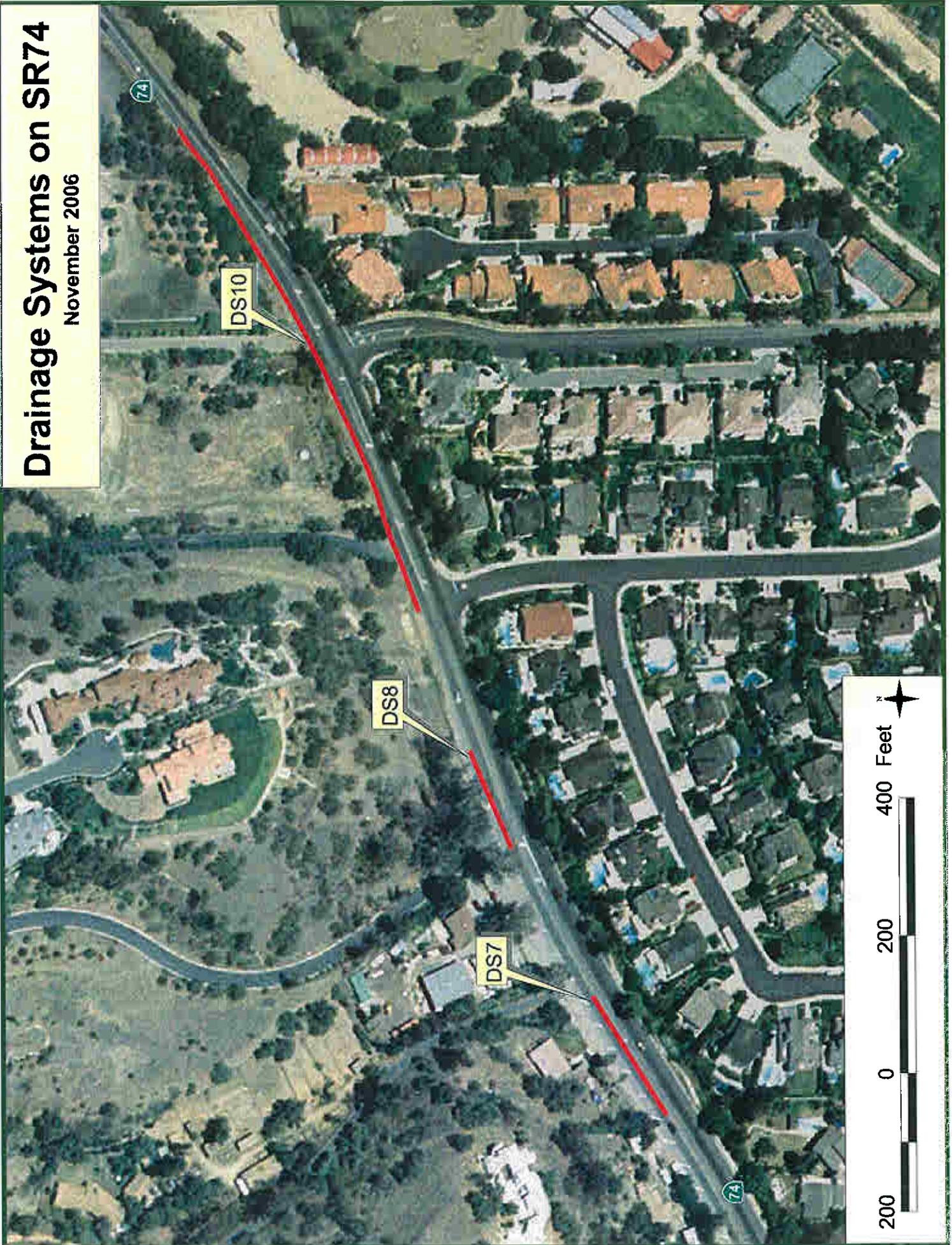


October 2006



Drainage Systems on SR74

November 2006



Project features include the following:

Highway Widening

The widening will occur primarily on the north side of SR-74 to minimize removal of mature trees or the existing sidewalk on the south side of the road. Currently there are two 3.6-m (12 foot) lanes in each direction and no median in the project area. The Build Alternative would provide one additional 3.6-meter wide (12 foot) lane in each direction as well as a 3.6-meter wide (12 foot) painted median. Also, a five-foot paved shoulder will be provided on each side of the roadway to accommodate Class II bicycle facilities. The edge of the pavement will be lined with concrete curbs on each side of the roadway.

Intersection Improvements

There are five intersections within the project study area: Calle Entradero, Via Cordova, Via Cristal, Via Erracarte, and Avenida Siega. Each intersection would be modified to account for the additional lanes, median, and shoulders. At the intersections where there are existing right turn pockets (Via Cordova and Via Cristal), the right turn pocket would remain. At Via Cordova, the right turn pocket would be modified and the sidewalk would be reconstructed. No new intersections would be added. None of the existing intersections are proposed to be signalized.

Driveways

On the north side of Ortega Highway, within the project limits, there are 11 existing driveways. Each of the eleven driveways would be modified to include reconstruction of the curb return to be ADA (American Disability Act) compliant. These driveways would be designed and built to Caltrans standards to maintain sight distance and avoid safety issues. Along the south side, there are currently two unpaved dirt driveways. These would be paved and modified to be ADA compliant. No new driveways would be added.

Pedestrian and Bicycle Facilities

There is an existing sidewalk on the north and south side of the highway which begins outside of the project limits to the west. These sidewalks continue partially through the project area within the north sidewalk currently terminating at Palm Hill Drive and the south sidewalk currently terminating just east of Avenida Siega. In order to provide sidewalk continuity between the City and the County limits, Caltrans

and FHWA decided to eliminate the north sidewalk and maintain the south sidewalk and extend it to the County limits. The south sidewalk would be maintained in the current position with the exception of a portion of the sidewalk at the intersection of Via Cordova, where the sidewalk would be shifted to the south and reconstructed to provide for the right turn pocket at this intersection. A new sidewalk would be constructed to connect to the existing sidewalk in the City and beyond to the County sidewalk system.

Class II bicycle facilities are planned and will be provided on each side of the roadway as part of the 5 (foot) paved shoulders throughout the project limits. These facilities will be in conformance with the Orange County Transportation Authority (OCTA) Commuters Bikeways Strategic Plan (CBSP). The City's General Plan states in its circulation system the need to promote an extensive public bicycle, pedestrian, and equestrian trails network.

Cut and Fill

The roadway widening within this portion of the project generally consists of cut slopes and retaining walls on the north side of the highway. Improvements on the south side of the highway will be limited to sound walls that are anticipated to be founded on piles. The exception to this is an approximate 700-foot section of roadway east of Avenida Siega that will be widened to the south by constructing a fill slope up to 8 feet high. Five retaining walls are currently planned on the north side of the highway in this area. The retaining walls are up to about 20 feet high and are anticipated to be founded on piles that are drilled to a depth of about twice the wall height. Minor cut slopes (i.e., <5-10 feet high) will be constructed on the north side of the roadway in areas where sufficient area is available. The designed fill slopes on the south side of Ortega Highway will require toe-of-slope keyways approximately 3 to 5 feet deep by 15 feet wide. The designed cut slopes on the north side of the highway will require buttress keyways approximately 3 to 5 feet deep by 15 feet wide.

Drainage Improvements

Since most of the widening will occur on the north side of the highway, all existing drainages would be modified and extended to intercept at the proposed edge of pavement. An additional ten drainages would be added on the north side of the highway throughout the project limits. There would be no drainages added to the south side of the highway; however, existing drainages on the south side from

Avenida Siega, where widening would occur on the south, to the City/County line would be modified to intercept at the proposed edge of pavement. There is a bioswale proposed at Strawberry Lane; however, the issue of bioswale locations and dimensions within the project area are still to be determined, at the time of this NES.

Walls

Five retaining walls would be located on the north side of the highway. These retaining walls will vary from 18 – 20 feet high. Vertical walls with slum block finish have been proposed. The front of the walls will be covered with landscape to meet aesthetic requirements of the City of San Juan Capistrano in order to blend the engineered structures into the natural environment. The construction of these retaining walls will result in the removal of trees.

Two soundwalls are proposed on the south side of the highway, spanning for three consecutive blocks. A soundwall was proposed from Calle Entradero to Via Cordova, but has since been eliminated at the time of this NES. Currently proposed are two soundwalls: one would start at Via Cordova and end at Via Cristal and the second soundwall would start at Via Cristal and end at Via Erracarte. All walls would follow the alignment of the existing garden wall and construction would require minimal removal of the existing vegetation. Exact soundwall heights are still to be determined but will be from 14 feet to 16 feet.

The project limits includes two options for soundwalls. These are glass walls and sound fighter noise walls. The use of glass panels would maintain the existing views of the southerly hills and San Juan Creek and provide light and transparency for adjacent residents thus avoiding a tunneling effect. The sound fighter noise walls would eliminate reflective noise to the residents on the north side from the implementation of the soundwalls on the south side.

Signals and Lighting

Currently, there are no signals within the project limits. The proposed project does not warrant any signals at the existing intersections. All streetlights affected by the widening of the highway would be relocated and replaced in kind.

Utilities

All utilities such as power, gas, sewer, and telephone lines will be impacted by this project. These would be relocated or placed underground within the project limits. In

addition, a new 12-inch high-pressure water line will be installed on the north side of the project. The installation of this water line is not part of the proposed project. The City of San Juan Capistrano is preparing an environmental document for this water line project. The construction of the water line would be coordinated with the proposed widening of SR-74.

Landscaping

North of SR-74, in locations where retaining walls are proposed, new planting will occur in front of the retaining walls. The proposed landscaping would be designed to blend with the natural environment and was coordinated with the City of San Juan Capistrano. North of SR-74, the sidewalk proposed for removal from Calle Entradero to the Hunt Club, will be replaced with new landscaping to match the existing landscaping of the area. South of SR-74, the type of soundwall selected should reflect a construction method to minimize vegetation removal. Any vegetation that is removed south of SR-74 would be replaced, within the project limits as spacing allows, with mature-size vegetation as coordinated with the City of San Juan Capistrano. Vegetation removal and subsequent planting must be coordinated with the City of San Juan Capistrano according to their City General Plan guidelines.

Construction Equipment

Project equipment may include a bulldozer, grader/scrapper, backhoe, front loader, roller/compactor, trucks, pile driver, and fueling equipment.

Chapter 2. Study Methods

The BSA is located west and north of San Juan Creek (Creek). This Creek flows from northwest to southeast toward the Pacific Ocean. Surveys were conducted to generally characterize the biological resources of the BSA and to ascertain the presence or absence of sensitive plants and animals, or the likelihood of occurrence in the BSA. For survey purposes, the BSA defines the disturbance limit for the proposed project, including such activities as cut and fill and grading, from Calle Entradero east to the City of San Juan Capistrano/County of Orange boundary.

Prior to conducting surveys, a literature review and records search was conducted to identify the existence or potential occurrence of sensitive animals, plants or special interest biological resources in or within the vicinity of the BSA. Database records included a review of the California Natural Diversity Data Base Information (2006), which is administered by the California Department of Fish and Game. This database covers sensitive animal and plant species, as well as sensitive natural communities that occur within California. The California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (2005), which identified four specific designations, or "Lists", of sensitive plant species and summarizes regulations that provide for the conservation of sensitive plants, was referenced.

Based upon the lack of suitable habitat within the BSA, RMV survey finding of areas adjacent to the BSA, and disturbed conditions of the BSA, USFWS protocol surveys weren't deemed appropriate for any threatened and/or endangered species. The BSA is disturbed and contains small areas that may be utilized by wildlife. Low-density residential areas, landscaped areas, and disturbed roadside shoulders dominate the BSA. General wildlife and habitat surveys were conducted; however, focused botanical surveys were not conducted.

In addition to field surveys by Department Biologists, the data in this NES was compiled from:

- A List of Proposed, Threatened, and Endangered Species (USFWS, August 7, 2006) for the BSA.

- California Department of Fish and Game Natural Diversity Database for San Juan Capistrano (2006)
- CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California
- CNPS Orange County Chapter's Plant Species of Special Interest in Orange County (Bramlet, 1995)
- A Checklist of the Vascular Plants of Orange County, California (Roberts, 1998)
- Caltrans Biological Assessment (1992) for the widening of the Lower San Juan Creek Bridge
- Final Natural Environment Study for the South Orange County Transportation Infrastructure Improvement Project (P&D Consultants, Inc., 2003)
- NES for SR-74 widening (Calle Entradero to east of La Pata/Antonio and SR-74 intersection) (Caltrans, 2004).
- Tree surveys of the BSA by Tatsumi Partners (2006) for BSA

Database searches were conducted for sensitive species expected to occur in the vicinity of the BSA. Sensitive species known to occur in the general area were also considered. A plant species list is attached in Appendix E and follows the nomenclature of The Jepson Manual, Higher Plants of California (Hickman, 1993). Vegetation of the BSA was classified by Holland (1986) and Sawyer and Keeler-Wolf (1995). A rare plant survey of the BSA was not conducted due to: areas have been landscaped for City improvements (south side) or residential yards (north side), disturbed nature of the BSA, and the low potential for sensitive plant species occurrences. General plant surveys were conducted by Department Biologists.

A wetland jurisdictional delineation of the BSA was conducted on September 21, 2006, and October 5, 2006, for both federal and State jurisdictional areas. Drainage areas were evaluated according to USACOE and CDFG criteria. Tributaries to San Juan Creek, are considered jurisdictional, based on ACOE and CDFG guidelines due to connectivity within the watershed as non-isolated waters. The boundaries of the jurisdictional areas were observed in the field and mapped on a base map (see figure 2, Drainage Systems of SR-74). The jurisdictional determination was conducted

according to 1987 Army Corps of Engineers Wetland Delineation Manual and Common Wetland Plants of Coastal California and Common Riparian Plants of California (Faber, 1996; Faber and Holland, 1996). A wildlife species list was compiled from field notes and recorded observances in the area (see Appendix E).

A request to FHWA to initiate Section 7 Consultation was not submitted as the proposed project is not anticipated to impact any threatened or endangered species. Caltrans has been in coordination with the resource agencies, during the various stages of the development of this project.

An inventory of nonsensitive wildlife was obtained during field surveys the BSA. Surveys for nonsensitive birds were conducted by Caltrans. The presence of any nests or other evidence of breeding activity for raptors was documented. A use area was classified as an area where the presence of any life stage (such as fledgling, juvenile, adult, or breeding pair) is observed during surveys for avian species other than raptors (P&D, 2003). Pitfall arrays or herpetile transects were not performed due to the lack of suitable habitat. Riparian habitat, within the BSA, was minimal and associated with Drainage System 7 on the north side of SR-74.

2.1. Regulatory Requirements

The following documents contain regulatory requirements applicable for the proposed project:

- ❖ The Ranch Plan EIR/GPA/ZC No. 589 dated November 2004 for the Ranch development and SR-74 widening project.
- ❖ An Addendum to the Ranch Plan EIR No. 589 was prepared including changes to the SR-74 widening project from City/County line to 0.58 km east of La Pata Avenue/Antonio Parkway. The Lead Agency for the Addendum is the County of Orange and the State is a responsible agency. The RMV Addendum indicated that the widening of SR-74 (County portion) would not impact any sensitive species; however, the widening would permanently impact a total of 3.0 acre of natural habitat. In addition, the widening of SR-74 would permanently impact 0.003 acres of ACOE and CDFG jurisdictional areas, within Planning Area 1 of RMV (directly east of the BSA).

- ❖ The Draft EIS San Juan Creek and Western San Mateo Creek Watershed SAMP was prepared by the U.S. Army Corps of Engineers. This EIS covers permits for drainage activities within the BSA. According to ACOE Representative Jae Chung, on September 12, 2006, the SAMP Letter of Permission (LOP) Process is applicable for the BSA.
- ❖ The Joint Programmatic EIR/EIS and Draft IA for the Southern Subregion NCCP/MSAA/HCP. The County as the lead agency for the NCCP/MSAA and EIR (County No. 584), and the USFWS is the lead agency for the HCP and EIS. The RMV is a participant in the NCCP/MSAA process.

The County will prepare resource agency permits for the proposed project per SAMP and NCCP/MSAA/HCP agreements and guidelines. The Department will review these resource agency permits for impacts and conditions associated with SR-74 itself. The County is responsible for mitigation and monitoring commitments for any impacts to biological resources associated with the proposed project. At the time the County prepares the project plans, the County will determine appropriate project mitigation, in coordination with the resource agencies. No mitigation will be planted within the state right-of-way, to account for impacts to biological resources. A detailed description of each applicable documents is included:

Ranch Planning Area Proposed Project

The RMV Planning Area includes approximately 22,815 acres located in the southern portion of unincorporated Orange County, to the east of the BSA. The Orange County Board of Supervisors approved a General Plan Amendment (GPA) and Zone Change (ZC) for the RMV Planning Area on November 8, 2004 in the form of the B-10 Modified Alternative. Prior to this action, the B-12 Alternative was developed to further address sub-basin-level Southern Planning Guidelines and the Watershed Planning Principles in addition to the overall goals and objectives of the SAMP and the NCCP/MSAA/HCP Programs. This alternative is based on input from the ACOE, CDFG, USFWS, the environmental community, and the general public. The B-12 Alternative (RMV Proposed Project) provides for 5,873 acres of development and 16,942 acres of open space within the RMV Planning Area. Alternative B-12 would include 14,000 dwelling units, including up to 6,000 senior housing units. The proposed development would also include urban activity center, business park, neighborhood center, and golf resort uses, as well as a supporting circulation system and infrastructure. A 122-acre portion of the proposed RMV Regional Park, is

included in Planning Area 1 and would be designated Open Space of the General Plan. The extension of the regional riding and hiking trail along the southerly side of San Juan Creek and the regional bikeway along the northerly side would be implemented with construction of Planning Area 1 (RMV, 2004). The SAMP EIS and NCCP/MSAA/HCP assume B-12 as a preferred project.

The RMV contains sensitive vegetation communities that provides habitat to sensitive species, including scrub habitats, chaparral, vernal pools and seeps, riparian and woodland habitat. Grasslands on the project site are currently used for grazing. The Gobernadora Ecological Restoration Area (GERA) is a 105-acre mitigation bank developed in Canada Gobernadora as replacement habitat for previously approved projects.

RMV Addendum

The purpose of the Addendum is to analyze the potential differences between the impacts evaluated in the RMV Final EIR 589 and those that would be associated with the development of Planning Area 1. The scope of the Planning Area 1 project is a subset of the larger Ranch Plan project addressed in FEIR 589. Planning Area 1 is located immediately east of the BSA, immediately east of the City of San Juan Capistrano in the vicinity of Antonio Parkway and Ortega Highway and immediately south of the Ladera planned community. Planning Area 1 is bisected by San Juan Creek, which is a dominant physical feature extending northeast and southwest through the larger RMV Planning Area.

According to the Addendum, the development of Planning Area 1 would impact sensitive species, including three California gnatcatcher locations, one Cooper's hawk historic nest location, one red-tailed hawk historic nest location, one barn owl's historic nest location, one grasshopper sparrow location, one rufous-crowned sparrow location, three yellow-breasted chat locations, one red-diamond rattlesnake location, two western spadefoot toad location. All sensitive species impacts associated with Planning Area 1 were included within the totals for the RMV Project (EIR 589) (Bonterra, 2006).

SAMP

The NCCP/HCP Planning Guidelines and SAMP/MSAA Watershed Planning Principles address the protection of important resources- biologic and related

hydrologic/geomorphic resources – at a geographic specific scale in the NCCP Sub-Basin Guidelines and Watershed Sub-Basin Planning Principles.

According to the Draft EIS for San Juan Creek and Western San Mateo Creek Watershed SAMP, the U.S. Army Corps of Engineers, the purpose of the SAMP is to provide for reasonable economic development and the protection and long-term management of sensitive aquatic resources. The San Juan Creek and Western San Mateo Creek Watersheds SAMP would provide the framework for permit coverage for the San Juan Creek Watershed and the western portion of the San Mateo Creek Watershed. The SAMP proposes the Long-Term Individual Permits/Letters of Permission (LOP) procedures for long-term activities proposed by Rancho Mission Viejo and the Santa Margarita Water District on the RMV Planning Area in reliance on the SAMP and in conjunction with the review, approval, and implementation of an Aquatic Resources Conservation Program coordinated with the Southern Subregion NCCP/MSAA/HCP. The RMV and Santa Margarita Water District (SMWD) are participants of the SAMP.

Regional Water Quality Control Board

On October 11, 2006, the California Regional Water Quality Control Board, San Diego Region, considered Tentative Order No. R9-2006-0104, Waste Discharge Requirements and Section 401 Water Quality Certification for Rancho Mission Viejo, LLC, The Ranch Planning Area 1, Orange County. The adoption of this Tentative Order would authorize the permanent placement of fill into up to 2.66 acres (12,149 linear feet) of waters of the United States and 0.30 acres (1,214 linear feet) of non-federal waters of the State that are tributary to San Juan Creek. The discharges are proposed to accommodate development of Planning Area 1 of Rancho Mission Viejo's Ranch Plan. RMV has proposed to enhance 0.77 acres of habitat within San Juan Creek to compensate for loss of unvegetated streambed and that 2.19 acres of wetlands it has created within the 31-acre Gobernadora Ecological Restoration Area (GERA) would compensate for effects to water quality and beneficial uses of the proposed fill to vegetated waters. RMV has proposed a Water Quality Management Plan to prevent degradation of water quality and beneficial uses within San Juan Creek from stormwater and urban runoff discharges.

NCCP/MSAA/HCP

The Southern Subregion NCCP/MSAA/HCP is being prepared by the County of Orange in cooperation with CDFG and the USFWS in accordance with the provisions

of the state Natural Community Conservation Planning Act of 1991 (NCCP Act), California Endangered Species Act (CESA), federal Endangered Species Act (FESA), and Section 1600 of the Fish and Game Code. The proposed Southern Subregion NCCP/MSAA/HCP would provide for the conservation of designated state and federal listed and unlisted species and associated habitats that are currently found within the 132,000-acre Southern Subregion NCCP/MSAA/HCP.

The conservation area is located in south Orange County from the mouth of San Juan Creek along the creek inland to I-5; then northwest along I-5 to El Toro Road and north along El Toro Road to Live Oak Canyon Road and northeast to the boundary at Riverside County the San Diego and Riverside County boundaries form the eastern boundary of the subregion. The County of Orange has prepared the Southern Subregion NCCP/MSAA/HCP, Draft Implementation Agreement and associated Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) jointly with the U.S. Fish and Wildlife Service (USFWS). The County is the lead agency for the NCCP/MSAA and associated EIR (County No. 584), while the USFWS is the lead agency on the HCP and associated EIS. The Southern Subregion encompasses 132,000 acres including 40,000 acres within the Cleveland National Forest. Under the NCCP/MSAA/HCP, participating landowners receive regulatory coverage for projects addressed by the NCCP/MSAA/HCP for all species and habitats identified for coverage in the NCCP/MSAA/HCP.

The USACE is responsible for issuing any Section 404 authorizations. The applicable RWQCB would be required to issue a Section 401 certification for a proposed action. As part of the SAMP, the USACE is seeking a Section 401 certification form the San Diego RWQCB.

The HCP addresses the issuance of an incidental take permit to RMV, the County of Orange, and the Santa Margarita Water District for development-associated impacts to the endangered least Bell's vireo, southwestern willow flycatcher, arroyo toad, Riverside fairy shrimp, and San Diego fairy shrimp; the threatened coastal California gnatcatcher; and 19 other unlisted animal species. The HCP also seeks assurances for the threatened thread-leaved brodiaea and 6 other unlisted plant species in southern Orange County.

The proposed NCCP/MSAA/HCP would create the basis for the issuance of Federal and State permits and other authorizations under FESA, the Natural Community Planning Act of 1991 and Section 1600 of the Fish and Game Code. The

Conservation Strategy consists of the creation of a permanent Habitat Reserve along with the formulation and implementation of a Habitat Reserve Management Program (HRMP).

The County of Orange Board of Supervisors certified the Final EIR for the NCCP/MSAA/HCP and approved the HCP in October 2006. The USFWS distributed the Final EIS for public review on November 13, 2006. The IA was signed by the Participating Landowners (the County, RMV, and SMWD) in December 2006. The USFWS signed the IA, approved the HCP, and issued the Incidental Take Permits to each of the participating landowners on January 10, 2007. The Southern HCP assumed the Ranch Plan development. Coordination with CDFG on the NCCP/MSAA is ongoing.

Regional Water Quality Control Board

The Rancho Mission Viejo is in process to obtain Tentative Order No. R9-2006-0104, Waste Discharge Requirements and Section 401 Water Quality Certification for PA 1, Orange County (October 11, 2006, California Regional Water Quality Control Board, San Diego Region meeting).

2.2. Studies Required

For the proposed project, USFWS protocol surveys for threatened and/or endangered species were not deemed appropriate due to the disturbed nature of the BSA, lack of suitable habitat, correspondence with USFWS, and survey results of RMV in areas adjacent to the BSA. A general inventory of vascular flora was conducted by Department Biologists. Low-density residential areas, landscaped areas, and disturbed roadside shoulders dominate the BSA. General wildlife and habitat surveys were conducted; however, focused botanical surveys were not conducted. Vegetation and wildlife surveys were noted during field surveys of the BSA.

2.3. Personnel and Survey Dates

Caltrans Biologists and Environmental Staff visited the project site on June 28, 2006, August 1, 2006, August 30, 2006, September 13, 2006, September 21, 2006, October 5, 2006, and November 30, 2006, in order to conduct field surveys, drainage assessment, verify retaining and soundwall locations, and survey for trees to be impacted by the proposed project. Surveys by Department Biologists (for the City

portion of the project) occurred on September 13 and November 30, 2006, with surveys conducted of north side trees, south side trees, and vegetation to be impacted by the proposed project. A meeting with the resource agencies occurred on October 5, 2006, including Stephanie Hall (USACOE) and Naeem Siddiqui (CDFG). Department Biologists included Arianne Glagola and Tina Gallegos; Department Environmental Staff included Senior Environmental Planner Smita Deshpande along with Associate Environmental Planner Alison Army.

2.4. Agency Coordination and Professional Contacts

Caltrans has coordinated with representatives from various resource agencies to address issues to biological resources with the potential to occur in the BSA.

On October 5, 2006, Caltrans met with Stephanie Hall of the ACOE and Naeem Siddiqui of the CDFG. In addition, Caltrans has notified United States Fish and Wildlife Service Regulatory Biologist, Jonathan D Snyder, of the proposed project and a Species List was obtained from the USFWS. In addition, Jae Chung of the USACE was contacted regarding proposed project requirements of the SAMP. On March 15, 2006, Department Environmental Staff participated in a conference call with the agencies including Stan Glowacki (NOAA Fisheries), Jonathan D Snyder (USFWS), Stephanie Hall (USACE), and Jeremy Haas (SDRWQCB), in order to discuss the proposed improvements to SR-74, within the BSA.

2.5. Limitations That May Influence Results

The collection of biological field data is normally subject to environmental phenomena that cannot be controlled or reliably predicted. Field data should be interpreted conservatively and consider the uncertainties and limitation necessarily imposed by the environment. It is unlikely that sensitive plants occur within the BSA given the nature of the disturbed conditions. Pre-construction plant and animal surveys are anticipated to occur. Areas of the BSA were inaccessible, such as the orchard property and private property, on the both the north and south side of SR-74. Surveys could only be completed on the state right-of-way side of the chain link fence. The potential for sensitive plant and animal species was low in these areas due to the presence of disturbed site conditions.

Chapter 3. Results: Environmental Setting

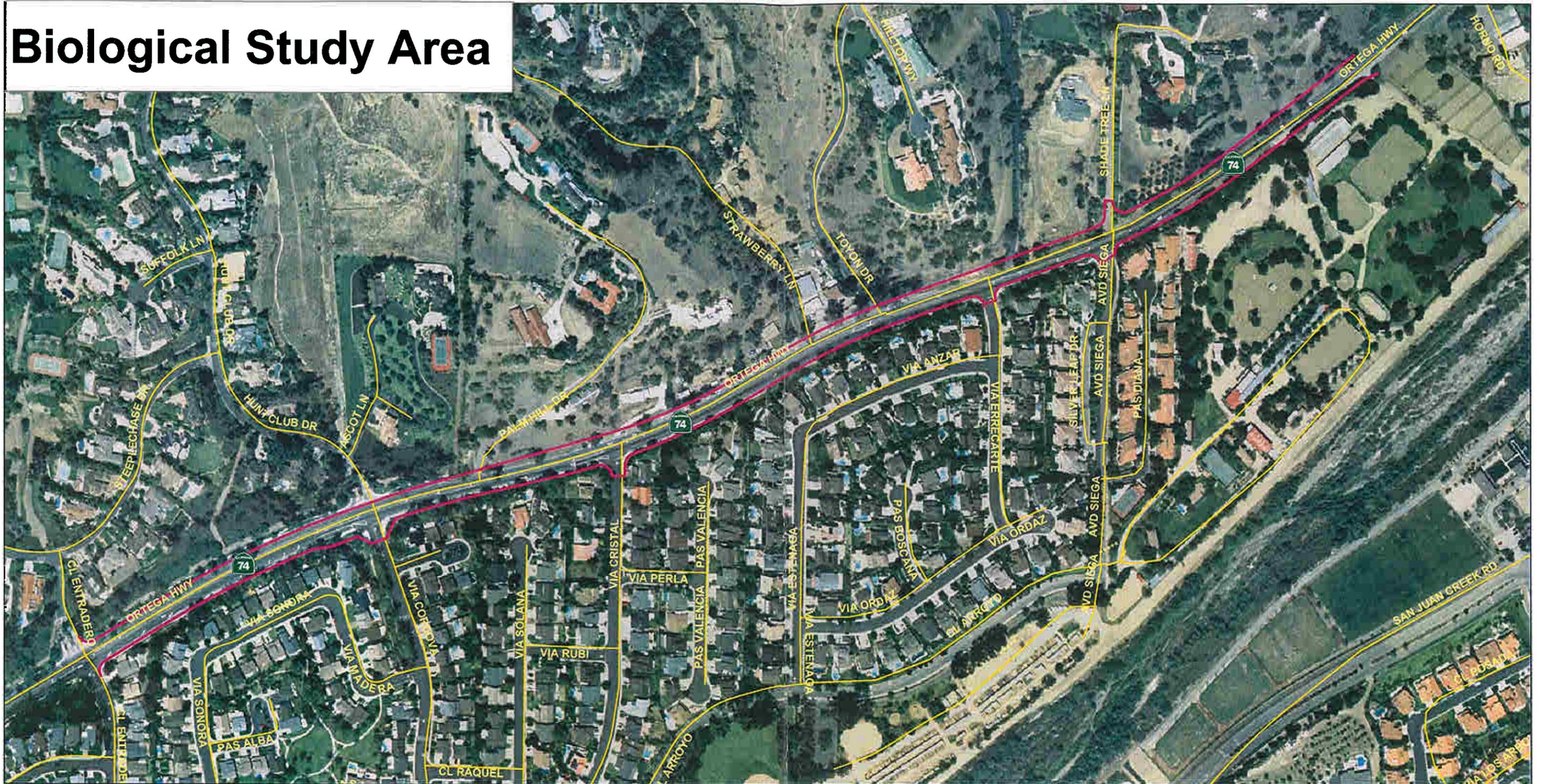
The BSA lies within the City of San Juan Capistrano, within southern Orange County, from Calle Entradero to the boundary of the City of San Juan Capistrano and County of Orange. Southern Orange County supports a great diversity of vegetation communities in a natural mosaic. The boundary with the County of Orange is found just to the east of the BSA, Interstate 5 lies to the west of the BSA. The BSA contains state highway, residential, agricultural, orchard, and equestrian areas. Small areas of riparian, atypical wetland, and oak trees occur within the BSA. These areas of habitat are uncontiguous with surrounding areas of open space, found in RMV.

The BSA is located in the USGS San Juan Capistrano quadrangle, Sections 6 & 32, Township 7-8 south, and Range 7 west. The elevation of SR-74, in the BSA, ranges from 200-500 meters (656-1640 feet). The land uses of the BSA include primarily low density residential areas (north and side sides of the road), an orchard area on the north side of the road, landscaped areas on the south side of the road, and disturbed areas typical of roadway shoulders on the north side of the road. In addition, a concrete meandering path occurs on the southern side of SR-74, in the BSA. The north side of the BSA contains a dirt equestrian trail. A private residence within the BSA contains approximately 8 oak trees, along the fence line, at the southeastern portion of the project. Ladera Ranch is located to the north of the BSA. The RMV PA 1 is located directly to the east of the BSA. The Donna O'Neill Land Conservancy is located to the southeast of the BSA. The Caspers Wilderness Park is located to the northeast of the BSA. The BSA also contains v-ditch areas that are either are primarily concrete-lined.

3.1. Description of the Existing Biological and Physical Conditions

3.1.1. Study Area

Biological Study Area



SR74-BSA
EA 086900
12-ORA-74
PM 1.0/1.9(KP 1.6/3.0)
October 2006



Legend

-  SR74 Biological Study Area
-  Roads

3.1.2. Physical Conditions

-

San Juan Creek Watershed

The main tributary of San Juan Creek is located less than a mile from the eastern and southern BSA boundary. In this area, the creek flows in a northeast to southwest direction, under SR-74 at the Lower San Juan Creek Bridge, eventually draining to the Pacific Ocean. Most of this portion of San Juan Creek consists of good quality mature native vegetation surrounded by orchard and equestrian areas. Water in this portion of San Juan Creek often is fed by polluted urban and agricultural runoff. The dominant vegetation is willow (*Salix* sp.) and mulefat (*Baccharis salicifolia*), with Western sycamore (*Platanus racemosa*) on the upper slopes, in this portion of San Juan Creek.

The San Juan Creek Watershed encompasses about 176 square miles including creeks, seeps, vernal pools, alkali meadows, freshwater marshes, and riparian wetlands, eventually draining into the Pacific Ocean. San Juan Creek is an ephemeral body of water with surface flow appearing only after winter rains, leaving scattered ponds that often dry up by late summer. Creekbed soils are composed of silt, sand, and eroded gravel. Wildlife currently travel along San Juan Creek searching for food, water, shelter, and mates. Within the BSA, however, tributaries to San Juan Creek contain very small patches of disturbed habitat. San Juan Creek provides cover, water, and food sources, as well as enables the localized or daily movement of animals (P&D, 2003). The San Juan Creek Watershed extends from the Cleveland National Forest in the Santa Ana Mountains to the Pacific Ocean at Doheny State Beach near Dean Point Harbor. Caspers Wilderness Park and San Mateo Wilderness Area lands are located adjacent to the Cleveland National Forest along the eastern boundary. The western portion of the watershed area is highly urbanized encompassing portions of the cities of Mission Viejo and San Juan Capistrano and the planned community of Ladera Ranch. Urbanized areas in the northern portion of the watershed include the City of Ranch Santa Margarita. The southern portion of the watershed is bound by the cities of Dana Point and San Clemente. The major named streams in the San Juan Watershed include San Juan Creek, Bell Canyon Creek, Canada Gobernadora, Verdugo Canyon Creek, Oso Creek, Trabuco Creek, and Lucas Canyon Creek.

An Arizona crossing is located approximately ½ mile downstream of the Lower San Juan Creek bridge; however, the crossing would be passable by fish only during

conditions of high flow in the watershed (CDFG, personal communication). The BSA does not contain suitable hydrology to be utilized by fish.

San Juan Creek is found east and south of the BSA, less than a mile away. Numerous tributaries to San Juan Creek, in the form of culverts/ditches, are found within the BSA. The elevation of SR-74, within the BSA, ranges from 200-500 meters (656-1640 feet). The project contains Quaternary alluvium, terrace, and river deposits. The BSA is also likely to contain dense to very dense gravelly sand and sandy gravel with scattered cobbles and some areas of silt and clay.

Topography and Soils

Soils and bedrock that comprise the lower portion of San Juan Creek include a high percentage of clays in the soils. The soils typical of the clayey terrain include the Alo and Bosanko clays on upland slopes and the Sorrento and Mocho loams in floodplain areas (RMV, 2004). Just east of the BSA, soils of San Juan Creek are bedrock that contain a high percentage of clays in the soils. The soils typical of clayey terrain include the Alo and Bosanko clays on upland slopes and Sorrento and Mocho loams in floodplain areas (SAMP, 2005).

The topography within the BSA generally slopes down from the north to the south. Existing cut and fill slopes typically have slope ratios between 1V: 11H to 1V:1.2H. The project is located in the Peninsular Ranges geomorphic province at the extreme southeastern margin of the Los Angeles Basin, and lies between the Santa Ana Mountains to the east and the San Joaquin Hills to the west. The Peninsular Ranges geomorphic province is characterized by northwest-southeast trending faults, which are roughly parallel to the San Andreas Fault Zone. The project lies between the Cristianitos Fault Zone at the east end of the project and the Laguna Canyon Fault Zone 6 km to the west. Neither of these faults is considered active (Barker, 2006).

The project is underlain by Quaternary alluvium, terrace, and river deposits. The BSA is also likely to contain dense to very dense gravelly sand and sandy gravel with scattered cobbles and some areas of silt and clay. Capistrano Formation bedrock likely occurs below the alluvium and terrace deposits. The majority of the materials within the BSA are granular in nature (i.e., sand and gravel) (Barker, 2006).

Drainages

Drainage Enhancements are also proposed within the BSA. All existing drainages would be modified and extended to intercept at the proposed edge of pavement. An additional ten drainages would be added on the north side of the highway in the BSA; three of these DS are considered jurisdictional atypical wetlands according to ACOE and CDFG guidelines: 7,8, and 10. Drainage System 7 involves replacing the inlet for greater capacity with a 60" headwall. This drainage system contains cattails (*Typha domingensis*), doc (*Rumex crispus*), willow (*Salix sp.*), pampas grass (*Cortaderia selloana*), and sedge (*Carex sp.*) In addition, this drainage system contains standing water likely resulting from irrigation of upslope residential areas. DS7 occurs just east of Toyon Drive, is approximately 20 feet wide, and doesn't contain a clearly defined bed, channel, or bank areas but it does contain standing water and vegetation typically found in "wet" conditions. DS 8 will likely be replaced with a 60" headwall and wingwall resulting in an increased capacity, and currently is a fully concrete-lined v-ditch. DS 10 occurs along the north side of SR-74, in the roadway shoulder. There is a poorly defined bank area that has likely resulted from urban runoff changing the hydrology and topography of BSA conditions. Additional improvements may occur prior to the final design; however, the drainage improvements listed in this NES reflect the plans available at this NES.

The presence of suitable habitat on either side of a passage (culvert, underpass) is an important factor predicting use as are the dimensions of the passage for wildlife (Ng et. al, 2004). The culverts within the BSA are small box culverts/corrugated metal pipe (CMP) with small amounts of non-native vegetation at the inlet and/or outlet structures, and may provide a limited function as a wildlife corridor; however, San Juan Creek is the main wildlife corridor adjacent to the BSA.

Table 1: Jurisdictional Drainages within BSA (City of San Juan Capistrano)*

<i>DS #</i>	<i>Post Mile</i>	<i>Vegetation</i>	<i>Area of Impact</i>
7	Just east of Toyon Drive, north side SR-74; 1.545 – 1.588	ACOE jurisdiction and CDFG jurisdiction (riparian vegetation)	2270 square feet (or 0.052 acre); length 227 ft x 10 ft width
8	1.638 – 1.665	ACOE soft-bottom ditch, portion is v-ditch	1440 square feet (or 0.033 acre); length 144 ft x 10 ft width
10	1.700 – 1.794, 1.794 – 1.867, concrete v-ditch east of Shade Tree Lane	ACOE jurisdictional area	2146 square feet (or 0.049 acre); 494 ft length x 2 foot width = 988 and 386 ft. length x 3 foot width
			0.134 acre

*field survey with ACOE, CDFG, Huitt Zollars, on October 5, 2006, information based on design at this time of this NES

3.1.3. Biological Conditions in the Biological Study Area

The BSA is highly disturbed and contains low density residential areas. The south side of the BSA is dominated by landscaped areas, planted primarily along an existing meandering concrete path. Vegetation on the south side of the road primarily consists of Sycamore, Pine, and Eucalyptus trees. Oak trees are found at the southeastern BSA boundary, within private property, with the dripline of the trees extending into the state right-of-way. The north side of the BSA contains disturbed areas of the roadway shoulder in addition to low-density residential areas containing: bouganvillea, California pepper trees, olive trees, Washington fan palm, eucalyptus, and iceplant. Areas along SR-74 contain vegetation typical of roadway shoulders. These small patches of habitat are not considered a habitat community but have been quantified to determine impacts.

All existing drainages would be modified and extended to intercept at the proposed edge of pavement. An additional ten drainages would be added on the north side of the highway in the BSA. A total of three existing drainages are jurisdictional wetlands based on ACOE and CDFG guidelines. The drainage areas contain cattails, willow, pampas grass, sedge, and doc (DS 7) with DS 8 containing bougainvillea and

non-native grasses. DS 10 contains primarily non-native grasses and species typical of disturbed roadway shoulders. The culverts that cross under SR-74 may be use by mobile wildlife to travel under the roadway; however, only very marginal habitat is present and there areas are not designated wildlife corridors. The oaks within the BSA are not considered an oak woodland as there are less than a dozen of them that occur in a linear area, with some planted in containers.

Vegetation

Vegetation found within the BSA includes areas of landscaping (south side) and north side disturbed conditions. The south side of SR-74 contains Evergreen Elm (*Ulmus parvifolia*), *Eucalyptus* spp, Sweet Gum (*Liquidambar styraciflua*), London Plan Tree (*Plantanus x acerifolia*), California Pepper Tree (*Schinus molle*), Yucca (*Yucca brevifolia*), sycamore (*Plantanus* sp.), ficus, and Oak Tree (*Quercus* sp.) (Tatsumi and Partners, Inc., 2006). A total of 70 trees will be impacted along the north side of the road and 41 trees along the south side of SR-74 (Tatsumi Partners, 2006). The oaks do not occur within CDFG jurisdiction; however, the City of San Juan Capistrano Tree Removal Guidelines are applicable for the tree removal. A mature Coast Live Oak is found at STATION 104+20, within the BSA, however it will not be impacted by project work. The oaks in the BSA occur in upland areas.

The north side of the highway contains primarily Pepper tree (*Schinus molle*), Sycamore (*Plantanus* sp.), Eucalyptus (*Eucalyptus* sp.), elm (*Elmus* sp.), along with small occurrences of yucca (*Yucca brevifolia*), bouganvillea (*Bouganvillea* sp.), areas of non-native grasses, castor bean (*Ricinus communis*), Washington Fan Palm (*Washingtonia filifera*), and iceplant (*Carpobrotus edulis*) in an approximate 30 ‘ by 30’ square). The large oak and sycamore trees present in the project limits are essential to raptors for roosting and nesting sites.

Invasive Species

On February 3, 1999, President Clinton signed Executive Order 13112, *Invasive Species*, requiring Federal agency action to combat the introduction of invasive plant species in the United States. Federal Highway Administration guidance issued August 10, 1999, defined the invasive plants that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

Invasive species found within the BSA include iceplant (*Carpobrotus edulis*) and non-native grasses (primarily on the north side of SR-74). This iceplant will be

removed with project work and will not be replanted. Species that are non-native to the area include: purple fountain grass (*Pennisetum setaceum*), Mexican feather grass (*Stipa tenuissima*), wild oat (*Avena* sp.), castor bean (*Ricinus communis*), bougainvillea (*Bougainvillea* sp.), rip gut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), and telegraph weed (*Heterotheca grandifolia*). In addition, black mustard (*Brassica* sp.), thistle (*Carduus* sp.), cheeseweed (*M. parvifolia*), pampas grass (*Cortaderia selloana*), and Eucalyptus (*Eucalyptus* sp.), are found in the BSA.

3.2. Regional Species and Habitats of Concern

This section addresses the sensitive biological resources having the potential to occur within the general region of the BSA. Legal protection of sensitive species varies widely, from the relatively comprehensive protection afforded to species listed as endangered and/or threatened to no legal status at present. The CDFG, USFWS, local agencies, and various special interest groups publish watchlists of declining species. These lists often describe the general nature and perceived severity of the species' decline. In addition, recently published findings and preliminary results of ongoing research provide a basis for consideration of species that are candidates for State and/or federal listing. Finally, species that are clearly not rare or threatened either statewide or regionally, but whose local populations are sparse, rapidly dwindling, or otherwise unstable, may be "of local interest."

For purposes of this discussion, the term "sensitive species" refers to those plants and animals occurring or potentially occurring on the property and designated as endangered or rare (as defined by CEQA and its Guidelines), or of current local, regional, or State concern. These are species that are rare, locally restricted, or declining in a significant portion of their range. Inclusion in the sensitive species analysis for this property is based on the following criteria: (1) direct observation of the species on the property during one of the biological surveys conducted; (2) sighting by other qualified and reputable observers; (3) record reported by the CNDDDB; or (4) property contains appropriate habitat and is within the known range of a given species.

A federally endangered species is one facing extinction throughout all or a significant portion of its geographic range. A federally threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of federally listed or proposed species and/or

designated critical habitat needs to be considered during the planning of a project, particularly if the project would result in “take” of the species or its habitat. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm in this sense can include any disturbance to habitat used by the species during any part of its life history.

The state of California defines an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy, a threatened species as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management, and a rare species as one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants.

The California Species of Species Concern status applies to animals not listed under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA) but which, nonetheless, are: (1) declining at a rate that could result in listing; and (2) historically occurred in low numbers and known threats to their presence already exist.

The BSA is within a region of Biological Importance. Planning Area 1, of the RMV, is located immediately east of the BSA. Planning Area 1 contains grasslands, coastal sage scrub, riparian, chaparral, and open water habitat (San Juan Creek) (Bonterra, 2006). Grassland is the habitat of greatest occurrence in Planning Area 1. Development of Planning Area 1 would impact sensitive species, including three California gnatcatcher locations, one Cooper’s hawk historic nest location, one red-tailed hawk historic nest location, one barn owl’s historic nest location, one grasshopper sparrow location, one rufous-crowned sparrow location, three yellow-breasted chat locations, one red-diamond rattlesnake location, two western spadefoot toad location (Bonterra, 2006). Planning Area 1 also contains areas of ACOE and CDFG jurisdiction.

Table 2: Sensitive Species with the Potential to Occur According to CNPS Database and CNDDDB for San Juan Capistrano

SCIENTIFIC NAME	COMMON NAME	STATUS	GENERAL HABITAT/ DESCRIPTION	HABITAT PRESENT/ ABSENT	LIST SOURCE AND RATIONALE
PLANTS					
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	FT ST CNPS 1B	Clay soils, annual grassland, vernal pools	A	CNDDDB, The BSA contains landscaped areas, low density residential areas, and disturbed conditions typical of roadway shoulders (lack of suitable habitat)
<i>Calochortus weedii</i> var. <i>intermedius</i>	Foothill mariposa lily	CNPS 1B	Rock open slopes in chaparral, CSS, or grassland	A	CNDDDB, lack of suitable habitat
<i>Centromadia parryi</i> ssp. <i>australis</i>	Southern tarplant	CNPS 1B	Vernally mesic grassland, often disturbed	A	CNDDDB, lack of suitable habitat
<i>Dudleya multicaulis</i>	Many-stemmed dudleya	CNPS 1B	Clay soils or granitic outcrops in chaparral and CSS	A	CNDDDB, lack of suitable habitat
<i>Dudleya viscida</i>	Sticky dudleya	CNPS 1B	Rocky soils in CSS	A	CNDDDB, lack of suitable habitat
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Ocellated Humboldt lily	CNPS 4	Shaded streams near oak woodland	A	CNDDDB, lack of suitable habitat
<i>Nolina cismontana</i>	Chaparral nolina	CNPS 1B	Chaparral and CSS	A	CNDDDB, lack of suitable habitat

<i>Quercus dumosa</i>	Nuttall's scrub oak	CNPS 1B	Sandstone and sand soils in Chaparral and CSS	A	CNDDDB, lack of suitable habitat
BIRDS					
<i>Campylorhynchus brunneicapillus couesi</i>	Coastal cactus wren	SC	CSS with cholla	A	CNDDDB, lack of suitable habitat
<i>Polioptila californica californica</i>	Coastal California gnatcatcher	FT, SC	Coastal sage scrub	A	CNDDDB, lack of suitable habitat
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE, SE	Riparian forests and willow thickets	A	Potential nesting habitat does not occur in BSA, CNDDDB
AMPHIBIANS AND REPTILES					
<i>Clemmys marmorate pallida</i>	Southwestern pond turtle	SC	Riparian, ponds, creeks	A	CNDDDB, lack of suitable habitat
<i>Cnemidophorus hyperythrus</i>	Orange-throated whiptail	SC	CSS, chaparral woodland, riparian, terraces, floodpains	A	CNDDDB, lack of suitable habitat
<i>Phrynosoma coronatum blainvillei</i>	San Diego horned lizard	SC	CSS, chaparral, grassland, variety of habitats	A	CNDDDB, lack of suitable habitat
<i>Scaphiopus hammondii</i>	Western spadefoot	SC	Grasslands and woodlands	A	CNDDDB, lack of suitable habitat
<i>Thamnophis hammondii</i>	Two-striped garter snake	SC	Highly aquatic, requires perennial water source	A	CNDDDB, lack of suitable habitat
FISH					
<i>Eucyclogobius newberryi</i>	Tidewater goby	FE, SC	Coastal, brackish-water habitats	A	CNDDDB, lack of suitable habitat
<i>Gila orcutti</i>	Arroyo chub	SC	Freshwater streams	A	CNDDDB, lack of

			and rivers		suitable habitat
PLANTS					
<i>Atriplex coulteri</i>	Coulter's saltbush	1B, 2-2-2	Coastal bluff scrub, coastal dunes, grasslands	A	CNDDDB, lack of suitable habitat
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	SE, FT; 1B, 3-3-3	Woodland, scrub, grassland, clay soils	A	CNDDDB, lack of suitable habitat
<i>Calochortus weedii</i> <i>var. intermedius</i>	Intermediate mariposa lily	1B, 2-2-3	Coastal scrub, chaparral, and grassland	A	CNDDDB, lack of suitable habitat
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	Summer holly	1B, 2-2-2	Mixed chaparral	A	CNDDDB, lack of suitable habitat
<i>Dudleya multicaulis</i>	Many-stemmed dudleya	1B, 1-2-3	Chaparral, coastal scrub, grassland, clay	A	CNDDDB, lack of suitable habitat
<i>Dudleya stolonifera</i>	Laguna Beach Dudleya	FT, ST; 1B, 3-3-3	Chaparral, cismontane woodland, coastal scrub, grassland	A	CNDDDB, lack of suitable habitat
<i>Euphorbia misera</i>	Cliff spurge	2, 2-2-1	Coastal bluff scrub, coastal scrub	A	CNDDDB, lack of suitable habitat
<i>Quercus dumosa</i>	Nuttall's scrub oak	1B, 2-3-2	Coniferous forest, chaparral, coastal scrub	A	CNDDDB, lack of suitable habitat
<i>Verbesina dissita</i>	Crownbeard	FT, ST; 1B, 3-3-2	Chaparral, coastal scrub	A	CNDDDB, lack of suitable habitat

CNPS Lists (1A, 1B, 2, 3, and 4)

CNPS is a local resource conservation organization that has developed an inventory of California's sensitive plant species. The inventory is a summary of information on the distribution, rarity, and endangerment of California's vascular plants. These five lists were created in an effort to categorize degrees of concern.

List 1A: Presumed Extinct in California

List 1B: Rare or Endangered in California and Elsewhere

List 2: Rare or Endangered in California, More Common Elsewhere

List 3: Need More Information

List 4: Plants of Limited Distribution

Absent [A] means no further work needed. Present [P] means general habitat present and species may be present. Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); California Species of Special Concern (SSC); California Native Plant Society (CNPS).

Table 3: Listed, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area According to USFWS Species List

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
Amphibians					
Arroyo toad	<i>Bufo californicus</i>	FE	Flood terraces, sandy pools	A	The BSA contains landscaped areas, disturbed areas typical of roadway shoulders, and low density residential areas (lack of suitable habitat)
Birds					
Tricolored blackbird	<i>Agelaius tricolor</i>	SC	Marshes, grassland	A	Lack of suitable habitat
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE	Low-elevation riparian habitats	A	Lack of suitable habitat
Bald eagle	<i>Haliaeetus leucocephalus</i>	FT	Lakes, reservoirs	A	Lack of suitable habitat
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT, SC	Coastal Sage Scrub	A	Lack of suitable habitat
Least Bell's vireo	<i>Vireo bellii pusillus</i>	FE, SC	Riparian	A	Lack of suitable habitat
Crustaceans					
San Diego Fairy Shrimp	<i>Branchinecta sandiegnensis</i>	FE	Vernal Pools	A	Lack of suitable habitat
Riverside Fairy Shrimp	<i>Streptocephalus woottoni</i>	FE	Vernal Pools	A	Lack of suitable habitat
Fish					
Southern steelhead	<i>Oncorhynchus mykiss</i>	FE	Freshwater streams, coastal lagoons, drainages	A	Lack of suitable habitat
Plants					
Thread-leaved brodiaea	<i>Brodiaea filifolia</i>	FT,SE	Chaparral, woodlands, coastal scrub	A	Lack of suitable habitat
Laguna Beach live-forever	<i>Dudleya stolonifera</i>	FT,ST	Chaparral, woodlands, coastal scrub	A	Lack of suitable habitat
Big-Leaved Crownbeard	<i>Verbesina dissita</i>	FT,ST	Chaparral, Coastal scrub	A	Lack of suitable habitat

Absent [A] - no habitat present and no further work needed. Habitat Present [HP] - habitat is, or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present. Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS), etc.

Special Status Species Rejected From Further Consideration

3.3. Amphibians

Arroyo toad (*Bufo californicus*); Federal: Endangered; State: Species of Special Concern

This toad inhabits slow-moving creeks or washes with intermittent streams and sandy gravel benches and terraces. They prefer shallow pools with gravel bottoms for breeding and burrow in sandy soils in riparian, scrub, woodlands and other habitat associated with riparian areas during early winter and become active during late winter to forage. Arroyo toads are found in San Juan Creek (northeast of the BSA) (P&D, 2003) and on RMV (County, 2004). The species has been found closest to the BSA during surveys in 1995 at the Lower San Juan Creek Bridge (Caltrans, 2002). During the breeding season, female arroyo toads regularly use riparian and upland habitat far from the stream's edge, and return to these habitats after traveling far upstream for oviposition. Male and female arroyo toads may use upland habitats throughout the pre-breeding, breeding, and post-breeding seasons. The breeding season occurs from late January to February to early July, although it can be extended in some years, depending on weather conditions. Eggs are deposited and larvae develop in shallow pools with minimal current, little or no emergent vegetation and sand or pea gravel substrate. After metamorphosis from June to August, the juveniles remain on the bordering gravel bars until the pool no longer persists. Juveniles spend more time exposed on sandy stream terraces during the daytime than do adults, and are thus vulnerable to diurnal predators. Adults excavate shallow burrows for shelter during the day when the surface is damp or during longer intervals in the dry season.

The extent of arroyo toad movement away from stream channels is influenced by a variety of factors including rainfall amounts, surface water availability, floodplain

widths, vegetative cover, and topography preferences (USFWS, April 2004). Individual toads have been observed as far as 1.2 miles (mi) (2 km) from the streams where they breed, but are most commonly found within 650 to 3,280 feet (ft) (200 to 1,000 meters (m)) of those streams in coastal areas with broad floodplains, and 160 to 650 ft (50 to 200 m) in more mountainous areas away from the coast. Arroyo toads typically burrow underground during periods of inactivity and thus tend to use upland habitats that have sandy, friable soils, but upland sites with extremely compact soils can also be used.

According to the proposed critical habitat designation for arroyo toad (USFWS, 2004), habitat upslope of San Juan Creek is considered suitable for arroyo toad as these areas do contain some level of vegetative cover or other structures which may be used for hiding or thermal cover, do usually contain some areas of friable soils suitable for burrowing by toads or contains burrows created by other wildlife, and are within the lateral buffer to approximately 80 feet contour above the stream bed elevation. The BSA does not occur within this 80 feet contour distance. The drainage areas/culverts within the BSA do not contain suitable habitat for use by arroyo toad. The species is not anticipated to occur within the BSA.

Southwestern pond turtle (*Clemmys marmorata pallida*); Federal: Species of Concern, CDFG: Species of Concern

This species is also a NCCP/HCP Planning Species. This subspecies occurs from approximately the San Francisco Bay area south through the Coast Ranges to northern Baja California, Mexico. The southwestern pond turtle inhabits permanent or nearly permanent bodies of water in many habitat types below 6000 feet in elevation. They require basking sites such as partially submerged logs, vegetation mats, or open mud banks. Exotic species, such as crayfish, threaten the survival of this species. This turtle is known to inhabit streams, intermittent creeks, ponds, freshwater marshes, and lakes in woodland and scrub habitats. This species is often hard to detect due to its secretive nature; however, they were found in San Juan Creek at the Ortega Highway bridge and in San Juan Creek (P&D, 2003; Caltrans, 2004). This species is present in RMV east of the BSA (County, 2004); however, suitable habitat does not occur within the BSA.

Orange-Throated Whiptail (*Cnemidophorus hyperythrus*): Ca. Species of Special Concern

This species is also an NCCP/HCP Planning Species that occurs below 854 meters (2,800 feet) in San Bernardino, Orange, Riverside, and San Diego Counties. This species is associated with well-drained friable soil of slopes that have a southern exposure and are sparsely covered with vegetation. This species prefers washes and other sandy areas with patches of brush and rock. It frequents dry, often rocky hillsides, ridges and valleys supporting broken coastal sage scrub habitats where it forages near the bases of shrubs and also underground for termites which are their main food source. They were found in 2003 surveys in RMV (P&D, 2003). The species was found as close to the BSA as the first crossing of SR-74 over San Juan Creek (Caltrans, 1996). The BSA does not contain suitable soils; the species is not anticipated to occur in the BSA.

San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*); CDFG: Species of Special Concern

The San Diego horned lizard is an NCCP/HCP Planning Species that inhabits coastal sage scrub and chaparral habitat in arid and semi-arid climates. This species prefers friable, rocky, or shallow sandy soils. This species is found below 1800 m (6,000 feet) in the mountains of southern California exclusive of desert regions. The horned lizard burrows into loose soils to avoid heat and predators and hibernates in burrows under logs, rocks, in mammal burrows, or in crevices. It is also a secretive, hard-to-detect species without special techniques (e.g., pitfall traps). There is a lack of suitable habitat within the BSA. This lizard is found primarily in open or sparse scrub and chaparral communities. It prefers loose friable soil for burrowing. Loss of habitat, overcollecting, and the introduction of exotic species have contributed to the decline of this species. This species was found in RMV and Donna O'Neill Land Conservancy, and Canada Gobernadora (P&D, 2003). Suitable habitat does not occur in the BSA and the species is not anticipated to occur.

Western spadefoot (*Scaphiopus hammondi*): Ca. Species of Special Concern

This species is found in California south to Baja California. Spadefoot inhabits grassland, CSS, and other habitats with open sandy gravel soils. They breed in vernal pools and in temporary ponds/pools associated with river bottoms and floodplains. Vernal pools are essential for breeding and egg-laying. The western spadefoot is primarily a species of the lowlands, frequenting washes, floodplains of rivers, alluvial

fans, and alkali flats (P&D, 2003). For reproduction and successful metamorphosis, western spadefoot require rain-filled pools that hold standing water for more than three weeks (County, 2004). This toad has been found in San Juan Creek, Cristianitos Canyon, and in RMV temporary depression areas filled with water, in Cristianitos and Gabino Canyons, and in related uplands along San Juan Creek (P&D, 2003). These areas are east and north of the BSA. The presence of exotic predators has reduced populations of spadefoot. Suitable habitat is not found in the BSA and the species is not anticipated to occur.

Two-Striped Garter Snake (*Thamnophis hammonidii*): Ca. Species of Special Concern

The two-striped garter snake is typically found in coastal California from the vicinity of Salinas to northwest Baja California from sea level to about 7,000 feet in elevation. This snake occurs primarily in wetlands and is found in freshwater marsh and riparian habitats with perennial waters. This species is found in RMV (P&D, 2003) east of the BSA. This species has been found just east of the crossing of SR-74 over San Juan Creek (Caltrans, 2004). This species is highly aquatic and found in or near permanent freshwater, often along streams with rocky beds and riparian growth. This species has declined sharply due to a reduction in freshwater aquatic and riparian habitats. Suitable habitat is not present in the BSA and the species is not anticipated to occur.

3.4. Birds

Cooper's Hawk (*Accipiter cooperii*): Ca. Species of Special Concern

The Cooper's hawk is an NCCP/HCP Planning Species and a California Species of Special Concern. Both resident and migratory populations exist in Orange County. Wintering Cooper's hawks are often seen in wooded urban areas and native woodland communities. Nesting habitats include oak and riparian woodlands dominated by sycamores and willows. Cooper's hawks in the region prey on small birds and rodents that live in woodland communities and occasionally in scrub and chaparral communities. Cooper's hawk was observed just east of the BSA in 2004 (Caltrans, June 2004) and is found in RMV (County, 2004). Small patches of habitat occur in the BSA; however, the habitat is very marginal and the species is not anticipated to nest in the BSA.

Tricolored blackbird (*Agelaius tricolor*); Federal: Species of Concern; CDFG: Species of Special Concern

This species is also an NCCP/HCP Planning Species. These colonially nesting birds prefer to breed in marsh vegetation of bulrushes and cattails and have also been recorded nesting in willows, blackberries, and mustard. This species is often found foraging in wet pastures, agricultural fields, and seasonal wetlands. This species is found in RMV (County, 2004) and was found during surveys of the San Juan Creek bridge immediately east of the BSA (Caltrans, June 2004; Caltrans, 1996).

White-tailed kite (*Elanus leucurus*); Federal: Species of Concern, Ca: Fully Protected Species

The white-tailed kite is included on the CDFG list of “Special Animals” and is an NCCP/HCP Planning Species. This species breeds in riparian trees, particularly in the coastal valleys and plains, and forages in grassland and shrub communities. White-tailed kites, while readily observed in undeveloped portions of Orange County, have begun to decline in the region. Reasons for the decline include loss of foraging habitat, roost sites, and nesting habitat (P&D, 2003). This species tends to nest in trees such as oaks, willow, and sycamores, and forage in grassland and scrub vegetation types. This species shows strong preference to nest groves and trees. The species was observed just east of the BSA in 1992 (Caltrans, June 2004) and is found in RMV (County, 2004).

Southwestern willow flycatcher (*Empidonax traillii extimus*); Federal: Endangered; State: Endangered

The southwestern willow flycatcher is a neotropical migrant that breeds in low-elevation riparian habitats. This species is a federally- and state-listed Endangered species and an NCCP/HCP Planning Species. Occupied sites generally contain the presence of perennial or near-perennial water in riparian woodlands along streams and rivers with mature, dense stands of willow, cottonwoods (*Populus* spp.), or smaller spring fed or boggy areas with willows or alders (*Alnus* spp.). Breeding sites tend to contain high vegetative volume in the lower strata and high canopy density. The willow flycatcher occurs in coastal southern California as an uncommon spring migrant and fairly common fall migrant, generally riparian areas. Southwestern willow flycatchers are late spring breeders, generally present and singing on breeding territories by mid-May and fledge young in early July. They are generally gone from breeding grounds in southern California by late August and are exceedingly scarce in

the United States after mid-October (P&D, 2003). Nesting is rare in southern California and extensive willow-riparian woodlands are required. Nesting habitat for this species is present along Canada Gobernadora and along San Mateo Creek in southern California (P&D, 2003).

Suitable habitat contains stream segments with a gradient of 4 percent or less, at elevations between 100 and 8000 feet, presence of surface water, saturated soil, or presence of obligate/facultative herbaceous wetland plants during the early summer months, presence of dense clumps or stands of woody riparian vegetation covering an aerial extent of 20 percent over a 0.2 ha (0.5 acre) section of the floodplain or adjacent streamside terrace (USFWS, 2000; P&D, 2003). Extensive areas of willow riparian woodlands are not present in the BSA. The species is found in RMV (County, 2004). The southwestern willow flycatcher is not anticipated to occur in the BSA due to a lack of suitable hydrology and vegetation.

Least Bell's vireo (*Vireo bellii pusillus*); Federal: Endangered; State: Endangered

Least Bell's vireo is federally- and state-listed Endangered and an NCCP/HCP Planning Species. Now a rare and local summer resident of southern California's lowland riparian woodlands, the least Bell's vireo was formerly more common and widespread. In 1980, the state designated the least Bell's vireo as an endangered species, and the federal government listed the species as endangered in 1986. Vireos have declined due to destruction and fragmentation of riparian habitat and to brood parasitism by brown-headed cowbirds. This species inhabits low riparian growth in the vicinity of water or in dry river bottoms, below 2000 feet. This species primarily occupy riverine riparian habitats that typically feature dense cover within approximately three to six feet of the ground and a dense, stratified canopy. In the coastal portions of southern California, the least Bell's vireo occurs in willows and other low, sense valley foothill riparian habitat and lower portions of canyons and along the western edge of the deserts in desert riparian habitat. This species nests along margins of bushes or on twigs projecting into pathways, usually of willow, baccharis, or mesquite. Closest occurrences to the BSA include San Mateo Creek and Cristianitos Creek (P&D, 2003) along with along SR-74, 2 miles east/northeast of I-5, in the vicinity of San Juan Creek (CNDDB, 2006). Suitable habitat for the species does not occur in the BSA and the species is not expected to occur. The species was found just east of the BSA, at the crossing of SR-74 over San Juan Creek, during surveys in 1994 and 1995 (Caltrans, 1996).

Bald Eagle (*Haliaeetus leucocephalus*); Federal: Threatened; State: Endangered

Southern California is primarily wintering habitat for bald eagles with breeding confirmed only in a few locations. Bald eagles are usually found close to lakes and reservoirs where they feed on fish, coots, and waterfowl (Stephenson, 1999). Human activities may alter the habitat use pattern of this species. Suitable breeding habitat for this species does not occur within the project area with the species not anticipated to nest.

Coastal California Gnatcatcher (*Polioptila californica californica*); Federal: Threatened; State: Species of Special Concern

The California gnatcatcher is a federally-listed Threatened species, a California Species of Special Concern, and a NCCP/HCP Planning Species. The coastal California gnatcatcher is a permanent resident of coastal sage scrub (Venturan coastal sage scrub, Diego coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub) below 2500 feet in southern California (Biosystems Books, 1994). California gnatcatchers are most abundant in mature stands, where shrub canopy is typically greater than 50 percent and often exceeds 60 percent, and dominated by California sage, black sage, white sage, and California buckwheat (P&D, 2003). The closest location to the BSA is in RMV (P&D, 2003). The existing populations continue to decline primarily due to habitat destruction. There is no CSS within the BSA with the coastal California gnatcatcher not expected to occur.

Coastal Cactus Wren (*Campylorhynchus brunneicapillus*); Ca. Species of Special Concern

This NCCP/HCP Planning Species is a resident of coastal southern California, where they occur in dry washes with yucca and cacti, and on lower coastal slopes and bluffs with extensive patches of prickly-pear cactus. Habitat of the species is dominated by coastal sage scrub interspersed with patches of southern cactus scrub. This species is found in RMV (County, 2004). The species is not anticipated to occur in the BSA due to insufficient habitat.

Harrier (*Circus cyaneus*); Ca: Species of Special Concern

It is a regular winter migrant and occasionally breeds in Orange County. It can be observed year round foraging in riparian, grassland, and scrub communities.

Breeding habitat includes prairie, savannah, slough, wet meadow, and marsh vegetation types. While once a relatively common species during fall, winter, and spring in undeveloped areas of Orange County, the northern harrier population is now greatly reduced and localized in distribution. This species is threatened by loss of habitat, pesticides, and loss of suitable habitat. The species was observed just east of the BSA in 1995 (Caltrans, June 2004) and forages in RMV (County, 2004). Small patches of marginal habitat occur in the BSA; however, harrier are not anticipated to occur in the BSA as there is a lack of suitable nesting habitat.

Ferruginous Hawk (*Buteo regalis*): Federal: Species of Concern; Ca: Species of Special Concern

This raptor occurs as a winter resident in California. It is rare to uncommon along the coast of southern California during the winter season. This hawk occupies open, dry habitats such as grasslands, shrublands, rangelands, and, in winter, plowed agricultural fields. This large raptor preys on small to medium-sized mammals. This species is present in RMV during winter as a visitor for foraging (County, 2004). Small patches of marginal habitat occur in the BSA; however, hawks are not anticipated to occur in the BSA as there is a lack of suitable nesting habitat.

Merlin (*Falco columbarius*); Ca: Species of Special Concern

The merlin is an NCCP/HCP Planning Species. In California, merlins prefer a vast open space such as estuaries, grasslands, and deserts where they hunt small flocks of birds. In Orange County, merlins are uncommon visitors and winter migrants. As merlin breeding populations in the northern latitudes recover from pervious contaminant-related reproductive problems, the species will likely be observed more frequently during the winter in places where appropriate habitat remains (P&D, 2003). The species forages in RMV (County, 2004) and the species is not anticipated to occur in the BSA due to a lack of suitable habitat.

Yellow-breasted chat (*Icteria virens*); CDFG: Species of Special Concern

This warbler was once a fairly common summer resident in riparian woodlands throughout California, but is now much reduced in numbers, especially in southern California (P&D, 2003). For nesting, this species requires dense, brushy tangles near water and riparian woodlands supporting a thick understory. There is a lack of suitable habitat within the BSA and the species is not anticipated to occur. This species is found on RMV (County, 2004).

Yellow Warbler (*Dendroica petechia brewseri*); CDFG: Species of Special Concern

Yellow warblers breed in riparian woodlands in lowland and foothill canyons of California. Due to declines in local breeding populations, most are migrant in this region. They are typically found in riparian forests that contain cottonwoods, sycamores, willows, and alders. Suitable habitat is not found in the BSA. This species is not anticipated to occur in the BSA. As recent as 2004 surveys, yellow warbler were present just east of the BSA, at the Bridge.

3.5. Crustaceans

San Diego Fairy Shrimp (*Branchinecta sandiegonensis*); Federal: Endangered

This species is restricted to vernal pools in southwestern coastal California and extreme northwestern Baja California, Mexico. No individuals have been found in riverine waters, marine waters, or other permanent bodies of water. All known locations are below 701 meters (2,300 feet) and within 65 kilometers (40 miles) of the Pacific Ocean, from Santa Barbara County south to northwestern Baja California (USFWS, 1997a). San Diego Fairy Shrimp are found in RMV (County, 2004) east of the BSA. There is a lack of suitable habitat within the BSA and the species is not anticipated to occur.

Riverside Fairy Shrimp (*Streptocephalus wottoni*); Federal: Endangered

This species occurs in vernal pools, pool-like ephemeral ponds, and human-modified depressions from coastal southern California south to northwestern Baja California, Mexico. No individuals have been found in riverine or marine waters (USFWS, 2001). Riverside Fairy Shrimp are found in RMV (County, 2004) east of the BSA. There is a lack of suitable habitat within the BSA and the species is not anticipated to occur.

3.6. Fish

Southern steelhead (*Onchorhynchus mykiss*); Federal: Endangered; State: Species of Special Concern

The local steelhead is the southern steelhead, which is a subset of *Oncorhynchus mykiss irideus*. Historically, steelhead are known to occur within San Juan Creek

(P&D, 2003; Stephenson, 1999). This anadromous fish spends most of its life in the sea and then migrates into freshwater streams to spawn. The young hatch out, spend a year or two in fresh water, and then return to the sea. This species is believed absent from the BSA due to lack of suitable hydrology. On December 10, 2004, NOAA Fisheries proposed the designation of critical habitat for seven evolutionary units of the Pacific salmon and steelhead in California. San Juan Creek is included within this designation. Steelhead have not been documented in the San Juan Creek within the SAMP Study Area limits (SAMP, 2005). The BSA does not contain any proposed critical habitat or suitable hydrology for fish. The nearest crossing of San Juan Creek is approximately 1.0 mile east of the BSA, as it crosses under SR-74, in the County of Orange. According to the CDFG, there are no downstream barriers to fish passage.

Arroyo chub (*Gila orcutti*); Federal: Species of Concern, CDFG: Species Concern

The arroyo chub is found in slow water stream sections with mud or sand bottoms. They tend to feed on aquatic vegetation and associated invertebrates and prefer warm water temperatures and pool habitats with sand and mud bottoms. The species is adapted to survive in widely fluctuating water temperatures and dissolved oxygen levels. The closest occurrence of the species to the BSA is in RMV (County, 2004). This species is threatened by exotics (largemouth bass and black bullhead) and water rights legislation. The BSA does not support fish due to a lack of suitable hydrology.

Tidewater goby (*Eucyclogobius newberryi*); FE, CDFG: Species Concern

The tidewater goby favors coastal, brackish-water habitats. The habitat of the BSA is not suitable for tidewater goby and the species is not anticipated to occur. Closest occurrences of the species are in San Mateo, San Onofre, Las Flores, Hideen, and Cocklebur lagoons (P&D, 2003). The species is generally associated with sandy and muddy substrates where they feed on marine and aquatic invertebrates, and form burrows during the breeding season. This annual species spends its entire life cycle confined to the lagoon and river, and it is not believed to venture offshore into the marine habitat (P&D, 2003). Suitable hydrology is not found in the BSA to support goby.

3.7. Plants

Suitable habitat does not occur in the survey area for the following:

Coulter's saltbush (*Atriplex coulteri*); CNPS 1B, RED 2-2-2-

Coulter's saltbush is found within coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland. The species may also occur on ridgetops as well as alkaline low places from 10-440 meters (CNDDDB). This species is associated with clay or alkaline soils. This species blooms from March – October and is threatened by development. This species is found in RMV (County, 2004). The BSA does not contain suitable habitat with the species believed absent from the BSA.

Thread-leaved brodiaea (*Brodiaea filifolia*); Federal: Threatened, State: Endangered, CNPS List 1B, RED 3-3-3

Thread-leaved brodiaea is a federally-listed Threatened, state-listed Endangered, a CNPS List 1B, and a NCCP/HCP Planning Species. The thread-leaved brodiaea is found in cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools containing clay soils, from 40-1220 meters (131 – 4002 ft.). *Brodiaea filifolia* bloom from April – June and is threatened by residential development, road maintenance, grazing, and non-native plants. This species is usually associated with annual grassland and vernal pools and is often surrounded by shrubland habitats. Closest locations are in RMV (County, 2004). The BSA does not contain suitable habitat with the species believed absent from the BSA.

Intermediate Mariposa Lily (*Calochortus weedii* var. *intermedius*); CNPS: 1B, RED: 2-2-3

Intermediate mariposa lily is found in coastal scrub, chaparral, and valley and foothill grasslands on dry, rock open slopes and rock outcrops. It is found at elevations of 180-855 meters. The species blooms from May – July. The species is threatened by development, road construction, and fuel modification. Closest occurrences are in RMV (County, 2004). The BSA does not contain suitable habitat with the species believed absent from the BSA.

Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*); CNPS: 1B, RED: 2-2-2

Summer holly is found in maritime chaparral areas from 30-550 meters. The species is an evergreen shrub that blooms from April – June and is threatened by development and gravel mining. The BSA does not contain suitable habitat of mixed chaparral with the species absent from the BSA.

Many-Stemmed Dudleya (*Dudleya multicaulis*); CNPS: 1B, RED: 1-2-3

Many-stemmed dudleya is found in chaparral and coastal scrub areas, along with valley and foothill grasslands. Associated species often include purple needlegrass, giant needlegrass, white sage, California sagebrush, and coast paintbrush (P&D, 2003). This species is found in heavy, clay soils or on grassy slopes from 15 - 790 meters. Closest occurrences to the BSA are in RMV (County, 2004). The species blooms from April – July. This species is threatened by development, road construction, grazing, and recreation. The BSA does not contain suitable habitat with the species believed absent from the BSA.

Laguna Beach live-forever (*Dudleya stolonifera*); Federal: Threatened, State: Threatened; CNPS List 1B, RED 3-3-3

The Laguna Beach live-forever is found in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and rocky areas. It is typically found at elevations of 10-260 meters and blooms from May – July. It is known from approximately six occurrences near Laguna Beach (CNPS, 2001). It is threatened by development, recreation, and non-native plants. The BSA does not contain suitable habitat with the species believed absent from the BSA.

Cliff spurge (*Euphorbia misera*); CNPS: List 2, RED:2-2-1

Cliff spurge is found in coastal bluff scrub and coastal scrub sites. This species favors rocky sites from 10-550 meters in elevation. This species blooms from December – August and is threatened by development. The BSA does not contain suitable habitat with the species believed absent from the BSA.

Nuttall's Scrub Oak (*Quercus dumosa*); CNPS: 1B, RED:2-3-2-

Nuttall's scrub oak is found in closed-cone coniferous forests, chaparral areas, and coastal scrub. This oak tends to favor sandy soils near the coast (15-400 meters) and

may be found on clay loam. This species is an evergreen shrub that blooms February – April. Closest species occurrences are in the Laguna area. The BSA does not contain suitable habitat with the species believed absent from the BSA.

Big-leaved crownbeard (*Verbesina dissita*); Federal: Threatened, State: Threatened, CNPS: List 1B, RED 3-3-2

The big-leaved crownbeard is found in maritime chaparral, coastal scrub, and elevations of 45-205 meters. This species is found on steep, rocky, primarily north-facing slopes within 1.5 miles of the ocean in gravelly soils. It blooms from April – July and is known in California from only two occurrences near southern Laguna Beach (CNPS, 2001). This species is threatened by urbanization and fuelbreak clearing. The BSA does not contain suitable habitat with the species believed absent from the BSA.

Regional Habitat

Habitats are considered to be sensitive biological resources based on (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of sensitive plants or animals occurring on the site. Within the region, habitat associations including: Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Sycamore Alder Riparian Woodland, Mulefat Scrub, Willow Riparian Scrub, Arroyo Willow Riparian Forest, Ephemeral Drainage/Wash, and Ruderal may occur (P&D, 2003; RMV, 2004). However, the dominant vegetation, with the region of the BSA, includes coastal sage scrub, grassland, agricultural, and chaparral (Bonterra, 2006). Habitat found on-site consists of small patches of marginal habitat.

Potential Sensitive Natural Communities, within the BSA, based on CNDDDB:

Southern Coast Live Oak Riparian Forest

Coast live oak riparian forest is dominated by coast live oak (*Quercus agrifolia*), with western sycamore (*Platanus racemosa*), Mexican elderberry, arroyo willow, red willow (*Salix laevigata*), and Goodding's black willow. Understory vegetation includes holly-leaf redberry (*Rhamnus ilicifolia*), California coffeeberry (*Rhamnus californica*), mule fat (*Baccharis salicifolia*), coastal goldenbush (*Isocoma menziesii*), poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), laurel sumac, California mugwort, and Douglas' nightshade (*Solanum douglasii*). There are

8 oak trees (*Quercus agrifolia*) within the BSA and riparian vegetation at DS 7. There are no forest areas, or large occurrences of native habitat, within the BSA.

Southern Cottonwood Willow Riparian Forest

Cottonwood-Willow riparian forest is a multi-layered forest community dominated by cottonwoods (*Populus* spp.) and willows (*Salix* spp), with other tree species occurring at lower numbers and percent cover. Dominant species in cottonwood-willow riparian forest are Goodding's black willow, Fremont's cottonwood (*Populus fremontii*), and black cottonwood (*P. balsamifera* ssp. *trichocarpa*). Other species common in the second canopy layer include arroyo willow, mulefat, poison oak, false indigo (*Amorpha fruticosa*), and desert grape (*Vitis girdiana*). The understory is comprised of species such as stinging nettle (*Urtica dioica*), branching phacelia (*Phacelia ramosissima*), dock (*Rumex* sp.), and California blackberry (*Rubus ursinus*). Several non-native species occur in cottonwood-willow riparian forests, including castor bean (*Ricinus communis*), giant reed (*Arundo donax*), and tree tobacco (*Nicotiana glauca*). There are cottonwood within the landscaped portion of the BSA. Small amounts of willow are found in DS 7. There are no forest areas, or large occurrences of native habitat, within the BSA.

Mulefat Scrub

The community is open or dense scrub dominated by mulefat, though scattered willows may be present. If this habitat type is in association with drainages, it is "protected" under the CDFG Code. In addition, riparian thickets have high habitat value because many reptiles, amphibians, mammals, birds, including sensitive species, use the dense foliage for camouflage to evade predators. This habitat is found immediately east of the BSA, in San Juan Creek; however, it is not found in the BSA.

Willow Riparian Scrub

Willow riparian scrub occurs along perennial or intermittent drainages that are typically subject to seasonal flooding. This habitat is characterized by shrub-sized willows and mulefat, with willows being the dominant species. As this habitat is typically associated with drainages, it is considered sensitive by CDFG and ACOE. This habitat may support sensitive species. This habitat is found adjacent to the BSA, in San Juan Creek.

Arroyo Willow Riparian Forests

These forests were abundant along major rivers of coastal Southern California but are now greatly reduced. The typical association of this riparian habitat type with drainages means it is “protected” under the CDFG Code. These habitats are considered high quality wildlife habitats because they provide protective cover, water, and food for a variety of species. This habitat is found adjacent to the BSA, in San Juan Creek.

Ephemeral Drainage and Wash

These areas are characterized by dynamic systems that carry a heavy load during storm events. The locations may vary from year to year. This habitat is found adjacent to the BSA, in San Juan Creek. The BSA contains drainage areas constructed with the roadway. DS 7 may contain water throughout the year, as a result of roadway runoff, urban runoff, and agricultural sources.

Chapter 4. Results: Biological Resources, Discussion of Impacts and Mitigation

4.1. Natural Communities of Special Concern

The BSA is dominated by landscaped areas of low-density residential areas, an orchard, equestrian area, and disturbed conditions typical of roadway shoulders. Habitats are considered to be sensitive biological resources based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of sensitive plants or animals occurring on the site. Surveys identified riparian and atypical wetland, within the BSA, that will be removed during construction. In addition, a total of 8 oaks trees may be impacted by ground disturbance activities at “The Oaks” property (2850 Ortega Highway) at the southeastern BSA boundary. These habitat areas have limited function and value and occur in very small areas next to the roadway shoulder. Holland (1986) along with Sawyer and Keeler- Wolf (1995) were used to classify vegetation of the BSA; however, true habitat associations or communities do not exist in the BSA as the vegetation consists of small areas of marginal habitat.

Direct Effects- Natural Communities.

Direct effects are caused by the proposed project and occur at the same time and place. Direct effects to natural communities of special concern involve the direct removal or fill of riparian/atypical wetland (0.134 acre) in DS 7, 8, and 10 (of this 0.052 acre is riparian vegetation). As culverts are improved and/or vegetation removed for roadway widening, these impacts will occur. Direct effects may also occur as ground disturbance activities occur within the dripline of 8 oak trees (*Q. agrifolia*) at “The Oaks” property. These direct effects are considered permanent and will be mitigated with replacement planting in proximity to the BSA per the City of San Juan Capistrano Tree Removal Guidelines. No critical habitat will be impacted by the proposed project. In addition, 41 tall trees (including the 8 oaks) will be removed on the south side of SR-74 and an estimated 70 trees will be removed from the north side. These trees may provide nesting and foraging habitat. These habitat

areas have limited function and value and occur in very small areas next to the roadway shoulder.

Indirect Effects- Natural Communities

Indirect effects to natural communities would extend throughout the duration of construction and are caused by the action and occur later in time or are farther removed in distance, but are still reasonably foreseeable to occur (50 CFR 402.02). Indirect effects may diminish the quality of native habitats. The effects are considered minimal on natural communities of special concern. They may include increased susceptibility of adjacent native habitats to invasion by nonnative species; potential fuel spills from construction equipment and activities of equipment or personnel outside designated construction areas; increased erosion, siltation, and runoff; and increased dust accumulation on plant leaves. Disturbances that would occur during construction typically enhance the germination and proliferation of nonnative plant species. Implementation of BMPs in the SWPPP would minimize these effects.

The proposed project may result in long term, beneficial effects including the removal of exotic species within the BSA, once construction is complete. Habitat within the BSA will not be further fragmented, as SR-74 is an existing road. Effects from shading from construction of the retaining walls and soundwalls are not anticipated. Areas abutting proposed wall locations will be landscaped primarily with low-growing ornamental species once the project construction is complete. There are no sensitive habitats in proximity to the wall locations.

Table 4: Natural Communities Impacted by the Proposed Project

<i>Natural Community</i>	<i>Impact Area* (acre)</i>	<i>Mitigation Area</i>	<i>Mitigation Responsibility</i>
Riparian	0.052 acre (DS 7)	Will occur in an area deemed suitable by the County, in cooperation with resource agencies, and determined at the time of preparation of project plans.	County
Atypical Wetland	0.134 acre (0.052 acre is riparian vegetation)	Will occur in an area deemed suitable by the County, in cooperation with resource agencies, and determined at the time of preparation of project plans.	County
Oaks	Approx. 8 mature trees at "The Oaks" property	In proximity to BSA, according to the City of San Juan Capistrano's Tree Removal Guidelines	County

4.1.1. Riparian

Riparian communities are associated with seasonally or perennially flowing freshwater where plants tolerate/require moist soils (Sawyer and Keeler-Wolf, 1995). In wetter areas, the understory consists of southern cattail and California bulrush; drier areas contain poison oak, mugwort, and nightshade as dominants in the understory with occasional individuals of mulefat (Holland, 1996). In addition, riparian communities are associated with the bottoms, banks, and occasionally the floodplains of drainages.

CNDDDB provides an inventory of sensitive plant and animal species following descriptions by Holland (1986). Riparian vegetation is limited to a few drainage ditches in the BSA, in narrow patches. This community was included as sensitive because it is associated with drainages under USACE and CDFG jurisdiction, due to the eventual drainage discharge into San Juan Creek.

The typical association of riparian habitat is “protected” under the Fish and Game Code and by the Clean Water Act. These habitats, within the BSA, are not considered high quality as they are unlikely to provide protective cover, water, and food for a variety of species. The riparian area within DS7 is next to SR-74 and adjacent to disturbed areas of the roadway shoulders. The riparian vegetation of DS 7 does not serve as a wildlife corridor and occurs in a linear path. The drainage features, within the BSA, may provide functions such as nutrient cycling, ground water recharge, and habitat support. Drainage areas will be improved with widening activities.

4.1.1.1. SURVEY RESULTS

All existing drainages would be modified and extended to intercept at the proposed edge of pavement. An additional ten drainages would be added on the north side of the highway in the BSA. A total of three existing drainages (DS 7, 8, and 10) are jurisdictional wetlands based on ACOE and CDFG guidelines. These drainage areas discharge to the southern side of the road and eventually discharge into San Juan Creek. These drainage areas are either fully concrete lined or contain fill soils; however, the bed, channel, and bank is only clearly defined in DS 8. On-site drainages support little or no vegetation and provide limited opportunity for wildlife. DS 7, 8, and 10 are considered “Other Waters” (atypical wetland).

Drainage System 7

DS 7 is classified as a jurisdictional drainage and likely resulted from small rain events, urban runoff, and minimal Caltrans Maintenance clearing of roadway shoulders resulting in this depressional area where riparian vegetation now thrives. It is located just east of Toyon Drive in the roadway shoulder. The understory of this habitat may contain poison oak and California wild grape; however, the system along SR-74 is dominated by willow and cattails. DS 7 contains cattails, pampas grass, doc, arroyo willow, and sedge, along with non-native species along the immediate

roadway edge. DS 7 contains 0.052 acre (2270 square feet) of riparian vegetation, with a total length of 227 feet and width of 10 feet.

The field visit on September 13, 2006, with ACOE and CDFG Staff, indicated that DS 7 is a jurisdictional area (atypical wetland). Drainage improvements include the construction of a curb and gutter, vegetated, with some type of rip rap. A second design option for DS 7 includes ungrouted rip rap and construction of an inlet structure. Regardless of the structure chosen, 0.052 acre of riparian/atypical wetland will be removed for the roadway widening. There is no clearly defined bed, channel, and bank in DS 7; however, riparian vegetation, standing water, and roadway fill soils are present. DS 7 may contain standing water year round, with standing water observed in the drainage during the field surveys by Department Biologists. Soils of DS 7 are typical of roadway fill soils brought in with the construction of the road in addition to soils that have eroded from neighboring residential areas.

Riparian habitat may provide habitat for migratory birds. DS 7, with standing water likely resulting from upslope irrigation from residences, may provide habitat for common yellowthroat, song sparrow, red-winged blackbird, and black phoebe. However, DS 7 occurs in a linear swath, in the shoulder of SR-74, and is not considered high quality habitat.

Drainage System 8

Drainage System 8 is a concrete-lined channel that contains non-native grasses and bougainvillea. The field visit on September 13, 2006, with ACOE and CDFG Staff, indicated that Drainage System 8 is a jurisdictional area. Drainage improvements include the removal of the existing inlet and construction of a 60" headwall at the existing fully-lined concrete v-ditch that contains primarily bougainvillea and landscaped shrubs. No riparian/wetland vegetation will be removed with proposed work at DS 8. Drainage system 8 has a length of 144 feet and width of 10 feet.

Drainage System 10

In addition, DS 10 is a jurisdictional area that contains primarily non-native grasses, along the roadway shoulder, and a small "bank" area that has likely resulted from the follow of water from urban runoff and yard improvements in this area that has changed the topography and hydrology of the roadway shoulder. This drainage occurs in a linear path next to the existing roadway, with an approximate length of 800 feet and average width of 2.5 feet.

4.1.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

- ❖ The County of Orange shall be responsible for mitigation of the project impacts. At the time of preparation of the plans, the County will determine appropriate project mitigation, in coordination with the resource agencies. The County will serve as applicant for resource agency permits.
- ❖ It is anticipated the County shall implement applicable conditions of the SAMP and NCCP/MSAA/HCP.
- ❖ The project shall comply with applicable conditions of the SAMP and NCCP/MSAA/HCP.
- ❖ The permittee shall perform initial vegetation clearing in Waters of the U.S. between September 15 and March 15. Work in waters may occur between March 15 and September 15 if breeding bird surveys indicate the absence of any nesting birds within a 50-foot radius.
- ❖ A Qualified Biologist shall monitor all appropriate ground disturbance activities to ensure that all conservation measures are being implemented.
- ❖ Prior to the initiation of the project, the boundaries of the project's impact area shall be delimited by the placement of temporary construction fencing, staking, and/or signage. Any additional acreage impacted outside of the approved project footprint shall be mitigated at a 5:1 ratio.
- ❖ All Best Management Practices (BMPs) would be in place during construction according to the Stormwater Water Pollution Prevention Plan (SWPPP). BMPs shall be employed to minimize erosion from the construction of project facilities and deposition of soil and/or sediment into drainage areas of the BSA.
- ❖ No fueling, lubrication, storage, or maintenance of construction equipment within CDFG or ACOE jurisdictional areas is permitted. Spoil sites shall not be located within the CDFG or ACOE jurisdictional areas, or in areas where it could be washed into a drainage channel that outlets at San Juan Creek.

- ❖ The project must comply with conditions of the SAMP and MSAA conditions. The project would result in 0.134 acre of permanent impacts to Waters of the United States (WoUS) requiring a Letter of Permission (LOP) from the U.S. Army Corps of Engineers (USACE) to authorize the discharge of dredged and/or fill materials into WoUS pursuant to Section 404 of the Clean Water Act. A compensatory mitigation plan addressing unavoidable impacts to WoUS and the program goal of no net loss of wetlands shall be prepared and approved by the USACE prior to the issuance of the first grading permit.
- ❖ Heavy equipment working in or crossing wetlands shall be placed on temporary construction mats (timber, steel, geotextile, rubber, etc.) or other measures must be taken to minimize soil disturbance such as using low pressure equipment. Temporary construction mats shall be removed promptly after construction.
- ❖ No discharge of dredged or fill materials (even it temporary) shall consist of unsuitable materials (e.g., trash, debris, etc.) and material discharged shall be free from pollutants in toxic amounts per Section 307 of the CWA.
- ❖ To the maximum extent practicable, the activity shall be designed to maintain pre-project downstream flow conditions.
- ❖ Any temporary fills must be removed in their entirety and the affected areas returned to their pre-existing conditions, including any native riparian and/or wetland vegetation.
- ❖ Measures shall be adopted to prevent potential pollutants from entering the watercourse. Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the project areas in a manner as to prevent any runoff from entering jurisdictional areas.
- ❖ Staging, storage, fueling, and maintenance of equipment must be located outside of the Waters in areas where potential spilled materials will not be able to enter any waterway or other body of water.
- ❖ An individual Section 401 Water Quality Certification shall be obtained (33 CFR 325.2(b)(1)).
- ❖ Environmentally Sensitive Areas (ESAs) are to be flagged prior to the start of construction. These areas are to be avoided during construction.

4.1.1.3. PROJECT IMPACTS

The project will remove a total of 0.052 acre (2270 square feet) of riparian vegetation from DS 7. Indirect effects to riparian habitat may have included: increased sediment and effects to water quality, and invasive/non-native species transported into riparian areas during construction. These indirect effects may diminish the quality of riparian habitat; however, they would be temporary and will last only during construction. Implementation of the BMPs in the SWPPP would further minimize these effects during the remainder of construction. The project drainages may provide limited nutrient cycling, ground water recharge, and habitat support. Drainage areas will be improved by widening activities.

Direct effects on riparian/non-wetland waters involve the loss of vegetation due to site preparation activities such as vegetation clearing, grubbing, filling, and grading for roadway and drainage improvements; these effects are permanent as drainage areas will be enhanced and filled for the roadway improvements. In addition, indirect effects may result from minimal erosion/sediment activities. DS 7, 8, and 10 contain low quality wildlife habitat. A total of 0.134 acre (of this, 0.052-acre is riparian) of ACOE and CDFG jurisdictional area will be removed from construction work and permanently impacted.

These effects would be minimized with the implementation of the SWPPP, prior to the discharge of any effluents. Design Pollution Prevention BMPs include all permanent soil stabilization systems such as preservation of existing vegetation, concentrated flow conveyance systems (e.g., drainage ditches, dikes, berms, swales) and slope/surface protection systems that utilize either vegetated or hard surfaces. Treatment BMPs include all permanent treatment devices and facilities such as biofiltration strips/swales, infiltration basins, and detention devices. Final determination regarding the selection of these BMPs would occur during the Plans, Specifications, and Estimates process, prepared by the County of Orange. Implementation of the BMPs in the SWPPP would minimize these temporary effects during construction.

Indirect effects may include: increased sediment and effects to water quality and invasive/non-native species being transported into these areas during construction. These indirect effects may diminish the quality of habitat; however, they would be temporary and last only during construction. Implementation of the BMPs in the SWPPP would minimize these effects.

4.1.1.4. COMPENSATORY MITIGATION

The County is responsible for mitigation and monitoring commitments for any impacts to biological resources associated with the proposed project. At the time the County prepares the project plans, the County will determine appropriate project mitigation, in coordination with the resource agencies.

4.1.1.5. CUMULATIVE IMPACTS

Cumulative biological impacts are the collective result of any number of related or unrelated projects ongoing or proposed within a geographical areas that, together, have a greater impact on biological resources than any one project considered individually. The proposed project and associated drainage improvements, are minimal in relation to the other project proposed for areas east of San Juan Capistrano. The project drainages discharge into San Juan Creek. Therefore, the study area for the cumulative impacts includes projects in the vicinity of San Juan Creek.

This area of cumulative impacts analysis is considered appropriate since: (1) impacts to water quality downstream may be compounded by additional impacts upstream, (2) impacts to jurisdictional waters along San Juan Creek may occur; and (3) increases in impervious substrates adjacent to San Juan Creek may increase water levels.

The proposed project may result in a minimal contribution to the regional (or cumulative) effect of the effects to hydrologic function and water quality. Indirect effects can affect riparian areas, through changes in velocity, inundation, or water quality degradation. With project BMPs in place, the proposed project may result in a minimal contribution to the degradation of water quality; however, the project will not cause a substantial effect to riparian vegetation given the distribution of riparian vegetation remaining within the region.

Throughout the coastal floodplain of southern California, riparian habitat has been lost to activities such as channelization for flood control and sand and gravel mining. Almost 6 acres of riparian vegetation and 2 acres of woodland are found immediately east of the BSA, in Planning Area 1 (Bonterra, 2006). Though these areas will be impacted with the widening of SR-74 in the County of Orange boundaries, there are large expanses of these communities in the RMV that will remain with completion of the development. Preserved areas of woodland and riparian will remain in the RMV.

Throughout southern California, riparian habitat has been lost to activities such as channelization for flood control and loss of habitat for development. As there is a roadway present within the BSA, project effects are not expected to further fragment the riparian/atypical wetland habitat. A regional loss of riparian/atypical wetland is not anticipated.

4.1.2. Atypical Wetland

Wetland and other waters are protected under a number of laws and regulations. At the federal level, the CWA 33 United States Code (U.S.C.) 1344 is the primary law regulating wetlands and waters. The CWA regulates the discharge of dredged or fill material into Waters of the U.S., including wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. All three parameters must be present, under normal circumstances, for an areas to be designated as a jurisdictional wetland under the CWA. The Section 404 permit program is run by the ACOE with EPA oversight.

At the state level, wetlands and waters are regulated primarily by CDFG and RWQCB. Sections 1600-1603 of the CDFG Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG prior to construction. A Lake or Streambed Alteration Agreement (SAA) will be required if the project may substantially and adversely affect fish or wildlife. CDFG jurisdictional limits are usually defined by the tops of stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a SAA obtained by CDFG. ACOE, in non-tidal waters, is measured to the Ordinary High Water Mark (OHWM).

Disturbance to Non-Wetland “Other Waters” will result when drainage areas are filled for the widening project. The capacity of the drainage areas will be increased as a part of construction. Drainage Systems 7, 8, and 10 are considered jurisdictional “atypical wetlands” (per ACOE and CDFG guidelines) as they eventually discharge into San Juan Creek. These “atypical wetlands” likely resulted from roadway construction and urban runoff and contain fill soils typical of roadway shoulders.

The SAMP process is applicable to the BSA. According to the SAMP Draft EIS, the purpose of the SAMP is to provide for reasonable economic development and the protection and long-term management of sensitive aquatic resources. As applicable to the proposed project, the SAMP proposes the Long-Term Individual Permits/Letters of Permission (LOP) procedures for long-term activities proposed for properties within the SAMP study area, which include the BSA.

4.1.2.1. SURVEY RESULTS

All existing drainages would be modified and extended to intercept at the proposed edge of pavement. An additional ten drainages would be added on the north side of the highway in the BSA. Existing DS 7, 8, and 10 are considered jurisdictional “Atypical wetlands”, within the BSA. These “Atypical wetlands” are man-induced wetlands per the 1987 Corps Wetland Delineation Manual, Section F, Atypical Situation, that likely resulted from roadway construction and urban runoff. Urban runoff and homeowner yard improvements have resulted in changes in topography and hydrology (primarily on the north side of SR-74). Due to the widening of SR-74, these drainage areas will be filled and enhanced with drainage systems of large capacity to accompany the roadway widening. DS 7 is a soft-bottom drainage that contains riparian vegetation, DS 8 is a concrete channel that contains primarily bougainvillea, and DS 10 contains primarily non-native grasses and is found along the roadway shoulder in a linear area. DS 7 has a length of 227 ft. and width of 10 ft.; DS 8 has a length of 144 ft. and width of 10 ft.; and DS 10 has an approximate length of 880 ft. and average width of 2.5 ft.

4.1.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

- ❖ The County of Orange shall be responsible for mitigation of the project impacts. At the time of preparation of the project plans, the County will determine appropriate project mitigation, in coordination with the resource agencies. The County will serve as the applicant for the resource agency permits.
- ❖ It is anticipated that the County shall implement applicable conditions of the SAMP and NCCP/MSAA/HCP.

The following elements have been agreed to but may not be limited to the following, per conditions of the SAMP and Caltrans Construction Requirements:

- ❖ The project would result in 0.134 acre of permanent impacts to Waters of the United States (WoUS) requiring a Letter of Permission (LOP) from the U.S. Army Corps of Engineers (USACE) to authorize the discharge of dredged and/or fill materials into WoUS pursuant to Section 404 of the Clean Water Act. A compensatory mitigation plan addressing unavoidable impacts to WoUS and the program goal of no net loss of wetlands shall be prepared and approved by the USACE prior to the issuance of the first grading permit. Mitigation ratios shall be determined by the USACE. Conditions of the LOP are expected to include the following:
 - ❖ When feasible, erosion and siltation controls, such as siltation or turbidity curtains, sedimentation basins, and/or hay bales or other means designed to minimize exacerbating turbidity in the watercourse above background levels existing at the time of project implementation, shall be used and maintained during project implementation. All exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be stabilized at the earliest practicable date to preclude additional damage to the project area through erosion or siltation and no later than November of the year the work is conducted to avoid erosion from storm events.
 - ❖ Heavy equipment working in or crossing wetlands shall be placed on temporary construction mats (timber, steel, geotextile, rubber, etc.) or other measures must be taken to minimize soil disturbance such as using low pressure equipment. Temporary construction mats shall be removed promptly after construction.
 - ❖ No discharge of dredged or fill materials (even if temporary) shall consist of unsuitable materials (e.g., trash, debris, etc.) and material discharged shall be free from pollutants in toxic amounts per Section 307 of the CWA.
 - ❖ To the maximum extent practicable, the activity shall be designed to maintain pre-project downstream flow conditions.
 - ❖ Exotic Species Management: All giant reed (*Arundo donax*), salt cedar (*Tamarix* spp.), and castor bean (*Ricinus communis*) must be removed from

the project site and ensure that the site remains free from these non-native species for a period of five years from project completion.

- ❖ Any temporary fills must be removed in their entirety and the affected areas returned to their pre-existing conditions, including any native riparian and/or wetland vegetation.
- ❖ Measures shall be adopted to prevent potential pollutants from entering the watercourse. Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the project areas in a manner as to prevent any runoff from entering jurisdictional areas.
- ❖ Staging, storage, fueling, and maintenance of equipment must be located outside of the Waters in areas where potential spilled materials will not be able to enter any waterway or other body of water.
- ❖ Prior to initiation of the project, the boundaries of the project's impact area shall be delimited by the placement of temporary construction fencing, staking, and/or signage. Any additional acreage impacted outside of the approved project footprint shall be mitigated at a 5:1 ratio. In the event that additional mitigation is required, the type of mitigation shall be determined by the USACE and may include wetland enhancement, restoration, creation, or preservation.
- ❖ With regard to federally listed avian species, avoidance of breeding season requirements shall be those specified in the programmatic Section 7 consultation for the LOP procedures. For all other species, initial vegetation clearing in WoUS must occur between September 15 and March 15. Work in waters may occur between March 15 and September 15 if bird surveys indicate the absence of any nesting birds within a 50-foot radius.
- ❖ The USACE shall be allowed to inspect the site at any time during and immediately after project implementation provided a 24-hour advance notice is given to the permittee. In addition, compliance inspections of all mitigation sites must be allowed at any time.
- ❖ A copy of the LOP conditions shall be included in all bid packages for the project and be available at the work site at all times during periods of work

and must be presented upon request by any USACE or other agency personnel with a reasonable reason for making such a request.

- ❖ Within 60 days of completion of impacts to waters, as-built drawings with an overlay of waters that were impacted and avoided shall be submitted to the USACE. Post-project photographs shall also be provided which documents compliance with permit conditions.
- ❖ An individual Section 401 Water Quality Certification shall be obtained (33 CFR 325.2(b)(1)).
- ❖ Environmentally Sensitive Areas (ESAs) are to be flagged prior to the start of construction. These areas are to be avoided during construction.
- ❖ A Qualified Biologist shall be designated responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with the proposed project in accordance with the adopted mitigation measures and applicable laws.
- ❖ All BMPs will be in place during construction according to the Storm Water Pollution Prevention Plan (SWPPP). BMPs shall be employed to minimize erosion from the construction of project facilities and deposition of soil or sediment into drainage channels within the BSA. Any indirect effects to habitat may diminish the quality of habitat; however, the implementation of BMPs in the SWPPP would minimize these effects.
- ❖ A Streambed Alteration Agreement/Master Streambed Alteration Agreement will be obtained from the California Department of Fish and Game.

4.1.2.3. PROJECT IMPACTS

Direct effects on wetlands and other waters involve the loss of vegetation from filling of DS 7, 8, and 10 for SR-74 north-side widening, and direct removal of habitat due to site preparation such as vegetation clearing, grubbing, and grading. The removal of 0.134 acre of atypical wetland (of this, 0.052 acre is riparian habitat) will occur. Since most of the widening will occur on the north side of SR-74, all existing drainages would be modified and extended to intercept at the proposed edge of pavement. An additional ten drainages would be added on the north side of SR-74 in the BSA.

Indirect effects to wetlands and other waters may include: (1) changes in hydrology from increased sediment entering drainage areas after vegetation clearing, and/or (2) invasive, non-native plants transported into areas along the roadway with the movement of soil and/or placement of fill material, present on construction equipment brought on-site or taken off-site, and inadvertently included in seed mixes. These indirect effects would only last during construction. Implementation of BMPs in the SWPPP would minimize these effects during construction.

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in atypical wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use. As a result, impacts to Wetlands and Other Waters are not substantial, with the implementation of the BMPs and anticipated conditions of the SAMP. The functions and values of the drainage facilities will be enhanced with improvements to structure as capacity, as a result of the project.

4.1.2.4. COMPENSATORY MITIGATION

The County of Orange shall be responsible for mitigation of project impacts. At the time of preparation of project plans, the County will determine appropriate project mitigation, in coordination with the resource agencies. It is anticipated that the County shall implement applicable conditions of the SAMP and NCCP/MSAA/HCP. A compensatory mitigation plan addressing unavoidable impacts to Waters of U.S. and the program goal of no net loss of wetlands shall be prepared and approved by ACOE prior to the issuance of the first grading permit. Mitigation ratios shall be determined by the ACOE.

4.1.2.5. CUMULATIVE IMPACTS

Flood control and activities associated with development have reduced this habitat greatly within southern California. Indirect effects can affect wetlands through increases in velocity, inundation, or water degradation. Discharges from projects are regulated and conditions are placed on individual projects to reduce the velocity of discharges; thus, cumulative adverse effects will not occur to velocity and erosion with cumulative projects in the watershed or on wetlands. The proposed project will not result in a contribution to the regional (or cumulative) effect to wetlands. Existing policies for no net loss exist for any unavoidable effects to wetlands.

Considering these regulatory requirements, implementation of the cumulative projects will not result in cumulative losses of wetlands.

4.1.3. Disturbed Areas

The BSA contains disturbed areas typical of roadway shoulders. These areas contain primarily non-native grasses and exotic species. In order to comply with Executive Order 13112, *Invasive Species* (February 3, 1999) and the Federal Highway Administration (FHWA) Guidance on Invasive Species (August 10, 1999) for a National Environmental Protection Act (NEPA) analysis, the State of California List of Noxious Weed Species was reviewed along with the Exotic Pest Plants of Greatest Ecological Concern in California List (California Exotic Pest Plant Council, CalEPPC) list. The frequency of occurrence of the species on either of these lists was documented in order to determine the potential impact the project may have on the spread of such invasive species, in order to comply with the executive order.

4.1.3.1. SURVEY RESULTS

The BSA contains disturbed conditions of roadway shoulders containing: purple fountain grass (*Pennisetum setaceum*), Mexican feather grass (*Stipa tenuissima*), iceplant (*Carpobrotus edulis*), wild oat (*Avena* sp.), castor bean (*Ricinus communis*), bougainvillea (*Bougainvillea* sp.), rip gut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), and telegraph weed (*Heterotheca grandiflora*). In addition, black mustard (*Brassica* sp.), thistle (*Carduus* sp.), cheeseweed (*Malva parvifolia*), pampas grass (*Cortaderia selloana*), and Eucalyptus (*Eucalyptus* sp.). Iceplant and pampas grass are found on the California Exotic Plant Pest Council, Pest Plants of Greatest Ecological Concern, List A-1: Most Invasive Wildland Pest Plants. The area of ice plant is approximately 30 ft. by 30 ft., on the north side of SR-74, next to the roadway, that will be impacted from roadway widening.

4.1.3.2. AVOIDANCE AND MINIMIZATION EFFORTS

- ❖ The project must comply with the conditions of the SAMP for removal of areas of arundo, salt cedar, and castor bean from the BSA.

- ❖ Prior to the initiation of the project, the boundaries of the project's impact area must be delimited by the placement of temporary construction fencing, staking and/or signage.
- ❖ A Qualified Biologist shall be designated responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with the proposed project in accordance with the adopted mitigation measures and applicable laws.
- ❖ All BMPs will be in place during construction according to the Storm Water Pollution Prevention Plan (SWPPP). BMPs shall be employed to minimize erosion from the construction of project facilities and deposition of soil or sediment into drainage channels within the BSA. Any indirect effects to habitat may diminish the quality of habitat; however, the implementation of BMPs in the SWPPP would minimize these effects.
- ❖ All giant reed (*Arundo donax*), salt cedar (*Tamarix* spp.), and castor bean (*Ricinus communis*) must be removed from the project site and ensure that the site remains free from these non-native species for a period of five years from project completion.
- ❖ In order to comply with Executive Order 13112 on *Invasive Species*, no invasive species will be planted within the state right-of-way or in areas in proximity to drainage areas where any invasive species may enter a drainage.

4.1.3.3. PROJECT IMPACTS

Invasive species, including ice plant and pampas grass, would be removed by the proposed project. Invasive species have the potential to be imported to the project culverts by contaminated construction equipment or imported materials such as soils. The dispersal of invasive species propagules in the BSA may be furthered by roadway vehicles, with inadvertent mixing of invasive species in seed mixes applied adjacent to the highway and the spread of invasive species during weed control programs such as mowing. The increased risk of the introduction or spread of invasive species would occur only during construction. The risks would be avoided or minimized with the application of the avoidance, minimization, and/or mitigation measures listed above. The project will remove The remove an approximate 30' x 30' patch of iceplant, in addition to scattered occurrences of castor bean, primarily on

the north side of SR-74. Areas of plant species that are non-native to the BSA will not be replanted, in the BSA, once construction is complete.

4.1.3.4. COMPENSATORY MITIGATION

The project must comply with conditions of the SAMP for removal of exotic species. In addition, in order to comply with Executive Order 13112 on *Invasive Species*, no invasive species will be planted within the state right-of-way or in proximity to drainage areas where the species may enter a drainage.

4.1.3.5. CUMULATIVE IMPACTS

Due to the implementation of conditions of the SAMP and with implementation of the avoidance, minimization, and mitigation measures for invasive species, the proposed project would have a minimal contribution to the regional risk of the introduction and spread of invasive species. No invasive species will be planted in the BSA, in accordance with Executive Order 13112.

4.1.4. Oaks

The USFWS and CDFG share regulatory responsibility for the protection of special-status plant species. The highest level of protection is given to those formally listed or proposed for listing as endangered or threatened under the FESA and/or CESA. The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et. seq., and 50 CFR Part 402. The regulatory requirements for CESA can be found in the CDFG Code, Section 2050 et. seq. The Department's projects are also subject to the Native Plant Protection Act, found in the CDFG Code, Sections 1900-1913, and CEQA Public Resources Code.

Though not considered a natural community of special concern, oak trees are protected by the California Department of Fish and Game if they occur within the jurisdiction of the CDFG. The oak trees within the BSA are regulated by the City of San Juan Capistrano Tree Removal Guidelines and do not occur in CDFG jurisdiction. Coast Live Oak Woodland is characterized by open canopy of coast live oaks, with an understory of grasses and occasional shrubs. The CNDDDB does not rank this community with regard to threat. A linear swath of oak trees is found along

the property fence at the southeastern portion of the BSA. The understory of these oak trees is non-native grasses. The oaks, within the BSA, are not considered an oak woodland since a total of 8 trees occur and the trees occur in a linear area.

4.1.4.1. SURVEY RESULTS

A total of 8 oak trees may be impacted from the widening work at The Oaks property (28650 Ortega Highway). These oaks are located along the south side of the road, with some within containers that may be relocated. The oaks within the BSA are not within the jurisdiction of CDFG. Project work proposed along the south side of SR-74 may occur within the drip line of these trees. Work within the drip line is considered an impact.

Coast live oaks (*Quercus agrifolia*) are found within the project limits along the southern section of SR-74. The oak trees within the project limits do not constitute oak woodland as the BSA oak trees are primarily in container plants, along the property fence at “The Oaks” property. Oak woodlands are characteristically two-layered plant communities consisting of a tree overstory that range from 10 to 60 percent and a continuous understory herbaceous layer made up of a species-rich mixture of forbs and grasses (P&D, 2003). Oak woodland is found east of the BSA, in the RMV. Within the BSA, the oak trees and mature trees may provide habitat for nesting birds.

4.1.4.2. AVOIDANCE AND MINIMIZATION EFFORTS

- ❖ Protective fencing shall be placed around the dripline of oaks to prevent compaction of root zone (ESA). In addition, oaks that remain in containers will be relocated prior to the start of construction.
- ❖ Any impacts to oak trees will be mitigated within proximity to the BSA, in compliance with the City of San Juan Capistrano’s Tree Removal Guidelines
- ❖ It is likely 15+ gallon container trees will be used for planting oaks, in proximity to the BSA, as coordinated with the City of San Juan Capistrano through their Tree Removal Guidelines. The City of San Juan Capistrano’s Land Use Code defines a tree as... “Any living perennial plant having a trunk diameter greater than six (6) inches, measured at a point three (3) feet above

ground. Tree removal permits which include trees over 24 inches in diameter are subject to City discretionary review and approval (Ramsey, 2006).

- ❖ Prior to the initiation of the project, the boundaries of the project's impact area must be delimited by the placement of temporary construction fencing, staking and/or signage.
- ❖ Environmentally Sensitive Areas (ESAs) are to be flagged prior to the start of construction. ESAs would include the drip line of oak trees. These areas are to be avoided during construction.
- ❖ A Qualified Biologist shall be designated responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with the proposed project in accordance with the adopted mitigation measures and applicable laws.
- ❖ All BMPs will be in place during construction according to the Storm Water Pollution Prevention Plan (SWPPP). BMPs shall be employed to minimize erosion from the construction of project facilities and deposition of soil or sediment into drainage channels within the BSA. Any indirect effects to habitat may diminish the quality of habitat; however, the implementation of BMPs in the SWPPP would minimize these effects.

4.1.4.3. PROJECT IMPACTS

Direct effects from project construction will involve work within the drip line of 8 oak trees (*Q. agrifolia*) found in an upland portion of the BSA. Oaks will be replanted within proximity of the BSA, as coordinated with the City of San Juan Capistrano, per their Tree Removal Guidelines.

4.1.4.4. COMPENSATORY MITIGATION

Effects to oak trees are considered as any ground disturbance of the drip line. Any effects to oak trees will be mitigated through planting in proximity to the BSA, as coordinated with the City of San Juan Capistrano per the City's Tree Removal guidelines. It is likely oak trees will be mitigated at a 5:1 replacement ratio.

The County of Orange shall be responsible for mitigation of project impacts. At the time of preparation of project plans, the County will determine appropriate project mitigation.

4.1.4.5. CUMULATIVE IMPACTS

The Rancho Mission Viejo property is located east of the BSA and contains numerous sensitive natural communities, including woodland areas. Given the occurrence of oak trees within the RMV and in areas east of the BSA, regional impacts to oak trees are not anticipated. Permanent effects to oak trees are not anticipated due to the oak trees of the BSA occurring within container plants, with the potential to be relocated prior to the start of construction. A regional loss to oak trees is not anticipated with planting of oaks in proximity to the BSA anticipated and given the current distribution (and plans for areas of open space) within RMV and along SR-74, east of the BSA.

4.2. Special Status Plant Species

The USFWS and CDFG share regulatory responsibility for the protection of special-status plant species. “Special status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to those formally listed or proposed for listing as endangered or threatened under the FESA and/or CESA. The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et. seq., and 50 CFR Part 402. The regulatory requirements for CESA can be found in the CDFG Code, Section 2050 et. seq. The Department’s projects are also subject to the Native Plant Protection Act,, found in the CDFG Code, and CEQA Public Resources Code. Due to the disturbed nature of the BSA, special status plant species were not anticipated within the BSA. Oak trees are regulated by CDFG when they occur within their jurisdiction; however, the oak trees in the BSA are regulated by the Tree Removal Guidelines of the City of San Juan Capistrano.

4.2.1.1. SURVEY RESULTS

Special status plant species were absent from the BSA. A total of 41 trees will be removed from the south side widening of SR-74 and 70 trees will be removed from

the north side. This includes impacts to work within the drip line of 8 oak trees. None of these trees/vegetation removed for the proposed project is considered of a “special status.”

4.2.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

- ❖ Protective fencing shall be placed around the dripline of any oak trees that cannot be relocated to prevent compaction to the root zone (ESA). In addition, oaks in container plants will be relocated prior to the start of construction.
- ❖ Any impacts to oak trees will be planted within proximity to the BSA, as per the City of San Juan Capistrano’s Tree Removal Guidelines.
- ❖ A Qualified Biologist shall be designated responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with the proposed project in accordance with the adopted mitigation measures and applicable laws.
- ❖ All BMPs will be in place during construction according to the Storm Water Pollution Prevention Plan (SWPPP). BMPs shall be employed to minimize erosion from the construction of project facilities and deposition of soil or sediment into drainage channels of the BSA.
- ❖ Prior to the initiation of the project, the boundaries of the project’s impact area must be delimited by the placement of temporary construction fencing, staking and/or signage.
- ❖ If any sensitive plants are observed within the BSA during pre-construction surveys, the locations of the populations and an estimation of the population size shall be mapped and shown on construction drawings. This information shall be used for appropriate avoidance during construction. If the species is to be avoided during construction, it shall be shown as ESA on the plants. If a population cannot be avoided during construction, this information shall be used for appropriate seed collection and salvage measures.
- ❖ Surveys are to be conducted consistent with conservation ethics. Collections of voucher specimen or rare plants will be made only when such an action will not jeopardize the continued existence of the population. Any collections are

to be made in accordance with applicable state and federal laws. Voucher specimen, if collected, are to be deposited at a herbarium for future use.

- ❖ Surveys are to be conducted in a systematic manner using field techniques that ensure a reasonably thorough coverage of all habitats potentially supporting special-status plant species.

4.2.1.3. PROJECT IMPACTS

No direct impacts to sensitive plants are anticipated.

Indirect impacts on plant communities are anticipated to include increase susceptibility of adjacent native habitats to invasion by non-native species, erosion, siltation, and runoff into riparian systems, soil and water contamination due to construction equipment fluid leakage; and increased dust accumulation on plant leaves. Construction disturbance typically enhances the germination of nonnative plants. The introduction of non-native species is of concern in proximity to drainage areas due to the potential to spread to San Juan Creek.

Indirect effects could degrade the habitat value within the BSA. Prior to project ground disturbance, pre-construction surveys are to occur to verify the absence of sensitive plant species. Surveys shall be conducted during the appropriate time of year (bloom season), as feasible. However, due to the disturbed nature of the BSA, sensitive plants are not anticipated to occur in the BSA and were not present during surveys by Department Biologists.

Construction could increase the potential for the spread of invasive plant species within the region. The BSA is already urbanized and contains species that are not native to the area. This impact is anticipated to be minimal and temporary and minimized through the implementation of SAMP conditions along with avoidance, minimization, and mitigation conditions listed in the SAMP.

4.2.1.4. COMPENSATORY MITIGATION

If any sensitive plants are encountered during construction, mitigation will occur per County of Orange NCCP/MSAA/HCP regional planning efforts. Any impacts to sensitive plants will be mitigated by the County of Orange, in an area deemed suitable by the County, in coordination with the resource agencies. The County of Orange is

to provide Caltrans with verification of project mitigation prior to the start of construction. The County will determine mitigation at the time of preparation of project plans, in coordination with the various resource agencies.

4.2.1.5. CUMULATIVE IMPACTS

Sensitive plants are found east of the BSA, in RMV, including Beaked Spikerush, Catalina Mariposa Lily, Chaparral Beargrass, Coulter's Saltbush, Fish's Miltwort, Many-stemmed Dudleya, Mesa Brodiaea, Mud Nama, Palmer's Grapplinghook, Salt Spring Checkerbloom, Small-flowered Microseris, Southern Tarplant, Thread-leaved Brodiaea, Upright Burhead, Vernal Barley, and Western Dichondra (Bonterra, 2006). The area east of the BSA contains a large concentration of sensitive plants considered within the context of southern California.

The proposed project is not anticipated to result in a contribution to regional (or cumulative) effects to sensitive plant species, including the introduction of nonnative invasive plant species and impacts to hydrologic function, water quality, and erosion/sedimentation potential. Due to the temporary nature of most of the impacts to the BSA, this proposed project will not contribute significantly to the cumulative impacts. Indirect impacts (such as human disturbance, increased occurrences of invasive plant species) would be chronic and could degrade the habitat value of the BSA. There are no sensitive plant species within the BSA; no long-term impacts to sensitive plants are anticipated. The loss of 111 trees from project construction, is not considered a substantial regional loss given the distribution of trees within the region and in designated areas of open space.

4.3. Special Status Animal Species Occurrences

The primary federal law protecting threatened and endangered species is the FESA (USC Section 1531, et. seq. and 50 CFR Part 402). This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA, are required to consult with the USFWS and the NMFS to ensure they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical

to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit.

At the state level, the CESA and CDFG Code emphasize early consultation to avoid potential effects to rare, endangered, and threatened species and to develop appropriate planning to offset projects causing the losses of listed species populations and their essential habitats. CDFG is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits “take” of any species determined to be an endangered or threatened species. “Take” is defined in the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to an otherwise lawful activity; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of FESA, CDFG may also authorize effects to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Direct Effects –Wildlife

Direct effects to wildlife are those that involve the physical loss of wildlife habitat due to site clearing, grubbing, grading and road widening, and include both permanent (long term) and temporary (short term) effects. Habitat losses will be permanent and may be mitigated at GERA, or an area deemed suitable by the County of Orange, in proximity to the BSA. Species may be temporarily effected into adjacent areas of open space during project construction. The proposed project does not include the placement of any median barriers and is not anticipated to permanently effect wildlife movement. No long-term effects to sensitive wildlife are anticipated.

Construction of the proposed project will result in the permanent loss of native habitat that provides marginal nesting, and foraging, opportunities for a wildlife species. The proposed improvements to SR-74 will permanently remove habitat used by wildlife including riparian/atypical wetland, disturbed areas, landscaped areas, and oak trees. In addition, small mammals, reptiles, and amphibians and other animals of slower mobility that live in the habitats in the BSA, may be effected as habitat is altered or removed (Trombulak and Frissell, 2000). More mobile wildlife species within the BSA may be able to vacate the area but would be forced to move into adjacent areas of open space. As a result, this movement of individuals may result in the increase in competition for available resources. Any displacement of wildlife, into adjacent areas of open space, is anticipated to be temporary.

The widening of SR-74 will increase automobile and pedestrian traffic in the vicinity, as well as human presence and human use of the area. Pre and post-construction noise levels will remain similar with the construction of the project soundwalls (Caltrans, 2006). Wildlife may be temporarily displaced during construction; however, there are extensive areas of open space to the south and east of the BSA, in RMV, that may be utilized by wildlife.

Construction – Blasting and Noise

The level of noise within the BSA will be from two sources: (1) existing traffic noise and (2) construction equipment. With implementation of the project noise walls, post-construction levels of noise will remain very similar to pre-construction levels. The added noise of construction equipment is low compared to the steady noise of highway traffic. At a distance of 50 feet for a weighted sound level (dBA), backhoe, trucks, and scrapers and front loaders typically have noise levels of 70 dBA (Harris, 1979). It is likely this equipment will be used for the proposed project. Minimal effects to wildlife may occur due to effects from noise. However, with the placement of retaining and soundwalls, noise levels post-construction will remain very similar to levels at pre-construction (Caltrans, 2006).

Noise may effect nesting birds in the following ways: (1) reduce communication distance, (2) distort sounds, and/or (3) cause an avoidance pattern due to annoyance. Reduced communication distance may make it more difficult to locate mates or make prospective mates perceive the calls of suitors as weaker than those of suitors in less noisy areas. It also reduces the area a bird can effectively defend, making the bird less attractive as a resource provider. Sound distortion may make it hard for prospective mates to determine the quality of others' songs. This may make females tend to choose mates from less noisy areas, affecting nesting patterns. No direct, permanent effects from noise to wildlife are anticipated; however, wildlife may be temporarily displaced into adjacent areas of RMV during construction.

Indirect Effects-Wildlife

Indirect effects are those related to incidental disturbance of biological resources beyond the area of direct effect (i.e., disturbance limits) resulting from construction, including noise and glare effects on wildlife, the effects of invasive species, dust on wildlife and plants, the potential for increased mortality of wildlife from species displaced by construction, increased potential for soil erosion, siltation, and runoff (Trombulak and Frissell, 2000). In addition, indirect effects may occur later in time or may be farther removed in distance, but they are reasonably foreseeable to occur.

No direct effects to sensitive wildlife are anticipated, with project avoidance and minimization measures anticipated to allow project construction to continue year-round. Indirect effects also include the degradation of the water quality from increased soil erosion, siltation and runoff. With implementation of project BMPs and a SWPPP, effects from sediment are considered minimal.

Indirect effects to riparian-dependent species may include any minimal changes in increased sediment in proximity to San Juan Creek and its tributaries, water depth, temperature, flow velocity, chemistry, or associated terrestrial/aquatic vegetation association that would reduce the habitat quality for riparian-dependent species. Any of these indirect effects will be temporary and last during construction. Although project work would affect intermittent/ephemeral drainage areas, fish do not use these areas due topography and lack of suitable hydrology. Implementation of the BMPs in the SWPPP would minimize these temporary affects to water quality of habitat, during construction. With implementation of pre-construction surveys, any impacts to wildlife would be minimal and occur only during construction.

Temporary Effects

Temporary effects to wildlife may result from the alteration of habitat and temporary displacement into adjacent areas of open space. Lighting may be installed during construction; however, no permanent lighting structures will remain once construction is complete. Wildlife may be temporarily displaced from habitat during construction, due to effects from noise and lights (as animal behavior including foraging and breeding may be disrupted); however, adjacent areas of open space will contain adequate cover and vegetation once construction is complete.

Permanent Effects

No permanent effects to special status animal species will occur with the proposed work. A Consistency Determination from the CDFG is not anticipated because state-listed species are absent within the BSA. The project area is highly disturbed and provides only small amounts of cover and foraging habitat for wildlife.

4.3.1. Discussion of Animal Species

Many state and federal laws regulate effects to wildlife. The USFWS, NMFS, and CDFG are responsible for implementing these laws. Federal laws and regulations pertaining to wildlife include NEPA, Migratory Bird Treaty Act, and the Fish and Wildlife Coordination Act. State laws and regulations pertaining to wildlife include CEQA, Sections 1600-1603 of the CDFG Code, and Section 4150 and 4152 of the CDFG Code. Raptors and other birds are protected during nesting season by state law and/or by the federal Migratory Bird Treaty Act. While loss of trees on-site is considered minimal given the extensive stands of woodland, grassland, and coastal sage scrub in the region, destruction of active nests for most avian species is legally prohibited. Raptors have been observed within and just east of the BSA. These include red-shouldered hawk (*Buteo lineatus*) and red-tailed hawk (*Buteo jamaicensis*). The small amount of oak trees and landscaped trees may provide marginal habitat for raptors. They are not anticipated to nest in the BSA, and have been found as close to the BSA as the Lower San Juan Creek Bridge, just east of the BSA. Raptors tend to use, and forage, over a variety of habitats including grassland, scrub, and woodland. Non-sensitive raptors were observed soaring over the BSA.

Bats also have the potential to forage in the BSA. Most of the bats that could potentially occur in the survey area are inactive during the winter and either hibernate or migrate, depending on the species (P&D, 2003).

Red-tailed hawk (Buteo jamaicensis)

The red-tailed hawk is commonly found in southern California and feeds on rodents, rabbits, sometimes small birds and reptiles (Peterson, 1990). Habitat that is favored includes open country, woodlands, prairie groves, mountains, plains, and roadsides. There are 59 occurrences of red-tailed hawk in RMV (Bonterra, 2006). Declines of southwestern populations of common raptors may be correlated to continued declines in scrub, grassland, riparian, and woodland communities.

Red-shouldered Hawk (Buteo lineatus)

This species is not considered a special status species by the resource agencies and is fairly common year-round resident in southern California west of the deserts. In Orange County, it is a common year-round resident of oak and sycamore woodlands in the lowlands and foothills. This species is found in the RMV (County, 2004) and

was present during surveys east of the BSA (Caltrans, June 2004). There are 25 occurrences of red-shouldered hawk in RMV (Bonterra, 2006). Declines of southwestern populations of common raptors may be correlated to continued declines in scrub, grassland, riparian, and woodland communities.

Other wildlife that occur on RMV include: Barn Owl, California Gnatcatcher, California Horned Lark, Cactus Wren, Cooper's Hawk, Grasshopper Sparrow, Great Horned Owl, Least Bell's Vireo, Loggerhead Shrike, Long-eared Owl, Red-diamond Rattlesnake, Orange-throated Whiptail, Riverside Fairy Shrimp, Rufous-crowned Sparrow, San Diego Fairy Shrimp, San Diego Horned Lizard, Southwestern Pond Turtle, Southwestern Willow Flycatcher, Tricolored Blackbird, Two-striped Garter Snake, Coast Patch-nosed snake, Western Spadefoot Toad, Western Whiptail, White-Tailed Kite, Yellow Warbler, and Yellow-breasted Chat (Bonterra, 2006). As these species are present in proximity to the BSA, they have the potential to forage in areas of close to the BSA. These species, however, are not anticipated to occur in the BSA, given the landscaped areas and disturbed nature of the site.

4.3.1.1. SURVEY RESULTS

Of the 11 possible federal or state threatened or endangered species that may occur in the BSA (USFWS, August 7, 2006), none were present during surveys of the BSA. USFWS protocol surveys were not conducted due to the presence of marginal habitat in the BSA and RMV survey results of threatened and/or endangered species absence in areas abutting the BSA. Due to the urbanized nature of the BSA, federally and/or state threatened or endangered species were not anticipated in the BSA. As a result, a Biological Assessment was not prepared.

Raptors have been observed soaring within and just east of the BSA. These include red-shouldered hawk (*Buteo lineatus*) and red-tailed hawk (*Buteo jamaicensis*). There is marginal, suitable nesting and foraging habitat in the BSA; however, these species were not observed nesting in the BSA. This species may continue to forage in the BSA, during construction. Raptors are classified as non-sensitive wildlife. Other raptors, such as those found in RMV, may forage in the BSA but are not anticipated to nest given the marginal habitat.

Department Biologists and Environmental Staff visited the BSA on June 28, 2006, August 1, 2006, August 30, 2006, September 13, 2006, September 21, 2006, October 5, 2006, and November 30, 2006. Animal and plant species typical of urban areas were present such as the cabbage white butterfly (*Pieris rapae*), swallowtail (*Pailio*

rutulus rutulus), house finch (*Carpodacus mexicanus*), common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), black phoebe (*Sayornis nigricans*), western fence lizard (*Sceloporus occidentalis*), and red-winged blackbird (*Agelaius phoeniceus*). See Appendix E to this NES for a complete list of survey results.

The BSA does not contain suitable hydrology to be utilized by fish or contain Essential Fish Habitat. No fish were observed in the BSA. The BSA contains box culverts/Corrugated Metal Pipes, and/or v-ditch structures that do not contain suitable hydrology to provide Essential Fish Habitat and/or serve as designated wildlife corridors.

Virtually all plant communities may provide some habitat for resident and migratory birds, however, the habitat of the BSA is considered of a marginal quality. Direct impacts may consist of the mortality of animals that occupy or temporarily reside in habitats located within the impact footprint and blockage of movements necessary for foraging, breeding, and other life history behaviors. There will be minimal habitat removal, in the BSA, that may contain food or necessary resources, for raptors. A total of 0.134 acre of riparian/atypical wetland habitat, which may be utilized by nesting birds/raptors, will be impacted. Eight oak trees (*Q. agrifolia*) will be impacted. In addition, 41 tall trees (including the eight oak trees) will be removed on the south side of SR-74 and 70 trees will be removed from the north side. These trees may provide nesting and foraging habitat; however, are not considered a substantial loss due to the distribution of trees in the region.

Small mammals may be found in the BSA. A direct mortality from roadkills is not anticipated to increase with the completion of construction. Adjacent areas where mammals may be relocated during construction, such as San Juan Creek, are present in close proximity to the BSA. With construction of the project, wildlife will be able to move from one side of SR-74 to the other, with the improvements to project culverts, if necessary. There is a lack of suitable nesting habitat for bats within the BSA, however bats may forage immediately east of the BSA at the Lower San Juan Creek Bridge (Caltrans, 2004).

4.3.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

- ❖ Prior to the start of construction, the Biological Monitor will conduct a pre-construction survey to verify the presence/absence of special status animal species within the BSA.

- ❖ Biological resources shall be protected during construction. To ensure this protection, a Biological Resources Construction Plan (BRCP) that provides for the protection of the resource and establishes the monitoring requirements.
- ❖ Vegetation removal in upland areas should not occur during the primary nesting season for local birds (February 15 through September 1) and most raptors, as protected by the Migratory Bird Treaty Act and Section 3503.5 of the CDFG Code, respectively. If vegetation removal must occur during this period, then preconstruction surveys shall be conducted in the appropriate habitats within and up to approximately 33 meters (100 feet) from the project boundary, or an area coordinated with the resource agencies, to identify nesting birds and/or raptors within or adjacent to the proposed project. In the event of discovery of active nests in the area to be cleared, protective measures as outlined by the Qualified Biologist shall be taken, as coordinated with the resource agencies. Clearing and grubbing limits may be established up to approximately 150 meters (500 feet) in any direction of nests, or buffer distance coordinated with the resource agencies.
- ❖ In order to avoid and minimize the effects of lighting on wildlife, construction lighting shall be shielded away from natural areas.
- ❖ A Qualified Biologist shall monitor all appropriate ground disturbance activities to ensure that all conservation measures are being implemented.
- ❖ All construction-related activities shall be confined to the proposed impact boundaries by installing fencing along the boundary to prevent any construction activities from encroaching into adjacent areas. In addition, construction access points shall be limited in proximity to sensitive habitats.
- ❖ All BMPs shall be in place during construction according to the SWPPP.
- ❖ ESAs will be flagged prior to the start of ground disturbance activities.
- ❖ Construction of project soundwalls will result in post-construction noise levels similar to pre-construction levels, in the BSA, and will result in temporary impacts to wildlife only during construction.

4.3.1.3. PROJECT IMPACTS

No direct or permanent impacts to special status animal species will occur. Wildlife in the vicinity of SR-74 will be subject to construction noise, stormwater runoff, erosion, and the potential introduction of invasive plant material. Any displacement of wildlife, into adjacent areas of open space, will be temporary. SR-74 is an existing road in the BSA and, if necessary, wildlife may travel beneath the roadway in culverts once construction is complete. The increase in traffic, construction/traffic noise, lighting, stormwater runoff, and invasive plant material, is not expected to increase substantially above pre-construction levels. Any displacement of raptors, into adjacent areas of open space, will be temporary. SR-74 is an existing roadway, with an increase in animal-vehicle collisions not anticipated once construction is complete.

Habitat that may be used by sensitive animals, for nesting and foraging, will be impacted by the proposed project for a total of 0.134 acre (of this, 0.052 acre is riparian vegetation) ACOE and CDFG jurisdiction. The loss of nesting and foraging raptor habitat can displace individuals, thereby increasing competition for remaining available resources. This increased competition can lead to a decrease in the local population of certain species. Loss of small amounts of riparian vegetation, oak trees, and landscaped areas- certain raptors occasionally forage along roadways, including the clearings that are often maintained along roadway edges. Raptors are protected under Section 3503.5 of the California Fish and Game Code. There are no additional impacts anticipated from habitat fragmentation as SR-74 exists in the BSA. Raptors are found within the BSA, along SR-74. Large oak and sycamore trees are essential to the raptors for roosting and nesting sites. Snags and cavities that characteristically develop in these trees are also used by a variety of cavity nesting species (i.e., barn owls and woodpeckers). Tall trees of the BSA may provide marginal habitat for nesting birds. Extremely marginal habitat for nesting birds is found along the roadway shoulder of the BSA.

The proposed project has the potential to impact 8 oak trees (*Quercus agrifolia*) and 0.13 acre of riparian/atypical wetland, possibly causing a displacement into adjacent areas of open space in RMV, thereby possibly increasing competition for remaining available resources. In addition, a total of 41 trees (including the 8 oak trees) will be removed along the side of the road and 70 trees will be removed from the north side. These trees are primarily found in landscaped and disturbed areas of the roadway shoulder. There are no woodlands or habitat “communities” within the BSA as areas

of habitat occur in small patches, of marginal quality. This loss of trees is not considered substantial given the occurrences of tall trees within the region.

Raptors and other birds are protected during nesting by state law and/or by the federal Migratory Bird Treaty Act. The loss of trees on site is considered minimal given the extensive stands of grassland, CSS, and woodland that occur just east of the BSA, in Planning Area 1 of RMV. The destruction of active nests for most avian species is legally prohibited. Declines of southwestern populations of common raptors may be correlated to continued declines in scrub, grassland, riparian, and woodland communities.

Noise levels in the BSA would not increase substantially over existing traffic levels. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting activities for wildlife. These impacts are considered short-term and are not anticipated to impact any sensitive species. Nesting birds may be impacted by these temporary impacts in the level of construction noise if present in the vicinity of the proposed project and may be temporarily displaced due to these disturbances. With construction of soundwalls, noise levels (post-construction) will remain the same as those pre-construction and are not considered substantial as a result of construction (Caltrans Route 74 Noise Analysis Report, 2006). Any noise impacts to nesting birds will occur only during construction with no permanent impacts to wildlife anticipated.

Lighting could result in an indirect effect on the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to the BSA. However, due to the urban nature of the BSA, the effect of lighting is anticipated to be minimal. As a result, lighting should be directed away from natural areas and/or shield natural areas under the direction of the qualified biologist.

4.3.1.4. COMPENSATORY MITIGATION

The County is responsible for mitigation and monitoring commitments for any impacts to biological resources associated with the proposed project. At the time the County prepares the project plans, the County will determine appropriate project mitigation, in coordination with the resource agencies. Trees will be replanted in accordance with the City of San Juan Capistrano's Tree Removal Guidelines.

Biological resources shall be protected during construction. To ensure this protection, a Biological Resources Construction Plan (BRCP) that provides for the protection of the resource and establishes the monitoring requirements, will be completed.

4.3.1.5. CUMULATIVE EFFECTS

There are no threatened and/or endangered species within the BSA. There are no cumulative losses to sensitive animals species anticipated from the proposed project. Raptors are common throughout the region in the BSA and within the San Juan Creek Watershed and are considered non-sensitive.

4.4. Cumulative Effects

The Council on Environmental Quality (CEQ) under 40 CFR 1508.7 defines a cumulative impact as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts to resources may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. Cumulative impacts can result from individually minor but collectively substantial actions taking place over a period of time.

A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Section 15130 of the CEQA Guidelines requires that cumulative impacts be discussed when:

“...the project’s incremental effect is cumulatively considerable, as defined in Section 15065. Where a lead agency is examining a project with an incremental effect that is no “cumulatively considerable,” a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable...”

Cumulative biological effects are the collective result of any number of related or unrelated projects ongoing or proposed within a geographical area that, together, have a greater effect on biological resources than any one project considered individually. The cumulative effects study area includes the San Juan Creek watershed. From a

biological perspective, this geographic area is considered appropriate because: (1) effects to water quality downstream may be compounded, (2) the presence of riparian habitat, and (3) the presence of CDFG and ACOE jurisdictional waters. The project may result in contributions to regional (or cumulative) effects, which include: impacts to hydrologic function, water quality, erosion/sedimentation potential and groundwater resources.

The closest project to the BSA includes County improvements to SR-74 immediately east of the BSA, in PA 1 of RMV. The BSA occurs within the SAMP, NCCP/MsAA/HCP study areas for Southern Orange County, and as such, is considered of regional importance in planning efforts. Detailed Regulatory Requirements are listed in Section 2.1 of this NES. These regional efforts will help to ensure that any regional losses for sensitive plants and/or animals are not substantial. Other project in the region of the BSA include:

- *The extension of the 241 south tollroad, South Orange County Transportation Infrastructure Improvement Project (SOCTIIP):* The tollroad alignment will include a crossing of Ortega Highway and San Juan Creek within unincorporated Orange County (P&D, 2003). The tollroad extension is from Oso Parkway in Rancho Santa Margarita to the San Diego County line. The SOCTIIP EIS/Supplemental EIR was distributed for public comment in May 2004. SOCTIIP would have the potential of causing water quality impacts associated with pollutants in runoff from the roadway. However, current regulations including state and federal water quality regulations, require that the water be treated prior to release into downstream waters; therefore, short-term impacts to water quality may occur.
- *The Rancho Mission Viejo Plan (RMV):* The RMV property is located west of the project limits, at the eastern boundary of the City of San Juan Capistrano, approximately 10 miles from the western limit of the BSA. The RMV Planning Area includes approximately 22,815 acres.
- *Natural Community Conservation Planning (NCCP) program:* The purpose of the program is to provide regional or areawide protection of natural wildlife diversity while allowing compatible and appropriate development and growth pursuant to the preservation of listed species under the Federal Endangered Species Act and the California Endangered Species Act, such as to ensure the long-term survival of the coastal California gnatcatcher and other special status

coastal sage-scrub dependent plant and wildlife species in accordance with state-sanctioned NCCP program guidelines (P&D, 2003).

The BSA occurs within the SAMP and NCCP/MSAA/HCP study areas for southern Orange County. These regional efforts will help to ensure that any regional losses of sensitive plant and/or animal species are not substantial. There are no threatened and/or endangered species within the BSA. There are no cumulative losses to sensitive species anticipated from the proposed project. Raptors are common throughout southern California and within the San Juan Creek Watershed and RMV.

The proposed project could result in a minimal contribution to the regional (or cumulative) effect of impacts to wetland areas. The impacts to low-quality habitat of atypical wetlands would occur during construction. Application of the BMPs in the SWPPP would minimize potential effects on wetlands/atypical wetlands in the region. Existing policies for no net loss exist for any unavoidable effects to wetlands exist through regulatory processes and the SAMP. Considering these regulatory requirements, implementation of the cumulative projects will not result in cumulative losses of wetlands.

The proposed project could result in a contribution to the regional (or cumulative) effect of the impacts to the hydrologic function, water quality, and erosion/sediment potential downstream of the BSA in San Juan Creek. The impacts to water quality would occur primarily during construction. Indirect effects can affect low-quality wetlands/atypical and riparian habitat through changes in velocity, inundation, or water quality. With application of the BMPs mentioned in the SWPPP, the project would provide a minimal contribution to the cumulative effect on the water quality and hydraulic function of the San Juan Creek Watershed.

The proposed project would not contribute substantially to cumulative impacts on sensitive biological resources. Wildlife and natural resources are widely distributed in RMV and southern California. The cumulative effects on biological resources would be minimized by using the avoidance and minimization measures listed in this NES. Since SR-74 is an existing roadway and no median barriers are proposed, the project would not contribute to the regional (or cumulative) effect of habitat fragmentation. Due to the proximity of sensitive habitat and species within RMV, any impacts from project construction would not contribute substantially to the cumulative loss of species.

The proposed project would result in the removal of species that are non-native to the area, as roadway widening occurs. The introduction of invasive plant species may degrade sensitive habitat. With implementation of the avoidance, minimization, and mitigation measures for invasive species, the proposed project would have a minimal contribution to the regional risk of the introduction and spread of invasive plant material. No invasive species will be planted in the BSA, in accordance with Executive Order 13112.

Chapter 5. Results: Permits and Technical Studies for Special Laws or Conditions

5.1. Regulatory Requirements

Resource Agency Permits

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires that an applicant for a Federal license or permit allows activities resulting in a discharge to Waters of the US, obtain a State certificate that the discharge complies with other provisions of the CWA. Section 404 of the CWA regulates discharge of dredged or fill material into Waters of the US, including wetlands.

Under Sections 1600-1603 of the Fish and Game Code, a lead agency must notify the CDFG prior to any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake through a Streambed Alteration Agreement.

The proposed project (City) will require permits from the CDFG, RWQCB, and ACOE based upon the project scope. The SAMP for San Juan Creek Watershed will be the permitting authority under the ACOE and the NCCP/HCP/MSAA will be the permitting authority under the CDFG. A Water Quality Certification will be required for the proposed project.

A Biological Assessment is not anticipated for this project due to the absence of sensitive species within the BSA. A Biological Assessment is not necessary for the proposed "major construction activity" as a listed species or designated critical habitat will not be affected.

Regulatory Setting

Federal Endangered Species Act

Endangered and threatened wildlife species, as well as designated critical habitat, are protected from unauthorized "take" pursuant to Section 9 of the Endangered Species

Act. “Take”, as defined by the Endangered Species Act, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or attempt to engage in any such conduct. The term “harm” has been broadly interpreted to include destruction of occupied habitat, such as may occur in the course of clearing and grading land for development.

Endangered and threatened plant species are protected from harm under the Endangered Species Act (CNPS 2001) as follows:

- The removal and reduction into possession of endangered plants from lands under federal jurisdiction.
- The removal, cutting, digging, damage, or destruction of endangered plants on any other area in knowing violation of state law or regulation.

The USFWS may authorize take only when take is incidental to, but not the purpose of, an otherwise lawful activity. The three means of authorizing such takes are as follows:

- 10a Permit: Pursuant to Section 10(a) of the Endangered Species Act, if a Habitat Conservation Plan (HCP) has been prepared pursuant to the regulations at 50 CFR 17.22 (b)(2) and 50 CFR 17.32 (b)(2) and is approved by USFWS. This process requires documentation per the National Environmental Policy Act (NEPA), as well as public noticing of the HCP by the USFWS.
- Formal Section 7 Consultation between the USFWS and a federal project sponsor or permitting agency. Formal Section 7 consultation occurs when a project “may affect” a listed species or designated critical habitat. Incidental take can be authorized via a statement in the Biological Opinion that results from formal Section 7 consultation.
- Section 4(d) Special Rules: for threatened species only.

California Endangered Species Act

Under the California Endangered Species Act (CESA), no person shall “import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts.” Through

permits or memorandums of understanding, the CDFG may authorize the import, export, take or possession of any endangered species, threatened species, or candidate species for scientific, educational or management purposes, if all of the following conditions are met:

- The take is incidental to an otherwise lawful activity.
- The impacts of the authorized take shall be minimized and fully mitigated. The measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorizing taking of this species. Where various measures are available to meet this obligation, the measures required shall maintain the applicant's objectives to the greatest extent possible. All required measures shall be capable of successful implementation.
- The permit is consistent with any regulations adopted pursuant to Sections 2112 and 2114 of the Fish and Game Code which refer to specifics of strategies for recovery of endangered or threatened species.
- The applicant shall ensure adequate funding to implement the measures required by paragraph (2) and for monitoring compliance with, and effectiveness of, those measures.

The CDFG may determine, based on the best scientific evidence and other information that is reasonably available, that the permit may not be issued if issuance of the permit would jeopardize the continued existence of the species.

5.2. Federal Endangered Species Act Consultation Summary

The Department staff coordinated with USFWS and NMFS, for the proposed project and potential impacts to sensitive species. This included discussions with the resource agencies involving the potential for threatened and endangered species, project drainage features, loss of habitat, and concerns for fish passage for the widening of the Lower San Juan Creek Bridge. The Department conducted sensitive species surveys starting in 2001, of the study area. The Department continued this resource agency coordination from 2001 – May 2006, of the study area. Starting June 2006, Department surveys of the project area were conducted.

Department staff notified the USFWS of the proposed project. A Species List for the State Route 74 Widening Project in the City of San Juan Capistrano, Orange County, California, was received from the USFWS on August 7, 2006. Due to the urbanized nature of the project area, federally and/or state threatened or endangered species are not anticipated within the BSA. As a result, a Biological Assessment was not prepared for the proposed project. Project drainage features do not contain the potential to support Essential Fish Habitat; as such, the NMFS was not consulted for the proposed project. In addition, the CDFG Natural Diversity Database was referenced for the San Juan Capistrano quadrangle. A summary of correspondence is included in Appendix F to this NES.

5.3. Federal Fisheries and Essential Fish Habitat Consultation Summary

The project area contains v-ditch/drainage areas and culvert inlets and outlets that are both soft-bottom and concrete lined tributaries to San Juan Creek. The largest project v-ditch (DS 8) is concrete lined. Project drainage features do not contain the potential to support essential fish habitat due to the topography and lack of suitable hydrology. Southern steelhead is listed as threatened by the National Marine Fisheries Service (NOAA Fisheries). The local steelhead is the southern steelhead, which is a subset of *Oncorhynchus mykiss irideus*. Historically, steelhead are known to occur within San Juan Creek. This species was not observed within any of the project drainages and the potential doesn't exist for the species to occur within the BSA drainages. Within San Juan Creek, there are no downstream barriers to fish migration, downstream of the BSA. The CDFG has performed some fieldwork focused on the presence of native fish in the San Juan Creek Watershed in recent years. No southern steelhead were found during these surveys (USACOE, 2006). A site meeting for the study area was conducted between Department Biologists and CDFG Staff) on May 10, 2004, to discuss the potential for southern steelhead. No southern steelhead individuals were found during surveys of the project area. The proposed project does not contain essential fish habitat or provide potential to support fish. A summary of correspondence is included in the appendices to this NES.

5.4. California Endangered Species Act Consultation Summary

A meeting occurred with Naeem Siddiqui (CDFG) on September 21, 2006. The project area was visited, the potential for sensitive species to occur was discussed, and the jurisdictional drainages within the BSA, were verified. As a result of the field visit, a total of three culverts (DS 7,8, and 10) were determined to be jurisdictional areas, according to ACOE and CDFG guidelines.

The CDFG Natural Diversity Database was referenced for the San Juan Capistrano quadrangle. A total of 8 oak trees (*Q. agrifolia*) will be impacted by the proposed project through work within the drip line of the oak trees. CDFG has measures in place for the protection of oak trees; however, the oak trees within the BSA do not occur within CDFG jurisdiction. Mitigation for these impacts will occur in areas coordinated with the City of San Juan Capistrano, according to their tree replacement guidelines. 15-gallon container oak trees will likely be used at a ratio of at least 5:1.

The Fish and Game Code 2081 allows an applicant who has obtained a “non-jeopardy” Federal Biological Opinion pursuant to Section 7, or who has received a Federal 10(a) permit, to submit the Federal opinion or permit to CDFG for a determination as to where the Federal document is “consistent” with CESA. If after 30 days CDFG determined that the Federal incidental take permit is consistent with State law, no further permit or consultation is required under CESA for the project. If CDFG determined that the Federal opinion or permit is not consistent with CESA, the applicant must apply for a State permit under Section 2081(b). The proposed project would not result in anticipated impacts to a State listed species; therefore, an “incidental take” permit pursuant to Section 2081 of the California Fish and Game Code is not anticipated, based upon the lack of suitable habitat within the BSA. A summary of correspondence is included in the appendices to this NES.

5.5. Wetlands and Other Waters Coordination Summary

As a result of the field visit on September 21, 2006, a total of 3 jurisdictional drainages are present, in the BSA. These areas are considered “Atypical wetland”, man induced wetlands per the 1987 Corps Wetland Delineation Manual, p.83, Section F, Atypical Situation, and likely resulted with the roadway construction and urban runoff that discharges into these culverts. In addition, it appears that the vegetation at DS 7 has not been removed by Caltrans Maintenance, as a result, an “Atypical

Wetland” has been created. In addition, homeowner yard improvements on the north side of SR-74 have resulted in a change in hydrology and topography of the BSA.

The Corps jurisdiction in nontidal waters is measured to the ordinary high water mark, as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris or other appropriate means that consider the characteristics of the surrounding areas (Cylinder et. al, 1995).

The Department Staff has worked in coordination with the ACOE and CDFG, specifically on issues involving project drainage features. A field visit was conducted between Department staff and CDFG on September 21, 2006, and Department along with ACOE and CDFG staff on October 5, 2006, of the project area. The Department and resource agency staff also worked to quantify the number of oak trees that would be impacted by project construction. The Department, along with resource agency staff, determined areas subject to resource agency jurisdiction, for the BSA.

Jurisdictional Waters of the United States

The U.S. Army Corps of Engineers regulates discharges of dredged or fill material into “Waters of the United States”. These waters include wetlands and nonwetland bodies of water that meet specific criteria. Corps regulatory jurisdiction pursuant to Section 404 of the Clean Water Act is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the Corps of regulations.

The discharge of fill material into Waters of the United States requires a Section 404 authorization issued by the ACOE. This authorization typically requires an application or notification that addresses specific information requirements. These typically include a project description, a delineation of the affected waters, and a mitigation proposal. Certain discharges can be authorized under the existing nationwide permits, such as NWP (14), which authorizes certain linear transportation projects, provided all of the specific and general NWP conditions are met. The maximum acreage of fill under this NWP is 0.5 acre. If a project is not eligible for authorization under an existing nationwide or general permit, an individual permit (IP) is required. The SAMP for San Juan Creek applies to the proposed project. The

SAMP approach allows the USACE to take into account indirect and cumulative effects on aquatic resources. In addition to the SAMP, coordinated public planning includes (1) an NCCP/MSAA/HCP for the Southern Subregion covering 132,000 acres and (2) a General Plan Amendment and Zone Change for the 22,815-acre RMV Planning Area. With the SAMP approach, potential impacts are analyzed in order to identify priority areas for preservation, identify potential restoration areas, and determine the least environmentally damaging locations for proposed projects. According to the SAMP (ACOE, 2005), the Clean Water Act requires that an applicant for a Section 404 permit first obtain a certification from the appropriate state agency stating the discharge of dredged or fill material into Waters of the US is consistent with the state's water quality standards and criteria. The Rancho Mission Viejo, as a SAMP Participant, would be required to adhere to proposed Long-Term Individual Permits/Letters of Permission (LOP) procedures as coordinated with the Southern Subregion NCCP/MSAA/HCP. The County of Orange, participating landowners, and the state and federal agencies with primary and planning and regulatory responsibility within the Southern Subregion. The County of Orange will obtain separate resource agency permits for the proposed project and is responsible for mitigation.

In summary, the Corps proposes to use Letters of Permission (LOP) outside of the RMV Planning Area to authorize eligible activities for those applicants who performed effective pre-application coordination with the Corps, complied with Section 401 (b)(1) Guidelines, and included effective compensatory mitigation for unavoidable impacts. Implementation of the LOP procedures in the San Juan Creek watershed would allow the Corps to undertake the appropriate level of permit review in consideration of the quality of the aquatic resource proposed to be affected (Corps, November 9, 2006 SAMP conditions as listed in the November 9, 2006 Public Notice for San Juan and San Mateo Watersheds, will be applicable for any impacts to Waters of the US within the City portion (proposed project).

The SAMP for San Juan Creek and Western San Mateo Creek Watershed Special Area Management Plan (SAMP) will cover work within the project drainages according to Jae Chung of ACOE (USACOE, 2006). A total of 0.134 acre of jurisdictional "Other Waters" will be impacted by the proposed project (of this, 0.052 acres consist of riparian vegetation).

California Department of Fish and Game

The CDFG, through Section 1600 of the California Fish and Game Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be affected adversely. Streams (and rivers) are defined by the presence of a channel, bed, and bank, and at least an intermittent flow of water. CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream or lake as defined by CDFG. The project will require a Streambed Alteration Agreement from CDFG according to the Fish and Game Code, under the MSAA (Master Streambed Alteration Agreement) for San Juan Creek.

Regional Water Quality Control Board

Jeremy Haas of the San Diego Regional Quality Control Board was contacted on March 15, 2006, regarding the proposed project.

5.6. Invasive Species

Non-native species are exotic species that have been introduced to an ecosystem. Invasive species are non native species which, not only successfully establish in the ecosystem, but then overcome the native ecosystem. The consequences of the invasion, including alteration of habitat and disruption of natural ecosystem processes, are often catastrophic for native species.

Iceplant (*Carpobrotus edulis*) and pampas grass (*Cortaderia selloana*) are found in the project area, in scattered patches along the north side of SR-74, in addition to non-native grasses. Once removed by proposed project activities, these species will not be replanted. Measures to minimize the spread of invasive species from the SAMP, include removal of exotic species from the project site and ensured that the site remains free from these non-native species, for a period of five years from completion of the project.

Executive Order 1312, *Invasive Species*, states that Federal agencies are not to authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States. Per the Executive Order, *Invasive Species* (February 1999), a Federal agency must prevent the introduction of invasive species; detect and control populations of invasive species to the extent practicable and permitted by law. The National Invasive Species Council, established per the Executive Order, includes the Secretary of the Department of

Transportation. The Council is to provide guidance on invasive species for Federal agencies to use in implementing the National Environmental Policy Act (NEPA). The FHWA issued, to the States, implementing guidance on invasive species for the Executive Order 13112 in September 1999.

Invasive species may be introduced or spread in the BSA during soil disturbance activities, be present on construction equipment brought on-site or taken offsite, and inadvertently included in seed mixes or in the soil of container stock. Invasive species may alter soil chemistry, making it difficult for native species to survive and reproduce. These invasives may outcompete natives, suppressing native recruitment, degrade or eliminate habitat for native animals, and provide food and cover for non-native animals. Any effects from invasive species are considered temporary and will last during construction. With implementation of the Exotic Species Management Plan, the introduction of exotic species in the BSA will be greatly minimized. The proposed project would have a minimal contribution to the regional risk of the introduction and spread of invasive species.

5.7. Other

Fisheries

The project area is composed primarily of low-density residential areas that are divided by the existing highway. The project area does not support designated wildlife crossings or essential fish habitat. Just east of the BSA, San Juan Creek serves as a wildlife crossing and may provide essential fish habitat. The BSA culverts/drainages lack suitable hydrology to support fish, with these culverts providing marginal habitat for wildlife.

Migratory Bird Treaty Act

Coastal southern California is along the migratory path of numerous species of birds. Migration occurs mostly in a south to north direction during the spring as birds move from their winter homes in the more tropical latitudes toward their breeding grounds. In the fall, this direction is reversed as the birds return to their wintering grounds. The peak periods for migration through southern California are March through May and August through October. The elevations at which birds migrate vary and depend on such factors as the species, location, geographic features, season, time of day and

weather conditions. The Migratory Bird Treaty Act (16 U.S.C. 703-711) makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. The federal Migratory Bird Treaty Act regulations and portions of the California Fish and Game Code prohibit the “take” of all native bird species and their nests.

California’s Native Plant Protection Act (NPPA), which can be found in Sections 1900-1913 of the Fish and Game Code, was developed to preserve, protect, and enhance rare and endangered plants in the State of California. The act requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of NPPA prohibit the taking of listed plants from the wild and require notification of the CDFG at least 10 days in advance of any change in land use which would adversely impact listed plants. This allows CDFG to salvage listed plant species that would otherwise be destroyed (P&D, 2003).

Executive Order 11990, Protection of Wetlands (May 24, 1977)

This order establishes a National policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. On Federally funded projects, impacts on wetlands must be identified in the environmental document. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included. The proposed project ensures the no net loss policy for wetlands through County mitigation for impacts.

Wildlife Corridors

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation by urbanization tends to create isolated islands of wildlife habitat (P&D, 2003). There are habitat linkages in areas surrounding the City of San Juan Capistrano including Casper’s Wilderness Park, O’Neill Regional Park, and Thomas Riley Wilderness Park. There are, however, no “designated” wildlife corridors in the BSA.

Features of the proposed project are not anticipated to effect the migration of wildlife, as Ortega Highway is an existing roadway. According to Caltrans Maintenance Roadkill Monitoring Reports from 1999-2006 for SR-74, a history of roadkill including coyote, dog, and cat occurs east of the BSA. Very little roadkill has

occurred in the BSA, during these years, according to the reports. There is no critical habitat within the BSA.

Wildlife depend on San Juan Creek riparian/wetland habitat as a migration route (P&D, 2003; Caltrans, 2004). The proposed project allows small wildlife to cross under SR-74 through drainages, if necessary. The proposed project does not further prohibit wildlife from crossing SR-74 as it is already a 2-lane roadway within the BSA.

Habitat fragmentation occurs when a proposed action results in a single, unified habitat area being divided into two or more parts, such that the division isolates the two new areas from each other. The result of the fragmentation is that the amount of habitat available to local wildlife populations is reduced. A reduction in available habitat is followed by a reduction in wildlife populations because the remaining areas are too small to support pre-fragmentation population levels. If the fragmentation is too great, wildlife populations will not be able to persist and some or all of the species in a fragmented habitat area will disappear. Wildlife movement benefits plant species by allowing for dispersal of pollinators along the linkage, thereby increasing genetic exchange among different populations (Noss, 2001).

San Juan Creek provides cover, water, and food resources as well as enables localized or daily movement of animals. San Juan Creek is a central connector within the RMV planning area, just east of the BSA. San Juan Creek will continue to function as a wildlife corridor upon completion of the project. San Juan Creek functions to serve wildlife movement in the RMV (County, 2004) and is the closest designated wildlife corridor to the BSA. The BSA contains tributary drainages to San Juan Creek; however, due to their size and limited habitat, they do not serve as wildlife corridors.

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Appendix A Project Maps

Include Location Map, BSA, and Impact Map

SHEET NO	DESCRIPTION
1	TITLE SHEET AND LOCATION MAP
2-6	TYPICAL CROSS SECTIONS
7	KEY MAP
8-16	LAYOUTS
17-XX	PROFILES AND SUPERELEVATION DIAGRAMS
XX-XX	CONSTRUCTION DETAILS
XX-XX	CONTOUR GRADING
XX	DRAINAGE PLANS
XX	UTILITY PLANS
XX	STAGE CONSTRUCTION/TRAFFIC HANDLING
XX	PAVEMENT DELINEATION PLANS
XX	SUMMARY OF QUANTITIES
XX	SIGN PLANS
XX	RETAINING WALL PLANS, DETAILS, QUANTITIES
XX	SOUNDWALL PLANS, DETAILS, QUANTITIES
XX	HIGHWAY PLANTING PLANS
XX	ELECTRICAL PLANS
XX	STRUCTURE PLANS

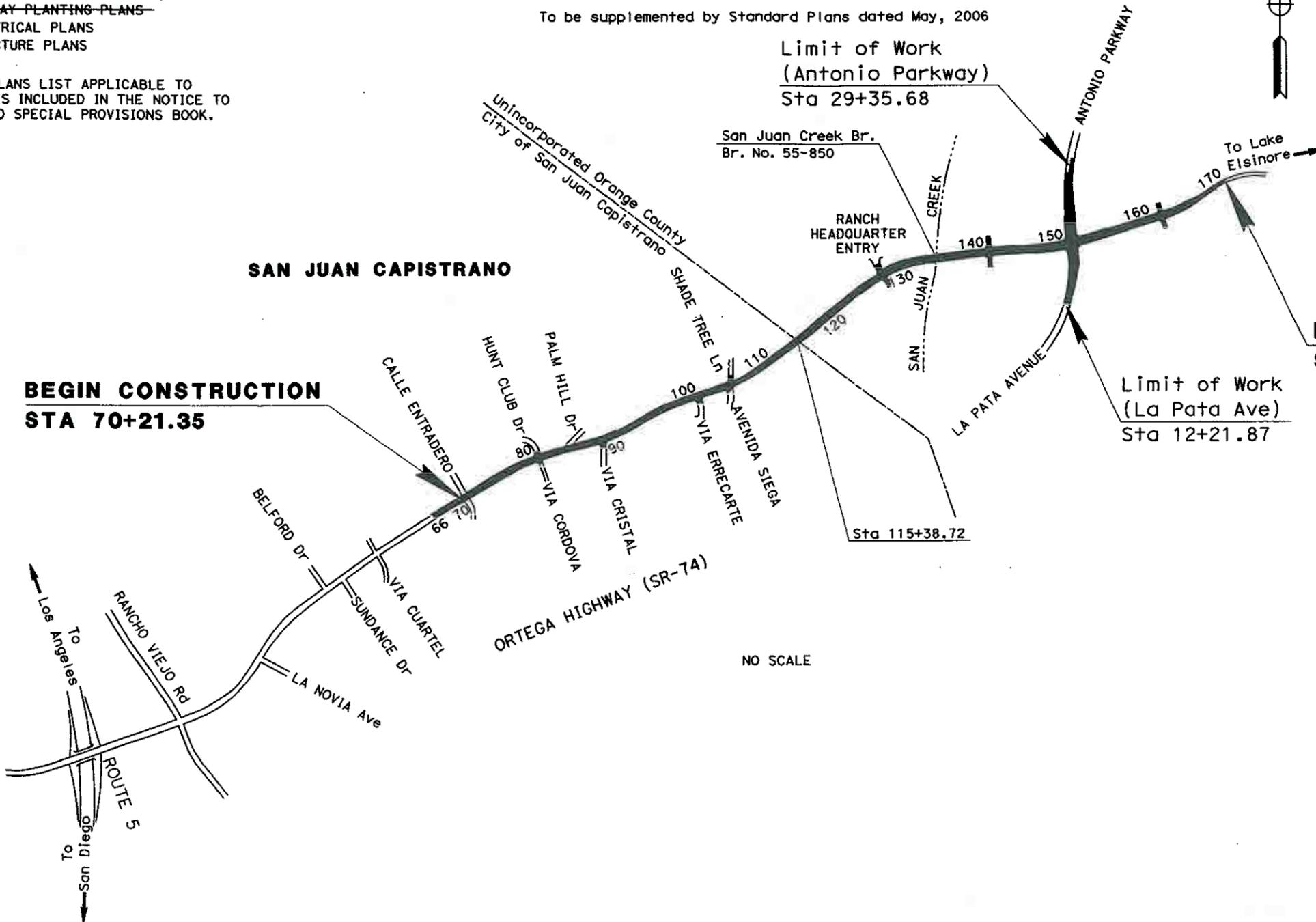
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO CONTRACTORS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN ORANGE COUNTY
NEAR SAN JUAN CAPISTRANO ON ORTEGA HIGHWAY (SR-74)
FROM 0.1 MILES WEST OF CALLE ENTRADERO
TO 0.4 MILES EAST OF LA PATA AVENUE/ANTONIO PARKWAY

To be supplemented by Standard Plans dated May, 2006



NO SCALE

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LOCATION MAP



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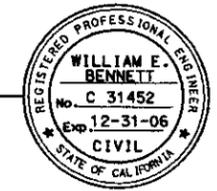
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HDR Engineering, Inc.
1936 E. Deere Ave., Suite 220
Santa Ana, Ca 92705

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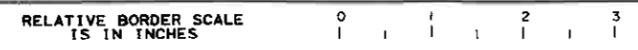
Contractor shall possess the class (or classes) of license specified in the "Notice to Contractors".



Project Engineer Date
Registered Civil Engineer

Plans Approval Date

Contract No. **12-086904**



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REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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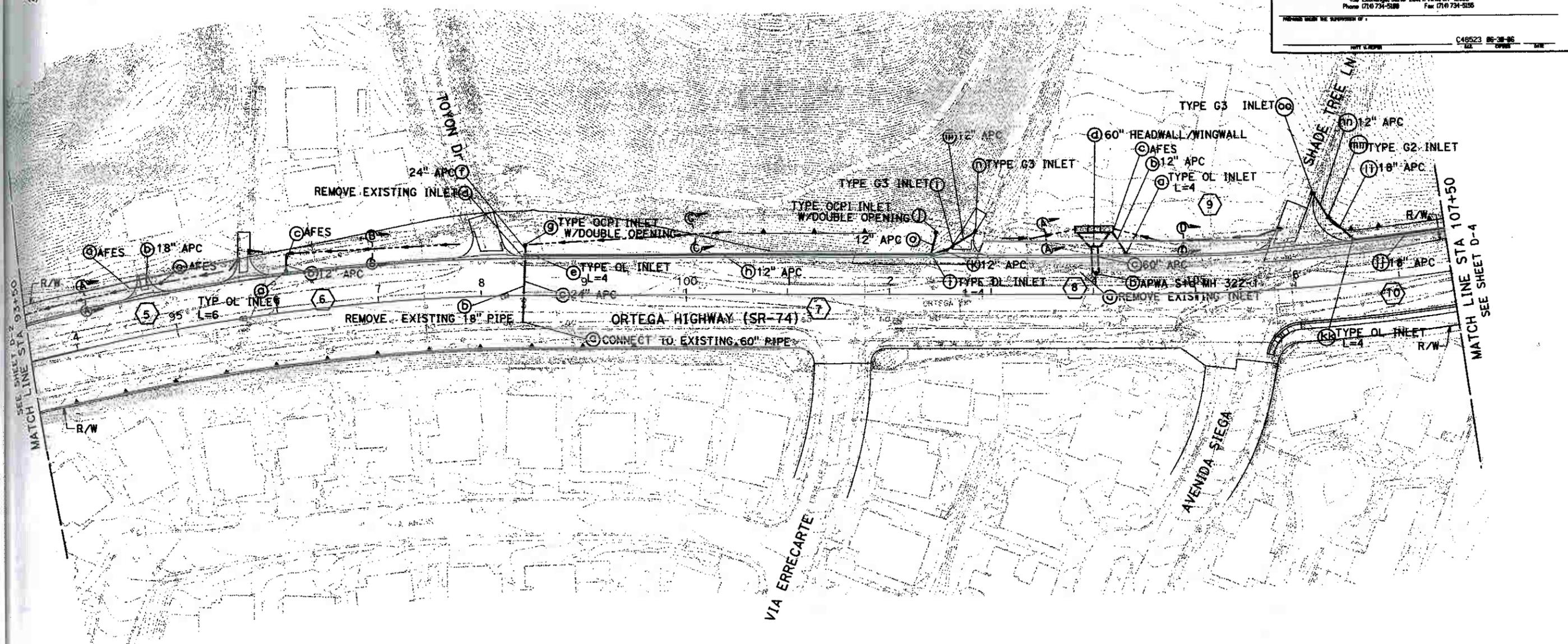
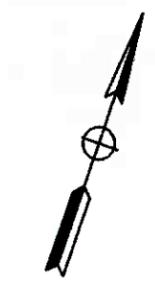
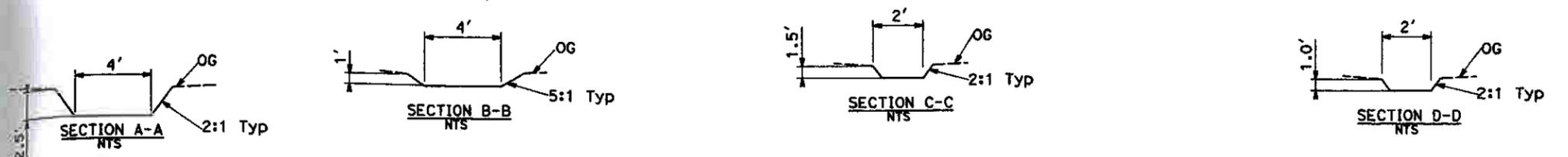
HUITT-ZOLLARS

438 Exchange Street, Suite 200, Irvine, CA 92602
Phone (714) 734-5188 Fax (714) 734-5155

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Expiration 6-30-06
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STATE OF CALIFORNIA

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SEE SHEET D-2

MATCH LINE STA 107+50
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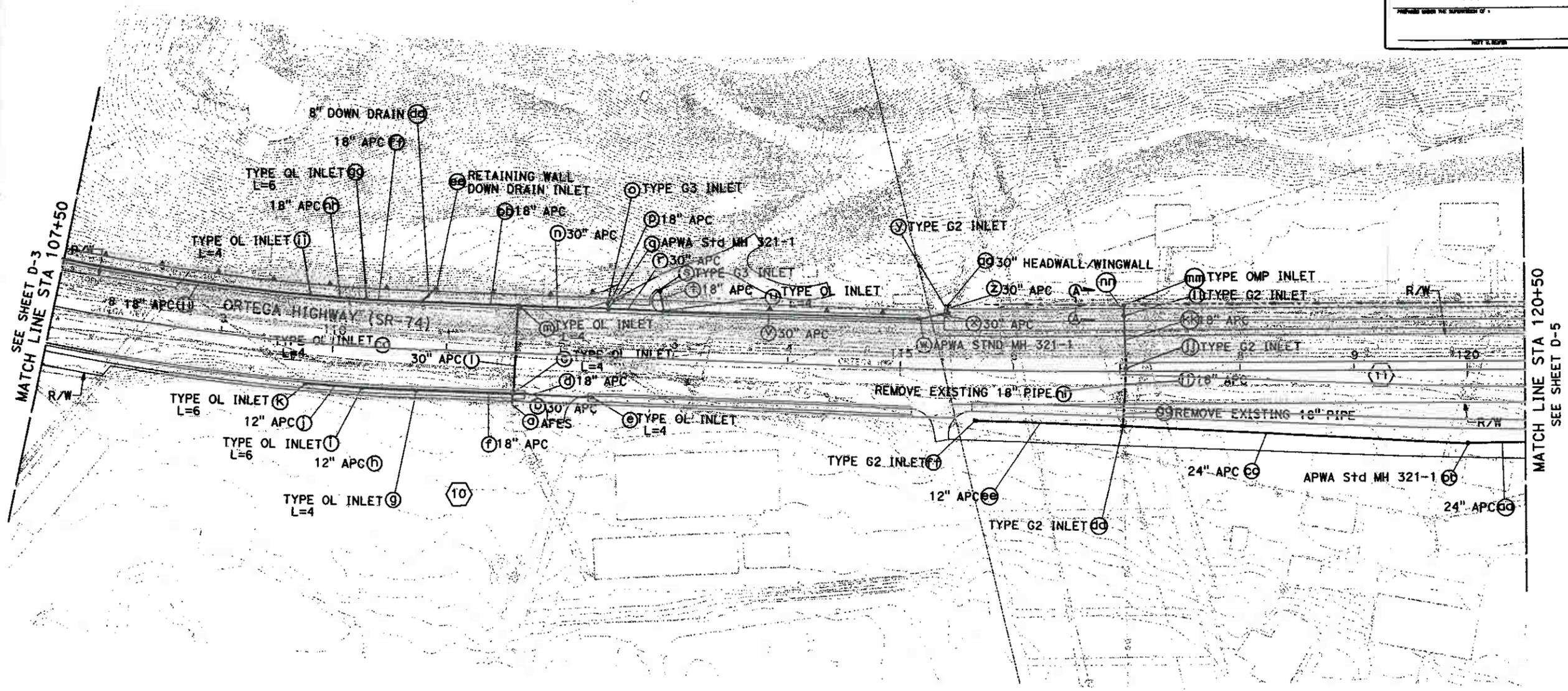
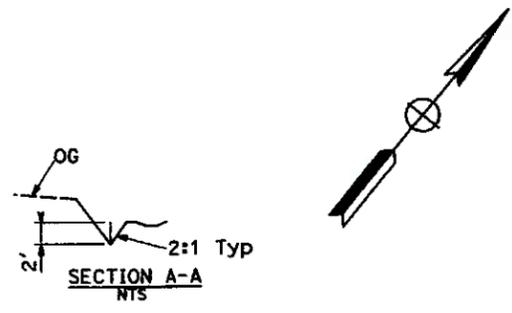
DRAINAGE PLAN

SCALE: 1" = 50'

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<small>438 Exchange Street, Irvine, CA 92602 Phone: (714) 734-9100 Fax: (714) 734-9105</small>			
<small>PROJECT UNDER THE SUPERVISION OF:</small>			
			<small>C48523 06-30-06</small> <small>DATE</small>



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DRAINAGE PLAN

SCALE: 1" = 50'

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Appendix B Species List

Received Aug 14, 2006



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

In Reply Refer To:
FWS-OR-1688.7

AUG 07 2006

Arianne Glagola
California Department of Transportation
District 12
3337 Michelson Drive, Suite CN380
Irvine, California 92612-0699

Subj: Species List for the State Route 74 Widening Project in the City of San Juan Capistrano, Orange County, California

Dear Ms. Glagola:

This letter is in response to your written request, received on August 4, 2006, for information on federally endangered, threatened, and proposed species that occur in the vicinity of the State Route 74 widening project in the City of San Juan Capistrano, Orange County, California. To assist you in evaluating the potential occurrence of federally listed endangered, threatened, proposed, and candidate species that may occur in the vicinity of the area identified, we are providing the enclosed list.

Section 7 of the Endangered Species Act of 1973 (Act), as amended, requires Federal agencies to consult with us, the U.S. Fish and Wildlife Service, should it be determined that their actions may affect federally listed threatened or endangered species. Section 9 of the Act prohibits the "take" (e.g., harm, harassment, pursuit, injury, kill) of federally listed wildlife. "Harm" is further defined to include habitat modification or degradation where it kills or injures wildlife by impairing essential behavioral patterns including breeding, feeding, or sheltering. Take incidental to otherwise lawful activities can be authorized under sections 7 (Federal consultations) and 10 (habitat conservation plans) of the Act.

If a proposed project is authorized, funded, or carried out by a Federal agency and may affect a listed species, then the Federal agency must consult with us on behalf of the applicant, pursuant to section 7 of the Act. In other words, any activity on private land that requires Federal involvement (such as the issuance of a section 404 permit under the Clean Water Act by the U.S. Army Corps of Engineers) and may affect listed species must be reviewed by us to ensure that the continued existence of the species would not be jeopardized. During the section 7 process, measures to avoid and minimize project effects to listed species and their habitat will be identified and incorporated into a biological opinion that includes an incidental take statement that authorizes incidental take by the Federal agency and applicant.

**TAKE PRIDE[®]
IN AMERICA** 

If a proposed project does not involve a Federal agency, but is likely to result in the take of a listed animal species, then the landowner or project proponent should apply for an incidental take permit, pursuant to section 10 of the Act. When an application is made for an incidental take permit, measures to avoid, minimize, or mitigate for effects to listed species and their habitat will be identified and incorporated into a habitat conservation plan. If the habitat conservation plan and the application for the permit meet the issuance criteria, a permit authorizing incidental take is issued.

We do not have site-specific information for this area. Therefore, we recommend that project proponents seek assistance from a biologist familiar with the habitat conditions and associated species in and around their project site to assess the actual potential for direct, indirect and cumulative impacts likely to result from the proposed activity.

In addition to the species on the enclosed list, we are also concerned for the following habitat community types that could potentially occur in the area and are becoming more rare. These include riparian, oak woodlands, coastal sage scrub, maritime chaparral, native grasslands, vernal pool, and wetland habitat.

Please contact the California Department of Fish and Game for State-listed and other sensitive species that may occur in the area of the project. State-listed species are protected under the provisions of the California Endangered Species Act. Rare plant species that may occur in the project area are included in the California Native Plant Society's (CNPS) inventory of rare and endangered vascular plants in California. State-listed and CNPS species require full consideration under the California Environmental Quality Act.

Should you have any questions regarding the species list provided, or your responsibilities under the Act, please contact Fish and Wildlife Biologist Jonathan Snyder of my staff at (760) 431-9440 extension 307.

Sincerely,



for Karen A. Goebel
Assistant Field Supervisor

Enclosure

**Federally Endangered, Threatened, Proposed, and Candidate Species that May Occur in
the Vicinity of the State Route 74 Widening Project in the City of San Juan Capistrano,
Orange County, California**

August 7, 2006

Common Name	Scientific Name	Federal Status
<u>Amphibians</u>		
arroyo toad	<i>Bufo californicus</i>	endangered
<u>Birds</u>		
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	endangered
bald eagle	<i>Haliaeetus leucocephalus</i>	threatened
coastal California gnatcatcher	<i>Polioptila californica californica</i>	threatened, critical habitat
least Bell's vireo	<i>Vireo bellii pusillus</i>	endangered
<u>Crustaceans</u>		
San Diego fairy shrimp	<i>Branchinecta sandiegonensis</i>	endangered
Riverside fairy shrimp	<i>Streptocephalus woottoni</i>	endangered
<u>Fish</u>		
southern steelhead*	<i>Oncorhynchus mykiss</i>	endangered
<u>Plants</u>		
thread-leaved brodiaea	<i>Brodiaea filifolia</i>	threatened
Laguna Beach live-forever	<i>Dudleya stolonifera</i>	threatened
big-leaved crownbeard	<i>Verbesina dissita</i>	threatened

* Under jurisdiction of NOAA Fisheries; contact that agency for more information on southern steelhead.

Appendix C Wetland Delineation

[Include Delineation Sheets for DS, 7, 8, and 10 based upon surveys with CDFG, ACOE, and Huitt-Zollars].

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	LOWER 74 (City)	Date	10-5-06
Applicant / Owner	Caltrans	County	ORA
Investigator	A. Pielke	State	CA
Do Normal Circumstances exist on the site?	YES <input type="radio"/> NO <input checked="" type="radio"/>	Community ID	
Is the site significantly disturbed (Atypical Situation)?	<input checked="" type="radio"/> YES <input type="radio"/> NO	Transect ID	L-74 City
Is the area a potential Problem Area? (if needed, explain on reverse)	YES <input type="radio"/> NO <input checked="" type="radio"/>	Plot ID	Drainage System 7

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Typha domingensis		OBL			9
2 Carex sp.		FAC			10
3 Salix lasiolepis		FACW			11
4					12
5					13
6					14
7					15
8					16

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks
Atypical wetland likely formed with urban runoff + lack of maintenance clearing.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <ul style="list-style-type: none"> <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available		<p>WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input checked="" type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	
FIELD OBSERVATIONS			
Depth of Surface Water	Approx. 3-6	(in)	<p>Secondary Indicators (2 or more Required):</p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Depth to Free Water in Pit		(in)	
Depth to Saturated Soil		(in)	

SOILS

Map Unit Name (Series and Phase):	Drainage Class:
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Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO
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PROFILE DESCRIPTION					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.

HYDRIC SOIL INDICATORS:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks:
roadway fill soils

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(YES) NO	Is this Sampling Point Within a Wetland? (YES) NO <div style="text-align: center; font-size: 1.2em;"><i>Atypical</i></div>
Wetland Hydrology Present?	(YES) NO	
Hydric Soils Present?	YES (NO)	

Remarks

Determined atypical wetland by ACOE's S. Hall during field visit

** Improvements to residences have altered hydrology + topography of n-side of SR-74*

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site <i>Lower 74 (City)</i>	Date <i>10-5-06</i>
Applicant / Owner <i>Caltrans</i>	County <i>Orange</i>
Investigator <i>A. Preite</i>	State <i>CA</i>
Do Normal Circumstances exist on the site? YES <input type="radio"/> NO <input checked="" type="radio"/>	Community ID
Is the site significantly disturbed (Atypical Situation)? <input checked="" type="radio"/> YES <input type="radio"/> NO	Transect ID <i>L-74 City</i>
Is the area a potential Problem Area? (if needed, explain on reverse) YES <input type="radio"/> NO <input checked="" type="radio"/>	Plot ID <i>Drainage System 8</i>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
<i>1 Nerium oleander</i>		<i>UPL</i>	<i>9</i>		
<i>2 non-native grasses</i>		<i>UPL</i>	<i>10</i>		
<i>3</i>			<i>11</i>		
<i>4</i>			<i>12</i>		
<i>5</i>			<i>13</i>		
<i>6</i>			<i>14</i>		
<i>7</i>			<i>15</i>		
<i>8</i>			<i>16</i>		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-)

Remarks
concrete-lined v-ditch

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <ul style="list-style-type: none"> <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available		WETLAND HYDROLOGY INDICATORS	
FIELD OBSERVATIONS		Primary Indicators:	
Depth of Surface Water	<i>0</i> (in)	<input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	
Depth to Free Water in Pit	<i>0</i> (in)	Secondary Indicators (2 or more Required):	
Depth to Saturated Soil	<i>0</i> (in)	<input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)	

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	Lower 74 (City)	Date	10-5-06
Applicant / Owner	Caltrans	County	Orange
Investigator	A. Preite	State	CA
Do Normal Circumstances exist on the site?	YES <input type="radio"/> NO <input checked="" type="radio"/>	Community ID	
Is the site significantly disturbed (Atypical Situation)?	<input checked="" type="radio"/> YES <input type="radio"/> NO	Transect ID	L-74 City
Is the area a potential Problem Area? (if needed, explain on reverse)	YES <input type="radio"/> NO <input checked="" type="radio"/>	Plot ID	Drainage System 10

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 non-native grasses		UPL	9		
2			10		
3			11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-)

Remarks
Drainage occurs along roadway / shoulder,
11-5-06 of 1987, minimal bed, bank

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available		WETLAND HYDROLOGY INDICATORS Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)	
FIELD OBSERVATIONS			
Depth of Surface Water		Ø	(in)
Depth to Free Water in Pit		Ø	(in)
Depth to Saturated Soil		Ø	(in)

SOILS

Map Unit Name (Series and Phase):	Drainage Class:
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Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO
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PROFILE DESCRIPTION					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.

HYDRIC SOIL INDICATORS:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks:
Roadway Fill Soils

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES <input type="radio"/> NO <input checked="" type="radio"/>	Is this Sampling Point Within a Wetland? YES <input checked="" type="radio"/> NO <input type="radio"/> <i>Atypical</i>
Wetland Hydrology Present?	YES <input type="radio"/> NO <input checked="" type="radio"/>	
Hydric Soils Present?	YES <input type="radio"/> NO <input checked="" type="radio"/>	

Remarks
Determined atypical wetland by ACOE's S. Hall during field visit

** Improvements to residences have altered hydrology + topography of n-side of SE-74*

Appendix D Site Photos



Photo 1: View of DS 7 looking northwest



Photo 2: View of DS 8, concrete-lined channel



Photo 3: View looking east of DS 8



Photo 4: View looking west of "The Oaks" property, less than a dozen oak trees will be impacted here during construction, along the property fence



Photo 5: View looking northeast along Ortega Highway, within Biological Study Area



Photo 6: View looking east within Biological Study Area, note disturbed roadway shoulders (north side of road) and landscaped areas (south side of road).



Photo 7: View along Ortega Highway, in Biological Study Area, looking east, near eastern project limit. The area on the north side of the roadway (left side of picture) includes DS 10.



Photo 8: View of north side of Ortega Highway, including DS 7

Appendix E Survey Findings

<i>Scientific Name</i>	<i>Common Name</i>	<i>Notes</i>
Butterflies		
<i>Pieris rapae</i>	<i>Cabbage white</i>	<i>DS 7</i>
<i>Pailio rutulus rutulus</i>	<i>Western tiger swallowtail</i>	<i>DS 7</i>
Lizards		
<i>Sceloporus occidentalis</i>	<i>Western fence lizard</i>	<i>Caltrans right-of-way</i>
Birds		
<i>Agelaius phoeniceus</i>	<i>Red-winged blackbird</i>	<i>DS 7</i>
<i>Buteo lineatus</i>	<i>Red-shouldered hawk</i>	<i>Soaring above BSA, no nesting observed</i>
<i>Buteo jamaicensis</i>	<i>Red-tailed hawk</i>	<i>Soaring above BSA, no nesting observed</i>
<i>Calypte anna</i>	<i>Anna's hummingbird</i>	
<i>Carpodacus mexicanus</i>	<i>House finch</i>	<i>Along roadway shoulder</i>
<i>Sayornis nigricans</i>	<i>Black phoebe</i>	<i>DS 7</i>
<i>Corvus brachyrhynchos</i>	<i>American crow</i>	
<i>Corvus corax</i>	<i>Common raven</i>	
<i>Sturnus vulgaris</i>	<i>European starling</i>	<i>Roadway shoulder</i>
Plants		
<i>Agave sp.</i>	<i>Agave</i>	<i>North side of road</i>
<i>Alnus rhombifolia</i>	<i>White alder</i>	<i>Landscaped areas, primarily south side of SR-74</i>

<i>Avena sp.</i>	<i>Wild oat</i>	<i>North side roadway shoulders</i>
<i>Bromus diandrus</i>	<i>Rip gut grass</i>	<i>North side roadway shoulders</i>
<i>Bougainvillea sp.</i>	<i>bougainvillea</i>	<i>DS 8</i>
<i>Carex sp.</i>	<i>Sedge</i>	<i>DS 7</i>
<i>Carduus sp.</i>	<i>thistle</i>	<i>North side roadway shoulder</i>
<i>Carpobrotus edulis</i>	<i>iceplant</i>	<i>North side SR-74, approx. 20' x 20' patch, along roadway shoulder</i>
<i>Cortaderia selloana</i>	<i>Pampas grass</i>	<i>DS 7</i>
<i>Eucalyptus sp.</i>	<i>Eucalyptus</i>	<i>North side roadway</i>
<i>Heterotheca grandifolia</i>	<i>Telegraph weed</i>	<i>North side shoulders</i>
<i>Liquidambar styraciflua</i>	<i>Sweet gum</i>	<i>South side roadway</i>
<i>Pennisetum</i>	<i>Fountain grass</i>	<i>North side of SR-74</i>
<i>Platanus racemosa</i>	<i>California sycamore</i>	<i>Landscaped areas, primarily south side of SR-74</i>
<i>Quercus agrifolia</i>	<i>Coast live oak</i>	<i>Along property fenceline at "The Oaks" property, eastern project limit</i>
<i>Schinus molle</i>	<i>California pepper tree</i>	<i>North and south side of SR-74</i>
<i>Salix sp.</i>	<i>willow</i>	<i>DS 7</i>
<i>Typha domingensis</i>	<i>cattails</i>	<i>DS 7</i>
<i>Ulmus parvifolia</i>	<i>Elm</i>	<i>South side of SR-74, landscaped areas</i>

Biological surveys were conducted within the County portion along Ortega Highway, including the widening of the Lower San Juan Creek Bridge. These studies are available, upon request, through Chris Flynn, Environmental Planning Branch C, 3337 Michelson Drive, Suite 380, Irvine, CA 92612-8894 (949) 724-2243 Voice.

Appendix F Correspondence

Caltrans has participated in resource agency coordination during 2001–2006 (proposed widening from two lanes to four lanes with a 3.6-meter wide striped median from Calle Entradero to 0.43 km east of SR-74/Antonio & La Pata), for the study area. The following are a list of meetings, phone conference dates, and some of the key meeting notes/findings, for the study area. Detailed meeting notes are available upon request.

2001: Project Update with Department Staff and USFWS Staff; 2001 surveys for LBV, SWWF, 500 feet upstream and downstream of the bridge were negative; ARTO surveys were negative.

March 25, 2002: Species List obtained from USFWS for Proposed, Threatened, and Endangered Species for the Proposed Widening of State Route 74 from Via Cordova to La Pata Avenue, Orange County, California.

April 2002: Department Wetland Assessment (Lower San Juan Creek Bridge) conducted.

September 16, 2003: On-site restoration at Lower San Juan Creek Bridge to be documented to USFWS, on-site violations reported to resource agencies by Department.

November 6, 2003: Meeting on-site between Department staff and Resource Agencies with the following provided: survey updates and status of restoration and bridge. A BA was written in 1996 for Bridge widening indicating vireo and arroyo toad presence just upstream of bridge; on-site planting of *Baccharis glutinosa* and *Salix lasiolepis*, *Alnus rhombifolia*, *Platanus racemosa*, *Populus fremontii*, *Quercus agrifolia*.

February 4, 2004: Meeting on-site at Lower San Juan Creek Bridge between Department Staff along with USFWS (Jonathan Snyder), CDFG (Pam Beare), ACOE (Stephanie Hall); discussed site history, survey results, proposed scope of work, presence assumed for LBV and ARTO at Bridge, potential mitigation options discussed, recommendation by USFWS to have gap between the bridges to allow light to infiltrate; impacts of shading from bridge work are to be considered; CDFG, issues of fish passage are to be considered. At this time, the CDFG recommended as assessment of the habitat for steelhead use and indicated they were walking the San

Juan Creek as part of a steelhead/barrier assessment. The USFWS also recommended an assessment of the habitat east of the La Pata/Antonio and SR-74 intersection for the potential to support coastal California gnatcatcher.

February 11, 2004: CDFG personal communication with understanding that there are no downstream of San Juan Creek bridge to preclude fish passage to the Lower San Juan Creek Bridge

2004: Surveys of study area conducted by LSA Associates for LBV, SWWF, and AT surveys, wetland delineation and habitat mapping. The Department is to assume vireo presence, in study area, due to site access restrictions on adjacent property to determine indirect effects

March 1, 2004: Meeting with USFWS, with on-site re-vegetation, at Lower San Juan Creek Bridge, to be documented by Department and provided to resource agencies.

March 2, 2004: Wetland Assessment conducted by Department Staff at Lower San Juan Creek Bridge, noticed on-site violations by adjacent property owners.

March 3, 2004: CAGN assessment at SR-74/Antonio & La Pata: narrow, isolated cut slopes, unlikely CAGN presence at this site

March 4, 2004: Survey of study area by Department Biologists.

May 2004: Department staff proposes current number of piers as on existing bridge, construction windows to minimize impacts to sensitive species

May 2005: Department Environmental Staff noted oaks at 28650 Ortega Highway ("The Oaks") to be impacted by Ortega Widening

A survey by Department was conducted, of the study area, on October 15, 2005. A total of 8 oaks are anticipated to be impacted at "The Oaks" property, from soil disturbance activities; however, a number of the oaks are within container plants right along the private property line.

October 15, 2005: Study Area project team discussion of oaks to be impacted, site history, bridge footprint, work window restrictions, mitigation, survey findings. In addition, the Department recommended RMV contact NMFS to address issues of fish passage, and recommendation for County to mitigate for any impacts to Caltrans re-vegetation at Lower San Juan Creek Bridge totaling 0.65 acre.

November 7, 2005: County is NCCP participant and will be responsible for study area mitigation commitments.

November 15, 2005: Meeting between Department Staff and HDR, during which oak impacts discussed within study area; HDR directed to minimize bridge footprint, County to account for bridge widening impacts to Department revegetation site, Department recommended County provide same number of piers as pre-construction bridge condition. County mitigation will cover any impacts from the widening of the Lower San Juan Creek Bridge.

November 16, 2005: Department Staff at RMV: survey findings negative for threatened and/or endangered species, RMV proposed transportation improvements associated with the Ranch Plan. The SAMP, Ranch EIR, and NCCP documents are applicable for the widening of the City portion of SR-74. Department recommended RMV address issues of fish passage for widening of Lower San Juan Creek Bridge and directing bridge lighting away from natural areas surrounding the bridge. Bridge widening to occur to the north of the existing structure, with a gap assumed between the structures, rock slope protection, and trail system to be constructed. Mitigation proposed as part of NCCP for County portion of widening of Ortega Highway (anticipated impacts at Lower San Juan Creek Bridge). Department required County account for any impacts to Department revegetation site at Lower San Juan Creek Bridge.

December 2005: Department recommended to RMV/County to minimize footprint at the Bridge, follow DFG/NOAA guidelines for fish surveys and all BMPs/avoidance and minimization measures for steelhead and other native fish (December 2005 email from Department to NMFS).

January 6, 2006: Conference call between Department and RMV during which trail proposal discussed at Lower San Juan Creek Bridge

January 23, 2006: Project team discussion that an trails that involve regarding of the channel bottom will involve resource agency coordination.

On February 2, 2006, Stan Glowacki of NMFS was contacted regarding fisheries issues. Effects are to be minimized at the Lower San Juan Creek Bridge with a June – December work window. The County is completing the design for the improvements to Ortega Highway in the County limits. The County will avoid and minimize impacts with their proposed Bridge design, as reported to Department.

February 6, 2006: A biking/hiking trail system is planned in the study area. NMFS requests complete project description, project footprint, water diversion activities/work in channel bottom, and minimization of impacts to San Juan Creek.

February 9, 2006: Through the SAMP, the ACOE will issue a long-term 404 permit for the Ranch Plan; through the NCCP/MSAA/HCP, CDFG will issue a 2081 permit and a Master Streambed Alteration Agreement and FWS will issue a Section 10 incidental take permit. The RMV will gain regulatory coverage for 32 species and 10 vegetation communities and have been meeting with the resource agencies for the past few years. The SAMP will provide regulatory coverage for impacts to waters of the US, including wetlands. The Department, however, is not an NCCP Participatory agency and has requested concurrence from the resource agencies that the County mitigation will cover any impacts for the widening of Ortega Highway.

March 8, 2006: County is to provide the design and obtain permits for the widening of the Lower San Juan Creek bridge in the study area.

On March 15, 2006: Department Environmental Staff participated in a conference call with the resource agencies including Stan Glowacki (NOAA Fisheries), Jonathan D Snyder (USFWS), Stephanie Hall (USACE) and Jeremy Haas (SDRWQCB). NOAA Fisheries indicated the RMV must address fisheries issues, USACOE directed the Department to the applicability of the SAMP, LOP process, and USFWS was to follow up regarding any requirements for informal consultation.

May 9 and 10, 2006: Correspondence with County and HDR: County is to minimize impacts at the Lower San Juan Creek Bridge as covered by the SAMP and NCCP envelope, provide same number of piers as pre-construction conditions, with County responsible for any resource agency permits at the bridge and compliance with permits conditions. Ranch EIR Addendum contains impacts for widening at Lower San Juan Creek Bridge (covered under PA 1) and any impacts to Department revegetation area at the Lower San Juan Creek Bridge as “Open space or uses credits that RMV owns in Gobernadora Ecological Reserve Area.” Upland and jurisdictional impacts are mitigated within the overall settlement plan that establishes open space or uses credits that RMV owns in Gobernadora Ecological Reserve Area.

Environmental Coordination Meetings for the Study Area occurred on: November 15, 2005, January 3, 2006, January 23, 2006, February 6, 2006, February 22, 2006, April 3, 2006, May 1, 2006, May 8, 2006, May 22, 2006.