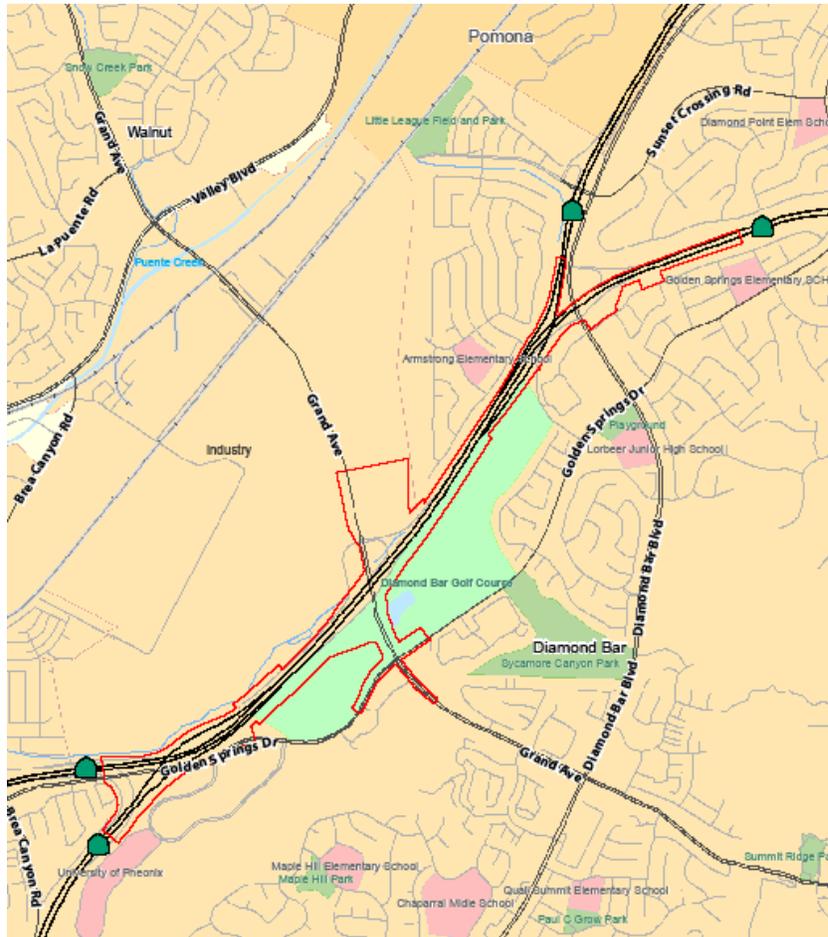


State Route 57/State Route 60 Confluence at Grand Avenue Project Grand Avenue Interchange and Confluence Improvements



Natural Environment Study

City of Industry and City of Diamond Bar

District 07-LA-60-PM R23.87/R24.48
EIR/EA 279100

July 2010



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STATE OF CALIFORNIA
Department of Transportation

CITY OF INDUSTRY
Urban-Industry Development Agency

CITY OF DIAMOND BAR
Public Works Division

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Summary

The City of Industry, in cooperation with the California Department of Transportation (Caltrans), is proposing freeway improvements to the State Route-57 (SR-57)/State Route-60 (SR-60) confluence at the Grand Avenue interchange in Los Angeles County. The primary purpose of the proposed project is to improve the operational deficiencies of the SR-57 and SR-60 freeways at the Grand Avenue interchange

The Biological Study Area (BSA) for the Proposed Project's limit of disturbance includes an approximately 2.6 mile segment along the SR-57/SR-60) confluence and an approximately 3,000 foot segment of Grand Avenue from the existing SR-60 westbound on-ramp to Golden Springs Drive. The BSA also includes an additional 50 ft buffer outside the existing roadway right-of-way.

Biological resources found within the BSA include a few scattered native riparian tree species located within and around the tributaries to Diamond Bar Creek, raptor foraging and jurisdictional waters/wetlands. Two concrete-lined channels present within the BSA will be relocated as part of the project. It is anticipated that resource agency permits will be required from the United States Army Corps of Engineers (ACOE), California Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Game (CDFG) under Sections 404 and 401 of the federal Clean Water Act (CWA) and Section 1600 of the State Fish and Game Code, respectively, for the channel relocations. Native birds protected under the Migratory Bird Treaty Act (MBTA) may also nest within and adjacent to the BSA. Mitigation measures proposed herein avoid and minimize potential effects to nesting birds.

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List of Abbreviated Terms

ACOE	Army Corps of Engineers
BSA	biological study area
Caltrans	California Department of Transportation
CAGN	coastal California gnatcatcher
CDFG	California Department of Fish and Game
CESA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
EA	Environmental Assessment
EIR	Environmental Impact Report
FC	Federal Candidate for listing as Threatened or Endangered
FE	Federal Endangered
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FP	Fully Protected
FPE	Federal Proposed Endangered
FPT	Federal Proposed Threatened
FSC	Federal Species of Concern
FT	Federal Threatened
ft	foot/feet
FWS	Fish and Wildlife Service
IS	Initial Study
km	kilometer(s)
KP	kilometer post
LBV	least Bell's vireo
m	meter(s)
MBTA	Migratory Bird Treaty Act
mi	mile(s)
MND	Mitigated Negative Declaration

NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA Fisheries	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
OHW	Ordinary High Water Mark
PM	post mile
RWQCB	Los Angeles Regional Water Quality Control Board
SE	State of California Endangered
SSC	California Species of Special Concern
ST	State of California Threatened
SWWFC	southwestern willow flycatcher
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Chapter 1. Introduction

The City of Industry, in cooperation with the California Department of Transportation (Caltrans), is proposing freeway improvements to the State Route-57 (SR-57)/State Route-60 (SR-60) confluence at the Grand Avenue interchange in Los Angeles County. Figure 1 and Figure 2 show the regional location and project vicinity relatively. The proposed project would be subject to both the California Environmental Quality Act (CEQA) and the federal National Environmental Policy Act (NEPA). The City of Industry would be the lead agency under CEQA and Caltrans would be the lead agency under NEPA.

SR-57 is a major north-south freeway, serving the cities and communities of the greater Los Angeles area. This freeway's north terminus is at its junction with Interstate 210 (I-210), in the City of Glendora, and its south terminus is located at the junction with Interstate 5 (I-5), and State Route 22 (SR-22), in the City of Orange. The portion of SR-57 that is located in the project area is located in the Pomona Valley.

SR-60 is a major east-west freeway that also serves the cities and communities of the Greater Los Angeles Area. SR-60 is part of the National Highway System (NHS) and the State Freeway and Expressway (F&E) System. SR-60 runs from Interstate 10 (I-10) near the Los Angeles River in the City of Los Angeles east to I-10 in Riverside County, serving the cities and communities on the eastern side of the Los Angeles metropolitan area and running along the south side of the San Gabriel Valley. The west terminus of the freeway is at the East Los Angeles Interchange complex, and the east terminus is at the junction with I-10 in the City of Beaumont

SR-57 and SR-60 meet and interconnect in the City of Diamond Bar and the City of Industry. The two separate freeways share an alignment for approximately 1.26 miles along the northbound/eastbound direction and approximately 1.34 miles along the southbound/westbound direction, following a generally northeasterly-southwesterly orientation.

The primary purposes of the proposed project are to improve traffic operations and safety of the SR-57 and SR-60 freeways at the Grand Avenue interchange.

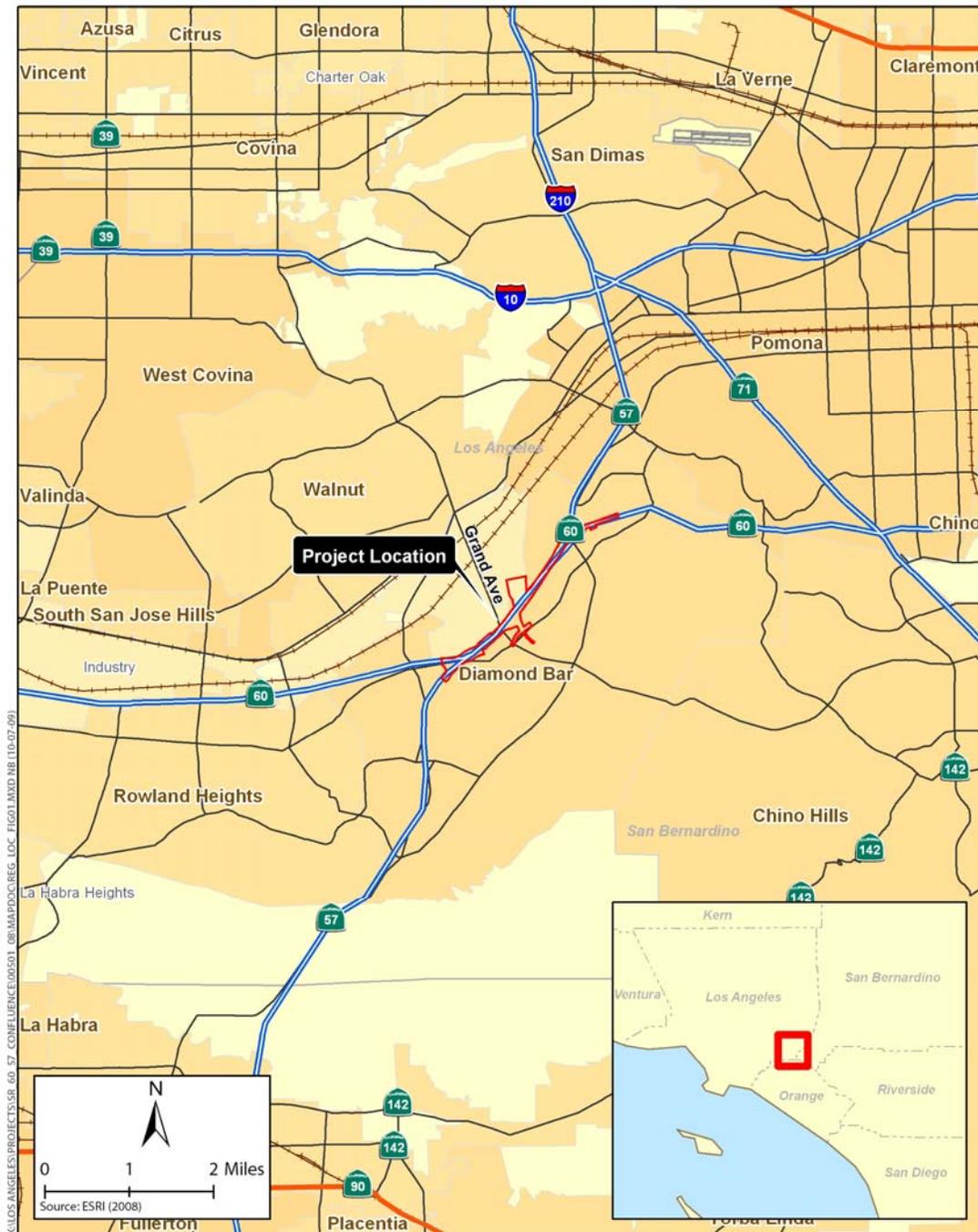


Figure 1
Regional Vicinity Map
State Route 57/State Route 60 Confluence at Grand Avenue Project

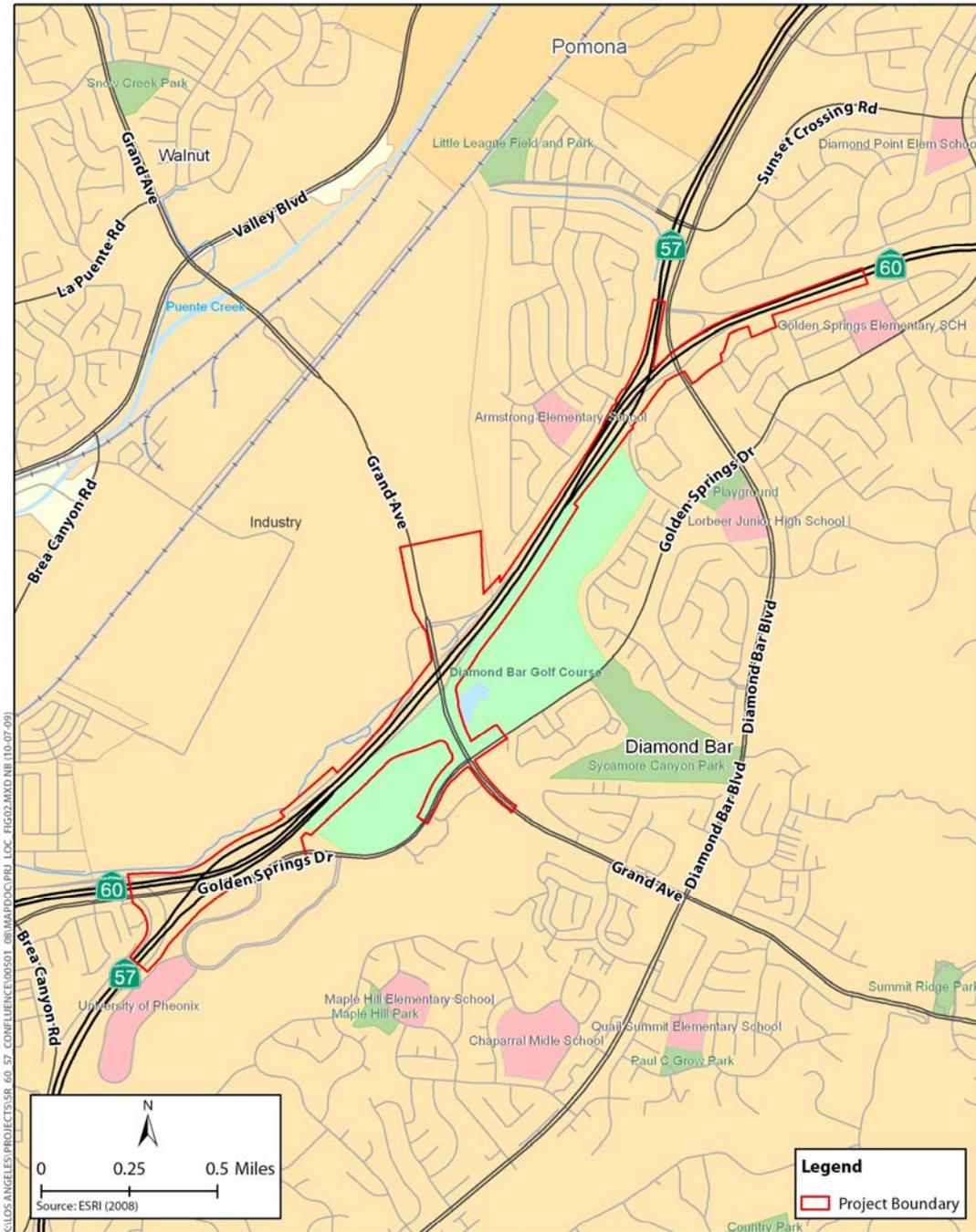


Figure 2
Project Location Map
State Route 57/State Route 60 Confluence at Grand Avenue Project

1.1. Project History

The Project Study Report (PSR) was approved on March 27, 2009 for the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project. The PSR Project Limits were located approximately at the midpoint of the two-mile common alignment of the SR-57/SR-60. The forecasted population and employment growth between 2008 and 2035 is expected to result in traffic growth approximately 25% higher than the existing volumes for the SR-60 mainline and the newly constructed HOV lanes based on SCAG traffic forecasts. With the steady commercial and industrial growth in the City of Industry and residential growth in the City of Diamond Bar, Grand Avenue from growth in the City of Diamond Bar, Grand Avenue from the interchange at SR-60 south to Golden Springs, would experience extensive delays and LOS approaching E and F during both the AM and PM peak hours. The 2035 forecasted traffic would result in further deficiencies in the mainline freeway demand over capacity ratio and an estimated LOS on the mainline of F in both the westbound and eastbound direction. The Grand Avenue interchange volumes forecasted to year 2035 indicate significant traffic delays at the off ramps in both directions of SR-60 due to the high demand over capacity ratios. The results of the AM and PM peak hour intersection LOS calculations indicate the existing off-ramps onto Grand Avenue would experience LOS F during peak hours.

The biological technical reports referenced herein and provided as Volume II have been prepared for the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project and the adjacent project, the Westbound On-Ramp at Grand Avenue/SR-60 Interchange Improvements Project.

1.2. Project Description

This section describes the proposed project and the design alternatives that were developed by a multi-disciplinary team to achieve the project purpose and need while avoiding or minimizing environmental impacts. Two build alternatives are being considered for the proposed project.

The proposed project would consist of the reconfiguration of the approximately 2.5-mile confluence of SR-57 and SR-60, which would include the addition of auxiliary lanes and associated on-ramp/off-ramp reconfigurations. SR-57 and SR-60 are major inter-regional freeways linking cities in the San Gabriel Valley and the Inland Empire with Los Angeles and Orange Counties.

1.2.1. Alternative 1 - No-Build Alternative

The No-Build (or No-Action) Alternative would result in no structural or physical changes to SR-57, SR-60, or the Grand Avenue interchange. Existing deficient capacity and congestion conditions due to short weave sections on SR-57, SR-60, and Grand Avenue would not change under this Alternative.

1.2.2. Build Alternatives

Two build alternatives are being considered. Both build alternatives would require the relocation of utility infrastructure (underground electrical lines, telecommunication lines, and electrical poles) on Grand Avenue, Golden Springs Drive, and the new Grand Avenue overcrossing structure as required, as well as the addition of a High Occupancy Vehicle (HOV) preferential lane to the westbound loop on-ramp after the construction of a new westbound direct on-ramp project being proposed by the City of Industry. The two build alternatives (Alternatives 2 and 3) are described below and shown in Figures 3 and 4, respectively.

Alternative 2- Combination Cloverleaf/Diamond Configuration Interchange Alternative

Alternative 2 would maintain the existing interchange configuration (compact-diamond) for the eastbound on and off ramps on SR-60. The interchange configuration at Grand Avenue for Alternative 2 would remain as a combination of partial cloverleaf for the westbound direction. The westbound SR-60 loop on-ramp would join the freeway as an auxiliary lane that would be constructed from the dropped lane from the SR-57 connector to the Grand Avenue westbound off-ramp, creating a two-lane exit ramp to Grand Avenue. An auxiliary lane would also be added in the eastbound direction that extends from the eastbound on ramp at Grand Avenue to the new connectors that bypasses the north/east SR-57/SR-60 interchange. A southbound SR-57 drop lane will be extended to a re-aligned westbound SR-60 off-ramp to Grand Avenue, creating a two-lane exit ramp.

A new bypass off-ramp is proposed on eastbound SR-60 west of the southern/western SR-57/ SR-60 junction. The existing northbound SR-57 to eastbound SR-60 connector would be realigned to accommodate the new bypass ramp and existing connector structure. A bypass connector would also be built at the northern/ eastern SR-57/SR-60 junction, and this connector would require new overcrossing structures at Prospector Road and Diamond Bar Boulevard as well as re-alignment of the Diamond Bar Blvd on-ramp.

The existing Grand Avenue overcrossing would be replaced with a new overcrossing structure over SR-60. Two 450-foot-long double left-turn lanes would be constructed on southbound Grand Avenue to provide access to the eastbound SR-60 on-ramp at Grand Avenue. The new Grand Avenue overcrossing would be widened to accommodate eight through lanes and double left-turn lanes.

The widening of Grand Avenue would continue south to Golden Springs Drive. Golden Springs Drive would be widened to allow additional through lanes, double left-turn lanes, and one right-turn lane on three legs of the intersection of Grand Avenue and Golden Springs. Oneright-turn lane would be provided on Grand Avenue on the northbound approach to Golden Springs Drive. Approximately 600 feet of Grand Avenue in the northbound direction south of the intersection at Golden Springs would be restriped to three lanes.

The improvements along the proposed eastbound on and off ramps would require partial takes of property from the public golf course south of SR-60. Sliver takes of property would also be required from behind a motel parking lot between Prospectors Road and Diamond Bar Boulevard. The proposed realignment of the eastbound on ramp on Diamond Bar Boulevard would also require a sliver take of a commercial property east of Diamond Bar Boulevard.

This alternative may also require retaining walls along the freeway mainline widening, auxiliary lanes, and on-and off-ramps. The locations and design of any potential retaining walls would be determined upon further project study.

Alternative 3-Partial Cloverleaf Interchange Configuration Alternative

Under Alternative 3 the existing eastbound on and off ramps at Grand Avenue, which form a compact diamond interchange, would be reconfigured as a partial cloverleaf interchange. The new intersection of Grand Avenue and the new eastbound on and off ramps would be located approximately 500 feet south of the existing intersection, or midway between the freeway and Golden Springs Drive. The new eastbound on-ramp would be a loop on-ramp that would join SR-60 as a new eastbound auxiliary lane. The existing eastbound on-ramp would be realigned to accommodate the widened Grand Avenue and would merge into the eastbound auxiliary lane created by a new southbound Grand Avenue to eastbound SR-60 loop on-ramp. The auxiliary lane would continue until joining an existing auxiliary lane on the eastbound SR-60 after the SR-57/SR-60 split. A southbound SR-57 drop lane will be extended to a re-aligned westbound SR-60 off-ramp to Grand Avenue, creating a two-lane exit ramp.

As in Alternative 2, a new bypass off-ramp is proposed on eastbound SR-60 west of the southern/western SR-57/ SR-60 junction. The existing northbound SR-57 to eastbound SR-60 connector would be realigned to accommodate the new bypass ramp and existing connector structure. A bypass connector would also be built at the northern /eastern SR-57/SR-60 junction, and this connector would require new overcrossing structures at Prospector Road and Diamond Bar Boulevard as well as re-alignment of the Diamond Bar Blvd on-ramp.

Similar to Alternative 2, the existing Grand Avenue overcrossing would be replaced with a new overcrossing structure over SR-60. However, unlike Alternative 2, a double left-turn lane from southbound Grand Avenue to the eastbound on-ramp would not be required, since vehicles traveling on southbound Grand Avenue would access northbound SR-57 and eastbound SR-60 by way of the new loop on-ramp on the west side of Grand Avenue. The new Grand Avenue overcrossing would be widened to accommodate the eight through lanes with a center divider/median.

Alternative 3, like Alternative 2 also would widen Grand Avenue south to Golden Springs Drive. Golden Springs Drive would be widened to allow additional through lanes, double left-turn lanes, and one right-turn lane on three legs of the intersection of Grand Avenue and Golden Springs. One right-turn lane would be provided on Grand Avenue on the northbound approach to Golden Springs Drive. Approximately 600 feet of Grand Avenue in the northbound direction south of the intersection at Golden Springs would be restriped to three lanes.

The improvements along the proposed eastbound on and off ramps would require partial takes of property from the public golf course south of SR-60. Sliver takes of property would also be required from a motel parking lot between Prospectors Road and Diamond Bar Boulevard. The proposed realignment of the eastbound on ramp on Diamond Bar Boulevard would also require a sliver take of a commercial property east of Diamond Bar Boulevard.

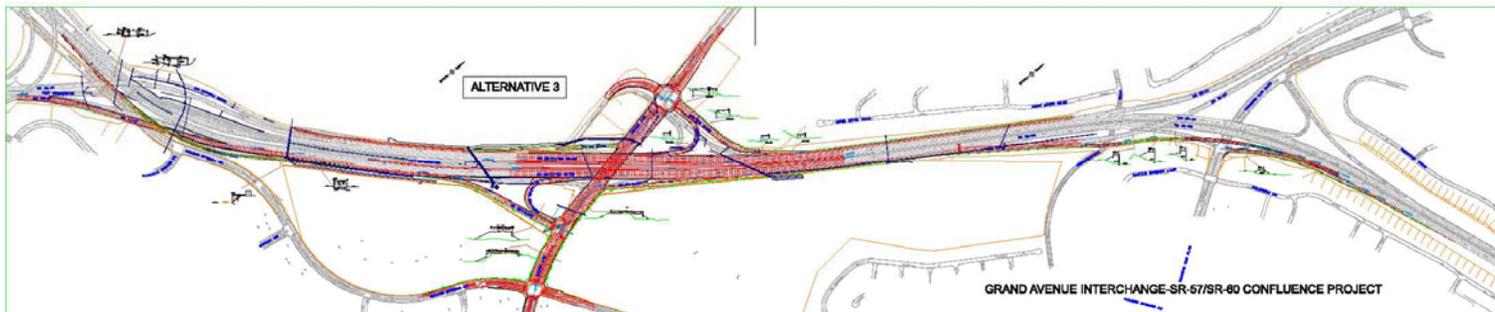
Construction Activities and Staging

The construction phase of the proposed project is anticipated to begin in the summer of 2013 and end by the fall of 2016. The proposed project would involve clearing, excavation, grading, and other site preparation activities prior to structural work and paving. On-site construction staging would occur just north of the westbound SR-60/southbound SR-57 Grand Avenue on- and off-ramps. This area, which is east of Grand Avenue, is owned by the City of Industry.

Figure 3: Alternative 2, Combination Cloverleaf / Diamond Interchange Configuration



Figure 4: Alternative 3, Partial Cloverleaf Interchange Configuration



Chapter 2. Study Methods

In support of the EIR/EA that is being prepared for the proposed project, several biological surveys were conducted, including focused surveys, native tree inventory, jurisdictional delineation and biological reconnaissance survey. These technical reports are included herein as Volume II.

A biological reconnaissance survey was conducted in spring 2008 for the overall SR-57/SR-60 Confluence study area. Based on the reconnaissance survey findings, a focused plant survey was conducted along the northern portion of the SR-57/SR-60 Confluence study area. A native tree inventory and a jurisdictional delineation were completed in winter 2007.

As part of the early consultation process conducted for the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project, in 2007 the USFWS recommended focused surveys be conducted for the (*Empidonax traillii extimus*) (SWWFC) and (*Vireo bellii pusillus*) (LBV) within suitable habitat areas located within the project study area¹. Based on the USFWS recommendation, two years of protocol surveys have been conducted. An additional third year of protocol surveys is currently underway.

The Biological Study Area (BSA) for the State Route-57 (SR-57)/State Route-60 (SR-60) Confluence at Grand Avenue Project limit of disturbance includes an approximately 2.6 mile segment along the SR-57/SR-60) confluence and an approximately 3,000 foot segment of Grand Avenue from the existing SR-60 westbound on-ramp to Golden Springs Drive. The limits of the BSA includes the current Caltrans right-of-way and adjacent private/public property required for the on-ramp and ancillary improvements, including retaining walls, drainage facility extensions, utility relocation, water quality treatment BMPs, and temporary construction easements and staging areas.

¹ March 27, 2007 e-mail correspondence from Christine L. Medak, Biologist, U.S. Fish and Wildlife Service Biologist, to Erik Hansen, Environmental Scientist, EIP Associates.

2.1. Regulatory Requirements

NEPA and CEQA require consideration of impacts to biological resources prior to implementing any projects. Other relevant laws and guidelines regarding biological resources are described below.

2.1.1. Federal Regulations

Federal regulations that apply to biological resources include the Federal Endangered Species Act (FESA), Sections 404 and 401 of the federal Clean Water Act, and the Migratory Bird Treaty Act.

Federal Endangered Species Act

Section 7 of the FESA of 1973 requires federal agencies to consult with the United States Fish and Wildlife Service (USFWS) if the project may affect federally listed threatened or endangered species. Section 9 of FESA prohibits the “take” (e.g. harm, harassment, pursuit, injury, kill) of federally listed wildlife. Take incidental to otherwise lawful actions can be authorized under Sections 7 (federal consultations) and 10 (habitat conservation plans) of the FESA.

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 USFWS on behalf of the applicant, pursuant to Section 7 of the FESA. 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.

Sections 404 of the Federal Clean Water Act

Section 404 of the Clean Water Act establishes a permit program, administered by the United States Army Corps of Engineers (ACOE), that regulates the discharge of dredged or fill material into waters of the United States (including wetlands). The discharge of dredged or fill material (temporarily or permanently) into areas delineated as waters of the United States typically requires prior authorization from the ACOE.

The Code of Federal Regulations (CFR) defines “waters of the U.S.” as intrastate lakes, rivers, streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The Code defines wetlands as “areas that are inundated or saturated by surface water or ground water at a frequency and duration

sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” In the absence of wetlands, the ACOE jurisdiction in non-tidal waters extends between the Ordinary High Water Mark (OHWM). The limits of the ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM, which is defined at 33 CFR 328.3(e) as:

“that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied.

In 2006, the United States Supreme Court further considered the ACOE jurisdiction of “waters of the United States” in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208), collectively referred to as *Rapanos*. The Supreme Court concluded that wetlands are “waters of the United States” if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable. On June 5, 2007, the ACOE issued guidance regarding the *Rapanos* decision. This guidance states that the ACOE will continue to assert jurisdiction over traditional navigable waters, wetlands adjacent to traditional navigable waters, relatively permanent nonnavigable tributaries that have a continuous flow at least seasonally (typically three months), and wetlands that directly abut relatively permanent tributaries. The ACOE will determine jurisdiction over waters that are nonnavigable tributaries that are not relatively permanent and wetlands adjacent to nonnavigable tributaries that are not relatively permanent only after making a significant nexus finding.

Furthermore, the preamble to ACOE regulations (Preamble Section 328.3, Definitions) states that the ACOE does not generally consider the following waters to be waters of the U.S. The ACOE does, however, reserve the right to regulate these waters on a case-by-case basis.

- Nontidal drainage and irrigation ditches excavated on dry land
- Artificially irrigated areas that would revert to upland if the irrigation ceased
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for purposes of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.

Waters found to be isolated and not subject to CWA regulation are often still regulated by the RWQCB under the State Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Should it be necessary, the FESA and the National Historic Preservation Act requires that the ACOE initiate consultation with these federal agencies before it can issue a permit. The purpose is to ensure that its actions, including the issuance of a permit, do not jeopardize the continued existence of listed species or adversely modify designated critical habitat or historic resources (Federal Endangered Species Act of 1973). Authorization also requires the applicant to ensure that the project is consistent with all state and local government requirements.

Sections 401 of the Federal Clean Water Act

Section 401 of the Clean Water Act requires that any applicant for a federal permit for activities that involve a discharge to waters of the State, obtain a certification from the regulating State agency that specifies the discharge will comply with the applicable provisions under the Federal Clean Water Act. The Regional Water Quality Control Boards administers the certification program in California.

Therefore, before the ACOE will issue a Section 404 permit, applicants must apply

for and receive a Section 401 water quality certification from the Santa Ana Regional Water Quality Control Board (RWQCB). Additionally, isolated nonnavigable waters and wetlands excluded from ACOE jurisdiction are subject to RWQCB authority as waters of the State, and any discharge of waste (the RWQCB considers fill to be waste) may require a Report of Waste Discharge and may be subject to Waste Discharge Requirements by the RWQCB.

The RWQCB can require mitigation measures above and beyond those required by the ACOE or CDFG. However, typically the mitigation proposed to satisfy the ACOE and CDFG meets RWQCB requirements to offset impacts to water quality.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 USC § 703 712) prohibits the take of any migratory bird. This treaty defines take as the action of or attempt to pursue, hunt, shoot, collect, or kill. Under this act, it is unlawful to take, possess, import, export, transport, sell, offer for sale, purchase, or barter any migratory bird, or any part, nest, or eggs of any such bird except under the terms of a valid permit.

2.1.2. State Regulations

State regulations that apply to biological resources include the California Endangered Species Act (CESA), Native Plant Protection Act, and Section 1601 – 1603 of the Fish and Game Code.

California Endangered Species Act

The CESA establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. Sections 2081(b) and (c) of the CESA allow the California Department of Fish and Game (CDFG) to issue an incidental take permit for a State listed threatened and endangered species only if specific criteria are met. Measures to minimize the take of species covered by the permit and to mitigate the impacts caused by the take will be set forth in one or more attachments to the permit. This attachment will generally be a mitigation plan (possibly a Habitat Conservation Plan) prepared and submitted by the applicant in coordination with CDFG staff. The mitigation plan should identify measures to avoid and minimize the take of State-listed species and to fully mitigate the impact of that take.

For projects that affect both a state and federal listed species, compliance with the FESA will satisfy CESA requirements if CDFG determines that the federal incidental take authorization is "consistent" with CESA under Fish and Game Code Section 2080.1. For projects that will result in a 'take' of a state-only listed species, project proponents must apply for a take permit under section 2081(b).

Native Plant Protection Act

California's Native Plant Protection Act, Fish and Game Code Sections 1900-1913, requires all state agencies to utilize their authority to carry out programs to conserve endangered and rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification to the CDFG at least 10 days in advance of any change in land use. This allows CDFG to salvage listed plant species that would otherwise be destroyed. The project proponent is required to conduct botanical inventories and consult with CDFG during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

Streambed Alteration Agreement (California Fish and Game Code Section 1600)

Section 1600 of the California Fish and Game Code states that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity." CDFG jurisdiction includes ephemeral, intermittent and perennial watercourses (including dry washes) characterized by 1) the presence of hydrophytic vegetation, 2) the location of definable bed and banks, and 3) the presence of existing fish or wildlife resources.

Under Sections 1601-1603 of the Fish and Game Code, project applicants are required to notify CDFG prior to any project that would divert, obstruct or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental process. CDFG must inform the project applicant of the existence of any fish and wildlife resources that may be substantially adversely affected by project related activities. If impacts to resources are identified, the CDFG must include a Streambed Alteration Agreement for measures to protect fish and wildlife resources.

2.1.3. General Plans and Policies

City of Diamond Bar's Tree Preservation and Protection Ordinance (Municipal Code, Title 22 *Development Code*, Article 3 *Site Planning and General Development Standards*, Chapter 22.38 *Tree Preservation and Protection*) (Ordinance) is designed to protect native oak (*Quercus* sp.), walnut (*Juglans* sp.), western sycamore (*Platanus racemosa*), and willow (*Salix* sp.) measuring eight inches more in diameter at breast height (DBH). According to the Ordinance, no person shall remove or relocate a protected tree or develop within the protection zone of a protected tree without first obtaining a Tree Removal Permit from the Director of the City's Community and Development Services Department. In accordance with the Ordinance, replacement trees shall be planted at a minimum of 3:1 for residential parcels greater than 20,000 square feet and commercial and industrial properties; however, the Director or Commission has final approval.

There are no other local plans or ordinances relevant to the project area. The site of the Proposed Project is not located in any approved Habitat Conservation Plan or Natural Community Conservation Plan.

2.2. Studies Required

Several biological technical reports have been prepared for the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project. These include a biological reconnaissance survey, jurisdictional delineation, native tree inventory, and focused surveys, included herein as NES - Volume 2.

A biological reconnaissance survey was conducted in spring 2008 for the overall SR-57/SR-60 Confluence study area. Based on the reconnaissance survey findings, a focused plant survey was conducted along the northern portion of the SR-57/SR-60 Confluence study area. A native tree inventory and a jurisdictional delineation were completed in winter 2007.

As part of the early consultation process conducted for the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project, in 2007 the FWS recommended focused surveys be conducted for the southwestern willow flycatcher (*Empidonax traillii extimus*) (SWWFC) and LBV within suitable habitat areas located within the

project study area.² Based on the FWS recommendation, three years of protocol surveys have been conducted. Survey years were 2007, 2008 and 2010.

The data and analysis contained in this NES is based on the biological technical report findings included herein as Volume II and is specific to the State Route-57 (SR-57)/State Route-60 (SR-60) confluence at the Grand Avenue interchange BSA.

2.2.1. Biological Reconnaissance Survey

A general biological reconnaissance survey for the SR-57/SR-60 Confluence study area was conducted in spring 2008 to generally define the Biological Resource baseline condition for the proposed project footprint and immediately adjacent areas and to define additional protocol surveys, tree assessments, and jurisdictional determinations that may be required to appropriately evaluate the project's potential impact to biological resources present.

Prior to conducting the field survey, available literature was reviewed to identify any special status plants, wildlife, or sensitive habitats known within the vicinity of the project site. The California Natural Diversity Database (CNDDB 2008) and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI 2008) were reviewed for the quadrangles containing and surrounding the project site (i.e., *Azusa*, *Glendora*, *Mt. Baldy*, *Ontario*, *San Dimas*, *Baldwin Park*, *La Habra*, *Yorba Linda*, and *Prado Dam* California USGS 7.5 minute quadrangles). These databases contain records of reported occurrences of federal and state-listed endangered, threatened, proposed endangered and threatened species, former Federal Species of Concern (FSC), delisted species, California Species of Special Concern (CSC), and otherwise sensitive species or habitats that may occur in the vicinity of the project site. Other existing documentation relevant to the project site was also reviewed for this report, including prior survey results reported by Jones and Stokes in 2003 and by Sage Environmental Group in 2007.

Sensitive plant species include all federal and state-listed endangered and/or threatened species and those that have been identified by the California Native Plant Society (CNPS) as having a limited distribution in California and throughout their range.

² March 27, 2007 e-mail correspondence from Christine L. Medak, Biologist, U.S. Fish and Wildlife Service Biologist, to Erik Hansen, Environmental Scientist, EIP Associates.

A sensitive wildlife species (i.e., federal and state-endangered, threatened, proposed, CSC, or otherwise sensitive species) was considered a potential inhabitant of the project vicinity if known occurrences and/or its geographical distribution encompassed part of the study area or if its distribution was near the site and general habitat requirements (i.e., wintering, roosting, nesting, or foraging habitat, or a permanent water source) of the species were present in the study area. The potential for each species to occur within the study area was then assessed based on these and other factors, including levels of disturbance, proximity to existing developments, connectivity to source populations, relative abundance, population trends, habitat quality and size, age of historical records, and the amount of development and disturbance that has occurred during the time subsequent to the latest records. A combined foot survey and windshield survey was conducted along the study area to document existing conditions and to assess the area for its potential to harbor sensitive biological resources and jurisdictional features. Aerial images of the footprint were carried into the field to record additional notes about the biology of the study area. Recorded notes included the locations of sensitive habitats, including various riparian habitats, patches of California walnut and coast live oak, and several large isolated natural trees.

2.2.2. Jurisdictional Delineation

A Jurisdictional Delineation was conducted for the SR-57/SR-60 Confluence study area in August 2007. Prior to beginning the field delineation, high-resolution aerial photographs, National Wetlands Inventory maps and USGS topographic maps of the project site were examined to determine the potential areas of USACE / RWQCB / CDFG jurisdiction. In the field, boundaries and dimensions of jurisdictional features were recorded on aerial photographs. Features within the survey area were investigated for the presence of drainages, water bodies, riparian habitats, potential wetlands and connectivity. Only features that exhibited the potential to be three-parameter wetlands (i.e., vegetation, soils, and hydrology) were investigated and recorded onto standardized data sheets. Recorded data typically includes present vegetation and percent covers, soil profiles in dug soil pits, and evidence of hydrology. Potential wetland habitats were evaluated using the methodology set forth in the *U.S. Army Corps of Engineers Wetland Delineation Manual* (ACOE 1987) and the 2006 Arid West Supplement (Arid Supplement). Data related to USACE-defined wetlands is recorded onto Wetland Determination Data Forms – Arid West Region for each individually numbered soil pit. Features with no evidence of wetland

hydrology, and which supports only upland vegetation, were evaluated for the upward limits of jurisdiction only and not for wetland parameters.

Potential CDFG jurisdictional riparian habitats were evaluated using the guidance described in *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (CDFG 1994).

2.2.3. Native Tree Inventory

A tree inventory was performed as part of the Jurisdictional Delineation in August 2007. Within the Proposed Project BSA, native trees were inventoried by species and recorded onto standardized data sheets. In addition to the individual tree inventory, several patches of native vegetation were classified and mapped by community (Sawyer and Keeler-Wolf 1995).

2.2.4. Braunton's Milk-Vetch Focused Survey

Focused surveys for the Braunton's Milk-Vetch (*Astragalus brauntonii*), a federally endangered and a CNPS List 1B.1 species, were conducted in June 2008 and again in June 2010. The survey was concentrated in areas where suitable habitat for Braunton's milk-vetch was present. To ensure the detection of Braunton's milk-vetch and other rare plants, the survey members were organized into a single line and were spaced 15 to 30 feet apart to form adjacent belt transects. The edge of each transect abutted the adjacent transect, leaving no gaps between each belt, for at least 100 percent coverage. Each crewmember then walked in the direction of the agreed upon endpoint within the individual belt transect. Each person walked the transect in a slightly meandering pattern for maximum and overlapping coverage. When carbonate soils suitable for Braunton's milk-vetch were encountered, the team member would stop and carefully scan the immediate area for the range of the microhabitat.

2.2.5. Southwestern Willow Flycatcher and Least Bell's Vireo Surveys

Two consecutive-year focused surveys were conducted in 2007 and 2008. A third 2010 protocol survey has also been completed. As approved by the FWS, the SWWFC and LBV surveys were conducted simultaneously to reduce redundancy in survey time.¹

Year 2007 Focused Survey

A habitat assessment was used to identify potentially suitable riparian habitat areas that could support the SWWFC and LBV within the study area. One area was identified. It is located along Diamond Bar Creek immediately downstream of the Grand Avenue.

SWWFC surveys followed FWS protocol for project-related surveys (FWS 2000). A total of six protocol surveys were conducted by playing taped willow flycatcher songs in all suitable habitat to determine presence/absence. Visits were at least five days apart, and less than 2.6 linear miles (4.2 kilometers) of habitat were surveyed per day. All surveys occurred within the three FWS established survey periods [i.e. at least one survey in period 1 (May 15 to May 31), at least one survey in period 2 (June 1 to June 21), and three surveys in period 3 (June 22 to July 17)] during favorable weather conditions. Surveys began pre-dawn and ended by 1200. All SWWFC surveys were performed by FWS-permitted biologists.

LBV protocol surveys were performed according to FWS guidelines (FWS 2001) and occurred concurrently with SWWFC surveys within the identified suitable habitat areas. The FWS requires a minimum of eight surveys between April 10 and July 31 at least ten days apart during favorable weather conditions.

Year 2008 Focused Survey

The second year survey was conducted in 2008. At that time, the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project study area expanded southward to include the adjacent golf course and to the west and east along the SR-60. A habitat assessment was to identify potentially suitable riparian habitat areas that could support the SWWFC and LBV within the expanded study area. The potential SWWFC and LBV suitable habitat surveyed during 2008 included the 2007 survey area and several additional areas along the SR-60 alignment.

SWWFC surveys followed FWS protocol for project-related surveys (FWS 2000). A total of six protocol surveys were conducted by playing taped willow flycatcher songs in all suitable habitat to determine presence/absence. Visits were at least five days apart, and less than 2.6 linear miles (4.2 kilometers) of habitat were surveyed per day. All surveys occurred within the three FWS established survey periods [i.e. at least one survey in period 1 (May 15 to May 31), at least one survey in period 2 (June 1 to June 21), and three surveys in period 3 (June 22 to July 17)] during favorable weather conditions. Survey dates were May 15-16; June 5; June 17-18; June 26; July 9; and July 17. Surveys began pre-dawn and ended by 1200. All SWWFC surveys were

performed by FWS permitted biologists Mike McEntee (TE099463) or Kris Alberts (TE039640-2).

LBV surveys were performed according to FWS guidelines (FWS 2001) and occurred concurrently with SWWFC surveys. A minimum of eight surveys are required between April 10 and July 31 at least ten days apart during favorable weather conditions. Biologists Kris Alberts, Mike McEntee, Linette Lina, Nichole Cervin, Paul Morrissey, Shannan Shaffer, Heather Clayton, and Lisa Wadley conducted nine surveys (April 24-25; May 5-6; May 15-16; May 27; June 5; June 17-18; June 26; July 9; and July 17).

Year 2010 Focused Survey

The third year survey was completed in 2010 consistent with 2008 expanded survey area. SWWFC surveys follow FWS protocol for project-related surveys (FWS 2000). A total of six protocol surveys were conducted by playing taped willow flycatcher songs in all suitable habitat to determine presence/absence. Visits were at least five days apart, and less than 2.6 linear miles (4.2 kilometers) of habitat were surveyed per day. All surveys occurred within the three FWS established survey periods [i.e. at least one survey in period 1 (May 15 to May 31), at least one survey in period 2 (June 1 to June 21), and three surveys in period 3 (June 22 to July 17)] during favorable weather conditions. All SWWFC surveys were performed by FWS permitted biologist Kris Alberts (TE039640-2). LBV surveys were performed according to FWS guidelines (FWS 2001) and occurred concurrently with SWWFC surveys. A minimum of eight surveys are required between April 10 and July 31 at least ten days apart during favorable weather conditions. Biologists Kris Alberts and Nichole Cervin conducted a total of nine surveys (April 15; April 26; May 6; May 17; May 27, June 7; June 17; June 28; and July 8).

2.3. Personnel and Survey Dates

Table 2-1: Personnel and Survey Dates		
DATE	SURVEY FOCUS	SURVEYORS
February 5, 2008	Biological Reconnaissance Survey	Biologist Kris Alberts (TE039640-2)
June 17, 2008	Focused Plant Survey for the Federally-listed Endangered Braunton's Milk-vetch	Botanists Nichole Cervin and Jenny McGee
June 25, 2010	Focused Plant Survey for the Federally-listed Endangered Braunton's Milk-vetch	Botanists Nichole Cervin
August 15 and 16, 2007	Jurisdictional Delineation	Biologist Kris Alberts (TE039640-2) and Paul Morrissey
August 15 and 16, 2007	Native Tree Inventory	Biologist Kris Alberts (TE039640-2) and Paul Morrissey
6 surveys May 15-16; June 5; June 17-18; June 26; July 9; and July 17, 2007	Year 2007 Focused SWWFC Survey	FWS permitted biologists Mike McEntee (TE099463) or Kris Alberts (TE039640-2).

Table 2-1: Personnel and Survey Dates		
DATE	SURVEY FOCUS	SURVEYORS
10 surveys April 27; May 7, 17, and 29; June 8 and 19; and July 2, 9, 14, and 27, 2007	Year 2007 Focused LBV Survey	Biologists Paul Morrissey, Kris Alberts (TE039640-2), Mike McEntee (TE099463), Laura Gorman, Linette Lina, and Stephaney Cox
6 surveys May 15-16; June 5; June 17-18; June 26; July 9; and July 17, 2008	Year 2008 Focused SWWFC Survey	FWS permitted biologists Mike McEntee (TE099463) or Kris Alberts (TE039640-2).
9 surveys April 24-25; May 5-6; May 15-16; May 27; June 5; June 17-18; June 26; July 9; and July 17, 2008	Year 2008 Focused LBV Survey	Biologists Kris Alberts (TE039640-2), Mike McEntee (TE099463), Linette Lina, Nichole Cervin, Paul Morrissey, Shannan Shaffer, Heather Clayton, and Lisa Wadley
6 surveys May 17; May 27; June 7; June 17; June 28; and July 8, 2010	Year 2010 Focused SWWFC Survey	USFWS permitted biologist Kris Alberts (TE039640-2).
9 surveys April 15; April 26; May 6; May 17; May 27; June 7; June 17; June 28; and July 8, 2010	Year 2010 Focused LBV Survey	USFWS permitted biologist Kris Alberts (TE039640-2).

2.4. Agency Coordination and Professional Contacts

On March 27, 2007, as part of the early consultation process conducted for the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project, Christine L. Medak, Biologist, FWS Biologist discussed the proposed SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project with Erik Hansen, Environmental Scientist, EIP Associates. Ms. Medak recommended focused surveys be conducted for the SWWFC and LBV within suitable habitat areas located within the project study area, stating that the SWWFC and LBV surveys could be conducted simultaneously to reduce redundancy in survey time. The conversation was memorialized in a March 27, 2007 e-mail. The completed 2007 and 2008 protocol survey reports have been forwarded to the FWS for their use/review.

2.5. Limitations That May Influence Results

There are no known limitations or constraints affecting the survey results. The surveys were conducted using standard protocols.

Chapter 3. Results: Environmental Setting

The following section addresses the regional context, and general conditions and biological resources observed within the project vicinity, including the area's topography, soils, vegetation, watercourses and level of human or natural disturbance.

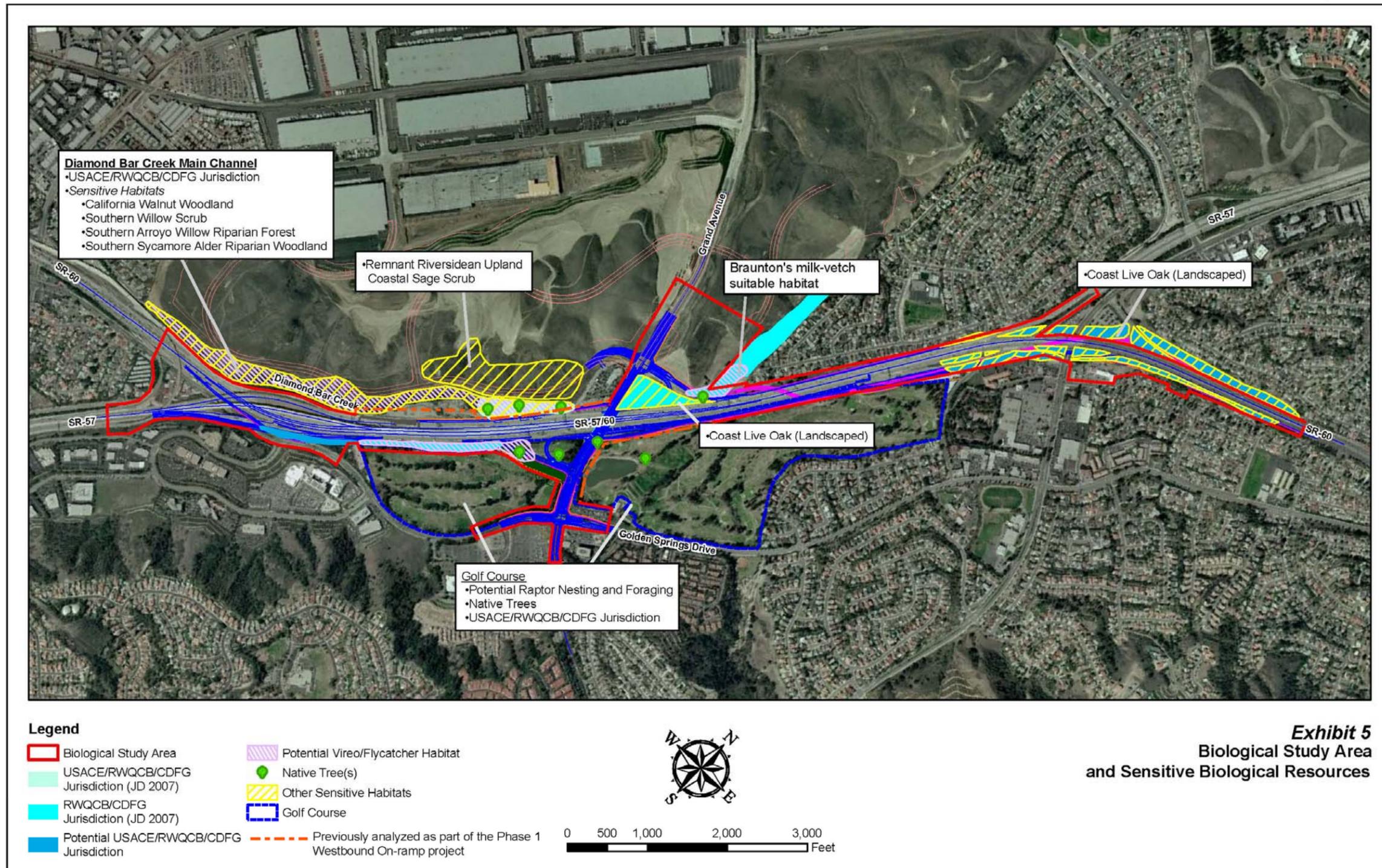
3.1. Description of the Existing Biological and Physical Conditions

The surrounding area is primarily composed of residential, recreational, and industrial development, as well as open space. The open space occurs along the north and west sides of the Grand Avenue/SR-57/60. This open space is historically grazed and now exhibits remnant patches of coastal sage scrub surrounded by a dominance of ruderal vegetation. A mature, mixed riparian woodland extends from Grand Avenue adjacent to the northwest side of SR-57/60 downstream to beyond the limits of the Proposed Project within Diamond Bar Creek. A mosaic of industrial, recreational, and residential development surround the Project area along the south and east portions, including Diamond Bar Golf Course and residential development surrounds the golf course. At the Grand Avenue/SR-57/60 interchange, a few business enterprises and supporting infrastructure are present. A number of drainages flow into Diamond Bar Creek from the south and east of SR-57/60.

3.1.1. Study Area

The Biological Study Area (BSA) for the State Route-57 (SR-57)/State Route-60 (SR-60) Confluence at Grand Avenue Project limit of disturbance includes an approximately 2.6 mile segment along the SR-57/SR-60) confluence and an approximately 3,000 foot segment of Grand Avenue from the existing SR-60 westbound on-ramp to Golden Springs Drive (Figure 5- Biological Study Area and Sensitive Biological Resources). The limits of the BSA includes the current Caltrans right-of-way and adjacent private/public property required for the on-ramp and ancillary improvements, including retaining walls, drainage facility extensions, utility relocation, water quality treatment BMPs, and temporary construction easements and staging areas.

April 2010



3.1.2. Physical Conditions

The Proposed Project is located in Diamond Bar, Los Angeles County, California in the *San Dimas* U.S. Geological Service (USGS) 7.5 minute quadrangle (quad) map in Township 2 South, Range 9 West, Sections 9 and 10. The elevation of the site is approximately 700 feet above mean sea level (msl) at its lowest point and 912 feet above msl at its highest point.

The following soils, identified from (<http://websoilsurvey.nrcs.usda.gov>), were identified within the BSA: Yolo association – this soil association occurs on alluvial fans between elevations of 1,175 and 1,200 feet, is over 60 inches deep, well drained, and exhibits moderate subsoil permeability; Altamont-Diablo association, 30 to 50% slopes, eroded – this soil association occurs throughout the Los Angeles basin area with elevations ranging from near sea level to 1,500 feet and occur on steeper slopes and are moderately eroded, reducing the effective soil depth and water-holding capacity and are approximately 20 to 27 inches deep; San Andreas-San Benito association, 30 to 75 percent slopes, eroded - this soil association occurs on steep to very steep mountainous areas between elevations of 200 and 1,500 feet; San Benito-Soper association – This soil association occurs on steep foothills along the Orange County line south of Pomona with elevations of 750 and 1,500 feet.

A number of drainage features flow into Diamond Bar Creek from the south and east of SR-57/60. Within the BSA, these include two concrete-line drainage features associated with the existing freeway and several small tributaries, all of which flow into Diamond Bar Creek via existing roadway culverts. From the project area, Diamond Bar Creek flows to the southwest where it connects to San Jose Creek. San Jose Creek then continues west to the San Gabriel River. The San Gabriel River then continues west before terminating at the Pacific Ocean. Diamond Bar Creek, San Jose Creek, and the San Gabriel River are considered Relatively Permanent Waters (RPW) of the U.S., and the Pacific Ocean is considered a Traditionally Navigable Water (TNW) of the U.S.

3.1.3. Biological Conditions in the Biological Study Area

Natural Vegetation Communities

The majority of the study area has been altered by humans and is comprised of ruderal, ornamental, and developed areas. Ruderal vegetation generally occurs in the margins along the sides of the paved roads and on the disked and/or formerly hillsides

within the BSA. Ruderal areas typically have heavily compacted or frequently disturbed soils. These areas are dominated by pioneering herbaceous plants, grasses (i.e., *Bromus* and *Avena* spp.), and noxious weeds, including mustards (i.e., *Brassica* spp., *Hirschfeldia incana*), thistles (i.e., *Silybum marianum*, *Carduus pycnocephalus*, *Centaurea melitensis*), and fennel (*Foeniculum vulgare*).

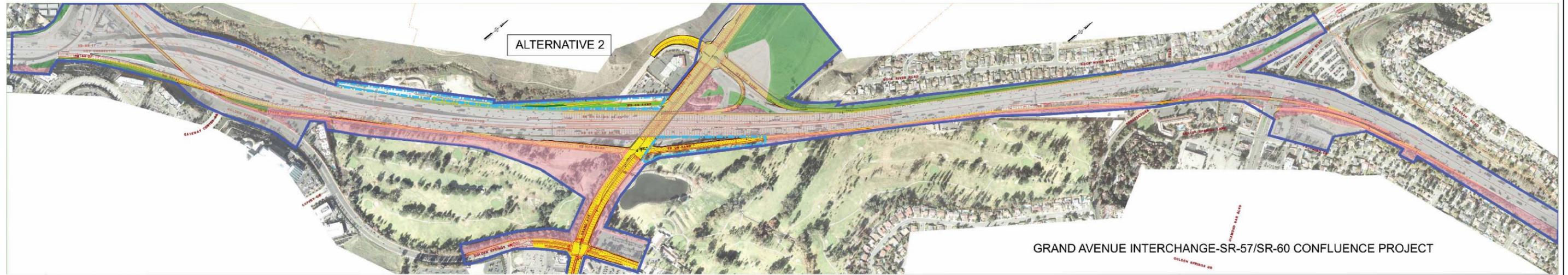
Ornamental vegetation includes commonly-found non-native landscape species used within the Diamond bar Golf Course and roadway landscaped areas. Developed areas within the study area display man-made structures such as houses, roads, businesses, and the fairways of Diamond Bar Golf Course.

The common vegetation type within these developed areas consists of exotic landscaping. In addition to these concentrated communities, the remainder of the study area contains a few scattered native riparian species located within and around the tributaries to Diamond Bar Creek within the BSA. These native trees include coast live oak (*Quercus agrifolia*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), California sycamore (*Platanus racemosa*), white alder (*Alnus rhombifolia* Nutt.), and California walnut (*Juglans californica*). It is noted that all but one coast live oak individuals were landscaped specimens along the freeway rights-of way. Vegetation communities mapped within the BSA and each proposed alignment area (Figure 6 and Figure 7).

Migration Corridors

Wildlife corridors provide specific opportunities for individual animals to disperse or migrate between other areas. Adequate cover, minimum physical dimensions, and tolerably low levels of disturbance and mortality (e.g., limited night lighting and noise, low vehicular traffic levels) are common requirements for corridors.

The BSA is characterized by ruderal and ornamental vegetation. The drainage tributaries located within the BSA are either piped underground or are concrete channels with high steep walls, and freeway noise and night lighting are currently present. Given some of the physical man-made constraints present for mammals, it is likely that the project site does not provide an important value to the movement of mammals. There is little opportunity for movement of mammal species from the adjacent Diamond Bar Creek to the west or north. However, there may be a potential for animals to move from Diamond Bar Creek through the gold course to the Puente Hills, an open space are located to the southwest.



- BSA
- NAP – included in the Westbound On-Ramp at Grand Avenue/SR-60 Interchange Improvements Project BSA

Vegetation Communities (acres)

	Present within BSA	Temporary Impacts	Permanent Impacts
■ 1 - Developed	119.46	7.85	3.92
■ 2 - Ruderal	20.25	18.39	1.86
■ 3 - Ornamental	37.00	28.00	9.00
TOTAL	176.71	54.24	14.78

Figure 6: Alternative 2 - Vegetation Communities



- BSA
 - NAP – included in the Westbound On-Ramp at Grand Avenue/SR-60 Interchange Improvements Project BSA
- Vegetation Communities (acres)**

	Present within BSA	Temporary Impacts	Permanent Impacts
■ 1 - Developed	119.46	7.85	3.93
■ 2 - Ruderal	20.25	18.29	1.96
■ 3 - Ornamental	37.00	27.63	9.37
TOTAL	176.71	53.77	15.26

Figure 7: Alternative 3 - Vegetation Communities

Aquatic Resources

A Jurisdictional Delineation was conducted for the SR-57/SR-60 Confluence project area in August 2007 and is included in Volume II of the NES. Within the BSA, a number of drainage features flow into Diamond Bar Creek from the south and east of SR-57/60 as shown in Figure 8 – Jurisdictional Waters and Native Tree Locations. These include two concrete-line drainage features associated with the existing freeway and several small tributaries

Invasive Species

As discussed earlier in this Section, the dominant habitat types in the BSA consist of nonnative ruderal vegetation and developed areas dominated by ornamental vegetation (Developed/Ornamental).

During the 2008 reconnaissance surveys, 9 exotic plants on the California Invasive Plant Council's (Cal-IPC) Invasive Plant Inventory were identified in the BSA. Each plant in the inventory is given an overall rating of high, moderate, limited, or unknown. Plants with a rating of high have severe ecological impacts. Plants with a rating of moderate have a substantial and apparent but not severe ecological impact.

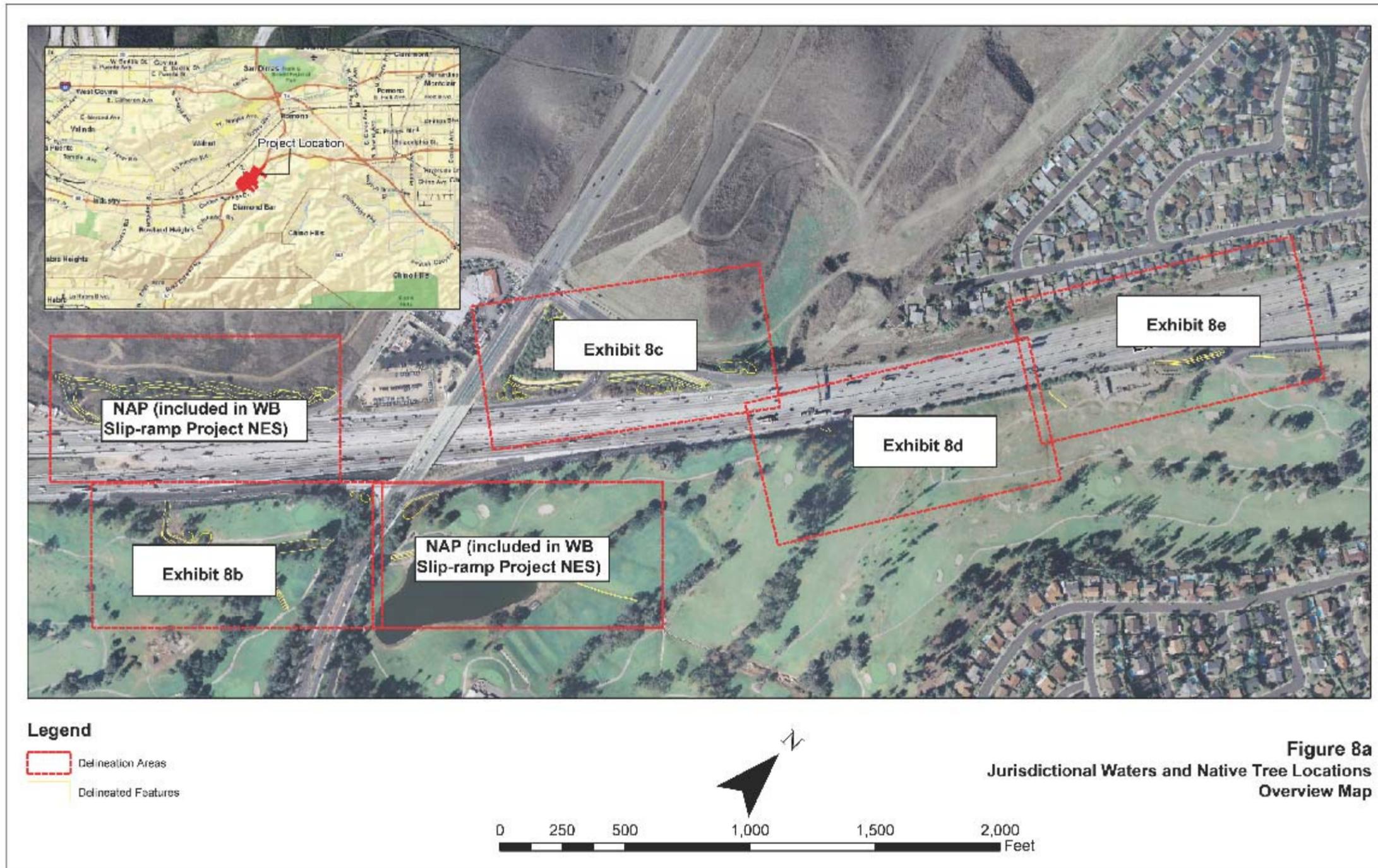
Plants with a limited rating are invasive, but their ecological impacts are minor on a Statewide level. The invasive species identified in the BSA and the applicable Cal IPC rating are provided in Table 3.1-1.

Table 3.1-1 Invasive Plants Located within the BSA

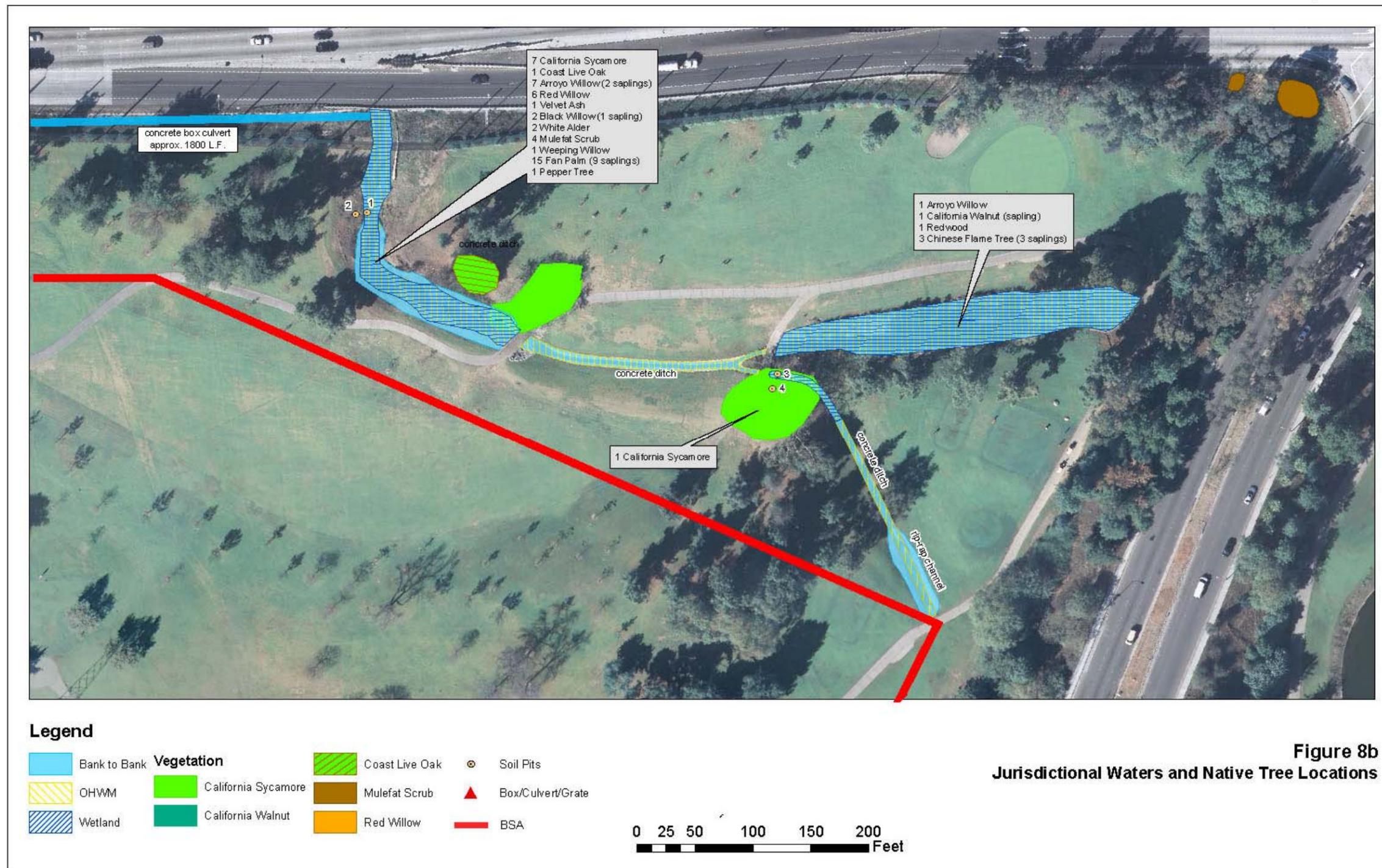
Common Name	Scientific Name	Cal-IPC Rating
Wild oat	<i>Avena</i> sp.	Moderate
Ripgut grass	<i>Bromus diandrus</i>	Moderate
Italian thistle	<i>Carduus pycnocephalus</i>	Moderate
Tocalote	<i>Centaurea melitensis</i>	Moderate
Fennel	<i>Foeniculum vulgare</i>	High
Tree tobacco	<i>Nicotina glauca</i>	Moderate
Castor bean	<i>Ricinis communis</i>	Limited
Milk thistle	<i>Silybum marianum</i>	Limited
Mexican fan palm	<i>Washingtonia robusta</i>	Moderate

Source: Cal-IPC Invasive Plant Inventory (www.cal-ipc.org/ip/inventory/weedlist.php, accessed 2009) and Sage Environmental Group, 2009.

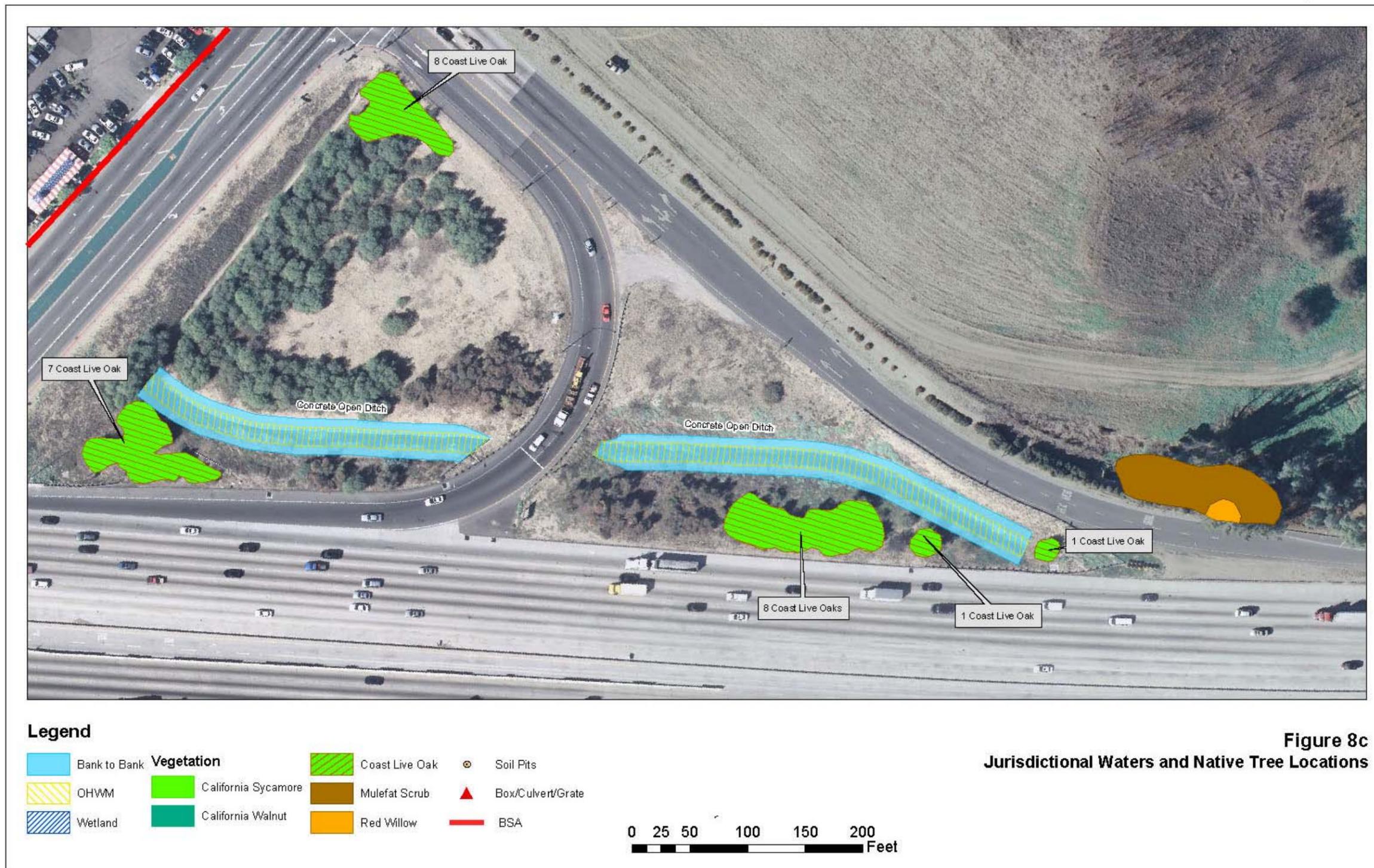
April 2010



April 2010



April 2010



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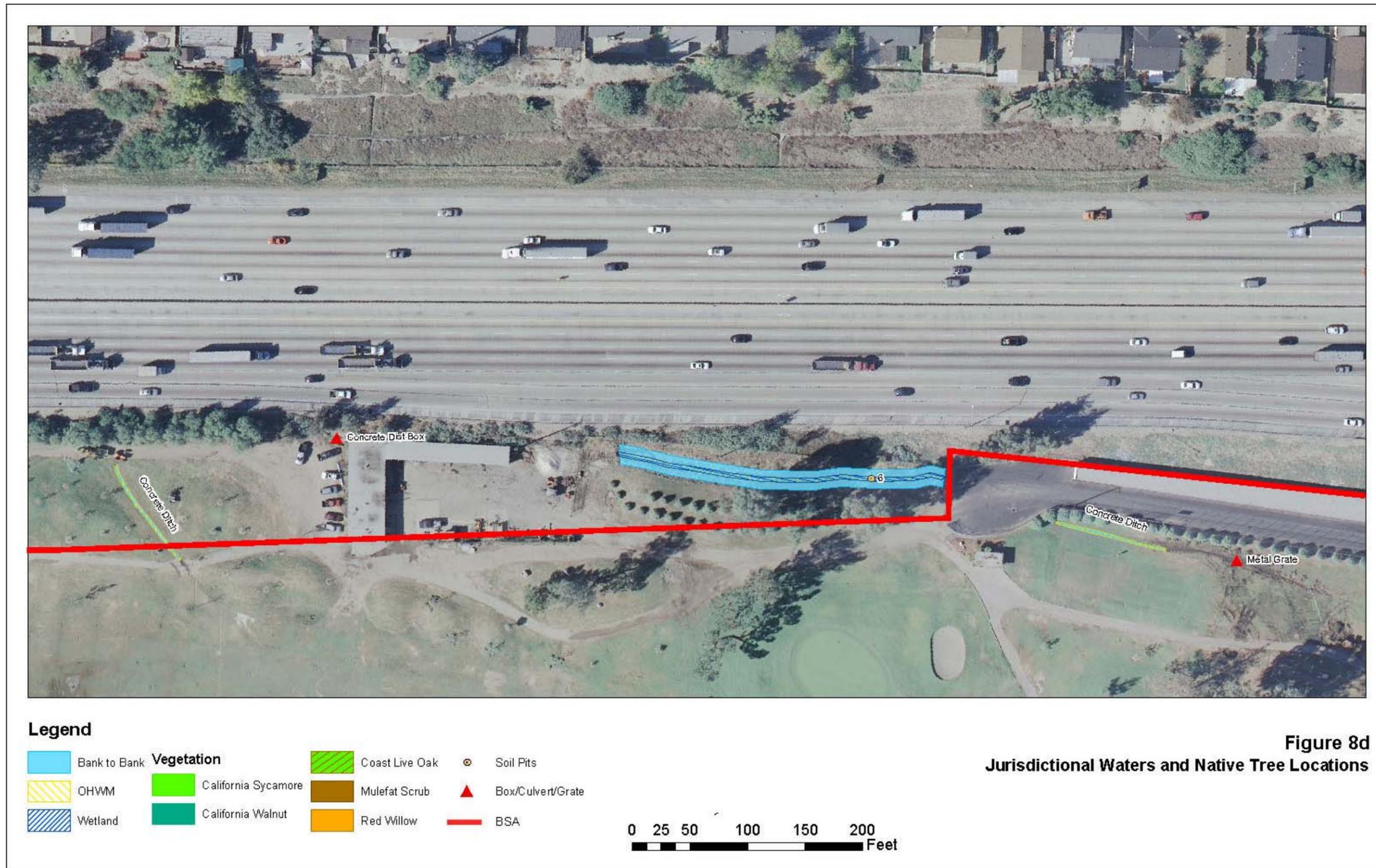


Figure 8d
Jurisdictional Waters and Native Tree Locations

April 2010

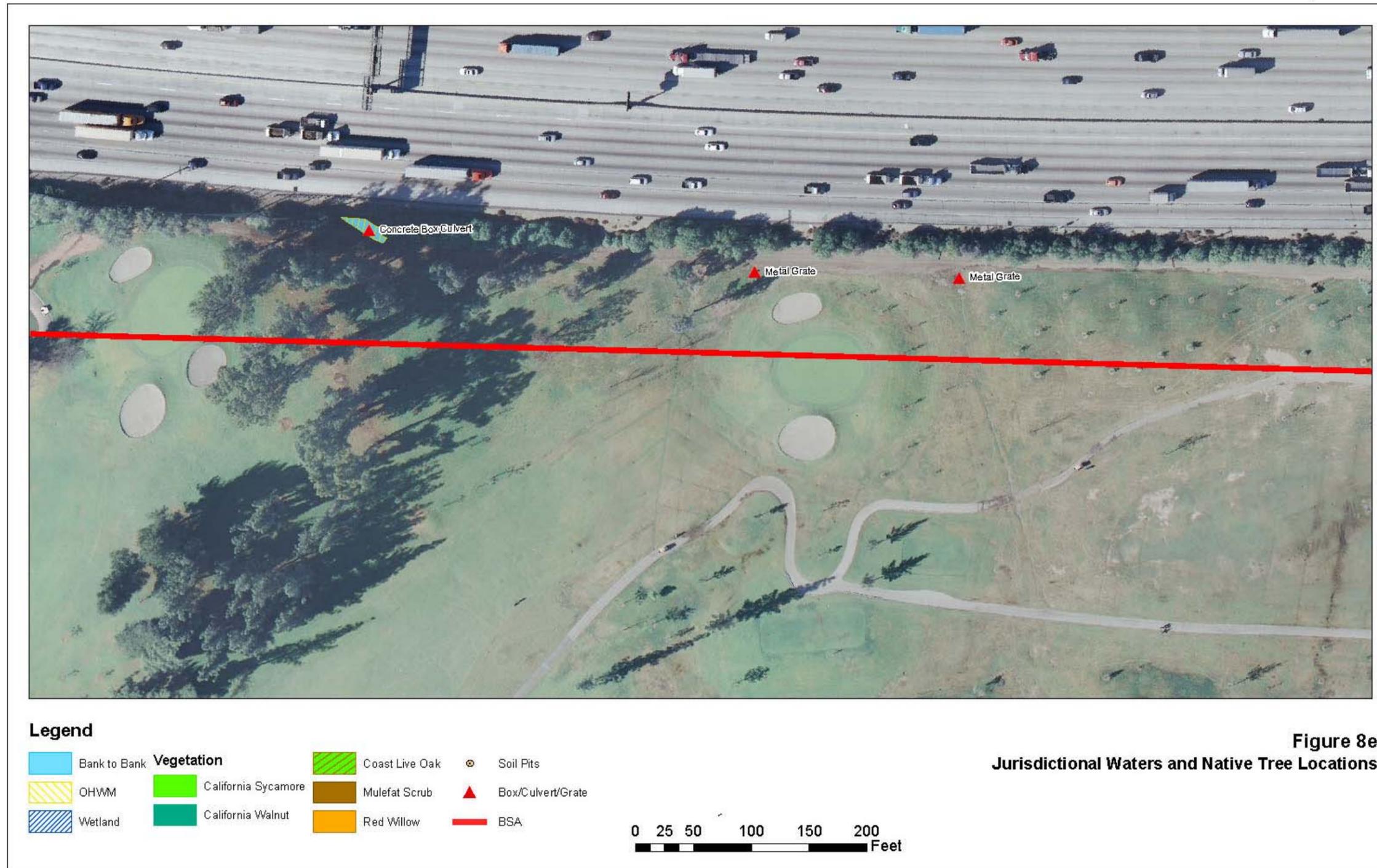


Figure 8e
Jurisdictional Waters and Native Tree Locations



■ BSA

Figure 8f
Jurisdictional Waters and Native Tree Locations

3.2. Regional Species and Habitats of Concern

Plant and animal species are considered to have special status if they have been listed as such on maintained lists with explicit criteria by federal or state agencies or one or more special interest groups, such as CNPS. This generally excludes species not concluded to be currently under threat or endangerment (e.g., those simply on “watch” lists or for which further information is solicited). The California Department of Fish and Game (CDFG) publishes separate comprehensive lists for plants and animals through the CNDDDB. These include taxa officially listed by the state and federal governments as endangered, threatened or rare, and candidates for state or federal listing. As part of the Biological Reconnaissance Survey for the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement, a query of the CNPS database and CNDDDB for the California Natural Diversity Database (CNDDDB 2008) and the California Native Plant Society’s Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI 2008) were reviewed for the quadrangles containing and surrounding the project site (i.e., *Azusa, Glendora, Mt. Baldy, Ontario, San Dimas, Baldwin Park, La Habra, Yorba Linda, and Prado Dam* California USGS 7.5 minute quadrangles).

The review identified 40 special-status plant species, 64 special-status animal species, and 11 sensitive natural communities as historically occurring in the vicinity of the BSA. Additional species were added to the list, as applicable, based on biologist knowledge of the study area and special-status species of the region. The Biological Reconnaissance Survey included in Volume II provides a full list of special-status species and sensitive habitats identified from the database query and a determination of the likelihood of occurrence for each species within the study area.

None of the 11 sensitive habitats identified as having a potential to occur are present within the SR-57/SR-60 Confluence Project BSA.

Absent

<u>Habitat Type</u>	<u>Status</u>
California Walnut Woodland	CDFG S1.1
Southern Willow Scrub	CDFG S2.1
Southern Arroyo Willow Riparian Forest	CDFG N/A
Riversidean Upland Coastal Sage Scrub	CDFG S2.1
Valley Needlegrass Grassland	CDFG S1.1
Southern Sycamore Alder Riparian Woodland	CDFG N/A
Riversidian Alluvial Fan Sage Scrub	CDFG S2.1
Canyon Live Oak Ravine Forest	CDFG N/A
Southern Coast Live Oak Woodland	CDFG N/A

Southern California Arroyo Chub/Santa Ana Sucker Stream	CDFG N/A
Southern Cottonwood Willow Riparian Forest	CDFG N/A

3.3. Vegetation

According to the literature review and the reconnaissance survey, a total of 40 sensitive plant species were identified as having a potential to occur within the SR-57/SR-60 Confluence Project study limits. Thirty of these 40 sensitive plant species are assumed or confirmed absent from the study area, and 10 of these 40 sensitive plant species have a low potential to occur within the study area. The 40 sensitive plant species and their potential to occur within the study area are listed below. A key to the status codes follows this list.

Twenty-four sensitive plant species are considered **absent** from the study area due to a lack of suitable soils, habitats, and/or elevation ranges. Twelve additional sensitive plant species were confirmed absent from portions of the study area during reconnaissance-level and focused plant surveys performed during the 2003 flowering season (Jones and Stokes 2003).

Absent

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Arbronia villosa</i> var. <i>aurita</i> <i>Atriplex coulteri</i>)	chaparral sand-verbena Coulter's saltbush	CNPS List 1B.1 CNPS 1B.2; CNPS List 1B.1
<i>Atriplex serenana</i> var, <i> davidsonii</i>	Davidson's saltbush	CNPS List 1B.2
<i>Berberis nevini</i>) <i>Brodiaea filifolia</i> <i>California macrophylla</i> <i>Calochortus clavatus</i> var. <i> gracilis</i>	Nevin's barberry thread-leaved brodiaea round-leaved filaree slender mariposa lily	FE, SE , CNPS 1B.1; FT, SE , CNPS List 1B.1 CNPS 1B.1; CNPS List 1B.2
<i>Chorizanthe parryi</i> var. <i> fernandina</i> <i>Cladium californicum</i> <i>Cordylanthus maritimus</i> ssp. <i> maritimus</i>	San Fernando Valley spineflower California saw-grass salt marsh birds beak	FC, SE , CNPS List 1A.1 CNPS List 2.2 FE, SE , CNPS List 1B.1
<i>Dodecahema leptoceras</i> <i>Dudleya cymosa</i> ssp. <i> crebrifolia</i> <i>Dudleya densifolium</i>	slender-horned spineflower San Gabriel River dudleya San Gabriel Mountains dudleya	FE, SE , CNPS List 1B.1 CNPS List 1B.2 CNPS List 1B.1
<i>Dudleya multicaulis</i> <i>Eriastrum densifolium</i> ssp. <i> sanctorum</i> <i>Fimbristylis thermalis</i> <i>Galium grande</i>	many-stemmed dudleya Santa Ana River woollystar hot springs fimbristylis San Gabriel bedstraw	CNPS List 1B.2 FE, SE , CNPS 1B.1 CNPS List 2.2 CNPS List 1B.2;

<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	Presumed Extinct
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	mesa horkelia	CNPS List 1B.1
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	CNPS List 1B.1
<i>Lilium parryi</i>	lemon lily	CNPS List 1B.2;
<i>Linanthus concinnus</i>	San Gabriel linanthus	CNPS List 1B.2;
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	CNPS List 1B.3;
<i>Navarretia prostrata</i>	prostrate navarretia	CNPS List 1B.1;
<i>Nolina cismontana</i>	chaparral nolina	CNPS List 1B.2;
<i>Orcuttia californica</i>	California Orcutt grass	FE, SE , CNPS List 1B.1
<i>Oreonana vestita</i>	woolly mountain-parsley	CNPS 1B.3
<i>Orobanche valida</i> ssp. <i>valida</i>	Rock Creek broomrape	CNPS List 1B.2
<i>Parnassia cirrata</i> var. <i>cirrata</i>	San Bernardino grass-of-Parnassus	CNPS List 1B.3
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta	FE, SE , CNPS List 1B.1
<i>Phacelia stellaris</i>	Brand's phacelia	FC , CNPS List 1B.1
<i>Rorippa gambelii</i>	Gambel's watercress	FE, ST , CNPS 1B.1
<i>Senecio aphanactis</i>	rayless ragwort	CNPS List 2.2
<i>Sidalcea neomexicana</i>	Salt Spring checkerbloom	CNPS List 2.2
<i>Symphyotrichum greatae</i>	Greata's aster	CNPS List 1B.3
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern	CNPS List 2.2.

Ten sensitive plant species were determined to have a **low** potential to occur on the study area, due to the presence of moderately disturbed habitat associated with these species. One of these 10 species, Braunton's milk-vetch (*Astragalus brauntonii*), is a federally endangered species.

Low

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	FE , CNPS List 1B.1
<i>Calochortus plummerae</i>	Plummer's mariposa lily	CNPS List 1B.2
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	CNPS List 1B.2
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	CNPS List 1B.1
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	CNPS List 1B.1
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	CNPS List 3.2
<i>Imperata brevifolia</i>	California satintail	CNPS List 2.1
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	CNPS List 1B.2
<i>Gnaphalium leucocephalum</i>	white rabbit-tobacco	CNPS List 2.2
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	CNPS List 1B.2

Status Codes

Federal

- FE = Federally listed; Endangered
- FT = Federally listed; Threatened
- FC = Federal Candidate for listing

State

- ST = State listed; Threatened
- SE = State listed; Endangered

CNPS

- List 1A = Plants presumed extinct in California.
- List 1B = Plants rare and endangered in California and throughout their range.
- List 2 = Plants rare, threatened or endangered in California but more common elsewhere in their range.

Extensions

- 0.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat).
- 0.2 = Fairly endangered in California (20-80% occurrences threatened).
- 0.3 = Not very endangered in California (<20% of occurrences threatened).

3.3.1. Sensitive Plant Species Descriptions

The Braunton's Milk-Vetch is a federally endangered and a CNPS List 1B.1 species. This perennial herb occurs in the carbonate soils of chaparral, coastal sage scrub, closed-cone coniferous forests, and valley and foothill grasslands at elevations up to 2,100 feet amsl. The range of this species includes the hills and basins of Ventura, Los Angeles, Orange, and Riverside counties. Braunton's milk-vetch flowers from March to July and generally germinates following burns and other disturbances. Threats to this species include development and alteration of local fire regimes. This species is considered to be very rare, with little more than ten known occurrences.

The 2008 focused Braunton's milk-vetch plant survey resulted in negative findings. The species was not observed present onsite during the 2008 survey. Based upon the findings of this survey and other focused plant surveys performed during the 2003 flowering season (Jones & Stokes 2003), all federal- and/or state-listed endangered or threatened plant species are confirmed absent from the project site. No further focused plant surveys are necessary for this project to address potential impacts to federal- and/or state-listed endangered or threatened plant species.

3.4. Animals

According to the literature review, a total of 64 sensitive wildlife species were identified as having a potential to occur within the SR-57/SR-60 Confluence study area for at least some portion of their life histories. Thirty-seven of these 64 wildlife species are considered absent or assumed absent from the study area, and 27 of the 64 have a low potential to occur within the study area. Two of the 27 sensitive wildlife species with a low potential to occur within the study area are federal and state-listed species: the SWWFC and LBV. Two additional species, golden eagle and white-tailed kite, are California Fully-Protected Species. Note that for some species, two different PFOs may be given for various phases of a life history. For example, a species may be assumed absent for nesting, but may have a low potential to occur as a wintering or migrating species.

Due to a lack of suitable soils, habitats, elevation ranges, or other environmental factors, the following 12 species are considered **absent** from the study area for at least some portion of their life histories:

Absent

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE
<i>Callophrys mossii hidakupa</i>	San Gabriel Mountains elfin butterfly	CSC
<i>Catostomus santaanae</i>	Santa Ana sucker	FT, CSC
<i>Gila orcuttii</i>	arroyo chub	CSC
<i>Rhinichthys osculus ssp. 3</i>	Santa Ana speckled dace	CSC
<i>Batrachoseps gabrieli</i>	San Gabriel Mountains slender salamander	CSC
<i>Bufo californicus</i>	arroyo toad	FE, CSC
<i>Rana aurora draytonii</i>	California red-legged frog	FT, CSC
<i>Rana muscosa</i>	mountain yellow-legged frog	FE, CSC
<i>Chaetura vauxi</i> (nesting)	Vaux's swift	CSC
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	CSC
<i>Ovis canadensis nelsoni</i>	Nelson's bighorn sheep	CSC

Due to a complete lack of or very low quality habitat, significant obstructions between the study area and outside populations (i.e., aquatic-associated species and some of the terrestrial species), poorly documented US ranges (i.e., pocketed free-tailed bat) or the location of the study area being outside of known nesting areas (i.e., tricolored blackbird and black swift), low relative abundances and no recent records within the vicinity of the project site (i.e., yellow-billed cuckoo), and/or the species

never being found on the study area during field surveys, the following 25 species are **assumed absent** from the project site for at least some portion of their life histories:

Assumed Absent

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Diplectrona californica</i>	California diplectronan caddisfly	None
<i>Spea hammondi</i>	western spadefoot	CSC
<i>Taricha torosa torosa</i>	Coast Range newt	CSC
<i>Anniela pulchra pulchra</i>	silvery legless lizard	CSC
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	CSC
<i>Thamnophis hammondi</i>	two-striped garter snake	CSC
<i>Actinemys marmorata pallida</i> ;	southwestern pond turtle	CSC
<i>Accipiter striatus</i>	sharp-shinned hawk	CSC (nesting)
<i>Agelaius tricolor</i>	tricolored blackbird	CSC (nesting)
<i>Amphispiza belli belli</i>	Bell's sage sparrow	CSC (nesting)
<i>Aquila chrysaetos</i>	golden eagle	FPS , CSC (nesting)
<i>Asio flammeus</i>	short-eared owl	CSC (nesting)
<i>Asio otus</i>	long-eared owl	CSC (nesting)
<i>Charadrius montanus</i>	mountain plover	CSC (wintering)
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	FC, SE
<i>Cypseloides niger</i>	black swift	CSC (nesting)
<i>Falco mexicanus</i>	prairie falcon	CSC
<i>Haliaeetus leucocephalus</i>	bald eagle	FD, SE, FPS (nesting and wintering)
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	CSC
<i>Euderma maculatum</i>	spotted bat	CSC
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	CSC
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	CSC
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	CSC
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	CSC
<i>Taxidea taxus</i>	American badger	CSC

Due to the presence of moderately suitable to good quality habitat and the location of the study area within the known ranges of the species, 27 sensitive wildlife species were determined to have a **low** potential to occur in the study area for at least some portion of their life histories. Two of these species, SWWFC and LBV, are federally and state-endangered species, and the CAGN is a federally threatened species. Two additional species, golden eagle and white-tailed kite, are California Fully-Protected Species.

Low

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	CSC
<i>Aspidoscelis tigris stejnegeri</i>	coastal western whiptail	CSC
<i>Phrynosoma coronatum blainvillii</i>	coast (San Diego) horned lizard	CSC
<i>Crotalus ruber ruber</i>	northern red-diamond rattlesnake	CSC
<i>Accipiter cooperii</i>	Cooper's hawk	CSC (nesting)
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	CSC
<i>Ammodramus savannarum</i>	grasshopper sparrow	CSC (nesting)
<i>Aquila chrysaetos</i>	golden eagle	FPS, CSC (migrating/foraging/wintering)
<i>Asio flammeus</i>	short-eared owl	None (migrating/foraging/wintering)
<i>Asio otus</i>	long-eared owl	None (migrating/foraging/wintering)
<i>Athene cunicularia</i>	burrowing owl	CSC
<i>Buteo regalis</i>	ferruginous hawk	CSC (wintering)
<i>Circus cyaneus</i>	northern harrier	CSC (nesting)
<i>Cypseloides niger</i>	black swift	None (migrating/wintering)
<i>Elanus leucurus</i>	white-tailed kite	FPS (nesting)
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE, SE (nesting)
<i>Falco columbarius</i>	merlin	CSC (wintering)
<i>Icteria virens</i>	yellow-breasted chat	CSC (nesting)
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE, SE (nesting)
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	CSC
<i>Antrozous pallidus</i>	pallid bat	CSC
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	CSC
<i>Eumops perotis californicus</i>	western mastiff bat	CSC
<i>Lasiurus cinereus</i>	hoary bat	CSC
<i>(Lasiurus xanthinus)</i>	western yellow bat	CSC;
<i>Myotis yumanensis</i>	Yuma myotis	CSC
<i>Polioptila californica californica</i> ³	coastal California gnatcatcher	FT, CSC

Status Codes**Federal**

FE	=	Federally listed; Endangered
FT	=	Federally listed; Threatened
FC	=	Federal Candidate for listing
FD	=	Federally Delisted

³ Year 2010 FWS protocol surveys were performed for this species adjacent to the BSA along Diamond bar Creek. The surveys resulted in negative findings, the species is not present.

State

ST	=	State listed; Threatened
SE	=	State listed; Endangered
FPS	=	California Fully-Protected Species
CSC	=	State Species of Special Concern

Due to the presence of moderately suitable to good quality habitat and the reported occurrence of one individual within a red-winged blackbird flock on the study area in 2003, five sensitive wildlife species were determined to have a **moderate** potential to occur again in the study area for at least some portion of their life histories.

Moderate

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Agelaius tricolor</i>	tricolored blackbird	None (migrating/foraging/wintering)
<i>Chaetura vauxi</i>	Vaux's swift	None (migrating/foraging/wintering)
<i>Circus cyaneus</i>	northern harrier	None (migrating/foraging/wintering)
<i>Elanus leucurus</i>	white-tailed kite	FPS (migrating/foraging/wintering)
<i>Empidonax traillii</i>	willow flycatcher	None
<i>Nyctinomops macroti</i>	big free-tailed bat	CSC

The following four sensitive species were confirmed **present** on the larger study area since 2007. The LBV is a federally and state-endangered species and the CAGN is a federally threatened species.

Present adjacent to the BSA

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Accipiter cooperii</i>	Cooper's hawk	None (migrating/foraging/wintering)
<i>Accipiter striatus</i>	sharp-shinned hawk	None (migrating/foraging/wintering)
<i>Dendroica petechia</i>	Yellow warbler	CSC (migrating/foraging/wintering)
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE, SE (nesting)

The following two sensitive species were confirmed **present** within the Grand Avenue Interchange and Confluence Improvements BSA since 2007.

Present within BSA

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>
<i>Accipiter cooperii</i>	Cooper's hawk	None (migrating/foraging/wintering)
<i>Accipiter striatus</i>	sharp-shinned hawk	None (migrating/foraging/wintering)

Status Codes

Federal

FE	=	Federally listed; Endangered
FT	=	Federally listed; Threatened
FC	=	Federal Candidate for listing
FD	=	Federally Delisted

State

ST	=	State listed; Threatened
SE	=	State listed; Endangered
FPS	=	California Fully-Protected Species
CSC	=	State Species of Special Concern

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

4.1. Natural Communities of Special Concern

4.1.1. Discussion of Natural Communities

No natural communities of special concern are located within the BSA. Vegetation communities identified and mapped within the BSA (see Figure 5) include 20.25 ac of ruderal vegetation, 37.00 ac of ornamental vegetation, and 119.46 ac of developed area.

4.1.1.1. SURVEY RESULTS

The project would result in temporary and permanent impacts to ruderal, ornamental, and developed areas.

Implementation of Alternative 2 would result in temporary impacts to 18.39 ac of ruderal vegetation, 28.00 ac of ornamental vegetation, and 7.85 ac of developed area; and permanent impacts to 1.86 ac of ruderal vegetation, 9.00 ac of ornamental vegetation, 3.92 ac of developed area. None of these communities are considered to be natural communities of special concern.

Implementation of Alternative 3 would result in temporary impacts to 18.29 ac of ruderal vegetation, 27.63 ac of ornamental vegetation, and 7.85 ac of developed area; and permanent impacts to 1.96 ac of ruderal vegetation, 9.37 ac of ornamental vegetation, 3.93 ac of developed area. None of these communities are considered to be natural communities of special concern.

Although not separate communities, there are a few individual native riparian trees and shrubs located within and around the tributaries to Diamond Bar Creek within the BSA and within the existing SR-60 right-of-way near Diamond Bar Boulevard. These native trees include coast live oak (*Quercus agrifolia*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), California sycamore (*Platanus racemosa*), white alder (*Alnus rhombifolia* Nutt.), and California walnut (*Juglans californica*). Based on review of the 2008 Biological Reconnaissance Survey tree inventory and the proposed site plans, approximately 96

native trees are located within the proposed project’s construction footprint. Of these, 69 are located within the existing Caltrans right-of-way. The native trees identified in the BSA are provided in Table 4.1-1 and Figure 8 – Jurisdictional Waters and Native Tree Locations.

Table 4.1-1 Native Trees Located within the BSA

Common Name	Scientific Name	Within Caltrans ROW	Outside of Caltrans ROW
Coast live oak	<i>Quercus agrifolia</i>	51	1
Red willow	<i>Salix laevigata</i>	0	6
Arroyo willow	<i>Salix lasiolepis</i>	1	8
Black willow	<i>Salix gooddingii</i>	3	2
California sycamore	<i>Platanus racemosa</i>	0	8
California walnut	<i>Juglans californica</i>	14	0
White alder	<i>Alnus rhombifolia</i> Nutt.	0	2
Subtotal		69	27
TOTAL		96	

4.1.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

The proposed project includes minimal widening of the existing freeway footprint along the freeway corridor, thereby avoiding impacts to native trees located within the freeway right-of-way to the extent feasible. Impacts outside of the right-of-way include relocation of existing drainage channels rather than undergrounding, thereby retaining the hydrology supporting adjacent native trees to the extent feasible.

Indirect impacts to roots and canopy of trees on adjacent property may occur as a result of work within the impact area to trees located outside of the permanent and temporary impact areas. If substantial impacts to roots and canopy of trees on adjacent property occur, it may result in the eventual deterioration and loss of the tree. Avoidance and minimization efforts will be implemented as applicable to trees located in areas adjacent to the impact area (i.e., not planned for removal).

To ensure the construction footprint within the BSA is minimized to the extent practicable adjacent to areas containing native trees, a qualified biological monitor will flag and stake the construction limits in the field in coordination with the contractor. The biological monitor will be onsite during construction to ensure the protection of the drip line area of adjacent native trees and that construction limits are enforced. The biological monitor will have the authority to halt construction if required to ensure compliance.

4.1.1.3. PROJECT IMPACTS

The proposed project will result in the removal of existing native trees located within the BSA. Up to 96 trees may be affected as listed in Table 4.1-1 Native Trees Located within the BSA. As the design of the project is finalized and the extent of the widening is precisely defined, field review to determine the extent of impacts to native trees will be conducted, with removal of native trees avoided to the greatest extent possible.

Short-term indirect effects associated with the construction of the proposed project may include potential fuel or lubricant spills from equipment and vehicles; activities of equipment, vehicles, or personnel outside of designated construction areas; increased erosion, siltation and runoff; increased localized noise and vibration; and increase dust accumulation on plant leaves. Implementation of Best Management Practices (BMPs) as defined in the Storm Water Pollution Prevention Program (SWPPP) and restricting activities to within the designated construction areas would minimize these effects.

Long-term indirect impacts to sensitive riparian habitat could result from impacts to water quality. The SWPPP includes long-term water quality treatment facilities designed to accommodate and treat runoff from the proposed project to ensure that no substantial adverse impacts occur to Diamond Bar Creek located downstream of the project site. The project is not anticipated to result in other long-term indirect impacts to sensitive habitats, including shading from retaining walls, fragmentation or adverse effects to adjacent habitat.

4.1.1.4. COMPENSATORY MITIGATION

Native trees, including coast live oak present within the existing Caltrans landscaped areas, that require removal will be replaced in proximity to the BSA as follows: Mark and replace all native trees greater than 6 inch diameter at breast height (dbh) (4.5 feet above surrounding grade) with the same species at a 1:1 ratio. Source materials should be of the same subspecies and/or variety locally present and from seeds or

cuttings gathered within coastal southern California to ensure local provenance. Locations for the tree planting include the Caltrans right-of-way, Diamond Bar Golf Course, and the downstream portion of Diamond Bar Creek owned by the City of Industry.

The City of Diamond Bar's Tree Removal Permit process will be applicable for the removal of any of these trees outside of the freeway right-of-way. All native trees located outside of Caltrans landscaped areas removed will be replaced as follows: Mark and replace all native trees greater than 6 inch diameter at breast height (dbh) (4.5 feet above surrounding grade) with the same species at a 2:1 ratio. Source materials should be of the same subspecies and/or variety locally present and from seeds or cuttings gathered within coastal southern California to ensure local provenance. Locations for the tree planting include the Caltrans right-of-way, Diamond Bar Golf Course, and the downstream portion of Diamond Bar Creek owned by the City of Industry.

4.1.1.5. CUMULATIVE IMPACTS

Because impacts to mature native trees within the BSA will be offset by planting like-in-kind trees at a 1:1 and 2:1 ratio in proximity to the BSA, the project is not expected to contribute to cumulative effects to mature trees in the region.

4.2. Jurisdictional Waters

4.2.1.1. SURVEY RESULTS

The 2007 *Jurisdictional Delineation* indicated that the presence of 1.18 acres of waters of the United States and 1.62 acres of waters of the States, including 0.38 acres of wetlands located within the BSA. Current engineering design plans indicate relocation of the existing southerly SR-60 concrete-lined channel and minor culvert extensions which would affect other drainage features as shown on Figure 8 – Jurisdictional Waters and Native Tree Locations.

4.2.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

The proposed project avoids and minimizes permanent impacts to jurisdictional waters and wetlands to the extent feasible. Relocation of existing concrete-line drainage features is proposed in lieu of under grounding these facilities. Culvert extension is designed as the minimum extension necessary to accommodate roadway widening.

4.2.1.3. PROJECT IMPACTS

Implementation of Alternative 2 will result in the permanent loss of 0.12 acres of wetlands due to culvert extensions to accommodate the widening of SR-60 and Grand Avenue.

Implementation of Alternative 3 will result in the permanent loss of 0.16 acres of waters of the United States and State, including 0.21 acres of wetlands, due to culvert extensions to accommodate the widening of SR-60 and Grand Avenue, and installation of the new SR-60/Grand Avenue eastbound loop on-ramp.

It is anticipated that resource agency permits will be required for the proposed relocation and culvert extensions from the ACOE, RWQCB, and the CDFG under Section 404 and 401 of federal CWA and Section 1600 of the State Fish and Game Code, respectively.

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, nonnative plants transported into areas along the roadway with the movement of soil and/or placement of fill material that is present on construction equipment brought on site or taken off site and is inadvertently included in seed mixes. These indirect effects would only last during construction.

4.2.1.4. COMPENSATORY MITIGATION

A native habitat replacement program at a 2:1 ratio for impacts to waters and wetlands is anticipated. The downstream portion of Diamond Bar Creek owned by the City of Industry is proposed as the mitigation site. A 5-year Habitat Mitigation and Monitoring Program (HMMP) will be developed in consultation with the resource agencies (ACOE, CDFG, RWQCB, FWS) to ensure the success of the native habitat replacement program. The HMMP will include provisions for initial planting, performance monitoring and success criteria.

4.2.1.5. CUMULATIVE EFFECTS

Because impacts to jurisdictional waters within the BSA will be offset by the expansion of contiguous waters and wetlands at a 2:1 ratio immediately adjacent to the BSA along Diamond bar Creek, the project is not expected to contribute to cumulative effects to waters and wetlands in the region.

4.3. Special Status Plant Species

Based on the 2008 general biological reconnaissance survey and the 2008 and 2010 focused Braunton's milk-vetch plant survey, no listed sensitive plant species are located within the BSA. No federally-designated critical habitat is present within the BSA.

4.4. Special Status Animal Species Occurrences

Based on the 2008 general biological reconnaissance, and the 2007, 2008 and 2010 focused SWWFC and LBV, sensitive wildlife species documented as present within the BSA is limited to raptors and other species protected by the MBTA. Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*Accipiter striatus*) were observed onsite. These species appear to utilize the BSA for wintering and foraging only. No federally-designated critical habitat is present within the BSA.

The MBTA and the California Fish and Game Code prohibit impacts to most native species of nesting birds. The trees and shrubs within and adjacent to the BSA may provide suitable nesting sites for a variety of species, including raptors and species protected by the MBTA, which are protected pursuant to these regulations.

4.4.1. Nesting Birds

The trees and shrubs within the BSA may provide suitable nesting sites for a variety of these species. However, raptor nesting habitat within the BSA is not ideal due to the lack of large sized trees and/or structures.

4.4.1.1. SURVEY RESULTS

The trees and shrubs within the BSA may provide suitable nesting sites for a variety of these species; however, no active nests were found within the BSA during the 2008 general biological reconnaissance, and the 2007, 2008 and 2010 focused SWWFC and LBV surveys. Raptor nesting habitat within the BSA is not ideal due to the lack of large sized trees and/or structures. No federally-designated critical habitat is present within the BSA.

4.4.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

Potential direct impacts to protected species are limited to migratory birds protected under the MBTA. Grubbing of vegetation within the construction footprint will

occur outside of the bird nesting season, generally defined as February 1 to August 31, to avoid potential impacts to nesting birds. However, work may occur during the nesting season if a preconstruction nest survey is conducted by a qualified biologist within three days prior to the start of construction to ensure no impacts to nesting birds occur. The survey will be conducted within the proposed impact area and adjacent suitable habitat up to 500 feet outside the construction footprint. Should nesting birds be present, no work will be conducted in that area until the young have fledged and will no longer be affected by the project, as determined by the qualified biologist.

4.4.1.3. PROJECT IMPACTS

Direct impacts to nesting birds could occur if an active nest is removed or if nesting birds are disturbed as a result of construction activities to the extent that they abandon the nest. The MBTA and California Fish and Game Code prohibit impacts that cause nest failure of most species of birds, and the avoidance and minimization measures described in Section 4.3.1.2 are anticipated to ensure that no nest loss occurs.

4.4.1.4. COMPENSATORY MITIGATION

As discussed in Section 4.1.1.4 of this document, impacts to mature native trees will be offset in accordance with the requirements of the Caltrans and/or City's Tree Preservation Ordinance through the Tree Removal Permit process. No additional compensatory mitigation is required.

4.4.1.5. CUMULATIVE EFFECTS

Project impacts to nesting birds are limited to the removal of trees and shrubs along the project's active roadways. These resources are less suitable for nesting than other resources throughout the region due to their proximity to the roadway and the resulting noise and human disturbance. Potential impacts from tree removal will be minimized and avoided through the planting of replacement trees. Therefore, temporary impacts to these resources are not anticipated to result in a cumulatively considerable contribution to impacts to nesting sites throughout the region.

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

5.1. Federal Endangered Species Act Consultation Summary

On March 27, 2007, as part of the early consultation process conducted for the SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project, Christine L. Medak, Biologist, FWS Biologist discussed the proposed SR-57/SR-60 Confluence Grand Avenue Interchange Improvement Project with Erik Hansen, Environmental Scientist, EIP Associates. Ms. Medak recommended focused surveys be conducted for the SWWFC and LBV within suitable habitat areas located within the project study area, stating that the SWWFC and LBV surveys could be conducted simultaneously to reduce redundancy in survey time. The conversation was memorialized in a March 27, 2007 e-mail.

The completed 2007 and 2008 protocol survey reports documenting negative findings within the BSA have been forwarded to the FWS for their use/review. The 2010 protocol survey report will be forwarded to the FWS for their use/review once available.

5.2. Federal Fisheries and Essential Fish Habitat Consultation Summary

No additional consultation was required for Federal Fisheries and Essential Fish Habitat, as these resources have been determined to be absent from the BSA.

5.3. California Endangered Species Act Consultation Summary

No additional consultation was required pursuant to CESA, as resources subject to CESA have been determined to be absent from the BSA.

5.4. Wetlands and Other Waters Coordination Summary

It is anticipated that resource agency permits will be required from the United States Army Corps of Engineers (ACOE), California Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Game (CDFG) under Sections 404 and 401 of the federal Clean Water Act (CWA) and Section 1600 of the State Fish and Game Code, respectively, for the concrete-lined channel relocations and minor culvert extensions associated with roadway widening.

5.5. Invasive Species

Post-project restoration monitoring within the downstream Diamond Bar Creek migration area is required to include invasive vegetation control as required by the Army Corps of Engineers (ACOE), California Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Game (CDFG) through the Section 404 and 401 of the federal Clean Water Act (CWA) and Section 1600 of the State Fish and Game Code compliance process.

5.6. Other

No additional consultation was required for other topics. Section 3.1.3 of this NES includes relevant information pertaining to the MBTA and wildlife corridors. No additional information is required.

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