

I-805 HOV/Carroll Canyon Road Extension Project

CITY AND COUNTY OF SAN DIEGO, CALIFORNIA
DISTRICT 11-SD-805, KP R42.6 / R46.2 (PM R26.5 / R28.7)
EA 2T0400

Initial Study with Mitigated Negative Declaration/ Environmental Assessment with Finding of No Significant Impact



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.



April 2009

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I-805 HOV/Carroll Canyon Road Extension Project

Interstate 805, from postmile (PM) R26.5 (kilopost [KP] 42.6) to PM R28.7 (KP 46.2)

San Diego County, California

INITIAL STUDY with Mitigated Negative Declaration / ENVIRONMENTAL ASSESSMENT with Finding of No Significant Impact

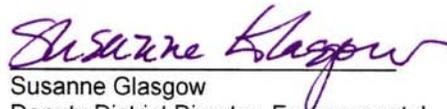
Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies:
City of San Diego
California Public Utilities Commission

2 April 2009

Date of Approval



Susanne Glasgow
Deputy District Director, Environmental
California Department of Transportation

CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT

FOR

I-805 HOV/Carroll Canyon Road Extension Project

Caltrans has determined that the Build Alternative will have no significant impact on the environment. This FONSI is based on the EA which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement (EIS) is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA.

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

2 April 2009
Date

Susanne Glasgow
Susanne Glasgow
Deputy District Director, Environmental
California Department of Transportation

MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to extend Carroll Canyon Road under Interstate 805 (I-805), add High Occupancy Vehicle (HOV) lanes in both the Northbound (NB) and Southbound (SB) direction along I-805, and construct north facing Direct Access Ramps (DAR) from these HOV lanes to the Carroll Canyon Road extension.

Determination

The purpose of the MND is to give notice to interested agencies and the public that Caltrans has adopted a MND for this project. This does not mean that Caltrans' decision regarding the project is final.

Caltrans has prepared an Initial Study for this project and has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on the following:

- Farmlands/Timberlands
- Pedestrian/Bicycle Facilities
- Wild & Scenic Rivers
- Park & Recreation Facilities
- Community Character & Cohesion

The proposed project would have no significant adverse effect on:

- | | |
|--------------------------------|------------------------------------|
| • Growth | • Transportation/Traffic |
| • Visual Resources | • Water Quality |
| • Cultural Resources | • Hazardous Waste |
| • Hydrology & Floodplain | • Geology/Soils/Seismic/Topography |
| • Paleontological Resources | • Land Use |
| • Air Quality | • Cumulative Impacts |
| • Noise | • Natural Communities |
| • Wetlands and Other Waters | • Plant Species |
| • Utilities/Emergency Services | • Animal Species |

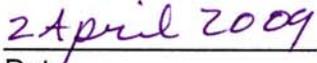
The proposed project would have no significant adverse effect on Threatened or Endangered Species with incorporation of the following mitigation measures to reduce potential effects to insignificance:

To Mitigate For Potential Biological Impacts

1. To offset 23ft² (0.0002ha) of impacts to San Diego fairy shrimp (SDFS) within road pools, at least 46ft² (0.005ha) of SDFS occupied pool habitat will be perpetually preserved and/or restored and managed.
2. To offset 0.6ac (0.24ha) of permanent impacts to coastal sage scrub, 1.2ac (0.5ha) of coastal sage scrub occupied by the gnatcatcher will be perpetually preserved and managed.
3. Caltrans will execute and record a preservation mechanism (i.e., deed restriction, conservation easement, etc.) over the vernal pool and coastal sage scrub to be preserved off-site by the project. This will protect all preserved areas in perpetuity.
4. Caltrans will prepare and implement a perpetual management, maintenance and monitoring plan for all on- or off-site biological conservation areas.
5. Further protection measures shall be implemented to protect sensitive resources within the project footprint. These measures are detailed within the Environmental Commitments Record (ECR) (Appendix D).



Susanne Glasgow
Deputy District Director, Environmental
California Department of Transportation



Date

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Chapter 1: Proposed Project

1.1 INTRODUCTION

The California Department of Transportation (Caltrans) in coordination with the Federal Highway Administration (FHWA) proposes to extend Carroll Canyon Road, a local arterial, and construct High Occupancy Vehicle (HOV) lanes on Interstate 805 (I-805) from the Carroll Canyon Road extension to the existing HOV lanes at the merge of Interstate 5 (I-5) and I-805. North-facing Direct Access Ramps (DARs) would connect the HOV lanes to the Carroll Canyon Road extension. The project extends 2.2mi (3.5km) and is located in the City of San Diego (Figure 1.1).

The Mira Mesa Boulevard/Sorrento Valley Road Interchange on I-805 is located in the Sorrento Valley community in the City of San Diego (City). It is one of two freeway interchanges (the second being the I-805 La Jolla Village Drive/Miramar Road interchange) serving the Sorrento Valley area. It is the most northerly local interchange on I-805 before the freeway merges with I-5 two miles to the north, and provides the only direct northerly freeway access to I-805 and I-5 from Sorrento Valley.

Sorrento Valley and surrounding areas comprise one of the largest employment centers in the San Diego region. This area accounts for approximately 6% of the region's employment base, comparable to San Diego's central business district. Mira Mesa Boulevard/Sorrento Valley Road interchange is the primary access point for commuter traffic into and out of Sorrento Valley. The area is home to over 46,000 jobs, many of which are located within large, commercial employment sites (e.g., Qualcomm, Gen-Probe, etc.). Forecasts indicate that employment in the Sorrento Valley area will increase to 51,000 jobs by the year 2030, an 11% increase (SANDAG).

This project is included in the San Diego Association of Governments' (SANDAG) adopted 2008 *Regional Transportation Improvement Program* (RTIP), with the Carroll Canyon Road extension component of the project listed under projects by the City of San Diego. The remaining components of the project are listed under projects by Caltrans as *I-805 Direct Access Ramps and HOV to Carroll Canyon Road*. This project is included in SANDAG's adopted 2007 *Regional Transportation Plan* (RTP) as a revenue-constrained, phased highway project within the I-805 HOV/Managed Lanes Corridor.

State funding through the Corridor Mobility Improvement Account (CMIA) in the amount of \$57.5 million has been identified for this project. The remaining costs for this \$102 million project would be funded through local and regional sources. Specifically, \$32.8 million would come from regional *TransNet* funds and \$11.7 million from local funds. *TransNet* is the \$3.3 billion program for highways, transit, local roads and bicycles that started in 1987 when voters countywide passed Proposition A – a county 0.5% transportation sales tax measure.

1.2 PURPOSE AND NEED

1.2.1 Purpose

The purpose of the I-805 HOV Extension / Carroll Canyon Road Extension Project is to provide efficient HOV access from the employment region of Sorrento Valley to the existing HOV lanes that begin at the I-5/I-805 interchange.

Objectives of the project are to:

- 1) Provide local traffic an additional access to the Sorrento Valley area via the Carroll Canyon DARs and Carroll Canyon Road extension. This new access would relieve congestion currently occurring at the Mira Mesa Boulevard/Sorrento Valley Road interchange.
- 2) Extend the southerly terminus of the existing I-5 HOV lanes from the I-5/I-805 interchange to a major regional business destination.
- 3) Provide HOV lane continuity with the existing I-5 HOV lanes along I-5 to the north as well as planned HOV lanes to the south along I-805. These improvements support the region's transportation objectives.
- 4) Support regional objectives by promoting the use of carpooling and transit, as well as being compatible with future proposed Bus Rapid Transit (BRT).

The project operates independent of reasonably foreseeable transportation improvements and would not preclude alternatives for future projects.

1.2.2 Need

Due to the coastal topography of the region, Sorrento Valley is geographically constrained to the north, west and south. The existing local circulation system serves Mira Mesa Boulevard and Sorrento Valley Road and offers limited regional mobility alternatives to I-805. Over the last decade, rapid employment growth in Sorrento Valley has resulted in increased demands on the existing interchange and the surrounding local circulation system. The result has been peak period congestion that has degraded travel times between Sorrento Valley employment sites and I-805.

EXISTING TRAFFIC CONDITIONS

Based on the methodology in the Caltrans *2000 Highway Capacity Manual*, an unsatisfactory delay at signalized and unsignalized intersections is considered more than 55 seconds. The intersections below are currently above this level during morning or afternoon peak hour commute periods. The following congested intersections demonstrate the need to provide an alternative access to Sorrento Valley.

I-805

The northbound I-805 exit ramp to Mira Mesa Boulevard/Vista Sorrento Parkway currently operates with a delay of 3 minutes, 15 seconds during the morning commute causing traffic to queue onto I-805.

The northbound I-805 exit ramp to Vista Sorrento Parkway/Mira Sorrento Place currently operates with a delay of 56 seconds during the morning commute.

Local Street Intersections

The intersection of Mira Mesa Boulevard and Scranton Road currently operates with a delay of 1 minute, 46 seconds during the morning commute and a delay of 2 minutes, 9 seconds during the afternoon commute.

The intersection of Mira Mesa Boulevard and Pacific Heights Boulevard currently operates with a delay of 1 minute, 23 seconds during the morning commute and a delay of 2 minutes, 9 seconds during the afternoon commute.

Refer to section 2.2.6 for further detail regarding existing and future traffic conditions.

HOV CONNECTIVITY AND MULTI-MODAL TRANSPORTATION

A need exists to provide a continuous system of HOV lanes throughout major corridors within the San Diego region and specifically along the I-805 and I-5 corridors. By establishing a continuous HOV lane system, buses and HOVs would travel along I-5 and I-805 with less congestion. However, for efficient access to local streets, they need a way to enter and exit directly onto and off of I-5 or I-805 without having to merge across numerous lanes. By constructing DARs, they would be able to more easily access local streets where major job centers and residential development are located.

1.3 PROJECT DESCRIPTION

1.3.1 Alternatives

PROPOSED BUILD ALTERNATIVE (PREFERRED)

The I-805 HOV Extension/Carroll Canyon Road Extension Project includes extension of Carroll Canyon Road from Scranton Road east of Interstate 805 (I-805) to the intersection of Carroll Canyon Road with Sorrento Valley Road west of I-805. The proposed project would also provide a business access road from the proposed Carroll Canyon Road to businesses south of Sorrento Valley Road.

The Carroll Canyon Road extension would be a four lane urban collector 82ft (25m) wide and approximately 0.52mi (0.83km) long. Approximately 0.31mi (0.5km) of this new roadway would be on structure with the remaining 0.21mi (0.33km) on fill. An approximately 328ft (100m) long access road for local businesses would be built from the Carroll Canyon Road extension to remove the non-standard distance to the intersection at Sorrento Valley Road and I-805. This new access road would include a signalized intersection and start 30ft (9m) above grade on structure and cross under Carroll Canyon at grade. A pedestrian staircase would be constructed to allow access to Sorrento Valley Road from local businesses. The non-standard intersection at Sorrento Valley Road and the I-805 southbound off ramp would be replaced by revising the horizontal and vertical geometrics of Sorrento Valley Road/Mira Mesa Boulevard to accommodate a standard signalized intersection at Carroll Canyon Road and Sorrento Valley Road. A new signalized intersection would also be created at Scranton Road and Carroll Canyon Road.

The proposed project also includes north facing DARs from the Carroll Canyon Road extension to the median of I-805, as well as, the construction of northbound and southbound HOV lanes within the median from Mira Mesa Boulevard to the existing HOV lanes at I-5 including median bridge widening at Sorrento Valley Boulevard undercrossing (UC) (Bridge No.57-786 L/R) and Mira Mesa Boulevard UC (Bridge No. 57-785 L/R). The north facing DAR is a two lane facility, which would be connected to HOV lanes. The proposed project also includes modification to the existing Carroll Canyon overhead (OH) (Bridge No. 57-787 L/R) to accommodate the DARs, widening of the southbound lanes at the Mira Mesa Boulevard UC (Bridge No. 57-785 L) to accommodate realignment of the southbound Mira Mesa loop on-ramp and realignment of the diamond on-ramp. Modifications also include southbound shoulder widening south of the existing Carroll Canyon OH (Bridge No. 57-787 L), northbound shoulder widening north of the Mira Mesa Boulevard UC (Bridge No. 57-785 R) and north of the Sorrento Valley Boulevard UC (Bridge No.57-786 R). Minor widening/realignment would also occur along Sorrento Valley Road / Mira Mesa Boulevard, the southbound off-ramp, and Scranton Road. Extension of the northbound and southbound HOV lanes includes pavement widening in the median area of I-805 and Sorrento Valley Boulevard UC (Bridge No. 57-786 L/R). A new signalized intersection would be constructed at the intersection of Carroll Canyon Road and the DARs.

Utility relocations include the installation of new poles within the existing San Diego Gas & Electric (SDG&E) utility corridor in order to alleviate clearance conflicts with the proposed roadway alignment and elevation. Distribution lines would also be changed

from overhead to underground to comply with all applicable codes, laws and regulations. The utility pole modifications would take place along an existing utility corridor across the Carroll Canyon Road extension, east of I-805. A high-pressure gas line and blowoff (device for releasing gas pressure from a pipeline) would require relocation to avoid conflict with the proposed bridge abutment and fill requirements. The above ground blowoff is located east of I-805. Please see section 2.2.5 for further detail.

Two sewer lines, one sewer vent and one water line would be relocated and replaced as a result of the project. These facilities are owned and maintained by the City of San Diego.

Pedestrian facilities to be incorporated into the project include adding sidewalk along the southern side of the proposed Carroll Canyon Road extension. The sidewalk would be 8ft (2.4m) wide. Bike facilities would be provided along both shoulders of Carroll Canyon Road that are 6ft (1.8m) in width.

Temporary construction easements would be required for six partial parcels. Two parcels would be transferred in ownership from the City of San Diego to Caltrans. Three partial parcels would be acquired from private owners and would become property of the City of San Diego. Footing easements for retaining walls would also be required for three privately owned parcels. One partial parcel privately owned would become an easement for SDG&E to maintain their facilities. Table 1.1 below lists the parcels required for the project.

No neighborhoods, public facilities, non-profit organizations or families with special composition (e.g. ethnic, minority, elderly, disabled or other factors) would be affected by the proposed right-of-way actions.

Table 1.1 Parcels Requiring Acquisitions and Easements

Assessor Parcel Number
343-010-19
343-130-12
343-130-13
343-131-09
343-131-10
343-130-17
341-321-37
341-321-63
341-321-54

Note: some parcels require multiple right-of-way uses.

Nonstandard Mandatory Design Features:

A preliminary design of the Build Alternative was completed to identify design restrictions and potential design exceptions for the project. The I-805/Carroll Canyon Road Interchange has physical constraints. It is located in an urban area surrounded by existing transportation facilities. In addition, this project falls under City of San Diego jurisdiction with different design guidelines than Caltrans. To minimize physical impacts to the existing environment and to meet Caltrans and City of San Diego design guidelines, mandatory and advisory design exceptions have been approved.

Exceptions to Mandatory Design Standards

The project proposes the following non-standard features:

- Stopping sight distances
- Super elevation rates
- Super elevation rates on a city street or county road
- Horizontal radii
- Lane widths
- Cross slopes
- Shoulder widths
- Super elevation transition runoff lengths
- Super elevation runoff locations
- Super elevation transitions for compound curves
- Super elevation rates on city streets or county roads
- Compound curve radii
- Vertical curves
- Intersection angles
- Single lane freeway entrance details
- Lane drop lengths

Figures 1.2-1.4 show project features of the Built Alternative. Figure 1.5 shows a typical cross section for the Built Alternative.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) AND TRANSPORTATION DEMAND MANAGEMENT (TDM) ALTERNATIVES

TSM and Multi-modal Alternatives consist of strategies to maximize efficiency of the existing facilities by providing options such as ridesharing, parking, and traffic-signal optimization. TSM options to improve traffic flow typically increase the number of vehicle trips a facility can carry without increasing the number of through lanes. This ability to increase the number of vehicle trips is often included during consideration of existing and forecast operational characteristics of a facility. Such strategies include replacing existing stop signs with traffic signals at intersections to improve existing peak hour traffic flow and to reduce queuing of vehicles. TSM also encourages automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. Multi-modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and transit.

TDM Alternatives focus on regional strategies for reducing the number of vehicle trips and vehicle miles traveled, as well, as increasing vehicle occupancy. It facilitates higher

vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation choice in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. Typical activities within this alternative reduce the amount of single occupancy vehicle trips by providing contract funds to regional agencies that are actively promoting ridesharing, maintaining rideshare databases and providing limited rideshare services to employers and individuals. Promoting mass transit, or by facilitating non-motorized alternative means of transportation are two such examples. TDM strategies may also include reducing the need for travel altogether through initiatives such as telecommuting. In some cases, TDM may also involve changing work schedules, with the resultant greater travel flexibility producing a more even pattern of transportation network use, muting the effect of morning and evening rush hours.

Although TSM/TDM measures alone could not satisfy the purpose and need of the project, the following TSM/TDM measures have been incorporated into the Build Alternative for this project:

- Bicycle and pedestrian improvements along Carroll Canyon Road
- Access to/from HOV lanes on I-805 to encourage carpooling/ridesharing
- Compatibility with future proposed BRT (Bus Rapid Transit)

NO-BUILD ALTERNATIVE

The No-Build alternative would maintain existing conditions. Delay would continue to worsen in 2030. This alternative is inconsistent with the needs of this area. Not extending the HOV network would create a gap in the HOV system and continuity of HOV lanes from I-805 to I-5 would be unattainable. Not providing DARs for the I-805 HOV lanes would prevent carpoolers or bus users from efficiently accessing a prime employment center.

The No-Build alternative is not consistent with the plans described in the RTP and RTIP.

IDENTIFICATION OF THE PREFERRED ALTERNATIVE

Prior to circulation of the draft document the Project Development Team analyzed the benefits and impacts of the Build, No-Build and TSM alternatives and identified the Build Alternative as the preferred alternative. After receiving input from the public, the project development team has remained with its prior identification of the Build Alternative as the preferred alternative.

Figure 1.1: Project Vicinity/Location Maps



Figure 1.3: Project Features Map B



Figure 1.4: Project Features Map C



1.4 PERMITS AND APPROVALS NEEDED

The permits, reviews, and approvals required for project construction are found in Table 1.2.

Table 1.2: Permits and Approvals Needed

Administering Agency	Permit or Approval	Current Status
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species	Biological Opinion Received 3/31/09
City of San Diego	Coastal Development Permit	Pending
City of San Diego	Freeway Agreement	Pending
City of San Diego	Encroachment Permit	Pending
California Transportation Commission	Access Approval	Pending

Chapter 2: Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures

2.1 RESOURCES WITHOUT IMPACTS

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

Wild & Scenic Rivers

No Wild & Scenic designated rivers exist within the project footprint.

Parks & Recreational Facilities

No parks or recreation facilities exist within the project footprint.

Farmlands/Timberlands

The project site is not located on land under a Williamson Act contract or within a Timber Production Zone, and no agricultural resources are located in the vicinity. Project implementation would not convert farmland to non-agricultural uses or affect any farmlands or timberlands.

Community Impacts

No impacts would occur to affect community character and cohesion. The Sorrento Valley area consists of commercial and industrial land uses.

The project would not result in relocation of residences or businesses. Partial takes of private and public property would take place to allow construction of the project.

No minority or low-income populations would be adversely affected by the proposed project. There is no housing in the area for minority or low-income populations.

2.2 HUMAN ENVIRONMENT

2.2.1 Land Use

This subchapter describes existing land uses within the project area; discusses the adopted land use plans, policies and ordinances that would apply to the proposed project. The analysis and findings presented in this subchapter are based on a Community Impact Memo prepared July 2008.

AFFECTED ENVIRONMENT

Existing Land Use

Land uses within the project area include a mixture of industrial, commercial, open space, and public facilities. A business park with predominantly office uses and some light industrial uses is located to the west. The area underneath I-805 is open space. Uses to the east of the proposed project area (north of existing Carroll Canyon Road and east of Scranton Road) are office and industrial. To the northeast are high-level (six to ten stories) structures for office use (north and south of Mira Mesa Boulevard) and a lower-level outdoor commercial mall (north of Mira Mesa Boulevard). To the southwest and southeast are business parks containing offices. The nearest residential area is located approximately 0.5mi (0.8km) to the northeast of the proposed project site. Figure 2.1 depicts existing land uses within the project area.

Land Use Designations

The Land Use adjacent to the proposed project, as designated by the City of San Diego's General Plan (General Plan), the Torrey Pines Community Plan, and the Mira Mesa Community Plan include Light Industrial, Heavy Industrial, Single Unit Residential, Open Space for Conservation and Undeveloped/Under Construction.

A portion of the proposed project is located within the City of San Diego's Multi-Habitat Planning Area (MHPA), which is the City's planned habitat preserve within the Multiple Species Conservation Program (MSCP) Subarea. The MSCP is the regional program through which the MHPA will be assembled as each participating jurisdiction implements their portion of the MSCP. The planned MSCP regional preserve for southwestern San Diego County is targeted at 172,000ac (69,606ha).

The City's MSCP study area includes 206,124 ac (83,415ha) within the City's jurisdiction. The City's planned MHPA totals 56,831 ac (22,998ha), with 52,012ac (22,667ha) (90%) targeted for preservation (approximately 30% of the planned regional preserve).

Public access is allowed in many areas of the MHPA consistent with species protection and habitat management. Trails (biking, hiking, and/or equestrian uses), passive recreation, bird watching, scientific research, and nature walks are examples of allowable uses in the MHPA that provide opportunities for the public to access and enjoy the MHPA. Mission Trails Regional Park, Mission Bay, Tecolote Canyon, and

Peñasquitos Canyon are a few major recreational areas within the MHPA that are available for public access in designated areas.

Development Trends

No large developments are anticipated to be built in the immediate project vicinity. The area is currently developed or is protected open space under the jurisdiction of the City of San Diego's MHPA. Existing and planned land uses are shown in Figure 2.1 and Figure 2.2.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

A portion of the proposed project is located within the City of San Diego's Multi-Habitat Planning Area (MHPA). The project would not impact existing or planned development within the project area.

No-Built Alternative

The No-Build alternative would not impact existing or planned development within the project area

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The Build Alternative does not have impacts to existing or planned development. The MHPA Land Use Adjacency Guidelines would be followed through the use of various project features including the use of permanent water treatment measures to treat runoff, directing lighting away from sensitive habitat and not introducing non-native vegetation into sensitive habitat areas.

Figure 2.1: Existing Land Use

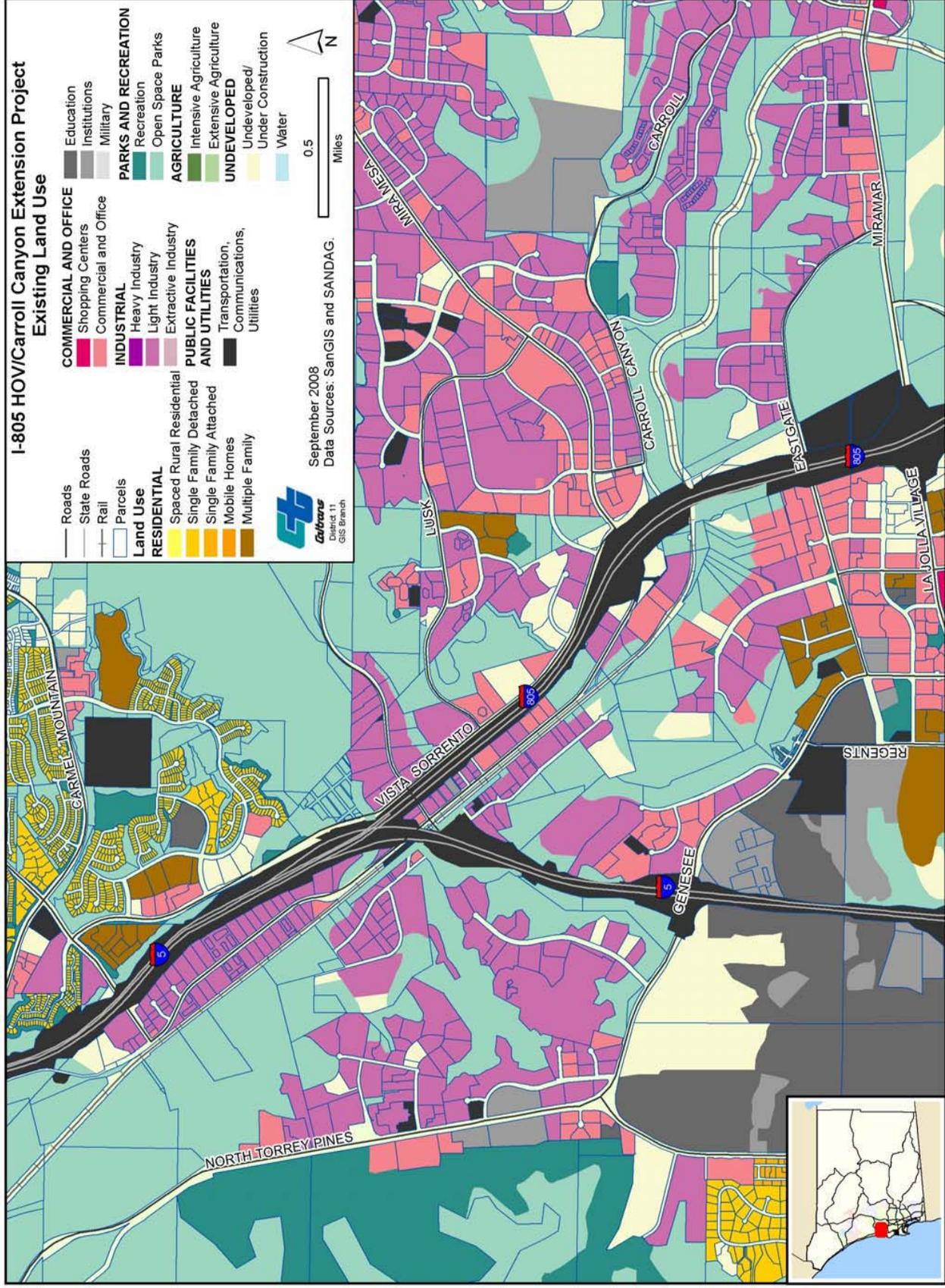
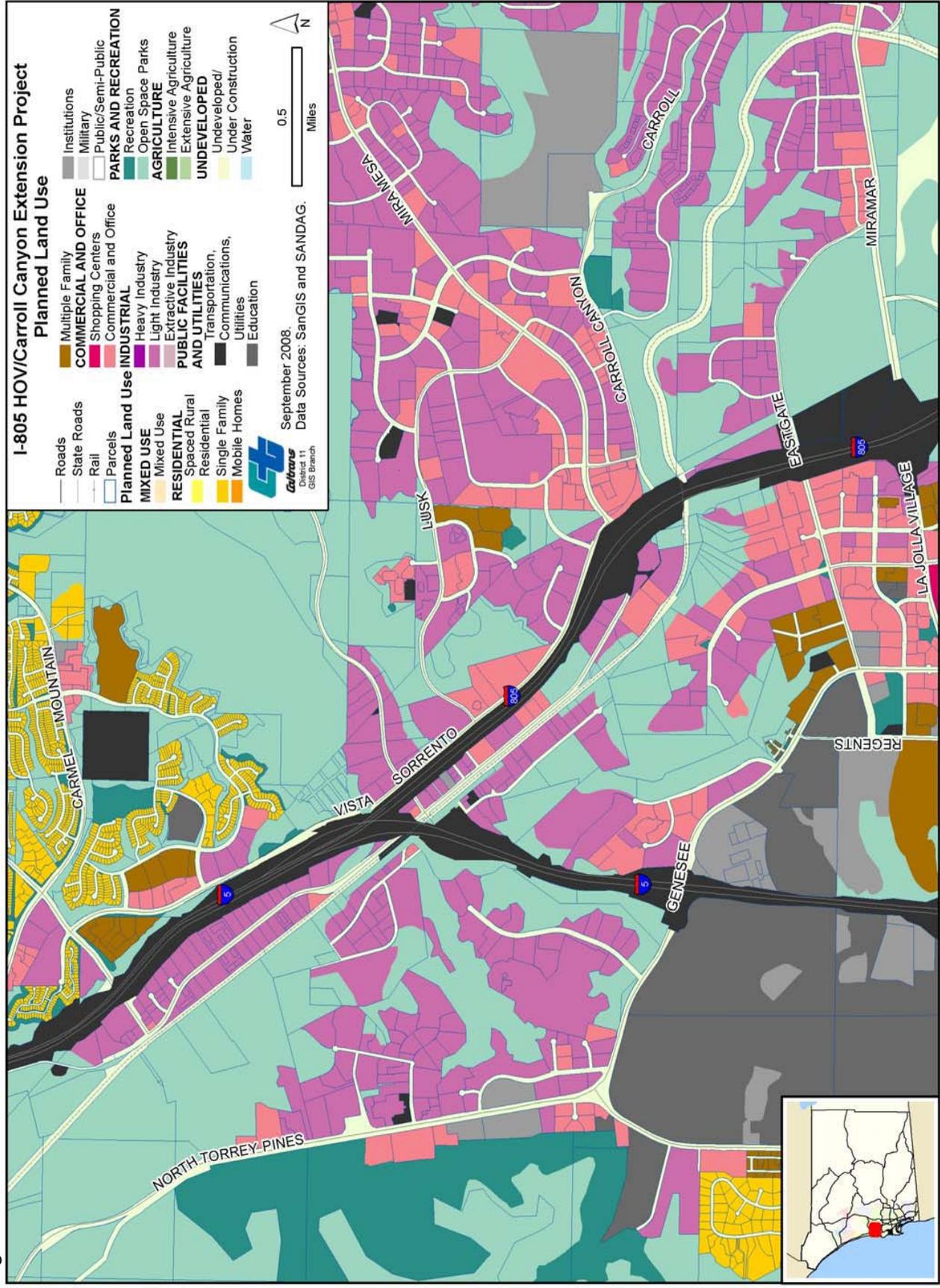


Figure 2.2: Planned Land Use



2.2.2 Consistency with State, Regional and Local Plans and Programs

AFFECTED ENVIRONMENT

Relevant Land Use Plans, Policies, and Ordinances

Plans, policies and ordinances that pertain to land use and transportation planning within the Project area are contained in elements and policies of the SANDAG 2007 RTP, the RTIP; the City of San Diego General Plan, Torrey Pines Community Plan, Mira Mesa Community Plan, and the MSCP. These land use plans and ordinances are described below.

REGIONAL TRANSPORTATION PLAN

In November 2007, the SANDAG Board of Directors approved the 2030 RTP. The RTP is the adopted long-range transportation planning document for the San Diego region. It is used as the basis for funding decisions made through the RTIP, which is discussed below. The plan covers public policies, strategies and investments to maintain, manage and improve the regional transportation system through 2030.

The RTP includes major transit capital projects, including DARs. The RTP identifies DARs as part of the region's Managed Lane/HOV network and identifies DARs as features along the I-805 corridor within the Project area.

REGIONAL TRANSPORTATION IMPROVEMENT PLAN

The RTIP is a key component of the RTP and other planning efforts for the region. The RTIP is consistent with the RTP and incrementally implements the vision presented in the RTP. The RTIP is a five-year capital improvement program for transportation projects that is updated by SANDAG every two years and reflects the region's priorities for short-range transportation system improvements.

CITY OF SAN DIEGO GENERAL PLAN

The General Plan (City of San Diego 2008) represents the comprehensive long-term plan for physical development of the City and provides a foundation for land use decisions within the City. The general plan includes state mandated elements related to circulation, land use, housing, conservation, open-space, noise and safety. The Mobility Element contains goals and policies intended to attain a balanced, multi-modal transportation network. The General Plan also lays the foundation for the more specific community plans, such as the Torrey Pines and Mira Mesa Community Plans described below. These Community Plans are based on the General Plan goals, guidelines, standards, and recommendations, and are tailored for the specific planning goals and objectives of the community planning areas. Specific policies within the Mobility Element of the General Plan that pertain to the proposed project include:

- ME-B.1 Work closely with regional agencies and others to increase transit ridership and mode share through increased transit service accessibility, frequency, connectivity, and availability.

- ME-B.2 Support the provision of higher-frequency transit service and capital investments to benefit higher-density residential or mixed-use areas; higher-intensity employment areas and activity centers; community plan-identified neighborhood, community and urban villages; and transit-oriented development areas.
- ME-B.10 Implement transit priority measures to help bypass congested areas. Priority measures include, but are not limited to, transit signal priority, queue jumpers, exclusive transit lanes, transit ways, use of freeway shoulders and direct access ramps to freeway HOV facilities.

TORREY PINES COMMUNITY PLAN

A portion of the project study area is located within the Torrey Pines Community Plan. Within the project study area, the Torrey Pines community planning area includes the area west of I-805. The Torrey Pines Community Plan identifies the issues and goals of the community in a series of elements that include resource management and open space, transportation, residential, commercial, industrial, and community facilities. The plan also discusses the Local Coastal Program and the need to follow its guidelines for development within the Torrey Pines community. The relevant element of the plan, the Transportation Element is summarized below.

Transportation Element

The Transportation Element discusses the goals and policies with regards to transportation including transit, pedestrian facilities and bikeway and trail systems in the community. The goals of this community include:

- Provide an efficient, safe, and environmentally sensitive transportation system.
- Ensure that transportation improvements do not negatively impact the numerous open space systems located throughout the Torrey Pines community.
- Provide a transportation system that maximizes the opportunities for public transit use, especially in Sorrento Valley.
- Provide a system of bikeways and pedestrian facilities that would encourage bicycling and walking as means of transportation.
- Provide a transportation system that provides convenient linkages to the community's activity centers and to the rest of the metropolitan region.
- Provide a transportation system that encourages the use of mass transit, rather than building and/or widening roads and freeway.

MIRA MESA COMMUNITY PLAN

The project study area west of I-805 falls within the community of Mira Mesa. Mira Mesa Community Plan land use designations adjacent to the build alternative include light industrial, undeveloped, open space, commercial and office space. The Mira Mesa Community Plan identifies the issues and goals of the community in a series of elements that include sensitive resources and open space system, transportation system, park and recreation facilities, community facilities, residential land use, industrial land use, commercial land use, and development criteria. The relevant element of the plan, the Transportation System Element, is summarized below:

Transportation System Element

The Transportation System Element discusses the goals and policies with regards to transportation, including transit, pedestrian facilities, and bikeway and trail systems, in the community. The goals of this element include:

- An efficient and environmentally sensitive transportation system
- A transportation system that provides convenient linkages to the community's activity centers and the rest of the metropolitan region
- A transportation system that maximizes the opportunities for transit use
- A system of bikeways and pedestrian facilities that would encourage bicycling and walking as means of transportation

MULTIPLE SPECIES CONSERVATION PROGRAM

The City of San Diego, the County of San Diego, United States Fish and Wildlife (USFWS), the California Department of Fish and Game (CDFG), and other local jurisdictions joined together in the late 1990s to develop the MSCP. The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve.

The City adopted the MSCP Subarea Plan in March 1997 to meet the requirements of the Natural Community Conservation Program (NCCP) Act of 1991, the federal Endangered Species Act (ESA), and the California ESA. The Subarea Plan regulates effects on natural communities throughout the City and identifies preserve areas within the City as the MHPA.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

CONSISTENCY WITH THE REGIONAL TRANSPORTATION PLAN

As previously stated, the 2030 RTP includes major transit capital projects, including DARs. The RTP identifies DARs as part of the region's Managed Lane/HOV network and identifies DARs as features along the I-805 corridor within the project area. The proposed project would comply with applicable RTP policy goals and objectives. Delay times for vehicles would be reduced through implementation of the project (please refer to Section 2.2.6). Mobility would improve through the project area and improve accessibility to major employment centers. The project would provide a direct connection for HOV and transit vehicles to the I-805 freeway in an area that contains supporting and compatible land uses. The efficiency and safety of the project area's transportation system would be improved as some traffic trips entering and exiting I-805 would be redirected from congested freeway interchanges, roadway segments and intersections, as a result of the DARs.

CONSISTENCY WITH THE REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

The project would be consistent with the project description provided in the RTIP. The 2008 RTIP includes the project as MPO ID CAL 09C and allocates funds for its construction.

CONSISTENCY WITH THE MOBILITY ELEMENT OF THE CITY OF SAN DIEGO GENERAL PLAN

The project would be consistent with the applicable policies contained in the Mobility Element. The proposed DARs would provide a direct connection for HOV and transit vehicles to the I-805 and would facilitate future proposed transit operations.

CONSISTENCY WITH THE TORREY PINES COMMUNITY PLAN

The project would be consistent with the transportation element of the Torrey Pines Community Plan including promoting the use of mass transit and carpooling and providing pedestrian and bicycle facilities along the Carroll Canyon Road extension.

CONSISTENCY WITH THE MIRA MESA COMMUNITY PLAN

The project would be consistent with the Transportation System Element of the Mira Mesa Community Plan by promoting the use of mass transit and carpooling and providing pedestrian and bicycle facilities along the Carroll Canyon Road extension.

CONSISTENCY WITH THE MSCP

Implementation of the project would impact biological resources that are managed under the MSCP. Although Caltrans is not an enrolled agency under the MSCP, Caltrans strives to be consistent with the MSCP and other local plans. Caltrans, however, would comply with the MSCP as part of the Section 7 consultation process of the Federal Endangered Species Act.

No-Build Alternative

The No-Build Alternative would have no effect on State, Regional and Local Plans and Programs because no infrastructure would be modified.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The project features included with the project allow the project to remain consistent with state, regional and local plans. Therefore, no avoidance, minimization and/or mitigation measures are required.

2.2.3 Coastal Zone

REGULATORY SETTING

This project is within the coastal zone (see figure 2.3 for the Coastal Zone jurisdiction). The Coastal Zone Management Act of 1972 (CZMA) is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA. They include the protection and expansion of public access and recreation, the protection, enhancement and restoration of environmentally sensitive areas, protection of agricultural lands, the protection of scenic beauty, and the protection of property and life from coastal hazards. The California Coastal Commission (CCC) is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments (15 coastal counties and 58 cities) to enact their own local coastal programs (LCPs). LCPs determine the short- and long-term use of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A federal consistency determination would be needed as well when a local jurisdiction is providing a coastal development permit. A federal consistency determination would be acquired from the Federal Consistency Office of the CCC.

AFFECTED ENVIRONMENT

The project lies within the jurisdiction of the City of San Diego's Local Coastal Program. Caltrans would work with the City of San Diego to amend an existing Coastal Development Permit that the City of San Diego acquired under their Local Coastal Plan.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

The project would be inconsistent with the Coastal Act with the creation of additional impervious surface area, and with permanent impacts to 0.20ac (0.08ha) of Diegan Coastal Sage Scrub (CSS) within the Coastal Zone and temporary impacts to 0.34ac (0.14ha).

No-Build Alternative

No environmental consequences would take place as a result of choosing the no-build alternative.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Impacts to water quality would be minimized through the use of bioswales and other Best Management Practices to treat additional water run-off (refer to section 2.3.2). Impacts to CSS would be minimized during project design and mitigated on site at a 2:1 ratio by revegetation (refer to section 2.4.1). No environmental consequences are anticipated with adherence to these conditions, and other measures as required by the Coastal Permit.

2.2.4 Growth

REGULATORY SETTING

The Council on Environmental Quality (CEQ) regulations, which implemented NEPA in 1969, requires evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations, 40 CFR 1508.8, refer to these consequences as secondary impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

AFFECTED ENVIRONMENT

ACCESSIBILITY

Construction of the proposed project would provide access through a previously inaccessible area. However, the existing land use, including the MSCP and MHPA designations would restrict further development near the Carroll Canyon Road extension.

PROJECT LOCATION

The proposed project site is located within a developed urban area. Transportation projects in this type of area have a relatively low potential to cause growth-related impacts because of the area's built-out land use pattern.

GROWTH PRESSURE

The Torrey Pines and Mira Mesa communities near the project site are developed. Major commercial, office and industrial developments have been built in the vicinity since construction of I-805. There are some undeveloped lands in the vicinity, much of which are protected as open space in accordance with applicable land use plans.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

Consideration of factors including changes in accessibility, project location, nearby land uses and constraints to further growth lead to the conclusion that there is little or no potential to influence growth or introduce growth-related impacts. The proposed project

would not influence the overall amount, type, location, or timing of reasonably foreseeable growth in the project area.

No Build Alternative

The No Build alternative would not cause growth or growth related impacts because no further infrastructure would be provided that could result in growth or growth related impacts.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No measures are required since the proposed project would not be expected to influence the overall amount, type, location or timing of reasonably foreseeable growth.

2.2.5 Utilities/Emergency Services

AFFECTED ENVIRONMENT

Description of Work to Replace Existing Electric and Gas Utilities

The new roadway alignment would traverse SDG&E's utility easement, which contains several major overhead and underground utility structures. The proposed placement of engineered fill over existing pipeline structures and under existing overhead electric facilities would create clearance conflicts and be in violation of utility regulations. Impacted existing utility facilities include high-voltage electric transmission lines, 12 kilovolt (kV) electric distribution lines, high-pressure natural gas pipelines and regulator facilities, and other pipeline and telecommunication utilities. These facilities are critical components of the SDG&E system. To resolve potential conflict, several SDG&E gas and electric utility structures must be removed and replaced outside of the proposed construction area to avoid hazardous conditions and to comply with all applicable codes, laws and regulations.

A summary description of the proposed work to remove and replace SDG&E's gas and electric facilities to accommodate proposed site improvements is as follows:

Electric Transmission Pole Replacement Description

Although the proposed roadway would pass under four existing high voltage electric transmission lines rated at 230 kV, 138 kV and 69 kV, SDG&E has determined that the proposed alignment and roadway elevation would create clearance conflicts with wires and wood pole structures on two of the four high voltage lines. To alleviate clearance conflicts SDG&E would underground a portion of the existing lines and replace approximately seven wood pole structures with taller steel poles along the existing alignment. New wire would span between these new steel poles and over modified existing wood structures, thereby negating the need to grade or disturb habitat within nearby environmentally sensitive jurisdictional areas.

EXISTING ELECTRIC TRANSMISSION FACILITIES

Existing electric facilities are located in SDG&E's easement perpendicular to the proposed roadway. Existing facilities to be modified consist of two separate transmission overhead lines, with underbuilt distribution facilities supported on a total of fourteen wood poles, approximately 80ft (24.4m) tall. The total length of line requiring pole replacement on these two overhead lines is 1,700ft (518m) and 1,100ft (335m), respectively. Electric transmission and distribution facilities presently span across the proposed roadway and environmentally sensitive areas (ESAs). Utility truck access to each new pole would be by the existing access roads. All replaced poles, wires and other connected devices associated with the project would be demolished and removed from the site after new equivalent facilities have been constructed and energized.

PROPOSED ELECTRIC TRANSMISSION FACILITIES

New replacement steel poles would be installed, in-line with existing wood poles in SDG&E's easement, before the wood poles are removed. New transmission structures would consist of up to five new steel poles with anchor bolts and two light duty steel poles and would include the underground conversion of two existing overhead 69 kV taps across SDG&E's easement. New poles would be slightly taller than existing wood poles to accommodate increased elevation roadway requirements.

ELECTRIC TRANSMISSION DESCRIPTION OF WORK

Construction would consist of the installation of new: foundations, steel poles, underground conduit, wire, cable and associated hardware. Pulling sites (wire installation) would be from areas graded for roadway construction or from areas that are immediately accessible from existing SDG&E access roads. For poles requiring a new reinforced concrete foundation, pole installation would consist of drilling a hole at grade approximately 10ft (3m) in diameter by up to 35ft (10.7m) deep. Reinforcing steel and concrete would be placed in the foundation hole and allowed to cure. The new steel pole would be placed on top of the new foundation and overhead wires and hardware would be attached. For light-duty steel poles, a hole approximately 3 ft (0.9m) in diameter and 11ft (3.4m) deep would be drilled. Construction crews would install overhead devices from a "bucket" truck in areas that are immediately accessible from existing access roads or that are in the roadway construction area.

It is anticipated that all utility construction work would occur within SDG&E's existing easement. Typical pole removal, installation and overhead construction would require SDG&E to use the following construction equipment at various times intermittently along the lines:

- Drilling rig
- A flatbed truck for the delivery and removal of poles and material
- Concrete truck and pumping equipment, if needed
- De-watering storage tank, if needed
- A crane or helicopter to install new poles and/or remove existing poles, if needed
- A backhoe and/or bucket loader
- A dump truck to remove any excavated soil not used for back filling the new holes
- Crew vehicles, bucket trucks and pulling-machine for overhead electric work

SDG&E may require temporary storage and stringing sites during construction of replaced poles. Temporary material storage would be in SDG&E's easement and off public roadway. Stringing sites would be within existing SDG&E easement and out of ESAs, and measure approximately 50ft (15.2m) by 100ft (30.5m).

SDG&E anticipates that construction would occur 5 days a week during normal working hours for a period of approximately 30 working days depending upon site coordination and California Independent System Operator (CALISO) outage availability.

Electric Distribution Relocation Description

In conjunction with the transmission work, the existing distribution lines under built on the transmission poles would be affected by the road construction. On the east side of the transmission corridor, the distribution lines will need to be underground. This will include setting two cable poles, two 5in (13cm) with 1000kcmil and a 3315 handhole with traffic cover and connections and one 4.25in (11cm) telecommunications conduit that will transition in the underground to the east transmission line along with cable. On the west side of the corridor, the distribution facilities would need to be underground. This would involve setting two cable poles, two-5in (13cm) conduits with 1,000 kcmil cable, a 3315 handhole (vault) with traffic lid and connectors, and one 4in (10cm) telecommunication conduit and cable. For the overhead portion of the construction, a machine digger would dig the pole holes first, and then set the cable poles. SDG&E would then install the underground conduits using a backhoe and dump truck along with a concrete truck to provide the encasement for the underground conduits. SDG&E would pull the underground cable into the conduits connecting to the overhead wires. This would require bucket trucks at the cable poles and the cable dolly at the handhole locations. After energizing the underground, SDG&E would remove the existing overhead wires between the cable poles using overhead line crews and trucks.

Existing Gas Transmission Pipeline Facilities

Existing gas transmission facilities are located within the existing SDG&E utility easement. The proposed roadway alignment crosses above an existing 30in (76cm) diameter high pressure gas transmission main and main line valve. The roadway at that crossing would be a bridge structure maintaining vertical clearance for access to the main line valve. The main line valve would remain in operation during the construction of this bridge. The existing blowoff facility for this existing gas transmission main is located several hundred feet to the east of the main, away from the overhead electric lines. The proposed roadway alignment would have bridge abutment and fill conflicts with the existing 8in (20cm) gas main connecting the blowoff with the main line valve. This blowoff and gas main would need to be relocated to the south of the proposed roadway to a point adjacent to an ESA. A new easement would be required for this new facility. The existing access road to the blowoff would also have to be relocated. In addition, an existing communication antenna at the main line valve also needs to be relocated to a new location suitable for maintaining uninterrupted communication with the existing automated valve.

DESCRIPTION OF WORK

Construction work would consist of the following:

- Installing a new blowoff, gas main, and access road that connects the blowoff to the existing main line valve
- Relocating the existing communication antenna and appurtenances
- Protection for existing main line valve during bridge construction
- Providing continuous security and access to the main line valve and blowoff during bridge construction
- Maintaining necessary clearances under bridge falsework for access to the main line valve

- Providing necessary protection to the existing high pressure gas main during construction and grading
- Providing necessary erosion control measures and BMPs during and after construction

All construction work and new facilities would be within approved work areas and easements. The new blowoff would be accessed by the existing access road.

The following typical construction equipment would be used for the new blowoff relocation:

- Excavator/backhoe/bucket loader for moving dirt and backfill materials
- Water Truck for dust control and compaction
- De-Watering Storage Tank, if necessary
- Truck/Trailer/Crane for transporting materials
- Side Boom Dozer for moving pipe on site
- Welder Trucks for welding pipeline
- Crew Vehicles for workers
- Dump Truck for moving materials
- Concrete Trucks and pumping equipment, if necessary
- Generator and Lighting, if necessary

SDG&E anticipates construction of the blowoff facilities would require approximately four weeks to complete. Gas transmission standby personnel are required to be on site during any excavation work near the high-pressure gas transmission main. All welding requires x-ray testing and certification.

Water and Sewer Facilities

Within the project limits, two sewer lines, one sewer vent and one water line would be impacted by the project. These facilities are owned and maintained by the City of San Diego. They would be modified and replaced in kind to accommodate the project features that conflict with their current placement. These facilities would be replaced to the satisfaction of the City of San Diego Utilities Director.

ENVIRONMENTAL CONSEQUENCES

SDG&E has adopted thresholds for GHG emissions related to utility relocations based on the South Coast Air Quality Management District's guidelines of December 2008 and the Air Resources Board's guidelines of October 2008. The URBEMIS 9.2.4 model is utilized to estimate equipment emissions. SDG&E's analysis of the Greenhouse Gas (GHG) emissions associated with their utility relocations is included in Appendix A. The analysis is included in this environmental document in order to allow SDG&E to approve and proceed with the needed utility relocations to meet the CEQA requirements of the PUC.

Build Alternative

Impacts to sensitive resources due to utility relocations are not anticipated. Visual impacts resulting from the relocation of utilities would be low.

No-Build Alternative

No utilities would require modification or relocation by choosing the no-build alternative.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Relocation of utilities would be coordinated with the utility owners. Impacts to resources within the project footprint would be avoided when utilities are relocated. ESAs would be delineated around riparian habitat adjacent to Carroll Canyon Creek to prevent construction work from impacting biological resources. Plans would be developed to ensure that utility services are provided throughout project construction.

2.2.6 Traffic and Transportation/Pedestrian and Bicycle Facilities

REGULATORY SETTING

Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans is committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public would be provided to persons with disabilities.

AFFECTED ENVIRONMENT

A traffic evaluation report was completed November 2008. The study area applied in conducting the traffic analysis began at the southern terminus of the project study area, the Carroll Canyon interchange. The northern terminus is the merge of I-805 with I-5. The traffic report analyzes local street intersections on both the west and east sides of I-805.

ENVIRONMENTAL CONSEQUENCES

Three time periods are used when assessing the traffic and circulation through the project study area. The first is the existing condition, which is the most recent data for current traffic conditions. The second is 2010, which is the current approximation of traffic conditions when the proposed project would be open to traffic. The third is 2030, 20 years after the proposed project has been built. Traffic conditions are analyzed in both the Build Alternative scenario and the No-Build Alternative scenario.

Traffic Volumes

Figures 2.4 - 2.8 show average daily traffic (ADT) along various segments of I-805 and AM and PM peak hour volumes at intersections surrounding the project boundaries. The figures include existing traffic, 2010 Build Alternative traffic, 2010 No-Build Alternative traffic, 2030 Build Alternative traffic and 2030 No-Build Alternative traffic.

Figure 2.3: Existing AM/PM Peak Hour Volume and ADT

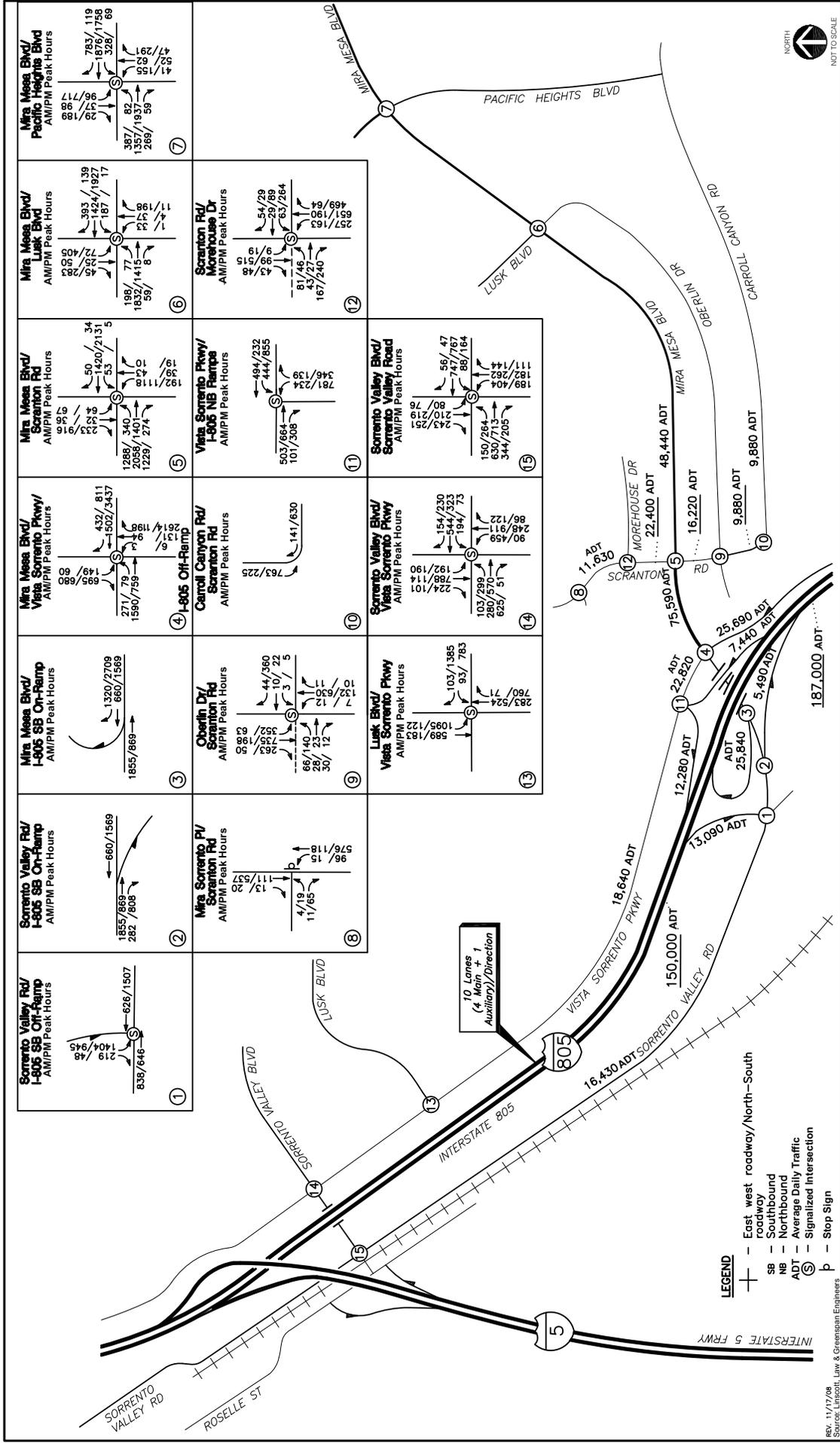


Figure 2.4: 2010 Build Alternative AM/PM Peak Hour Volume and ADT

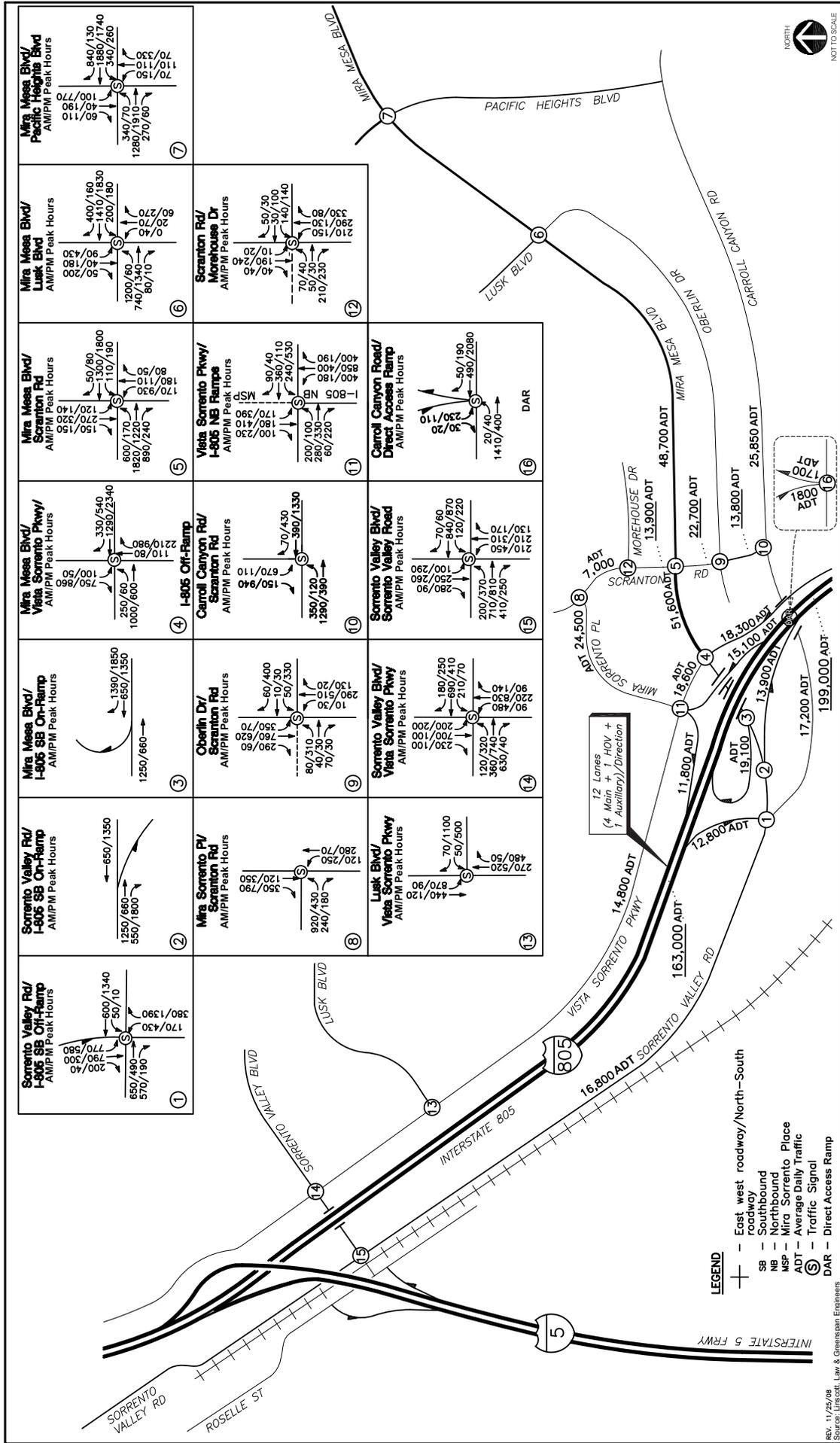
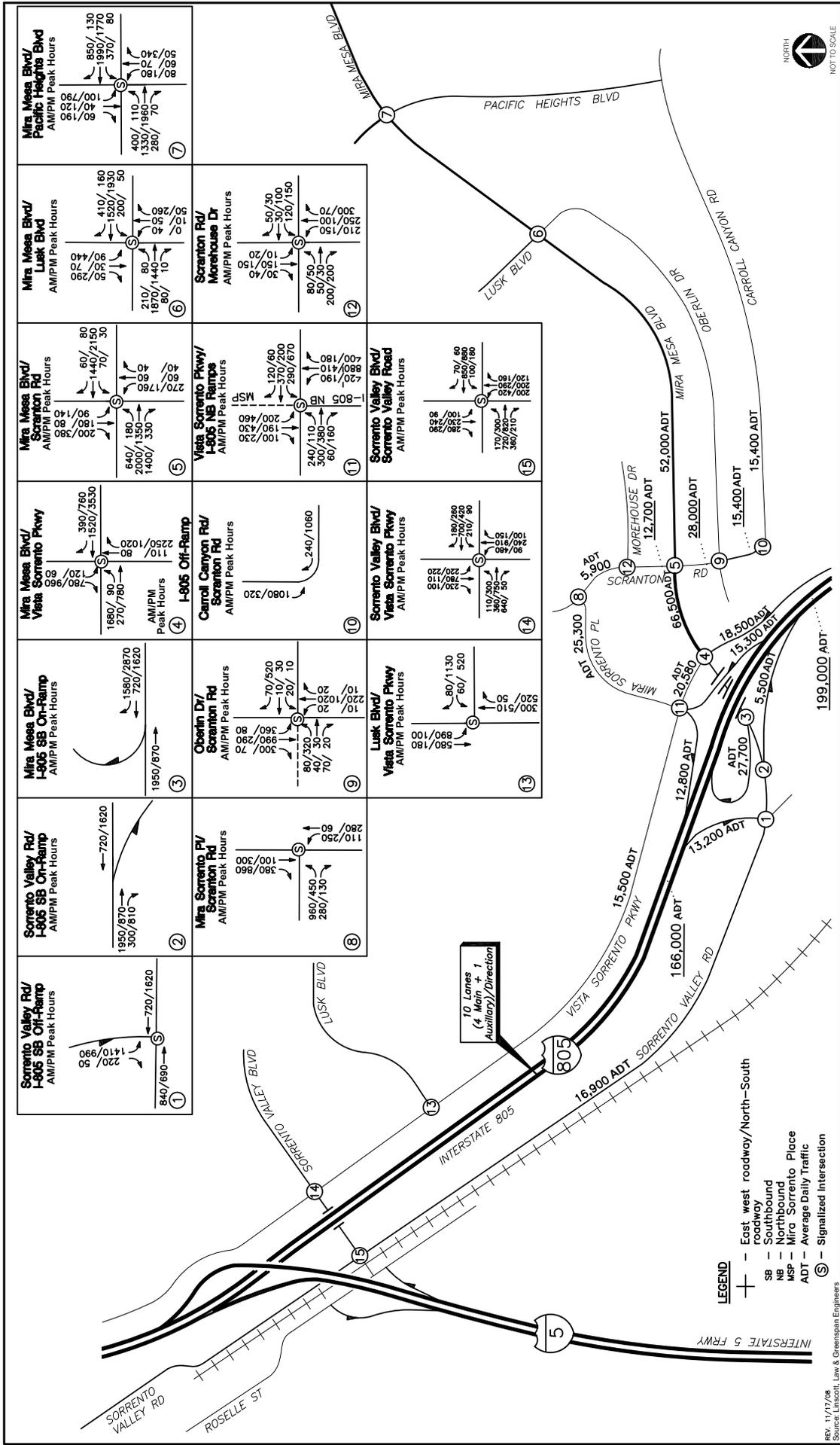
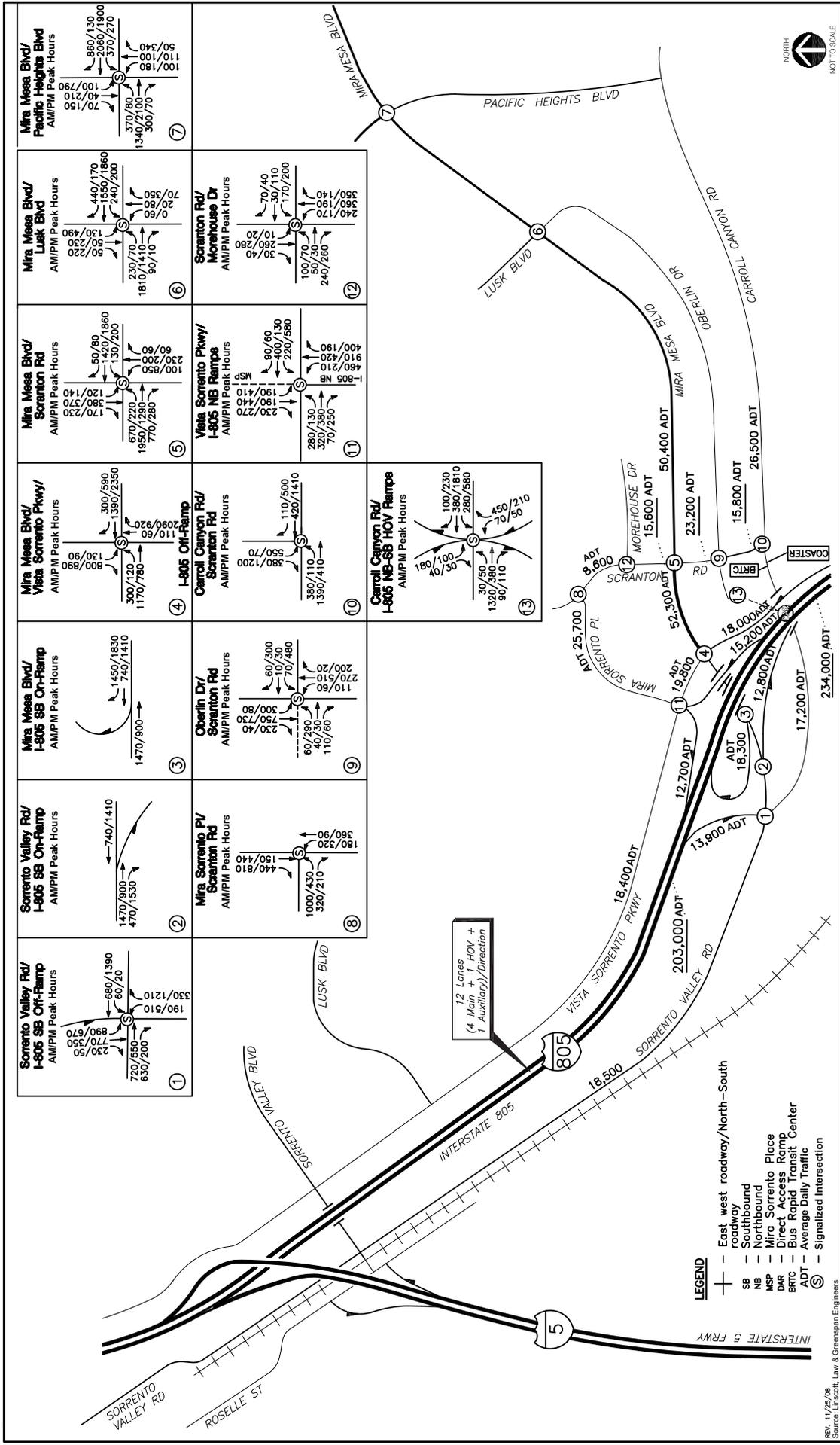


Figure 2.5: 2010 No-Build AM/PM Peak Hour Volume and ADT



REV. 11/17/08
Source: Lincoln, Law & Greenspan Engineers

Figure 2.6: 2030 Build Alternative AM/PM Peak Hour Volume and ADT



Intersection Operations

To measure the congestion found along the local road network surrounding the I-805 corridor, delay at signalized intersections was measured. Delay at intersections greater than 55.0 seconds are shown in bold in Table 2.1

Table 2.1: Existing and Future Intersection Operations

Intersection	Peak Hour	Existing	2010 Build	2010 No-Build	2030 Build	2030 No-Build
		Delay	Delay	Delay	Delay	Delay
Sorrento Valley Rd/ I-805 SB Off ramp/ Carroll Canyon Rd.	AM	19.5	31.6	19.7	32.0	45.0
	PM	27.3	>100	37.0	>100	>100
Mira Mesa Blvd/ Vista Sorrento Pkwy/ I-805 NB Off ramp	AM	>100	>100	>100	83.2	>100
	PM	34.5	19.8	41.8	30.2	27.4
Mira Mesa Blvd/ Scranton Rd	AM	>100	87.2	80.2	>100	>100
	PM	>100	81.5	>100	92.0	87.4
Mira Mesa Blvd/ Lusk Blvd	AM	16.6	15.4	12.2	20.5	22.7
	PM	37.2	26.2	34.1	32.0	29.3
Mira Mesa Blvd/ Pacific Heights Blvd	AM	83.1	41.5	41.9	61.0	57.7
	PM	>100	>100	>100	>100	>100
Mira Sorrento Pl/Scranton Rd	AM	12.8	70.2	69.6	>100	>100
	PM	19.5	68.8	77.3	>100	>100
Oberlin Dr/ Scranton Rd	AM	21.9	21.8	34.0	32.0	41.3
	PM	33.0	47.2	>100	69.9	64.2
Carroll Canyon Rd/ Scranton Rd	AM	DNE	14.6	DNE	21.7	17.8
	PM		20.4		32.8	19.1
Vista Sorrento Pkwy/ I-805 NB Ramps	AM	56.1	44.8	56.0	62.7	68.6
	PM	39.7	44.4	60.6	50.9	60.3
Morehouse Dr/ Scranton Rd	AM	27.9	19.7	35.6	29.1	30.6
	PM	40.7	36.5	44.5	37.7	38.4
Carroll Canyon Road/ I-805 DARs	AM	DNE	46.5	DNE	37.4	DNE
	PM		18.8		22.1	

Note: Delay measured in seconds

DNE: Does Not Exist

ADA Compliance

ADA compliance would be followed in the design of access ramps for sidewalks along Carroll Canyon Road.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

A Transportation Management Plan (TMP) would be prepared to reduce potential construction related traffic conflicts, detours and delays.

2.2.7 Visual/Aesthetics

REGULATORY SETTING

NEPA establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). To further emphasize this point, the Federal Highway Administration in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities” (CA Public Resources Code Section 21001[b]).

Method of Visual Resource Analysis

IDENTIFY VISUAL CHARACTER

Visual character is descriptive and non-evaluative which means it is based on defined attributes that are neither good nor bad in themselves. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. If there is public preference for the established visual character of a regional landscape and a resistance to a project that would contrast that character, then changes in the visual character can be evaluated.

ASSESS VISUAL QUALITY

Visual quality is evaluated by identifying the vividness, intactness and unity present in the viewshed. This approach is particularly useful in highway planning because it does not presume that a highway project is necessarily an eyesore. This approach to evaluating visual quality can also help identify specific methods for mitigating specific adverse impacts that may occur as a result of a project.

The three criteria for evaluating visual quality can be defined as follows:

Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

Intactness is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual man made components in the landscape.

Definition of Visual Impact Levels

Low (L) - Low negative change to existing visual resources, and low viewer response to that change. May or may not require mitigation.

Moderately Low (ML) – Low negative change to the visual resource with a moderate viewer response, or moderate negative change to the resource with a low viewer response. Impact can be mitigated using conventional practices.

Moderate (M) - Moderate negative change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices.

Moderately High (MH) - Moderate negative visual resource change with high viewer response or high negative visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required would generally take longer than five years to mitigate.

High (H) - A high level of negative change to the resource or a high level of viewer response to visual change such that extraordinary architectural design and landscape treatment may not mitigate the impacts below a high level. An alternative project design may be required to avoid high negative impacts.

AFFECTED ENVIRONMENT

A Visual Impact Assessment was completed for the project December 2008.

Existing Visual Character

The project viewshed consists of a natural canyon that is surrounded, bisected and encroached upon by urban development. A railroad traverses its southerly slope, a north/south freeway and adjacent major utility corridor bisect the canyon, and commercial development is located on the canyon rim and in the canyon straddling the creek in the western portion of the viewshed. Urban development is so pronounced that its features have become the dominant visual elements. The resulting visual character of the viewshed is urban, with a naturally vegetated canyon bisecting the area.

Existing Visual Quality

The existing visual quality of the landscape unit is moderately low. Although some areas of the creekbed have vivid views of natural riparian habitat and large native trees, the visual unity and intactness of the scene is disrupted and degraded by freeway bridges, utility lines and equipment, utility access roads, mass landform grading, and encroaching commercial development.

Existing Scenic Resources

A scenic resource may be an object, set of objects or a whole landscape that has exceptional visual quality, character, uniqueness, cultural significance, or historical value. Since there is no comprehensive list of specific features that automatically qualify

as scenic resources, the Caltrans District Landscape Architect is responsible to research community values, conduct field reviews, perform site analysis, and synthesize the data gathered to determine whether scenic resources exist within the project area.

One scenic resource exists within the project area near the eastern terminus of Sorrento Valley Road adjacent to the existing Caltrans right-of-way fence. It consists of one coast live oak tree (*Quercus agrifolia*) that is 82ft (25m) tall, with an 82ft (25m) spread, and a circumference of 193in (4.9m). It is estimated to be 300-400 years old. Other trees such as Canary Island date palms, Monterey cypress, and eucalyptus were planted near the oak tree in the late 19th century. The date palms and eucalyptus survive today. This landscaping was recorded as part of the original homestead on the property known as the Mack Ranch. Only the trees remain as the earlier buildings were removed during post-war occupation of the property.

The first known aerial photograph showing the oak tree was taken in 1928 when the surrounding land was owned by William and Amelia Dillow, who established a farm on the site in 1919 and lived there until 1936. Since the Dillows preserved the tree as they developed the land, this assessment refers to the tree as the Dillow Oak (Figure 2.8).

According to the National Register of Big Trees (NRBT), the largest coast live oak in the world is the Council Oak of Wynola located near Julian, California. It is 58ft (17.7m) tall, has a spread of 75ft (22.9m), and is 338in (8.6m) in circumference. The Council Oak is estimated to be at least 500-600 years old. The Dillow Oak is larger in height and spread than the Council Oak, but has a smaller circumference.

Because of its aesthetic beauty, significant size and age, and its inclusion as part of a recognized cultural resource, the Dillow Oak is considered to be a scenic resource. The historic grouping of trees referred to above contributes to the scenic value of the oak tree.

Figure 2.8: The Dillow Oak



ENVIRONMENTAL CONSEQUENCES

Build Alternative

KEY VIEW #1 ANALYSIS

Orientation

Sorrento Valley Road near the proposed business access undercrossing looking east.

Existing Visual Quality/Character (Figure 2.9)

Existing visual quality is moderately low. Vividness is low due to the absence of attractive and memorable features in the landscape. Unity is moderate because the business park development contains landscaping that is compatible with the natural vegetation of the Carroll Canyon Creek riparian landscape. Intactness is low due to the visual encroachment of existing commercial and transportation development in the natural setting of Carroll Canyon.

Existing visual character in this portion of the project viewshed is suburban, and characterized by conflicting landscape patterns and elements caused by urban development in a natural setting. The commercial development is made more compatible with the natural surroundings by the presence of intensive landscaping that features mature native tree species.

Project Features in this Key View

The proposed extension of Carroll Canyon Road would be constructed in this area. The roadway would be elevated to accommodate an undercrossing that would allow a grade separated access connection to Sorrento Valley Road. Retaining walls at the top of a slope would support the roadway.

Change to Visual Quality/Character (Figure 2.10)

Visual quality would be reduced, but remain at a moderately low level after project construction. The proposed structures and landform grading would be consistent with existing transportation development in the viewshed. The proposed structures would be taller and of a larger scale than existing commercial development and would reduce the unity of the viewshed. Vividness and intactness would remain low.

Visual character would become more urban due to the large scale and hard surfaces of the proposed structures. They would form a severe contrast with the natural features of the nearby natural riparian landscape of Carroll Canyon Creek, and also contrast with the relatively small scale of adjacent industrial development. Changes to the visual character would be moderately high.

Viewer Response

Local street users and business park employees would have a high visibility of the project, but have short duration views. Few recreational users frequent the area. The project would be consistent with the goals of the industrial element of the Torrey Pines Community Plan. Viewer response would be considered moderately low.

Resulting Visual Impact

Change to the visual quality would be low. Change to the visual character would be moderately high. Viewer response is moderately low. The resulting visual impact would be moderate.

KEY VIEW #1

Figure 2.9: Existing View of Key View #1



Figure 2.10: Proposed View of Key View #1



KEY VIEW #2 ANALYSIS

Orientation

The office building parking lot located near the intersection of Carroll Canyon Road and Scranton Road looking southwest to I-805.

Existing Visual Quality/Character (Figure 2.11)

Existing Visual quality is low. Intactness and unity levels are low due to the profusion of overhead utility lines and maintenance roads used to service them. I-805 bridges and mass landform grading also detract from views of natural vegetation in the canyon and topography of the hills beyond. A railroad line located on the south slope of the canyon is another source of visual disturbance to the natural topography. Vividness is low.

Existing visual character could be classified as degraded suburban due to the disturbed nature of the natural landscape features caused by the utility corridor, freeway, and railroad.

Project Features in this key view

The project proposes to extend Carroll Canyon Road under the northern portion of the I-805 bridges to Mira Mesa Boulevard from its existing western terminus near the lower left of the key view photograph. The proposed road extension would be on structure as it passes through Carroll Canyon. Existing utilities would be relocated to alternate overhead structures in the viewshed. Existing service roads and ancillary utility facilities on the ground would remain.

Change to Visual Quality/Character (Figure 2.12)

Visual quality would remain low with the introduction of a large structure to the viewshed. Visual change would be greater if the road was constructed on fill. Relocated overhead utilities would have a similar effect as they do presently.

Visual character would become more urban due to the large-scale bridge structure added to the landscape. Because the structure would avoid severe changes to existing topography, change to existing visual character would be moderate.

Viewer Response

This key view is representative of those available from nearby office buildings in the area. Hundreds of employees would have short to medium duration distant views of the project. Viewer awareness among employees would be low due to the nature of their daily activity and the distance of the project from their viewing positions. Viewer response to the project would be low.

Resulting Visual Impact

Change to visual quality would be low. Change to visual character would be moderate. Viewer response is low. The resulting visual impact would be moderately low.

KEY VIEW #2

Figure 2.11: Existing View of Key View #2



Figure 2.12: Proposed View of Key View #2



KEY VIEW #3 ANALYSIS

Orientation

Railroad tracks located at the southern slope of Carroll Canyon looking north to the intersection of Carroll Canyon Road and Scranton Road.

Existing Visual Quality/Character (Figure 2.13)

Existing visual quality is moderate. Unity and intactness levels are moderate due to the extensive landscape planting that lends visual continuity with the riparian vegetation of the canyon. Buildings are sited and screened in such a way that they are not visually dominant. Vividness is moderate due to views of the large well-formed trees found along the creek.

Project Features in this key view

Carroll Canyon Road extension would be supported on structure until it reaches this key view area. As it continues east, the existing portion of Carroll Canyon Road would be widened to the south and would be supported by a retaining structure 820ft (250m) long, reaching a maximum height of 39ft (11.9m). The structure would be a geotensile slope retention system. Facing material for the structure would consist of wire baskets or gabions battered in shallow horizontal terraces. The wire baskets could receive soil and non-irrigated seeding. The structure would replace the existing landscaped slope adjacent to the street.

Change to Visual Quality/Character (Figure 2.14)

Replacement of the tree planted slope with a large structure would reduce the unity and intactness of the key view area to moderately low levels. Riparian trees in the mid-ground would screen most of the wall from view in this location. Vividness would remain the same. Change to visual quality would be moderate.

Tree removal and the large retaining structure proposed by the project would severely contrast with the natural character of the canyon, but views of the wall would be screened by native trees. Change to existing visual character would be moderate.

Viewer Response

This view would be seen by thousands of railroad passengers each day. The encroachment of a large built form in close proximity to the natural open space of the creek may be inconsistent with the visual quality goals contained in community planning documents. Viewer response to the proposed changes would be moderate.

Resulting Visual Impact

Change to visual quality would be moderate. Change to visual character would be moderate. Viewer response is moderate. Therefore, the resulting visual impact would be moderate.

KEY VIEW #3

Figure 2.13: Existing View of Key View #3



Figure 2.14: Proposed View of Key View #3



SUMMARY OF PROJECT IMPACTS

The proposed project would add an urban transportation facility to a natural open space canyon already disturbed by a freeway, railroad, utility corridor, and commercial development. Potential landform grading impacts would be avoided by placing Carroll Canyon Road extension on structure as it skirts the northern edge of Carroll Canyon creek bed. Currently, few viewers sensitive to visual changes would see the project. However, community plans pertaining to the project area seem to place a high value on Carroll Canyon Creek as a natural open space corridor and future trail corridor. The project would contrast with that type of visual character and may conflict with the visual quality goals of these plans.

Future viewers using the proposed Carroll Canyon Road extension would benefit from foreground treetop views of the canyon's natural open space as they traverse the structure that would bridge the canyon floor. A pedestrian viewpoint would be located on the southern side of the proposed bridge structure overlooking the creek's riparian vegetation.

Freeway travelers that use the proposed DARs would experience a dramatic contrast between the long range open views found on the mixed use lanes and the enclosed, spatial compression of descending the DARs to Carroll Canyon Road in a concrete trench up to 46ft (14.0m) high and 39ft (11.9m) wide. Concrete struts or beams 3ft (0.9m) in diameter would span the top of the trench at 8ft (2.4m) on center, forming a lattice "ceiling," providing an additional dimension of enclosure. The scale of this facility would be monumental, but consistent with the adjacent I-805 bridges that span Carroll Canyon. Because of its location in the freeway median, impacts to local viewers would be low.

Existing utilities would be relocated to alternative overhead structures within the same alignment and would sit higher than they do currently. The relocated utilities would have a similar aesthetic as they do presently. No further impacts are anticipated.

New freeway appurtenances such as changeable message signs, overhead traffic sensors, video cameras, and congestion pricing signage would add to the urbanizing effect of the project and detract from scenic views. These types of features would be concentrated at or near facilities and HOV ingress/egress points.

Storm water pollution prevention facilities such as bio-swales and detention basins would be located in various locations. Their standard features such as maintenance vehicle roads, rock rip-rap slopes, concrete headwalls, standpipes, and chain link fencing would be a non-compatible visual element at a community entry point, and natural open space area.

No-Build Alternative

The No-Build Alternative would not affect the viewshed in or around the project area or cause the disruption or destruction of existing aesthetic qualities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Caltrans and the FHWA recommends that a qualitative/aesthetic approach should be taken to mitigate for visual quality loss in the project area. This approach seeks to replicate desirable visual qualities that are impacted by a project *in situ* to restore a viewshed's original level of aesthetic excellence. It addresses the actual cumulative loss of visual quality that would occur in the project viewshed when the project is implemented. It also constitutes mitigation that can more readily generate public acceptance of the project.

Visual mitigation for project impacts addressed in the previous section would consist of adhering to the following design requirements in consultation with the District 11 Landscape Architect (DLA).

Mitigation measures that require regular maintenance and are located outside Caltrans right-of-way such as trees planted along local streets, or measures that require the installation of non-standard equipment within the right-of-way such as pedestrian bridge lighting, can be implemented only if the responsible local government is willing to maintain them in perpetuity.

Retaining walls

Retaining walls that follow the contours of the topography and maintain a constant elevation at the top of wall would be used where appropriate. Wall layouts and profiles would be composed of long radius curves, with no tangents or points of intersection. This type of wall would be visually compatible with surrounding terrain and provide room at the base for a slope that would contain landscape screening.

Retaining walls would be located at the top of slope wherever possible in road fill sections to provide a buffer area for landscape screening between the wall and the community.

In areas too narrow to place a planting pocket, retaining walls would be recessed behind the face of safety barriers at a sufficient distance to allow architectural features to be included on the face of the retaining walls.

In areas where space for architectural detailing would not exist, vertical concrete safety barriers would be considered. Vertical barriers add 12in (30cm) of additional width in which architectural elements such as mechanically stabilized earth (MSE) wall panel relief, pilasters, and wall caps can be included.

Architectural features, textures and integral concrete colors would be used to mitigate the appearance of retaining wall surfaces. Walls would incorporate architectural features such as pilasters and caps to provide shadow lines, provide relief from monolithic appearance, and reduce their apparent scale. Enhanced materials such as mosaic tile and weathering steel would also be used where appropriate to meet community context and design goals. See figure 2.15 for a visual simulation of potential architectural features along the right side wall.

Mechanically stabilized earth (MSE) walls would have custom designed panels that include integral color, enhanced surface texture, and a pattern reveal on each panel.

Figure 2.15: Southbound View along DARs at Carroll Canyon Road



A simulation of the proposed DARs looking south. Possible architectural features are seen on the right side wall.

Bridge Structures

An 8ft (2.4m) wide sidewalk would be located on the southern side of Carroll Canyon Road Bridge. It would receive a surface score pattern.

Pedestrian lighting, enhanced railings, and other urban amenities would be provided on Carroll Canyon Bridge to be consistent with community and city planning requirements.

Slope paving and raised medians would be enhanced with integral concrete color, texture, and deeply textured facing materials such as veneer block, integral pavers, or natural rock.

Storm Water Facilities

Storm water facilities such as bio-swales would be located beyond the clear recovery and sight distance areas wherever possible to allow trees and landscape screening to be installed. Planting within the facilities would be consistent with surrounding landscape planting whenever possible.

The facilities would appear to be natural landscape features such as dry streambeds or riparian pools and would be shaped in an informal, curvilinear manner where feasible. Slope grading would incorporate slope rounding, variable gradients, and be similar to the surrounding topography to de-emphasize a defined outer edge where feasible. Rock slope protection would have a natural appearance and consist of aesthetically pleasing whole material of various sizes that is consistent in appearance with native rock in the area where feasible.

Maintenance access drives would be located in unobtrusive areas away from local streets and would consist of inert materials or herbaceous groundcover that is visually compatible with the surrounding landscape where feasible.

Visible concrete structures and surfaces would receive integral color and be of special design if appropriate. Concrete drainage aprons would be integrated with other hard surfaces such as gore paving, and be consistent in color and texture where feasible.

Standpipes and other vertical appurtenances would be placed in unobtrusive locations and be fabricated of weathering steel or painted an unobtrusive color where possible.

Bio-swailes and linear drainage ditches would be designed as soft surface dual use facilities such as recreational trails or maintenance access roads when feasible.

Landscaping

Freeway landscaping with drought tolerant ornamental and native trees, shrubs, and groundcover would be planted. Areas adjacent to existing native habitat would receive native landscaping. Native landscaping would be designed in consultation with the District Biologist.

Mitigation landscaping located within City right-of-way would consist of native and drought tolerant trees, shrubs, grasses, and inert groundcover that would be sustainable without supplemental irrigation subsequent to the conclusion of the extended plant establishment period.

All landscaped areas would receive permanent irrigation.

All landscaped areas would receive an extended plant establishment period of three years.

The Dillow Oak and adjacent historic tree grouping would be protected as an ESA during construction. Selected mature specimen California Sycamore trees near the biological ESA at Carroll Canyon Creek would be protected and each candidate tree would be chosen in consultation with the project engineer to ensure adequate space to be provided for project construction. A mature California Sycamore adjacent to Sorrento Valley Road would be preserved. ESA areas would extend 5ft (1.5m) beyond the drip line of each tree.

Lighting, Signage, and Miscellaneous Freeway Appurtenances

Lighting and signage pedestals on structures would occur at pilasters or be incorporated in other architectural features, where feasible.

Concrete lighting and signage pedestals would be designed in such a way that vertical barrier transitions are not required.

Lighting and signage in the DARs would be designed to be compatible with overhead struts and architectural features.

Electrical and signal equipment at ramp termini would be placed in visually unobtrusive locations, where feasible.

Gore paving (paving at the point where a main lane of a freeway and onramp separate) would incorporate enhanced materials consistent with corridor design themes found in adjacent freeway projects.

2.2.8 Cultural Resources

REGULATORY SETTING

The term “Cultural Resources,” as used in this document, refers to all historical and archaeological resources, regardless of age or significance. Besides NEPA, laws and regulations dealing with cultural resources include the National Historic Preservation Act (NHPA), CEQA and the California Public Resources Code (PRC).

The NHPA of 1966, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to take into account the effects of their actions on such properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, in accordance with regulations promulgated in CFR36§800. On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The Programmatic Agreement (PA) implements the Advisory Council’s regulations streamlining the Section 106 process and delegating certain responsibilities to Caltrans. FHWA’s responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Pilot Program (23CFR§773), as of July 1, 2007.

“Historical Resources” are considered under CEQA Section 21084.1 and CEQA Guidelines §15064.5, as well as California PRC §5024.1, which established the California Register of Historical Resources. PRC §5024.5 specifically requires state agencies to consider how state-owned historical resources might be affected by their actions within its rights-of-way. “Historical resources” is the CEQA equivalent to NEPA’s “historic properties.” CEQA §21083.2 and CEQA Guidelines 15064.5 also require consideration of unique archaeological resources.

AFFECTED ENVIRONMENT

Cultural resources studies prepared for the project include a 2002 *Archaeological Survey and Historic Resources Evaluation Report*, a subsequent 2005 *Archaeological Testing and Evaluation at CA-SDI-2723* and a 2008 *Historic Property Survey Report (HPSR)*. The HPSR was provided to SHPO in October 2008 to satisfy Caltrans’ responsibilities pursuant to the laws and regulations discussed above.

The Area of Potential Effects (APE) consists of rolling landscape that encompasses Carroll Canyon Creek on the south, eastward along Carroll Canyon Road to approximately 1500ft (457m) beyond Scranton Road. On the west, the DARs component of I-805 stretches along the median to I-5, while along Sorrento Valley Road the APE extends from the proposed merge with Carroll Canyon Road northwest to the intersection with Mira Mesa Boulevard. It is a combination of highly disturbed and developed areas of existing roadways, and relatively undisturbed land in-between Carroll Canyon Creek and I-805. Historically, the land had been used by Native Americans up until 150 years ago, and then for ranching, agriculture, and homesteading into the early 1960s.

Cultural resources work for the project has consisted of background records searches to determine what sites had been previously recorded within the project study footprint, and what other surveys and excavations had been conducted within a one mile radius. This included a search of the archives at the South Coastal Information Center of the California Historical Resources Information System (CHRIS), located at San Diego State University, and the San Diego Museum of Man in Balboa Park. Further historical research was conducted at the San Diego Historical Society, the County Recorder's Office, and a title search was performed to identify previous property owners.

Consultation with local Native American tribes was conducted. Caltrans sent a letter to the California Native American Heritage Commission (NAHC) on March 25, 2008. They were asked to conduct a sacred lands search and to provide a contact list for appropriate tribes and individuals with affiliation to the project region. Their reply was received on March 27, 2008, informing that the sacred lands search was negative, and providing a list of appropriate contacts. Letters to all those identified on the list were sent out on April 7, 2008. No replies were received; and follow-up telephone calls did not prompt any responses. Caltrans staff met with Carmen Lucas, a Native American representative from the Kwaaymii (Kumeyaay) tribe, on April 18, 2008, where it was expressed that the archaeological site located adjacent to the project be protected and preserved. Further consultation with Ms. Lucas occurred via telephone on January 13, 2009, and at the project location on January 22, 2009.

Two cultural resources were originally located within the APE, archaeological site CA-SDI-2723 and a historic homestead referred to as the Mack Ranch.

Historic Resources

An early ranch known as the Mack Homestead was once located within the project footprint. Ranching activities in the area date from the late 1800s into the 1960s. By the mid-1960s all buildings on the property had been removed, although some mature landscaping trees could be seen, with some still existing today. An evaluation of the homestead determined it was not significant as a consequence of previous analysis completed for the City of San Diego. No buildings remain and no evidence could be found that would indicate any potential for historical archaeology being present on the property. In fact, very little information could be found tying the land to any of its numerous owners. The most intensive period of habitation post-dates World War II, and the few historic remains noted on the surface confirm 1950s to early 1960s occupation. Since the property could not be identified with persons or events important in regional history, and all its earlier remains are gone, it lacks integrity to qualify for listing on the National Register of Historic Places or California Register of Historical Resources. It was not formally evaluated for its eligibility to the Registers, as its recent periods of occupation are not 50 years old, which is the minimum threshold for Register consideration. A well of unknown age was recently located at the site. Wells often served as repositories for trash, especially when individuals were planning to leave a location, when they discard unwanted possessions into them.

Prehistoric Resources

Prehistoric archaeological site CA-SDI-2723 was originally recorded by the San Diego Museum of Man in the 1920s. All subsequent site updates from the 1950s through

1980s confirm a pattern of site destruction through development and agriculture. Today it is estimated that less than 10% of the original site remains. The excavation conducted for the Carroll Canyon Road extension in 2005 concluded that the main midden and artifact-bearing deposits at CA-SDI-2723 were outside the project footprint. The City of San Diego determined that the archaeological site was a significant resource for the purposes of CEQA. Under the City's proposed design a portion of the site would have been adversely affected. To mitigate for these effects a data recovery program had been prepared and would have been implemented had the project proceeded as planned by the City. Caltrans' subsequent refinements to the design have eliminated all impacts to the remaining portion of the site. Recovered archaeological remains included flaked stones, ground stone tools, bone tools, shell beads, and animal and shellfish food remains. The site was radiocarbon dated to c. 3500 years before the present (BP). This places the site within a cultural period locally known as the La Jollan, which lasted from roughly 8500 to 1500 years BP.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

HISTORIC RESOURCES

The proposed project would directly impact a portion of the Mack Homestead. Since the Mack Homestead does not qualify for either the National Register of Historic Places or California Register of Historical Resources, it requires no further consideration of impacts to the property under CEQA or NEPA.

PREHISTORIC RESOURCES

Site CA-SDI-2723 is located adjacent to the project, but would not be directly impacted by construction activities, or indirectly impacted by project-related activities such as staging or equipment storage.

No Build Alternative

Under the No Action Alternative, no cultural resources impacts would occur.

AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

Historic Resources

Impacts to a non-significant site do not require further investigation or mitigation; therefore, avoidance, minimization, and/or mitigation measures are not required for the Mack Homestead. The recently located well is outside the project footprint and would not be affected by the undertaking.

Prehistoric Resources

CA-SDI-2723 would be avoided. To ensure the site is not indirectly damaged during construction, the site area would be staked and clearly marked. The Contractor would be

required to submit a plan showing all necessary access to the work area and protective measures to be implemented with approval of the Caltrans Resident Engineer (RE). The existing surface of the archaeological site would be protected with engineering fabric or other suitable barrier materials approved by the RE prior to placement of fills, access roads, etc. Similar measures would be implemented for the placement of temporary falsework pads within the site area. The placement of protective measures in the site vicinity would be monitored by an archaeologist and Native American monitor. An ESA would be established and would be listed in the contract's Special Provisions. No excavation would be allowed within the ESA. Limited access to the ESA would be permitted as approved by the RE and contingent upon all previously mentioned protective measures having been implemented. No work in the ESA would be performed outside the presence of the RE. The RE would be notified of all work in and/or above the ESA a minimum of two weeks in advance of the anticipated start of the activities.

Consultation regarding site protection measures was undertaken with Ms. Lucas on January 22, 2009. In accordance with Ms. Lucas' recommendations, any fill and fiber matting placed on the site would be removed after the completion of construction.

If cultural materials should be discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until qualified personnel could assess their nature and significance.

If human remains should be discovered during construction, State Health and Safety Code §7050.5 states that further disturbance and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to PRC §5097.98, if remains are thought to be Native American, the coroner would notify the NAHC who would then notify the Most Likely Descendent (MLD). The party discovering the remains would contact the District Archaeologist, so that consultation could take place with the MLD to provide for the respectful treatment and disposition of the remains. Further provisions of PRC §5097.98 would be followed, as applicable.

2.3 PHYSICAL ENVIRONMENT

2.3.1 Hydrology and Floodplain

REGULATORY SETTING

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A.

In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

AFFECTED ENVIRONMENT

A Floodplain Study (FS) was completed for the project June 2005. Based on the FS, a Floodplain Evaluation Report Summary was completed January 2009.

The project area is located on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel number 06073C1339 for San Diego County and Incorporated Area, California, dated June 19, 1997.

FEMA defines the 100-year (or base) flood as being “a flood having a one percent chance of being equaled or exceeded in any given year.” FEMA defines the floodway as “the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights.” A substantial increase in flood heights is defined by FEMA as being one foot or greater.

The proposed roadway extension will encroach into the existing regulatory floodway of the Special Flood Hazard Area as defined by the FIRM, however, the FS included a new hydraulic model of the existing conditions which concluded that the adopted floodway boundaries do not accurately reflect the flow characteristics of a base flood event and that a corrected map shows that the proposed roadway extension will be outside the floodway.

ENVIRONMENTAL CONSEQUENCES

Built Alternative

ENCROACHMENT ASSOCIATED WITH THE BUILD ALTERNATIVE

Floodway models indicate that the proposed construction area boundary would be located adjacent to, but not within, the revised floodway boundary. Therefore, it is anticipated that the proposed project would not encroach into the floodway.

A minor encroachment into the floodplain is anticipated due to the placement of two bridge columns.

FLOODPLAIN BOUNDARY AND WATER SURFACE EVALUATION

When compared to the base floodplain, there appears to be no significant increase in the area of the flood boundary or the water surface elevation. The encroachment would be parallel to the direction of flow and would not change or affect the water surface elevations in all but one cross-section. The water surface elevation increase for this one cross section would be 0.01ft (0.003m). No increase in flooding would result from the implementation of the project.

RISKS OF THE ACTION

The new hydraulic model prepared to better delineate the 100-year floodplain and floodway boundary indicates that the project will be located within the floodplain but not within the floodway. Although the proposed project would be located within the floodplain it would be within areas of ineffective flow and/or backwater. The impact of the project on the flood elevation would be minimal (less than 0.05ft [1.5cm]).

IMPACTS ON NATURAL AND BENEFICIAL FLOODPLAIN VALUES

The minor encroachment associated with the Build Alternative would not create a barrier to flows or wildlife passages in the area. No impacts to natural and beneficial values would occur.

SUPPORT OF INCOMPATIBLE FLOODPLAIN DEVELOPMENT

The proposed project would not cause adverse impacts to properties located upstream or downstream of the proposed project as it is anticipated that the floodplain would change by less than 0.05ft [1.5cm] following construction.

No Build Alternative

No impacts to the floodplain or floodway would occur because no improvements are proposed under the No-Build Alternative.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No measures are proposed because impacts to the floodplain are minimal.

2.3.2 Water Quality and Storm Water Runoff

REGULATORY SETTING

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (USACE) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the Statewide permit, and projects performed by other entities on Caltrans right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1ac (0.4ha) require the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) during construction. Projects less than 1ac (0.4ha) require a Water Pollution Control Plan.

AFFECTED ENVIRONMENT

Receiving Water Bodies

The proposed project is within the Miramar Reservoir Hydrologic Area which is within the Peñasquitos Hydrologic Unit (Hydrologic Sub-Area 906.10). The watershed drains an area of approximately 52.1 sq mi (135 sq km) through Los Peñasquitos Creek and Carroll Canyon. The proposed project drains directly into Carroll Canyon and Soledad Canyon, which join Los Peñasquitos Creek north of the I-5/I-805 merge. Carroll Canyon Creek is one of the three Creeks that feed into the Los Peñasquitos Lagoon in addition to Los Peñasquitos Creek and Carmel Valley Creek.

Beneficial Uses

To protect the water quality goals of a water body, each water body has designated beneficial uses. Beneficial Uses, as defined in the San Diego RWQCB Basin Plan (Basin Plan), are the uses of water necessary for the survival or well being of humans, plants and wildlife. These uses promote the tangible and intangible economic, social and environmental goals of mankind.

According to the Basin Plan, to establish existing beneficial uses, one would have to demonstrate that fishing, swimming, or other uses have actually occurred since

November 28, 1975, or the water quality and quantity is suitable to allow the uses to be attained.

While "Potential" designation is established by a variety of reasons including: plans are proposed to put the water to a future use; potential exists to put the water to a future use; the public desires to put the water to future use; the water is potentially suitable for municipal or domestic water supply under the terms of the *Sources of Drinking Water Policy* (State Board Resolution No. 88-63); or the Regional Board has designated a beneficial use as a regional water quality goal.

In addition, some water bodies have been exempted by the RWQCB from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, *Sources of Drinking Water Policy*.

The following beneficial uses were identified for Carroll Canyon Creek:

- Municipal & Domestic Supply (Exempted)
- Agricultural Supply (Existing)
- Industrial Service Supply (Existing)
- Contact Water Recreation (Potential)
- Non-Contact Water Recreation (Existing)
- Warm Fresh Water Habitat (Existing)
- Cold Fresh Water Habitat (Existing)
- Wild Life Habitat (Existing)
- Rare, Threatened or Endangered Species (Existing)

The following beneficial uses were identified for Soledad Canyon Creek:

- Municipal & Domestic Supply (Exempted)
- Agricultural Supply (Existing)
- Industrial Service Supply (Existing)
- Contact Water Recreation (Potential)
- Non-Contact Water Recreation (Existing)
- Warm Fresh Water Habitat (Existing)
- Cold Fresh Water Habitat (Existing)
- Wild Life Habitat (Existing)

The following beneficial uses were identified for Los Peñasquitos Lagoon:

- Contact Water Recreation (Existing)
- Non-Contact Water Recreation (Existing)
- Preservation of Biological Habitats of Special Significance (Existing)
- Estuarine Habitat (Existing)
- Wild Life Habitat (Existing)
- Rare, Threatened, or Endangered Species (Existing)
- Migration of Aquatic Organisms (Existing)
- Spawning, Reproduction and/or Early Development (Existing)
- Shellfish Harvesting (Existing)

- Marine Habitat (Existing)

Section 303(d) of the Clean Water Act and Total Maximum Daily Loads

To maintain the beneficial uses of the surface water bodies, the federal Clean Water Act (CWA) requires States to identify and make a list of surface water bodies that are polluted, referred to as the "Clean Water Act Section 303(d) List of Water Quality Limited Segments" (List).

Under §303(d) of the CWA, States must also prioritize the water bodies on the list and develop Total Maximum Daily Loads (TMDLs). A TMDL is a quantitative assessment of water quality problems, contributing sources, and load reductions or control actions needed to restore and protect bodies of water. A TMDL is underway for the Los Peñasquitos Lagoon under Investigation Order R9-2006-0076 (TMDLs for Impaired Lagoons, Adjacent Beaches and Agua Hedionda Creek) issued by the San Diego RWQCB. Caltrans has been actively involved with the other dischargers in completing the monitoring requirements under this investigation order. The San Diego RWQCB is working with the dischargers to assess and model the monitoring data submitted and develop TMDLs for the water bodies covered under this order.

Table 2.2 lists the 303(d) impaired receiving water bodies within the project limits and the those that have TMDL requirements.

Table 2.2: Water Bodies within Project Limits

<i>303(d) Impaired Receiving Water Body</i>	<i>Pollutant/Stressor</i>	<i>TMDLs</i>
Soledad Canyon	Sediment Toxicity	
Los Peñasquitos Lagoon	Sedimentation/Siltation	X

ENVIRONMENTAL CONSEQUENCES

Built Alternative

The project has the potential to impact the quality of the receiving water bodies during the construction phase as well as during operation of the freeway if the appropriate Best Management Practices (BMPs) are not implemented.

PERMANENT IMPACTS

During operation, potential sources of pollutants found in highway runoff include sediment from natural erosion; nutrients (nitrogen and phosphorus) from tree leaves, mineralized organic matter in soil, fertilizers runoff, nitrite from automobile exhausts, atmospheric deposition, emulsifiers and surfactants; pesticides; metals (dissolved and particulate) from combustion products of fossil fuels, wearing of break pads and corrosion.

The proposed project would result in a 13.84ac (5.6ha) increase in impervious areas, thus having the potential to increase the velocity of the runoff. This increase in paved areas could also potentially cause erosion, scour and have an impact on downstream

channel stability if the effects of the increased runoff are not evaluated and taken into consideration during the hydraulic design.

TEMPORARY IMPACTS

Potential sources of pollutants during the construction phase could be generated from construction materials as well as construction activities. Examples of pollutants generated from construction materials include: vehicle fluids, asphaltic emulsions from paving activities, joint and curing compounds, concrete curing compounds, solvents and thinners, paint, sandblasting material, landscaping materials, treated lumber, Portland Cement Concrete (PCC) rubble and general litter. Examples of construction activities that have the potential to contribute pollutants include clearing and grubbing, grading operations, soil import operations, sandblasting, landscaping and utility excavation.

The project is anticipated to generate approximately 47.94ac (19.4ha) of disturbed soil areas during the construction phase. If disturbed slopes are not protected, sediment has the potential to travel to adjacent waterways.

No-Build Alternative

Selection of the No-Build Alternative would result in no construction or operational water quality impacts

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BMPs would be implemented to address potential water quality impacts during the planning and design, construction, and operational (maintenance) stages. The Statewide Storm Water Management Plan (SWMP) describes how Caltrans would comply with the provisions of the NPDES Permit (Order 99-06-DWQ). The SWMP describes the program that Caltrans would implement to reduce the discharge of pollutants to the storm water drainage systems that serve the highway and highway-related properties, facilities and activities. The SWMP divides the BMPs into separate categories from the planning and design phase to the operational (maintenance) phase.

To address the pending TMDL requirements for the Peñasquitos Lagoon and due to the proximity of Carroll Canyon Creek, various BMPs would be implemented during construction as well as operation to prevent or minimize sediment runoff from entering the creeks.

Short-term potential impacts to water quality during the construction phase are prevented/minimized through the use of Construction Site BMPs while the long term potential impacts during the facility operation and maintenance are prevented/minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. BMPs are categorized and described in Table 2.3.

Table 2.3: BMP Categories and Description

BMP Category	Description	Responsible Division for BMP Implementation
Category IA	Maintenance BMPs: litter pickup, toxics control, street sweeping, etc.	Division of Maintenance
Category IB	Design Pollution Prevention BMPs: permanent soil stabilization systems, etc.	Division of Design
Category II	Construction Site BMPs: temporary runoff control	Division of Construction
Category III	Treatment BMPs: Permanent treatment devices and facilities	Division of Design, Construction and Maintenance

Maintenance BMPs (Category IA)

Caltrans maintenance performs various activities on different facilities throughout the state to ensure safe and usable conditions for the public. Most of these activities are performed by small crews with minimal soil disturbance.

The objective of implementing maintenance BMPs is to provide preventative measures to ensure that maintenance activities are conducted in a manner that reduces the amount of pollutants discharged to surface waters via Caltrans storm water drainage systems. Maintenance BMPs would be on-going for the life of the facility and they have to be in accordance with the Storm Water Quality Handbook, Maintenance Staff Guide (Guide). The Guide provides detailed instructions on how to apply the approved storm water Maintenance BMPs to maintain facility operations and highway activities.

Design Pollution Prevention BMPs (Category IB)

Design Pollution Prevention (DPP) BMPs are standard technology-based, non-treatment controls selected to reduce pollutant discharges to the maximum extent practicable. DPP BMPs have the following design objectives: Prevent downstream erosion, stabilize disturbed soil areas and maximize vegetated surfaces consistent with Caltrans policies.

Without the implementation of DPP BMPs, the project may have an effect on downstream channel stability through changes in the rate and volume of runoff, the sediment load due to changes in the land surface, and other hydraulic changes from stream encroachments, crossings or realignment. The peak flow rate, runoff velocities, and erosive characteristics of the soils in the area would be assessed with regard to downstream watercourses to determine potential impacts.

The selection of the specific BMPs is an iterative process that begins at the planning stages and gets refined during the design phase. Since Caltrans is committed to prevent or minimize impacts to water quality, the project would preserve the existing vegetation outside the work areas, stabilize slopes with vegetative cover after the completion of construction and keep the total paved area to a practical minimal. The project would also upgrade the drainage systems where necessary to handle the additional runoff, add additional drainage systems as necessary and use flared end section or rock slope protection at culvert outlets where appropriate. Design Pollution Prevention BMPs that may be implemented are found in Table 2.4.

Table 2.4: Design Pollution Prevention BMPs, Category IB

Consideration of Downstream Effects Related to Potentially Increased Flow
Preservation of Existing Vegetation
Concentrated Flow Conveyance Systems
Ditches, Berms, Dikes and Swales
Overside Drains
Flared Culvert End Sections
Outlet Protection/Velocity Dissipation Devices
Slope/Surface Protection Systems
Vegetated Surfaces
Hard Surfaces

Construction BMPs (Category II)

It would be necessary to use a combination of temporary erosion and sediment control BMPs to address both storm water and non-storm water discharges during construction. Caltrans would implement various construction site BMPs, as appropriate, during construction to reduce the potential for short-term impacts. These temporary control practices are consistent with the BMPs and control practices required under the State of California NPDES General Construction Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ), and are intended to achieve compliance with the requirements of the aforementioned Permit. The selected BMPs are directed at reducing pollutants in storm water discharges and eliminating non-storm water discharges. The BMPs to be implemented would cover the categories in Table 2.5 below. Examples of construction BMPs that could be implemented for this project include temporary fiber rolls, temporary erosion control, temporary concrete washouts, temporary construction entrances, street sweeping, temporary check dams and temporary drainage inlet protection.

Table 2.5: Construction BMP Categories

Temporary Soil Stabilization
Temporary Sediment Control
Wind Erosion Control
Tracking Control
Non-Storm Water Management
Waste Management and Materials Pollution Control

Treatment BMPs (Category III)

Treatment BMPs must be considered and implemented for the proposed project, as required under the SWMP to prevent or minimize the long-term potential impacts of the project. A preliminary review of the project area has been completed and potential locations and types of treatment BMPs have been assessed based on the following two criteria: pollutants of concern in the receiving water bodies and feasibility (based on such factors as climate, water volume, soil conditions, physical limitations, other environmental considerations, etc.). The project would incorporate six bioswales. The bioswales would treat approximately 19.8ac (8.0ha) of impervious area, 12.6ac (5.1ha) of which would be existing pavement, and 7.2ac (2.9ha) would be new pavement.

The project is also proposing to enhance three culvert outlets areas that drain to Carroll Canyon Creek to augment the treatment potential when water is conveyed through the area. The areas would be enhanced by planting or hydroseeding where erosion and scouring has occurred. The culvert outlets proposed for enhancement convey approximately 5.4ac (2.2ha) of commingled surface water from coming from both City and Caltrans existing and new impervious surfaces.

2.3.3 Geology/Soils/Seismic/Topography

REGULATORY SETTING

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake (MCE), from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

AFFECTED ENVIRONMENT

A preliminary geotechnical report was completed March of 2008 and is referenced herein.

Site Geology

From State Route 52 (SR-52) north to the southern slope of Carroll Canyon, the I-805 freeway primarily traverses mesas and cuts in the Linda Vista Formation. Within this interval, Scripps Formation and Stadium Conglomerate underlie lower areas of the native topography. Within Rose Canyon, Carroll Canyon, and Los Peñasquitos Canyon, some freeway facilities are underlain by alluvial soils. From Carroll Canyon north to the I-5 junction, Bay Point Formation and Ardath Shale mostly underlie the freeway. Localized locations of colluvium and alluvium occur as subgrade to the freeway embankment.

With the exception of the Ardath Shale Formation and alluvium, all native geologic units that underlie the alignment of this project are highly competent. However, only a relatively minor section of the project alignment may be impacted by the presence of Ardath Shale Formation.

Topography and Drainage

The section of I-805 from SR-52 to the I-5 and I-805 Interchange generally parallels the Pacific Coast. It traverses a series of uplifted wave cut terraces called mesas that parallel the existing coastline. East to west trending river valleys, canyons, and arroyos deeply dissect these terraces. Terrace elevations are typically about 330ft (100m) or less above Mean Sea Level (MSL) while stream and arroyo elevations decrease from the east to the west direction, and at their limits they are just above MSL.

Natural drainage at the location of the referenced section of the freeway occurs mainly through the canyons and arroyos. Runoff water and drainage water in developed areas

flows toward, or is channeled to, these topographic features that carry it westward to the Pacific coast.

Water

Outside of storm events, surface water is not typically present along the project alignment. A slight year round base flow, punctuated by storm discharge, occurs within the streambeds at Rose Canyon, Carroll Canyon, and Los Peñasquitos Canyon.

Groundwater

Seepage water, springs, ephemeral streams, and perched water conditions could be encountered within the project limits. These hydrogeologic phenomena are most likely to occur at the toe of slopes and embankments, and at the contact between permeable units (sandstone) and impermeable (shale). In addition, they are likely to occur at the bottoms of canyons and arroyos that incise mesas.

Soil Survey Mapping

For this project the Soil Survey of San Diego Area, California, prepared by the U.S. Department of Agriculture (USDA), Soil Conservation Service (1973) was utilized. Although the survey focuses primarily on agricultural issues, the report includes estimated soil properties, which are significant in engineering and land use planning.

The review of the Soil Survey report indicates that there are ten different soil units identified within the project area. Along the project alignment, the majority of relatively level areas or mesas are classified as having soils characteristic of the Redding and Redding-Olivian series (associations). These series are comprised of well-drained cobbly and gravelly loams that have gravelly and cobbly clay subsoil over a surficial hardpan. The floors of the valleys that incise the previously referenced mesas have soils characteristic of the Diablo-Linne and Las Flores-Huerhuero series. These series are comprised of well to moderately drained clays, clay loams and loamy fine sands that have a subsoil of sandy clay or clay.

ENVIRONMENTAL CONSEQUENCES

Built Alternative

GROUND MOTION

No known Holocene fault exists within the project area. However, several secondary faults related to the active Rose Canyon Fault Zone have been mapped along the project alignment. These faults (the Torrey Pines, Salk, and a few more unnamed faults) are currently believed to be pre-Holocene, though no direct evidence supports this fact.

The nearest known active fault is the Rose Canyon Fault Zone believed to be capable of producing an earthquake with a Maximum Credible Magnitude of 7.0 on the Richter scale. It is located about 3.42mi (5.5km) south and west from the project site. The potentially active La Nacion Fault is located about 11.2mi (18.0km) southeast from the

southern end of the project limits, and it is considered capable of producing an earthquake with a Maximum Credible Magnitude of 6.75 on the Richter scale. In addition, the Elsinore Fault, about 25.5mi (41.0km) northeast of the project limits, is considered capable of producing an earthquake with a Maximum Credible Magnitude of 7.5 on the Richter scale. All three referenced faults are believed to be capable of generating a Peak Bedrock Acceleration of about 16ft/s^2 (4.9m/s^2) at the project site.

GROUND SURFACE RUPTURE

Surface ground rupture is considered unlikely within the project limits. Active and potentially active faults are not known to cross the project alignment. The project site is not located within the State of California (Alquist-Priolo) Earthquake Fault Zone. Therefore, the potential for surface ground rupture within the project limits during a seismic event is considered low.

LIQUEFACTION

Liquefaction, a sudden large decrease of shearing resistance of a cohesionless soil, can be caused by strong vibratory motion due to earthquakes. Both research and historical data indicate that loose granular soils that are saturated by the presence of a relatively shallow groundwater table are most susceptible to liquefaction and dynamic settlement. Liquefaction is generally known to occur in saturated or near-saturated cohesionless materials at depth shallower than about 100ft (30.5m) Dynamic settlement, however, can occur in both dry and wet sands at greater depths.

The Rose Canyon area has a very low potential for soil liquefaction. However, the potential for soil liquefaction appears to be high in the Carroll Canyon area. Further analysis of liquefaction potential would be required and special design considerations may be needed to mitigate liquefaction. Such analysis and consideration would be appropriately conducted during the Geotechnical Design Report and Foundation Report phases of project development.

No-Build Alternative

No new infrastructure would be subject to the soils, geology, seismic conditions or topography of the area if no action is taken.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Construction Monitoring and Instrumentation

Geotechnically trained personnel should be present during project construction to observe all cuts, foundation subgrade, and embankment subgrade to assure that the provisions set forth in the documents are appropriately enforced. If unanticipated conditions are encountered, the geotechnical personnel should make recommendations to the Resident Engineer who would in turn direct the contractor. Instrumentation for measuring settlement or slope distress is likely to be included in final geotechnical recommendations. A program of periodic surveying for ground movement should be

included in project construction where the potential for ground movement and failure exists.

Recommendations and Specifications

All grading and roadway work would be performed in accordance with the Caltrans Standard Plans and Specifications. Final recommendations and Special Provisions should be based on the findings of subsurface exploration, testing, and analysis as presented in final Geotechnical Design Reports and Foundation Reports. These reports would be based on accurate project features and alignments as they are established.

2.3.4 Paleontology

REGULATORY SETTING

Paleontology is the study of life in past geologic time based on fossil plants and animals. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects. (e.g., Antiquities Act of 1906 [16 USC 431-433], Federal-Aid Highway Act of 1935 [20 USC 78]). Under California law, paleontological resources are protected by CEQA, the California Code of Regulations, Title 14, Division 3, Chapter 1, §4307 and §4309, and PRC §5097.5.

AFFECTED ENVIRONMENT

The paleontological resources in the project area are identified in a Paleontological Identification Report (PIR) completed in 2007.

The project area includes a diverse assemblage of fossil marine invertebrates (mollusks, crustaceans, and echinoderms) from strata of the Eocene-age Ardath Shale, Scripps Formation, and Ardath Shale/Scripps Formation undifferentiated.

Ardath Shale

Ardath Shale consists primarily of gray shale, siltstone and interbedded sandstones. It is well exposed in Rose Canyon and in roadcuts along Morena Boulevard south to Tecolote Canyon. Spectacular outcrops of the Ardath Shale occur in the seacliffs from Torrey Pines south to Scripps Institution of Oceanography. This formation was deposited at outer shelf depths on an ancient sea floor during the early middle Eocene, about 47-48 Ma (million years) ago.

The Ardath Shale has yielded diverse and well-preserved assemblages of marine microfossils, macroinvertebrates, and vertebrates (e.g., sharks, rays, and bony fish).

Scripps Formation

The Scripps Formation consists of interbedded layers of claystones, siltstones, and sandstones, with some cobble conglomerate. In its type area, in the high sea cliffs north of La Jolla, the formation is 185ft (56.4m) thick. The Scripps Formation is entirely of marine origin (continental shelf) and was deposited during the early middle Eocene, approximately 46-47 Ma.

The Scripps Formation is considered to be potentially fossiliferous almost everywhere it occurs. Most of the fossils known from this formation consist of remains of marine organisms including clams, snails, crabs, sharks, rays, and bony fish. However, remains of fossil reptiles (e.g., crocodile and turtle) and land mammals (e.g., uinathere, brontothere, rhinoceros, and artiodactyl) have also been recovered from the formation. Well-preserved pieces of fossil wood have also been recovered from the Scripps Formation.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

Potential impacts to paleontological resources typically occur in the form of destruction of buried fossil remains during earth moving activities associated with construction. The improvements proposed for the project have the potential to impact paleontologically sensitive geologic units along parts of the right-of-way.

No-Build Alternative

The No-Build Alternative would have no impacts to paleontological resources.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following Paleontological Mitigation Plan would be implemented in order to avoid, minimize or mitigate project related impacts to paleontological resources.

1. A qualified principal paleontologist (M.S. or PhD in paleontology or geology familiar with paleontological procedures and techniques) would be retained to be present at pre-grading meetings to consult with grading and excavation contractors.
2. Paleontological monitor, under the direction of the qualified principal paleontologist would be on site to inspect cuts for fossils at all times during original grading involving sensitive geologic formations.
3. When fossils are discovered, the paleontologist (or paleontological monitor) would recover them. Construction work in these areas would be halted or diverted to allow recovery of fossil remains in a timely manner.
4. Fossil remains collected during the monitoring and salvage portion of the mitigation program would be cleaned, repaired, sorted, and cataloged.
5. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, would then be deposited in a scientific institution with paleontological collections.
6. A final report would be completed that outlines the results of the mitigation program.

2.3.5 Hazardous Waste/Materials

REGULATORY SETTING

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

AFFECTED ENVIRONMENT

An Initial Site Assessment (ISA) was completed in June of 2002 to assess the potential for hazardous waste within the footprint of the Carroll Canyon Road extension and I-805 HOV extension. An aerially deposited lead (ADL) survey report for the project was completed March 2008.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

Lead is known to be present along the I-805 corridor as a result of vehicular exhaust emissions prior to the elimination of lead from fuels in the mid-1980s.

The ADL survey report, which included shallow soil sampling along the I-805 median and shoulder areas, concluded that total and soluble lead levels are not hazardous to a depth of 3ft (0.9m). This soil has been excavated during previous projects. There would be no restrictions regarding the use of this soil.

The ISA determined that potential hazardous waste issues/materials of concern may include lead in yellow paint, yellow thermal plastic paint striping and/or within existing bridge structures.

Asbestos containing materials may include bridge joints, railings, concrete and piping.

No-Build Alternative

The No Build Alternative would not result in grading or excavation of soils, removal of buildings within the project limits or disturbance of hazardous waste containing infrastructure; therefore, there would be no potential to encounter hazardous waste or materials.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Soil containing aerially deposited lead within the median of I-805 is not hazardous to a depth of 3ft (0.9m). There are no restrictions regarding the use of this soil. Soil along the shoulder is also not hazardous and may be reused without restriction. This soil has been excavated during previous projects. A lead compliance plan shall be written to address the handling of ADL.

Chemically treated wood in guardrails and signposts that are removed or replaced must be treated as hazardous waste and would require special handling and disposal.

Prior to disturbance of any painted surfaces, sampling should be performed to assess the presence of lead. Suspect surfaces, including guardrails, piping, and pavement striping should be sampled and analyzed, and if present, appropriate abatement actions shall be implemented in accordance with applicable regulatory requirements.

Prior to commencement of excavation activities, a Site Specific Health and Safety Plan shall be prepared to protect the health of both workers and the public.

2.3.6 Air Quality

REGULATORY SETTING

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for CO, NO₂, O₃, and PM. California is in attainment for the other criteria pollutants. At the regional level, RTPs are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO) for San Diego County, SANDAG and the appropriate federal agencies, such as FHWA, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is “nonattainment” or “maintenance” for CO and/or particulate matter. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in “nonattainment” areas the project must not cause any increase in the number and severity of violations. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

AFFECTED ENVIRONMENT

An Air Quality Analysis was completed September 2008 for this project and is referenced herein.

The project is located in the San Diego Air Basin (SDAB), which is located within San Diego County. The climate of San Diego County is characterized by warm, dry summers and mild, wet winters. One of the main determinants of the climatology is a semi-permanent high-pressure area (the Pacific High) in the eastern Pacific Ocean. In the summer, this pressure center is located well to the north of San Diego County, causing storm tracks to be directed north of California. This high-pressure cell maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation. In San Diego County, the months of heaviest precipitation are November through April, averaging about 9 to 14in (23 to 36cm) annually. The mean temperature is 62.2°F (16.8°C) and the mean maximum and mean minimum temperatures are 75.7°F (24.3°C) and 48.5°F (9.2°C), respectively.

The Pacific High also influences the wind patterns of California. The predominant wind directions are westerly and west-southwesterly during all four seasons, and the average annual wind speed is 5.6mph (9.0km/hr).

A common atmospheric condition known as a temperature inversion affects air quality in San Diego. During an inversion, air temperatures get warmer rather than cooler with increasing height. Subsidence inversions occur during the warmer months (May through October) as descending air associated with the Pacific High comes into contact with cooler marine air. The boundary between the layers of air represents a temperature inversion that traps pollutants below it. The inversion layer is approximately 2,000ft (610m) above mean sea level (AMSL) during the months of May through October. However, during the remaining months (November through April), the temperature inversion is approximately 3,000ft (914m) AMSL. Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality.

California standards classify the SDAB as a nonattainment area for O₃, PM_{2.5} and PM₁₀.

Ambient air pollutant concentrations in the SDAB are measured at 10 air quality monitoring stations operated by the APCD. The APCD air quality monitoring station that represents the project area, climate, and topography in the SDAB is the Del Mar – Winston School monitoring station. However, not all criteria pollutants are monitored at every station. Therefore, to encompass the range of data necessary for all criteria pollutants, data from other Air Quality monitoring stations such as the San Diego – Overland, San Diego-Union, and San Diego-Beardsley monitoring stations, are presented in Table 2.6. Table 2.6 summarizes the excesses of standards and the highest pollutant levels recorded at these stations for the years 2005 to 2007.

Table 2.6: Ambient Air Quality Summary

Pollutant Standards	2005	2006	2007
Carbon Monoxide (CO)			
Maximum 8-hour concentration (ppm)	3.89	3.50	5.18
Maximum 8-hour concentration (ppm)	3.58	3.27	4.75
Number of Days Standard Exceeded			
NAAQS 8-hour (≥ 9 ppm)	0	0	0
CAAQS 8-hour (>9.0 ppm)	0	0	0
Nitrogen Dioxide (NO₂)			
Maximum 1-hour concentration (ppm)	0.076	0.091	0.087
Annual Average (ppm)	0.017	0.017	0.015
Number of Days Standard Exceeded			
CAAQS 1-hour	0	0	0
Sulfur Dioxide (SO_x)^a			
Maximum 24-hour concentration (ppm)	0.005	0.009	0.006
National annual average concentration (ppm)	0.003	0.004	0.003
Number of Days Standard Exceeded			
NAAQS 24-hour (>0.14 ppm)	0	0	0
CAAQS 24-hour (>0.04 ppm)	0	0	0
Ozone (O₃)			
Maximum 1-hour concentration (ppm)	0.082	0.086	0.110
Maximum 8-hour concentration (ppm)	0.070	0.074	0.079
Number of Days Standard Exceeded			
NAAQS 1-hour (>0.12 ppm)	0	0	1
CAAQS 1-hour (>0.09 ppm)	0	0	0
NAAQS 8-hour (>0.08 ppm)	0	0	0
Particulate Matter (PM₁₀)^b			
National maximum 24-hour concentration ($\mu\text{g}/\text{m}^3$)	44.0	42.0	65.0
National second highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)	40.0	34.0	45.0
State maximum 24-hour concentration ($\mu\text{g}/\text{m}^3$)	44.0	42.0	65.0
State second highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)	39.0	35.0	45.0
National ^c annual average concentration ($\mu\text{g}/\text{m}^3$)	22.3	22.5	23.2
State ^d annual average concentration ($\mu\text{g}/\text{m}^3$)	22.4	22.6	23.6
Number of Days Standard Exceeded			
NAAQS 24-hour ($>150 \mu\text{g}/\text{m}^3$)	0	0	0
CAAQS 24-hour ($>50 \mu\text{g}/\text{m}^3$)	0	0	1
Particulate Matter (PM_{2.5})			
Maximum 24-hour concentration ($\mu\text{g}/\text{m}^3$)	29.0	26.3	30.6
Second highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)	28.2	20.9	30.5
Third highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)	23.1	20.8	23.9
Fourth highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)	23.0	20.2	23.0
National ^c annual average concentration ($\mu\text{g}/\text{m}^3$)	*	11.0	*
State ^d annual average concentration ($\mu\text{g}/\text{m}^3$)	*	*	*
Number of Days Standard Exceeded			
NAAQS 24-hour ($>65 \mu\text{g}/\text{m}^3$)	*	0.0	*

Notes: * Data Unavailable

^a Sulfur dioxide readings taken from the San Diego Beardsley Monitoring Station

^b Measurements usually collected every six days.

^c National annual average based on arithmetic mean.

^d State annual average based on geometric mean.

Source: ARB 2007d; APCD 2007

ENVIRONMENTAL CONSEQUENCES

Build Alternative

REGIONAL AIR QUALITY CONFORMITY

The proposed project is fully funded and is included in the 2030 San Diego RTP: Pathways for the Future (Table A.2-Phased Highway Projects – Revenue Constrained Plan, page A-9), 2007 Update. The project is included in SANDAG's 2008 RTIP (MPO ID: CAL09C, page 29). A conformity determination for both the 2030 RTP and the 2008 RTIP was made by USDOT on November 17, 2008 (USDOT 2008). The design concept and scope of the proposed project are consistent with the project description in the 2030 RTP, the 2008 RTIP, and the assumptions in the SANDAG's regional emissions analysis. Therefore, the project would conform to the State Implementation Plan (SIP) and no adverse regional air quality impact would occur as a result of the project implementation.

LOCAL AIR QUALITY

The proposed project site is in a federal CO and PM₁₀ attainment area. The air quality conformity analyses of the RTP and RTIP are regional analyses and do not include the analyses of local CO or PM₁₀ impacts; these must be addressed at the project level. Federal and State attainment status for air pollutants may be found in Table 2.7.

Table 2.7: Attainment Status for the San Diego Air Basin

Pollutant	SDAB Attainment Status	
	Federal	State
O ₃ -1-hour	--a	Nonattainment
O ₃ -8-hour	Nonattainment-Basic Subpart 1	Nonattainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Attainment	Nonattainment
CO	Attainment/Maintenance	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment

a. Repealed by law in June 2005
Sources: EPA 2007b; ARB 2007b

Carbon Monoxide

The *Transportation Project-Level Carbon Monoxide Protocol, UCD-ITS-97-21* (Protocol), provides procedures and guidelines for use by agencies to evaluate the potential local level CO impacts of a transportation project. The Protocol provides decision flow charts designed to assist the lead agency in evaluating requirements that specifically apply to a proposed action. A summary of the flow chart analysis as it pertains to the project is provided below.

Local impacts from CO emissions shall be analyzed at a project level. The project is regionally significant and is included in the modeling of the region's transportation

network. The project is not in a region meeting federal attainment for all pollutants. The project is included in the conforming RTP and RTIP. The project is located within a CO attainment area and would not worsen air quality. It does not substantially increase the percentage of vehicles operating in cold start mode, significantly increase traffic volumes, or worsen traffic flow. The project would provide a new access to Sorrento Valley via the DARs and the extension of Carroll Canyon Road. Circulation should improve by implementing the project.

Evaluating the potential local level CO impacts of this project pursuant to the Protocol, it may be concluded that this project would not cause or contribute to any new exceedance of the NAAQS in the area, nor increase the frequency or severity of existing exceedances.

PM₁₀ and PM_{2.5}

On March 10, 2006, the U.S. Environmental Protection Agency (EPA) published a final rule that establishes the transportation conformity criteria and procedures for determining which transportation projects must be analyzed from local air quality impacts in PM_{2.5} and PM₁₀ nonattainment and maintenance areas. Based on that rule, the EPA and FHWA published *Transportation Conformity guidance for qualitative Hot-spot Analysis in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas* (PM guidance). While the SDAB is not a federally designated PM_{2.5} and PM₁₀ nonattainment or maintenance area, it is designated as a State nonattainment area for both pollutants. Thus, to meet State requirements, the proposed project is assessed using the procedure outlined in the PM Guidance.

The PM guidance document describes a qualitative hot spot analysis method that does not involve dispersion modeling. This qualitative PM_{2.5} and PM₁₀ hot spot analysis method involves a more streamlined review of local factors such as local monitoring data near a proposed project location.

The PM_{2.5} and PM₁₀ hot spot analysis method in the March 2006 Guidance involves two steps: determining whether or not a project is a "project of concern" and, if it is a "project of concern" preparation of a qualitative (emission analysis only) but more detailed analysis of the project.

The PM Guidance defines the following types of projects as projects of air quality concern:

- New or expanded highway project that have a significant number of or significant increase in diesel vehicles;
- Projects affecting intersections that are Level-of-Service (LOS) D, E, or F with a significant number of diesel vehicles, or those that would change to LOS D,E, or F, because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- New bus and rail terminals, and transfer points, that have a significant number of diesel vehicles congregating at a single location;
- Expanded bus and rail terminals, and transfer points, that significantly increase the number of diesel vehicles congregating at a single location; and,

- Projects in, or affecting locations, areas, or categories of sites that are identified in the PM_{2.5} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

A substantial volume for a new highway or expressway is defined as an annual average daily traffic (AADT) volume of 125,000 or more, and a significant number of diesel vehicles is defined as 8% or more of that total AADT or more than 10,000 truck AADT. A substantial increase in diesel truck traffic is normally considered to be approximately 10%.

The proposed improvements to the I-805 HOV/Carroll Canyon Project would increase capacity. The existing 2005 AADT volume is 331,560. The design year (2030) AADT volumes without the project are 343,500 vehicles. However, the existing diesel fuel truck percentage within the project limits is 7.1% of AADT, which is below the threshold of 8%. The proposed project would not result in an increase in truck volumes beyond the current 7.1% for the horizon year (2030).

The nearest air quality monitoring site located in a downwind direction from the project site that provides PM₁₀ and PM_{2.5} information is San Diego Overland Avenue monitoring station. The site indicates that the project area meets the current Federal PM₁₀ and PM_{2.5} standards of 150 ug/m³ (PM₁₀, 24 hours), 35 ug/m³ (PM_{2.5}, 24 hours), and 15 ug/m³ (PM_{2.5}, annual).

The proposed project is located in an attainment area for Federal PM₁₀ and PM_{2.5} standards, and in a non-attainment area of State PM₁₀ and PM_{2.5} standards. Based on screening using EPA PM Guidance, the proposed project is not a Project of Air Quality Concern because it does not meet the criteria due to relatively low total/truck AADT, truck percentage, and increase in truck volumes comparing the Build and No Build Alternatives. The proposed project is in conformance for Federal PM₁₀ and PM_{2.5} standards and is unlikely to increase the frequency or severity of any existing exceedances regarding the non-attainment of state PM₁₀ and PM_{2.5} standards.

Construction Related Air Quality Impacts

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other activities. Emissions from construction equipment also are anticipated and would include CO, nitrogen oxides (NO_x), volatile organic compounds (VOCs), directly-emitted PM₁₀ and PM_{2.5}, and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NO_x and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. If not properly controlled, these activities would temporarily generate PM₁₀, PM_{2.5}, and small amounts of CO, SO₂, NO_x, and VOCs. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly

controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the EPA to add 1.2tons (1.09tonne) of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50%.

In addition to dust-related PM₁₀ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs and some soot particulate (PM₁₀ and PM_{2.5}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

SO₂ is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting Federal Standards can contain up to 5,000 parts per million (ppm) of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and Air Resources Board regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel, so SO₂-related issues due to diesel exhaust would be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as distance from the site(s) increases.

Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

Evaluation of Project MSAT Impacts

For each alternative, the amount of MSATs emitted would be proportional to the vehicle miles traveled, (VMT), assuming that other variables such as fleet mix are the same for each alternative. Higher levels of regional MSATs are expected from the No-Build Alternatives because the VMT estimate for the No Build Alternative is higher than for the Build Alternative for the design year (2010). See Table 2.8 for forecasted VMT. Emissions would likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57% to 87% from 2000 to 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so substantial (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

Table 2.8: Vehicle Miles Traveled (VMT) for Alternatives

Year	No-Build	Build
VMT Year 2010	726,616	702,570
VMT Year 2030	714,142	755,700

Because of the specific characteristics of the project alternative there may be localized areas where VMT would increase, and other areas where VMT would decrease. Therefore it is possible that localized increases and decreases in MSAT emissions may occur. The localized increases in MSAT emissions would likely be most pronounced along new roadway sections that would be built under the Build Alternative. However, even if these increases do occur, they would be substantially reduced in the future due to implementation of EPA's vehicle and fuel regulations.

In sum, under the Build Alternatives in the design year it is expected there would be reduced MSAT emissions in the immediate area of the project, relative to the No-Build Alternative, due to the reduced VMT associated with more direct routing, and due to EPA's MSAT reduction programs. MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, would over time cause substantial reductions that, in almost all cases, would cause region-wide MSAT levels to be significantly lower than today.

Construction activity may generate a temporary increase in MSAT emissions.

No-Build Alternative

Under the No Build Alternative the project's contribution to easing future traffic congestion would not occur. Since operational traffic impacts would not be reduced, associated air quality impacts also would not be reduced. Regardless, no impacts are assessed because no construction is proposed.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Most of the construction impacts to air quality are short-term in duration and, therefore, would not result in adverse or long-term conditions.

The following measures would be incorporated into the project to minimize the emission of fugitive dust, PM₁₀, and PM_{2.5} during construction:

- Minimize soil disturbance.
- Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas.
- Suspend grading and earth moving when wind gusts exceed 25 mph unless the soil is wet enough to prevent dust plumes.
- Stabilize the surface of inactive stockpiles.
- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.
- Minimize unnecessary vehicular and machinery activities.
- Street sweeping shall be conducted where sediment is tracked from the job site onto paved roads, and shall be performed immediately after soil disturbing activities occur or offsite tracking of material is observed.
- Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.

The following measures would be incorporated into the project to minimize exposure to diesel particulate emissions:

- Locate construction equipment and truck staging and maintenance areas as far as feasible and nominally downwind of schools, active recreation areas, and other areas of high population density.

2.3.7 Noise

REGULATORY SETTING

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project would have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). Table 2.9 lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis. Figure 2.16 lists noise levels for various activities for comparison purposes.

Table 2.9: Noise Abatement Criteria for Various Land Uses

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	–	Undeveloped lands
E	52 Interior	Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Figure 2.16: Noise Levels for Various Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project would have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other

considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978 and the cost per benefited residence.

AFFECTED ENVIRONMENT

A Noise Study Report was prepared September 2008.

The ambient noise environment in the project area consists of vehicular noise from I-805 and various local roadways such as Carroll Canyon Road, Mira Mesa Boulevard, and Sorrento Valley Road. Jet flyovers from nearby Miramar Naval Air Station also substantially contribute to the ambient noise environment.

The surrounding development along I-805 and local roadways such as Mira Mesa Boulevard and Sorrento Valley Road within the project limits consists of various office buildings, public storages, and clinics. Two locations among these office buildings, Scripps Clinic and Sorrento Executive Plaza, have transitory outdoor use areas such as employee break and lunch spot with benches that are facing I-805 and Sorrento Valley Road. There is Fire Station No. 41 at the northeastern corner of Carroll Canyon Road and Scranton Road. Since sleeping quarters are located inside the facility, the fire station was identified as a sensitive noise receiver.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

The existing noise level in the project area ranges from 52 to 69 dBA. The future traffic noise levels at the outdoor employee break areas are predicted to be below the NAC of 72 dBA, and thus, no traffic noise impacts are anticipated at these locations.

The existing noise level at the Fire Station was measured at 69 dBA. Future traffic noise levels at the Fire Station are 72 dBA, which would exceed the NAC of 67 dBA, and thus would receive a traffic noise impact (Table 2.11). Since the sleeping quarters are located inside the station house, an interior noise level was also investigated. It is estimated that ordinary sash windows in a light framed building provide noise reduction of 20 dB between the exterior and the interior noise levels. The existing windows in the station are single-pane aluminum casement windows that are acoustically comparable to the ordinary sash windows. By subtracting the reduction of 20-dB from the predicted peak hour noise level of 72 dBA at the exterior, the interior noise level of the fire station with windows closed would meet the interior noise level criterion of 52 dBA (Table 2.10). Therefore, the interior of the station would receive noise impact during the peak noise hour. The major noise sources at this receptor are from local traffic from Carroll Canyon Road and Scranton Road. There would be no practical and feasible location for constructing a soundwall at the right-of-way or within private property for the fire station. Since there is no feasible location for a soundwall, window replacement would be the most cost effective and feasible way to abate the interior noise level of the fire station.

Compared to the existing single-pane windows, newly installed dual-pane windows should provide at least 5-dB additional noise reduction between the exterior and the interior noise levels. With the dual-pane windows in place, the interior noise levels during the peak hour would be reduced to below the NAC of 52 dBA.

Table 2.10: Predicted Build Alternative Traffic Noise Levels

Receptor No.	Location	Land Use ²	Existing Noise Levels ^{1,3} Leq(h), dBA	2030 Peak Hour Noise Levels, Leq(h), dBA ¹		
				Project Build With Abatement (No Abatement)	Activity Category and NAC ()	Impact Type (A/E, or None)
R1	Fire Station No. 41 4914 Carroll Canyon Rd San Diego	FRS	69 ^{M, STI}	72 (72)	B (67)	A/E
R1A			49 ^{M, STI}	47 (52)	E (52)	A/E

Notes:

- 1 – Leq(h) are A-weighted, peak hour noise levels in decibels
- 2 – Land Use: FRS – fire station; COM – commercial
- 3 – M = Measures noise levels; STx – measurement site number
E = Estimated from Build alternative and measurement sites
MO = Modeled future no-build noise level with LOS C volumes and calibration factor
- 4 – A/E = Approach or exceed NAC

Construction Noise

During the construction period a temporary increase in noise would occur. Effective noise control during the construction of a project means minimizing noise disturbances to the surrounding area. A combination of attenuation techniques with equipment noise control and administrative measures would be selected to provide the most effective means to minimize effects of construction activity noise.

No-Build Alternative

There would be no substantial differences in the existing noise levels with the No-Build Alternative.

AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

The City of San Diego has agreed in an e-mail to Caltrans dated December 19, 2008 that the City would be installing dual-pane windows at Fire Station No. 41 (Refer to Figures 3.1 and 3.2 in Chapter 3, Comments and Coordination). The installation of the dual-pane windows would provide interior abatement for traffic noise. See section 3.1 for coordination with the City.

The following control measures would be implemented in order to minimize noise disturbances during periods of construction:

Equipment Noise Control

- Ensure that all equipment items have manufacturers’ recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational. All construction equipment would be inspected at

- periodic intervals to ensure proper maintenance and presence of noise control devices.
- Turn off idling equipment

Administrative Measures

- Implement a construction noise-monitoring program to limit impacts
- Plan noisier operations during times least sensitive to receptors
- Keep noise levels relatively uniform and avoid impulsive noises, where feasible

2.4 BIOLOGICAL ENVIRONMENT

2.4.1 Natural Communities

REGULATORY SETTING

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in the Threatened and Endangered Species Section 2.4.5. Wetlands and other waters are discussed in Section 2.4.2.

AFFECTED ENVIRONMENT

A Natural Environment Study (NES) was prepared for the Project (I-805 HOV/Carroll Canyon Extension, San Diego County, City of San Diego, Caltrans District 11, SD-805-R26.5/R28.7, EA 11-2T0400, August 2008) to evaluate the biological resources and potential impacts to such resources within the Biological Study Area (BSA). The BSA consists of the project footprint and a buffer of 300ft (91.4m) beyond the footprint which supports natural habitats.

A Biological Assessment was prepared and submitted to the USFWS. A Biological Opinion was issued by USFWS on March 31, 2009. It is included as Appendix C. Avoidance, minimization and mitigation measures from the consultation are summarized within the following sections and all measures are included within the ECR (Appendix D).

Elevations range from about 40 to 300ft (12.2 to 91.4m) in this part of the Soledad Valley containing the BSA. Carroll Canyon Creek, an intermittent stream, flows directly into Los Peñasquitos Lagoon, which is a major San Diego County coastal wetland. This creek and the adjacent riparian habitat provide wildlife habitat and a movement corridor between the Lagoon and upper watershed areas.

Natural Communities

Natural vegetation communities found within the BSA consist of upland and wetland habitats. Four native communities are Diegan Coastal Sage Scrub (CSS), Disturbed CSS, Riparian Woodland, and Southern Willow Scrub. Three non-native communities/land coverages are Disturbed, Developed, and Ornamental. A brief discussion of each vegetation community follows. Impacts to key vegetation communities are also shown below.

DIEGAN COASTAL SAGE SCRUB

Diegan CSS is composed of low, soft-woody subshrubs to about three feet high and is one of the major shrub-dominated (scrub) communities within southern California. This community occurs on dry sites with shallow soils, such as steep, south-facing slopes or

clay-rich soils that are slow to release stored water. Sage scrub species are typically drought-deciduous plants with shallow root systems. Both of these adaptations allow for the occurrence of sage scrub species on these dry sites. Coastal sage scrub was listed as the third most extensive vegetation community in San Diego County in 1965; however, nearly 72% of the County's original sage scrub habitat has been destroyed or modified, primarily as a result of urban expansion.

Dominant plant species within the CSS community onsite include coastal sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilularis*), coastal buckwheat (*Eriogonum fasciculatum*) and California encelia (*Encelia californica*). Typical wildlife species found in this community include western fence lizard (*Sceloporus occidentalis*), California towhee (*Pipilo crissalis*), mourning dove (*Zenaida macroura*), Bewick's wren (*Thryomanes bewickii*), and desert cottontail (*Sylvilagus audubonii*). Invasive species within CSS include soft chess (*Bromus hordeaceus*), red brome (*Bromus madritensis*), and mustard (*Brassica* sp.).

DISTURBED DIEGAN COASTAL SAGE SCRUB

Disturbed CSS is composed of the same dominant plant species as undisturbed CSS but includes a higher presence of invasive species and a greater amount of bare ground. Dominant plant species within the Disturbed CSS community onsite include coastal sagebrush, coyote brush, and coastal buckwheat. Animal species and invasive plant species found within the Disturbed CSS onsite are the same as those found in undisturbed CSS as described above.

RIPARIAN WOODLAND

Riparian Woodland is a tall, open, broadleaf, winter-deciduous streamside woodland dominated by sycamore (*Platanus racemosa*). These stands seldom form a completely closed canopy and may appear as trees scattered in a thicket of shrub species. Willows (*Salix* sp.) and mulefat (*Baccharis salicifolia*), and coast live oak (*Quercus agrifolia*) also occur to varying degrees. Within the BSA, thin strips of Freshwater Marsh also occur next to the stream channel, dominated by cattail (*Typha* sp.). Common animal species include Pacific treefrog (*Pseudacris regilla*), common yellowthroat (*Geothlypis trichas*), Bewick's wren (*Thryomanes bewickii*), red-shouldered hawk (*Buteo lineatus*), and Pacific slope flycatcher (*Empidonax difficilis*). There are no common invasive species within this vegetation community.

SOUTHERN WILLOW SCRUB

Southern Willow Scrub consists of dense, broadleaved, winter-deciduous riparian trees and shrubs, sometimes forming dense thickets. These areas occur within and adjacent to stream channels. Within the BSA, thin strips of Freshwater Marsh also occur next to the stream channel, dominated by cattail (*Typha* sp.). Common plant species within Southern Willow Scrub are several willow (*Salix*) species (particularly arroyo willow, *S. lasiolepis*), with scattered emergent cottonwoods (*Populus fremontii*) and western sycamores (*Plantanus racemosa*). Several Northern catalpa (*Catalpa speciosa*) trees (native to the Midwestern U.S.) are present throughout. Animal species found within this habitat include Pacific treefrog, common yellowthroat, Bewick's wren, and Pacific slope

flycatcher. Invasive species within this habitat are pampas grass (*Cortaderia jubata*) and giant reed (*Arundo donax*).

Disturbed Habitat

Disturbed habitat is an area of high disturbance that is either dominated by invasive, non-native forbs that are adapted to a regime of frequent disturbances, or consist of dirt roads with “road pools.” Some of the Disturbed habitat in the BSA has trash, debris, and evidence of scattered homeless encampments. Similar to the nonnative grass species in California, many of the weeds now present in Disturbed habitat are originally from the Mediterranean region. Some species are Russian thistle (*Salsola tragus*), mustard (*Brassica* sp.), and red brome.

Road pools within Disturbed habitat are generally barren, shallow depressions (generally less than three inches deep) within portions of the dirt roads, ranging in size from about 20-900 sq ft (1.9-83.6m²) These pools are undoubtedly created by vehicle traffic digging up the roads during periods when the roads are muddy. The clay soils serve to retain water for periods during the rainy season.

Plant species within this habitat type include Australian saltbush (*Atriplex semibaccata*), red brome, sea-fig (*Carpobrotus edulis*), wild hemlock (*Conium maculatum*), horehound mint (*Marrubium vulgare*), and Russian thistle. Animal species found within Disturbed habitat include mourning dove, European starling, and California ground squirrel. Fairy shrimp (*Branchinecta* sp.) occur within some of the road pools.

Developed

Developed land is composed of areas of intensive use with much of the land covered by structures. Included in this category are cities, transportation, power, and communications facilities, and areas such as those occupied by shopping centers, light industrial buildings, and commercial complexes.

Dominant areas onsite consist of pavement, buildings, and contain only isolated inclusions of ornamental trees, shrubs, and lawns. Animal species found include urban-adapted species that are also typical of disturbed and ornamental areas such as house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), European starling (*Sternus vulgaris*), rock dove (*Columba livia*), and house sparrow (*Passer domesticus*).

Ornamental

Dominant plant species include various species of Eucalyptus (*Eucalyptus* sp.), acacia (*Acacia* sp.), bottlebrush (*Callistemon* sp.), and Peruvian pepper tree (*Schinus molle*). Animal species found within Ornamental habitat onsite are the same as those found in Disturbed habitat described above.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

Impacts to Diegan CSS, Disturbed CSS, and Riparian Woodland are detailed in Table 2.11.

Table 2.11: Impacts to Key Vegetation Communities

Vegetation Community	Temporary	Permanent
Diegan Coastal Sage Scrub (Caltrans R/W)	None	0.06ac (0.02ha)
Diegan Coastal Sage Scrub (City R/W)	0.40ac (0.16ha)	0.43ac (0.17ha)
Disturbed Diegan Coastal Sage Scrub (Caltrans R/W)	0.65ac (0.26ha)	0.03ac (0.01ha)
Disturbed Diegan Coastal Sage Scrub (City R/W)	0.12ac (0.05ha)	0.12ac (0.05ha)
Disturbed Diegan Coastal Sage Scrub (Private Land)	None	0.02ac (0.01ha)
Riparian Woodland (Caltrans R/W)	Branches of about six trees trimmed	None
Riparian Woodland (City R/W)	Branches of about one tree trimmed	None

WILDLIFE CORRIDORS

Carroll Canyon Creek and the adjacent riparian vegetation constitute both a regional and local wildlife movement corridor. The area is a regional corridor based on its landscape position between urbanized areas and the presence of downstream (Torrey Pines State Reserve) and upstream natural areas (e.g., portions of Miramar Marine Corps Air Station [MCAS]). The area is also a local corridor due to its habitat values within the BSA and nearby canyons for a variety of wildlife species (e.g., mule deer, coyote).

No-Build Alternative

The No-Build Alternative would not have impacts to natural communities within the project limits.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Diegan Coastal Sage Scrub

Impacts were minimized during design; however, required road geometry (e.g., curvature) limited the opportunity to move the alignment away from this vegetation community. With the road elevated on structure, CSS may grow back under the edges. Staging and storage areas should be sited to avoid this vegetation community. ESAs would be established to protect adjacent biological resources during construction.

Permanently impacted CSS shall be mitigated at a 2:1 ratio by encumbering CSS habitat at a Caltrans or SANDAG-owned parcel. Temporarily impacted CSS shall be mitigated on site at a 1:1 ratio by revegetation. Both actions would be done at the conclusion of construction.

Disturbed Coastal Sage Scrub

Impacts were also minimized during project design; however, required road geometry limited the opportunity to move the alignment away from this vegetation community. With the road alignment built on structure, it is possible that some CSS would grow back under the road, at least on the edges. Staging and storage areas should be sited to avoid this vegetation community. ESAs would be established to protect adjacent biological resources during construction.

Permanently impacted Disturbed CSS would be mitigated at a 2:1 ratio, by encumbering CSS habitat at a Caltrans or SANDAG-owned parcel. Temporarily impacted areas would be revegetated on site. Both actions would be done at the conclusion of construction.

Riparian Woodland

Impacts to Riparian Woodland were avoided during project design, with the exception of up to about six sycamores that would have branches trimmed. There would be no ground disturbance. The very large coast live oak west of I-805 was avoided. About four coast live oaks would be impacted. Coast live oaks would be replanted at a 5:1 ratio (i.e., 20 trees) within the BSA.

Southern Willow Scrub

Impacts to Southern Willow Scrub were avoided during project design. ESAs would be established to protect adjacent biological resources. Roadway lighting would also be directed away from Carroll Canyon Creek.

Wildlife Corridors

Carroll Canyon Road would extend along the north side of the Creek and there would be no impacts to the regional wildlife corridor. The road would be built on elevated structure so that local movements continue. Highly invasive plant species can be removed, as described above, thus increasing the carrying capacity of the habitat for native wildlife. Noise due to roadway operation is expected to be similar to the existing conditions. Road lighting would be minimized and directed away from the riparian area. Thus, after the project has been completed, the area should continue to persist as a wildlife corridor in both a regional and local context for the variety and abundance of wildlife that use it.

2.4.2 Wetlands and Other Waters

REGULATORY SETTING

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by EPA.

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as FHWA, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If DFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

AFFECTED ENVIRONMENT

Wetlands within the resource study area include Riparian Woodland and Southern Willow Scrub habitats.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

There would be no impacts to wetlands or waters of the U.S. or State requiring permits; therefore, no coordination is needed with resource or regulatory agencies

No-Build Alternative

The No-Build alternative would not result in impacts to wetlands or waters of the U.S. or State.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization and/or mitigation measures are required due to no impacts occurring as a result of the proposed project.

2.4.3 Plant Species

REGULATORY SETTING

The USFWS and CDFG share regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section 2.4.5 in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at USC 16, Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and CEQA, Public Resources Code, Sections 2100-21177.

AFFECTED ENVIRONMENT

One Special Status Plant Species, Palmer’s sagewort (*Artemisia palmeri*), was found in the BSA during field surveys. A total of 76 plant species (44 native) was recorded.

Palmer’s Sagewort

Palmer’s sagewort (*Artemisia palmeri* Gray) is a deciduous, aromatic shrub in the Asteraceae (sunflower family). It is known to frequently occur in low (i.e., wet) places below 2,000 feet in coastal San Diego County. The closest location is in Miramar, which is less than five miles from the BSA. Palmer’s sagewort is also known in Rancho Bernardo near the intersection of I-15 and SR-56. This plant was observed immediately west of the BSA along Carroll Canyon Creek between Sorrento Valley Road and Roselle Street. The species is on the California Native Plant Society’s (CNPS) List 4.2, for plants limited in distribution and “fairly endangered in California” and is known within Riparian Scrub and Riparian Woodland habitats.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

PALMER'S SAGEWORT

About 15 plants at three locations within the project footprint would be impacted. Palmer's sagewort should otherwise continue to persist in the BSA.

No-Build Alternative

The No-Build Alternative would not result in impact to special status plant species.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Palmer's Sagewort

Although 15 individuals would be impacted, about 89% of the Palmer's sagewort in the BSA, including the largest clusters, would be avoided. These locations should be in Environmentally Sensitive Areas (ESAs); therefore, construction activities would avoid them.

Salvage and replanting is not known to be successful. However, the plant is in cultivation at several nurseries in southern California. Caltrans has used this species successfully in other restoration projects. Therefore, it shall be mitigated from container stock at a minimum 2:1 ratio, in association with suggested riparian restoration efforts.

2.4.4 Animal Species

REGULATORY SETTING

Many state and federal laws regulate impacts to wildlife. USFWS, the National Oceanic and Atmospheric Administration (NOAA) Fisheries and CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.4.5. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

AFFECTED ENVIRONMENT

Four California Species of Special Concern occur; these are the western (Coronado) skink (*Eumeces skiltonianus*) (a lizard), orange-throated whiptail lizard (*Cnemidophorus hyperythrus beldingi*), Vaux's swift (*Chaetura vauxi*), and yellow warbler (*Dendroica petechia*).

Western (Coronado) Skink

The western (Coronado) skink (*Eumeces skiltonianus interparietalis*) is a lizard inhabiting semiarid environments of canyons, mesas, and mountains. The blue tail of skinks is distinctive. Rocky outcrops and thickets along streams are especially favored by the western skink. Although active during the daytime, the species is known to be somewhat secretive and challenging to detect. They are also occasionally seen along habitat edges and disturbed habitats.

Orange-throated Whiptail

The orange-throated whiptail lizard (*Cnemidophorus hyperythrus beldingi*) is a lizard that inhabits washes and other sandy areas where there are rocks and patches of brush and rocky hillsides. They frequent coastal chaparral and streamside growth and eats insects and spiders. They are also occasionally seen along habitat edges and disturbed habitats.

Vaux's Swift

Vaux's swift (*Chaetura vauxi*) is the smallest swift in North America and is a common spring and fall migrant in coastal San Diego County. It also winters regularly around the City of Oceanside. Vaux's swift has been experiencing a decline in its natural habitat due to forest removal. The species sometimes roosts chimneys and other man-made structures.

Yellow Warbler

The yellow warbler (*Dendroica petechia*) is a fairly common spring and fall migrant and an uncommon and localized summer resident. In San Diego County, breeding warblers are generally restricted to mature riparian woodland. This species has experienced increases recently, primarily attributed to trapping of brown-headed cowbirds (*Molothrus ater*) to benefit the endangered least Bell's vireo.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

WESTERN (CORONADO) SKINK

Disturbed Habitat possibly used by the skink would be directly impacted, resulting in displacement of individual skinks and possible individual mortality. Most habitat impacts would be temporary, however, due to the raised bridge structure of Carroll Canyon Road. A long-term reduction in area skink population would not be expected since movement from adjacent habitats would not be affected.

ORANGE-THROATED WHIPTAIL

Coastal Sage Scrub habitat possibly used by the orange-throated whiptail would be directly impacted. This may result in displacement of whiptails and possible individual mortality. A long-term reduction in area whiptail population would also not be expected since movement from adjacent habitats would not be affected.

VAUX'S SWIFT

No impacts to Vaux's swifts would occur.

YELLOW WARBLER

There would be no impact to the yellow warbler since Southern Willow Scrub would not be impacted. Enhancement of Southern Willow Scrub by removal of giant reed and pampas grass would improve the carrying capacity of the habitat of yellow warbler, thus benefiting the species locally and over the long-term.

No-Build Alternative

The No-Build Alternative would not result in impact to special status animal species.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Western (Coronado) Skink

With the exception of limited tree trimming previously described, the project design avoids riparian habitats along Carroll Canyon Creek.

Given the limited impacts to disturbed habitat, which are mainly temporary, no compensatory mitigation is proposed.

Orange-throated Whiptail

The project design impacts limited amounts of CSS and Disturbed CSS favored by the lizard, and avoids riparian habitats along Carroll Canyon Creek (with the exception of limited tree trimming).

Given the limited impacts, which are mainly temporary, no compensatory mitigation is proposed.

Vaux's Swift

No avoidance or minimization efforts are needed. Since there would be no impacts, no compensatory mitigation is required.

Yellow Warbler

Impacts to Willow Riparian Woodland were avoided during project design. Since there would be no impacts to the species, no compensatory mitigation is required.

2.4.5 Threatened and Endangered Species

REGULATORY SETTING

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 USC, Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as FHWA, are required to consult with the USFWS and NOAA Fisheries to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. CDFG is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

AFFECTED ENVIRONMENT

A list of federally endangered and threatened species that may occur in the BSA was received from the USFWS on May 9, 2002 (Figure 3.1). Three species appeared on the list: California gnatcatcher (*Polioptila californica*), least Bell's vireo (*Vireo bellii pusillus*), and willowy monardella (*Monardella linoides* ssp. *viminea*). On March 28, 2008, the list was verified as current (J. Stuckrath, USFWS, pers. comm.). In addition, surveys were conducted for the federally endangered arroyo toad (*Bufo californicus*).

Field surveys determined that three federally-listed species (two endangered, and one threatened) occur within the BSA. They are the San Diego fairy shrimp (*Branchinecta sandiegonensis*), least Bell's vireo, and the California gnatcatcher. The vireo is also listed by the State of California as endangered. The willowy monardella and arroyo toad were not detected.

Willow Monardella

The willow monardella is a State and federally-listed endangered perennial, herbaceous plant in the lamiaceae (mint family). This plant is known to be restricted along only ten ephemeral drainages in San Diego County and northern Baja California. It occurs where water flows only after peak seasonal rains and major flooding events that periodically scour riparian vegetation and redistribute alluvial material. Willow monardella may also be found on coarse, rocky, sandy alluvium on benches, stabilized sandbars, channel banks, sandy washes, and/or among boulders and stones.

The species is reported to be extirpated from Carroll Canyon according to the 5-year status review by USFWS, with the closest populations located on MCAS Miramar. The willow monardella was not observed during field surveys within the BSA.

San Diego Fairy Shrimp

The San Diego fairy shrimp (SDFS) was listed as federally endangered on February 3, 1997. This species is a small, aquatic crustacean (Order: Anostraca) restricted to vernal pools, "road pools" and other similar shallow depressions.

Mature individuals lack a carapace (hard outer covering of the head and thorax) and have a delicate, elongate body, large stalked, compound eyes, and 11 pairs of swimming legs. Adult male SDFS range in size from 0.35-0.63in (0.9-1.6cm); adult females are 0.31-0.55in (0.8-1.4cm) long. The second pair of antennae in males are greatly enlarged and specialized for clasping the females during copulation, while the second pair of antennae in the females is elongate.

SDFS mainly occur in San Diego County from Camp Pendleton, inland to Ramona and south through Del Mar Mesa, Proctor Valley, and Otay Mesa. This species tends to inhabit shallow, small vernal pool-like depressions (e.g., pools in dirt roads, a.k.a. road pools) with water temperatures of 50-79°F (10-26°C). They are ecologically dependent on seasonal fluctuations in their habitat, such as absence or presence of water during specific times of the year, duration of inundation, and other environmental factors that likely include specific salinity, conductivity, dissolved solids, and pH levels. Water chemistry is an important factor in determining SDFS distribution.

SDFS are non-selective particle filter-feeders, or omnivores. Detritus, bacteria, algal cells, and other items between 0.3-100 microns may be filtered and ingested. Adult fairy shrimp are usually observed between January and March; however, in years with early or late rainfall, the hatching period may be extended. This species hatches in 3-8 days, and matures in about 7-17 days depending on water temperature. SDFS may only persist for about 4-6 weeks after hatching. The eggs are either dropped to the pool bottom or remain in the brood sac until the female dies and sinks. Eggs may persist in the substrate for several years. When the pools refill in the same or subsequent rainy seasons, some but not all of the eggs may hatch. Fairy shrimp may be eaten by a wide variety of species, including beetles, dragonfly larvae, and other arthropods, frog, salamander, and toad tadpoles, shorebirds, ducks, and even other fairy shrimp.

SDFS are known to occur in most of the vernal pool complexes in coastal San Diego County. Many populations of SDFS have likely been eliminated or have experienced

drastic declines due to the substantial loss of habitat in Southern California. The majority of the vernal pools within the range of the SDFS were lost prior to 1990. The greatest recent losses of vernal pool habitat in San Diego County have occurred in Mira Mesa, Rancho Peñasquitos, and Kearny Mesa, which accounted for 73% of all the pools destroyed between 1979 and 1990. Similar to San Diego County, vernal pool habitat was once extensive on the coastal plain of Los Angeles and Orange counties. There has been a near total loss of vernal pool habitat in these areas.

The SDFS is especially vulnerable to alteration in hydrology; thus, the protection of watershed function is critical to its survival. SDFS are also threatened by urban, agricultural development, modified hydrology due to adjacent road construction, and illegal trash dumping. Unpredictable natural events such as drought or fire may eliminate the SDFS due to its fragmented and restricted range. They are also vulnerable to contaminants in runoff waters and watershed quality. Low levels of genetic variability may affect the species potential for long-term viability.

SDFS is known to occur in one road pool (surface area about 23sq ft [2.1m²]) in the proposed project alignment just west of the I-805 Freeway. The species is also present in six other road pools within the BSA. Three of these pools are west of the freeway and just north of Carroll Canyon Creek; the other three pools are south of Carroll Canyon Creek, two are east of I-805, and one is west of the freeway.

California Gnatcatcher

The California gnatcatcher is a federally listed threatened subspecies. This resident bird is usually found in association with CSS vegetation communities, particularly Diegan CSS. The subspecies can occur on gentle slopes within the maritime and coastal climate zones, generally below 1,000ft (305m) elevation. Often, California sagebrush and flat-top buckwheat are the dominant plants species in the area. The gnatcatcher's range is restricted to the coastal slopes of southern California, from Los Angeles County south to El Rosario, Baja California, Mexico. Concentrations of this subspecies are found throughout Carlsbad, southwest San Marcos, and Oceanside, with lesser concentrations in portions of Escondido, Vista, and Encinitas. Critical populations occur in northeast Carlsbad, southeast Carlsbad/southwest San Marcos, and north Oceanside adjacent to Camp Pendleton. Gnatcatchers are known to occur in Torrey Pines State Reserve, about three miles northwest of the BSA. Construction monitoring studies suggest that the species tolerates adjacent construction and high noise levels.

In 2002, a nesting pair of California gnatcatchers was observed in the CSS habitat in the western part of the BSA. However, surveys in 2003 and a 2008 survey following the recommended USFWS protocol throughout the entire BSA did not find any California gnatcatchers. A California gnatcatcher was also observed on the slope near southbound I-805 south of Carroll Canyon, but this location is outside of the BSA (about 400ft [122m] from the project limits).

Least Bell's Vireo

The least Bell's vireo (*Vireo bellii pusillus*) is a small, olive-gray songbird that nests and forages almost exclusively in riparian woodland habitats. It is migratory, occurring only from about April through September in San Diego County. Nesting habitat typically consists of riparian woodland with well-developed overstories, understories and low densities of aquatic and herbaceous cover. The understory often consists of dense thickets composed of narrow-leaved willow (*Salix exigua*), mulefat (*Baccharis salicifolia*) and saplings of arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*) or one of several other herbaceous species. The species occurs in much of coastal San Diego County, especially Camp Pendleton, the San Diego River, the San Luis Rey River, and the Tijuana River Valley. The closest known locality for the species is near the San Dieguito Lagoon, near Del Mar, about five miles from the BSA.

In 2006, a least Bell's vireo was observed in the Willow Riparian habitat east of I-805, just south of the intersection of Scranton Road and Carroll Canyon Road. A survey conducted in 2008 following the recommended USFWS protocol did not detect any least Bell's vireos.

Arroyo Toad

The arroyo toad (*Bufo californicus*) is a small amphibian that resides in selected riparian habitats of the southwestern United States, including San Diego County. The arroyo toad is not known to occur in within the area. This federally endangered species has warty skin and dark spots. Optimal habitat consists of rivers that have shallow, gravelly pools near sandy terraces suitable for foraging adults. Breeding takes place in large streams in shallow pools with silty gravel/sand substrate that are relatively undisturbed by currents and have little emergent vegetation. Although the USFWS did not suggest completing surveys for this species, surveys were conducted in the BSA in 2000. No arroyo toads were observed.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

WILLOWY MONARDELLA

The proposed project would not impact the willowy monardella.

SAN DIEGO FAIRY SHRIMP

One road pool (about 23 sq. ft in area) known to support SDFS would be covered with the raised road structure of Carroll Canyon Road. Three other pools not likely, but possibly supporting SDFS would be partially covered, adversely affecting the hydrology of these pools. They may not hold water as long or have the opportunity to hold water at all after construction is completed. Water quality may also be affected; there could be increased runoff, and perhaps sedimentation. Thus, SDFS survival and reproduction would be adversely affected in these scenarios and may not even be possible.

CALIFORNIA GNATCATCHER

Since CSS habitat previously identified as occupied by gnatcatchers would be impacted by the proposed project, the species may be affected.

LEAST BELL'S VIREO

Since project construction would be adjacent to Southern Willow Scrub and Southern Coast Live Oak Riparian Woodland known to have been occupied by least Bell's vireo, the species, in the event that it is present, may be adversely affected by construction noise during territorial activities (i.e., reproduction). Existing noise levels have been compared to expected post-construction noise levels and found, at most, a 1dB(A) increase could be expected. High noise levels were determined to be present due to nearby I-805, the San Diego Northern Railway, and frequent aircraft/helicopter overflights from MCAS Miramar. Therefore, operation of the extended road would not add substantially, if at all, to the ambient noise.

ARROYO TOAD

There would be no effects to the arroyo toad from the proposed project.

No-Build Alternative

The No-Build Alternative would not cause impacts to threatened or endangered species within the project limits.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Willow Monardella

Since there would be no impacts to this species, no avoidance, minimization or compensatory mitigation is proposed.

San Diego Fairy Shrimp

The proposed project would be unable to avoid a road pool supporting SDFS due to the constricting position of the I-805 fill slope, existing bridge piers, new piers for elevated road structure of Carroll Canyon Road, and Carroll Canyon Creek. Three other road pools would also be unavoidably impacted due to required road geometry to build Carroll Canyon Road. Based on two wet season surveys, the road pools do not support SDFS. Surveys were completed during the current rainy season pursuant to the USFWS presence-absence protocol.

The road pool known to support SDFS within the BSA is located within Caltrans right-of-way.

All other nearby pools would be within ESAs and protected in place. This is possible, even for adjacent pools, since the roadway would be built on an elevated structure. The amount and location of compensatory mitigation for SDFS has been determined in

coordination with the USFWS. The mitigation consists of creation or restoration of vernal pools at a 2:1 ratio to impacts and may be done within the BSA or at another ecologically appropriate off-site location. Use of unencumbered vernal pool mitigation, land acquisition, or purchase of a conservation easement to preserve existing pools, are also possible. Several off-site locations within the City of San Diego are being considered, including (1) Del Mar Mesa (between SR-56 and Los Peñasquitos Canyon), (2) Carmel Mountain Preserve (east of I-5 and south of SR-56), (3) Lopez Ridge (east of Camino Santa Fe and north of Calle Cristobal), which includes the Brown Parcel, (4) just south of SR-52 and west of SR-163, (5) Parkdale/Carroll Canyon, (6) Magnatron Parcel (Kearny Mesa), (7) Sander Parcel (Kearny Mesa), (8) Dennerly Canyon (Otay Mesa), and (9) just east of I-805 and south of Nobel Drive. The mitigation location and type would be approved by USFWS prior to initiating project impacts. The offsetting measure would be implemented within one year of the USFWS Biological Opinion. The protected areas would be preserved in perpetuity, a management plan would be completed, and adequate funding would be provided. Any required approval from the City of San Diego would be obtained.

During construction, a biologist approved by USFWS would monitor construction, at a minimum weekly, to ensure avoidance of SDFS occupied road pools and their immediate watersheds. Additional visits would be done before predicted rain events and immediately after actual rain events to direct repairs of any breaches in the fence or erosion control measures.

The approved biologist would also provide training for construction personnel, be present during Environmentally Sensitive Area (ESA) fencing construction, ensure compliance with Conservation Measures in the USFWS Biological Opinion, and produce reports that document compliance with the Conservation Measures. Also, during construction, a temporary fence (with silt barriers and/or other appropriate erosion control measures) will be installed around the limits of project impacts (including construction staging areas and access routes). The temporary fence should be removed upon project completion.

After construction, the dirt road supporting road pools should be closed to vehicle use. A bypass road should be built. The bypass should only impact Disturbed Habitat or Ornamental Habitat. Caltrans should work with the City of San Diego to ensure that the barriers blocking access to the road rut pools are maintained to exclude vehicles and other unauthorized access.

Water runoff associated with the new road surface would be directed away from the on-site road pools supporting San Diego fairy shrimp. No permanent irrigation or water from irrigation systems associated with the project will be permitted to enter the on-site road pools containing San Diego fairy shrimp. These measures would better protect SDFS adjacent to the project area after the project is completed.

California Gnatcatcher

Impacts to CSS habitat were avoided and minimized to the maximum extent practicable. CSS habitat outside of the construction area would be designated an ESA with limited access. Construction staging areas to the east of I-805 should be sited to minimize impacts. CSS vegetation within the direct impact area should be cleared and grubbed prior to the gnatcatcher nesting season to avoid impacts to nesting birds, as the preferred approach to avoid impacts to the species. If vegetation clearing is planned during the breeding season (February 15 to September 15), a pre-vegetation clearance survey would be done by a biologist holding an appropriate USFWS permit.

To offset potential impacts to the California gnatcatcher, direct impacts to CSS habitat should be mitigated at a 2:1 ratio by encumbering CSS habitat at a Caltrans or SANDAG-owned parcel. The location and form of impact offset would be approved by the USFWS prior to initiating project impacts. The offsetting measures would be implemented within one year of the USFWS Biological Opinion. Temporary impacts should be mitigated at a 1:1 ratio by revegetation at the end of the project.

Least Bell's Vireo

Direct impacts to Southern Willow Scrub and Riparian Woodland that the least Bell's vireo could use were avoided. Project construction would avoid direct effects to Southern Willow Scrub and Southern Coast Live Oak Riparian Woodland. To offset potential indirect effects during construction, non-native invasive plants (e.g., giant reed) should be removed from 0.54ac (0.22ha) along Carroll Canyon Creek.

A qualified biologist would conduct Least Bell's Vireo surveys during construction, and if it is determined that vireo may be affected by construction activities, then Caltrans would coordinate with CDFG and USFWS to develop mitigation measures and/or any required authorizations.

Arroyo Toad

Since this species would not be affected, no mitigation is proposed.

2.4.6 Invasive Species

REGULATORY SETTING

On February 3, 1999, President Clinton signed Executive Order (EO)13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

AFFECTED ENVIRONMENT

A total of 16 non-native, invasive plant species are known to occur in the BSA. They vary in their abundance, distribution, and degree of invasiveness potential.

ENVIRONMENTAL CONSEQUENCES

Build Alternative

None of the species on the California list of noxious weeds is currently used by Caltrans for erosion control or landscaping.

No-Build Alternative

None of the species on the California list of noxious weeds would be affected under the No-Build Alternative

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

In compliance with the EO 13112, and subsequent guidance from FHWA, the landscaping and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur

Invasive Species Discussion and Eradication Measures

The most abundant species (and covering the most area) are pampas grass (*Cortaderia selloana*) and giant reed (*Arundo donax*). These species are highly invasive and threaten the long-term viability of the riparian habitat and the wildlife that depend upon it.

The most effective approach for eradication is the application of foliar herbicide to *Arundo* in the fall. At that time the herbicide would be translocated to the rhizomes and achieve the best control. Pampas grass can be sprayed and/or cut. Also effective

against pampas grass is removal of the seed heads if the former control approach is not feasible.

Hottentot fig, a.k.a. freeway iceplant (*Carpobrotus edulis*) is present in two limited areas on the edges of the vegetation on both sides of Carroll Canyon Creek. This species also has a “high” rating due to severe ecological impacts it causes by the formation of dense mats that prevent other vegetation from growing. It should be controlled and monitored for recurrence.

Two other highly invasive, non-native species present in the BSA are fennel (*Foeniculum vulgare*), which is scattered in several small clusters within the BSA and yellow star thistle (*Centaurea solstitialis*). Fennel is within and near the alignment. Yellow star thistle is mainly in the western area of the BSA in disturbed habitat. Both species should be removed and possible reestablishment should be monitored.

Crystalline iceplant (*Mesembryanthemum crystallinum*) is present in the BSA and has “moderate” invasive properties. Other species of similar concern are artichoke thistle (*Cynara cardunculus*), tree tobacco, and Mexican fan palm (*Washingtonia robusta*). Although they do not have the same high degree of invasive potential, and they are localized, these plants should still be removed.

Wild oat (*Avena*), mustard (*Brassica*), and brome grass (*Bromus diandrus*) are more widespread in Disturbed Habitat. Control is not likely to be feasible for these species and is not recommended. Mustard, in particular, has a long-lived seed bank, requiring control attempts over many years to have any chance of success.

There are about 20 northern catalpa (*Catalpa speciosa*) trees in the same riparian habitat. Though not listed by California Invasive Plant Council as an invasive species, catalpa trees nonetheless occupy habitat and displace native species in the riparian habitat in the BSA. One tree in the proposed alignment east of I-805 would probably be removed during construction. Removal of the others would likely have an ecological benefit and should also be done.

Plants of “limited” invasiveness potential in the BSA are curly dock (*Rumex crispus*), castor bean (*Ricinus communis*), and Peruvian pepper tree (*Schinus molle*). They do not commonly occur in the BSA since they have the potential to spread.

2.5 CUMULATIVE IMPACTS

REGULATORY SETTING

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under NEPA, can be found in 40 CFR, Section 1508.7 of the CEQ Regulations.

AFFECTED ENVIRONMENT

The federally endangered SDFS has been identified as having the potential to result in a cumulative effect as a result of the implementation of the project. Individually, the project does not result in a substantial impact to SDFS; however, habitat for SDFS is currently in poor or declining health even though the project's impacts are relatively small. The resource study area (RSA) for SDFS is comprised of primarily coastal mesa areas in San Diego County from Camp Pendleton, inland to Ramona and south through Del Mar Mesa, Proctor Valley, and Otay Mesa.

ENVIRONMENTAL CONSEQUENCES

SDFS are known to occur in most of the vernal pool complexes in coastal San Diego County. Many populations of SDFS have likely been exterminated or have experienced drastic declines due to the substantial loss of habitat in Southern California. The majority of the vernal pools within the range of the SDFS were lost prior to 1990. The greatest recent losses of vernal pool habitat in San Diego County have occurred in Mira Mesa, Rancho Peñasquitos, and Kearny Mesa, which accounted for 73% of all the pools destroyed between 1979 and 1990. Similar to San Diego County, vernal pool habitat was once extensive on the coastal plain of Los Angeles and Orange counties. There has been a near total loss of vernal pool habitat in these areas.

The SDFS is especially vulnerable to alteration in hydrology; thus, the protection of watershed function is critical to its survival. SDFS are threatened by urban development, agricultural development, modified hydrology due to adjacent road construction, and illegal trash dumping. Unpredictable natural events such as drought or fire may exterminate the SDFS due to its fragmented and restricted range. They are also vulnerable to contaminants in runoff waters and watershed quality. Low levels of genetic variability may affect the species potential for long-term viability.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Table 2.12 references other projects known to potentially impact SDFG, including their location, impacts and status as of this writing. The proposed project’s contribution would be relatively minor in relation to impacts that may occur by other projects listed in the table below, and any cumulatively considerable impacts resulting from the project would be fully offset by mitigating for SDFS habitat, as stated in section 2.4.5. Additionally, depending on the mitigation strategy selected in consultation with the USFWS, the project could provide a “net-benefit” in terms of creating more habitat than is required to mitigate for this project’s impacts. The selected mitigation strategy would be in an area of long term conservation value with habitat that is much better suited to long-term survival of the species, and any additional habitat remaining after mitigation of this project could be used to offset SDFS impacts for future projects.

No other resources have the potential to be directly or indirectly impacted by the project.

Table 2.12: Projects Considered in Cumulative Impact Analysis

Project Name	Jurisdiction / Location	Proposed Development	Identified / Anticipated Impacts	Project Status
I-805 Managed Lanes North Project*	Caltrans / I-805 (SR-52 interchange to proposed Carroll Canyon Road)	Widening of freeway and interchanges, DARs, Bus stations	Noise, endangered species (including SDFS) , paleontological impacts, visual impacts	Draft EIR/EIS in preparation
Camino del Sur Road Extension	City of San Diego / Carmel Mt. Rd to just north of Park Village	0.5 mi (0.8 km) of new alignment	Endangered species (including SDFS) , wetlands	EIR approved

* Within the vicinity of the proposed project

2.6 CLIMATE CHANGE

REGULATORY SETTING

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG)¹ emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations would apply to automobiles and light trucks beginning with the 2009 model year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this executive order is to reduce California's GHG emissions to (1) 2000 levels by 2010, (2) 1990 levels by the year 2020, and (3) 80% below 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that ARB create a plan that includes market mechanisms and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

Climate change and GHG reduction is also a concern at the federal level; at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change.

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98% of California's GHG emissions are from the burning of fossil fuels and 40% of all human-made GHG emissions are from transportation, Caltrans has created and is implementing the *Climate Action Program at Caltrans*. Transportation's contribution to GHG emissions is dependent on three factors: the types of vehicles on the road, the type of fuel the vehicles use, and the time/distance the vehicles travel.

One of the main strategies in Caltrans' Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0 to 25 mph [0 to 40km/hr]) and speeds over 55mph (89km/hr). Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors would lead to an overall reduction in GHG emissions.

¹ Greenhouse gases related to human activity, as identified in AB32, include: carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23, HFC-134a*, and HFC-152a*.

Caltrans recognizes the concern that carbon dioxide emissions raise for climate change. However, accurate modeling of GHG emissions levels at the project level, including carbon dioxide, is not currently possible. No federal, state, or regional regulatory agency has provided methodology or criteria for GHG emissions and climate change impact analysis. Therefore, Caltrans is unable to provide a scientific or regulatory-based conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement AB 1493 and AB 32. As part of the *Climate Action Program at Caltrans*, Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, and light and heavy-duty trucks. It is important to note that the control of the fuel economy standards is held by the EPA and ARB. The use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the University of California Davis. The proposed project would also help reduce climate change through the use of landscaping, irrigation with reclaimed water when available, the use of Portland cement where appropriate, use of energy-efficient lighting, and idling restrictions for trucks and equipment during construction and maintenance activities.

AFFECTED ENVIRONMENT

To estimate the potential beneficial or negative effect of the proposed project on San Diego regional GHG levels, the California Air Resources Board (CARB) EMFAC 2007 vehicle emissions model for the San Diego Air Basin was used to calculate carbon dioxide emissions for the San Diego metropolitan area with and without the proposed Project.

In order to determine regional GHG emissions, the SANDAG 'Revenue Constrained' Series 11 2010 and 2030 regional travel demand models were utilized for the land use and local street network assumptions for the Build and No Build scenarios. Regional fuel consumption and CO₂ emissions were modeled with and without the build scenario for each respective time horizon.

The results of the regional fuel consumption and CO₂ emissions models are shown in Table 2.13.

Table 2.13: Average Difference in Regional CO₂ Emissions

Alternative	Model Year	Fuel Consumption (gal)	Efficiency Fuel Savings (gal/day)	Diesel Fuel Consumption	Efficiency Fuel Savings (gal/day)	Regional CO ₂ Annual Avg. Emissions (tons/day)	Efficiency CO ₂ Savings (tons/day)
No-Build	2010	4,652,350	-	554,340	-	50,810	-
Build	2010	4,651,980	370	554,320	20	50,810	<10
No-Build	2030	5,814,580	-	654,160	-	63,730	-
Build	2030	5,813,620	2,960	653,910	250	63,720	30

Note: EMFAC2007 model reporting limit=10 tons/day

Compared to the No Build Alternative, implementation of the Build Alternative is estimated to reduce 2030 CO₂ emissions in the San Diego region by up to 30 tons per day. In 2010, the interim estimated CO₂ emissions reductions are estimated to be less than 10 tons/day compared to the No Build Alternative. These decreases would be due to the decreased congestion along the corridor and improved travel times along the corridor and the local street network. Therefore, despite the localized increase in traffic levels along the new local road extension, regional transportation efficiency would be increased and overall CO₂ emissions would be reduced.

Currently, the emissions modeling software is limited to generating output only for freeway mainlines, and not local streets. Therefore, the above analysis does not reflect any reduction in GHG emissions that could result from reduced queue lengths at ramp meters and intersections. Because the proposed project would reduce delay at these locations, there is the potential for further reduction in GHG emissions from vehicles spending less time idling.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures would also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- The proposed project would be designed to minimize removal of existing trees, especially mature trees. The proposed project would overlap existing road surfaces or would remove existing pavement that is no longer needed and would revegetate those surfaces thus helping to maintain the carbon sequestration potential of the project site.
- The project would plant disturbed areas with a variety of native and drought tolerant trees and shrubs in ratios sufficient to replace the air quality and cooling benefits of trees removed by construction of the project. Additional trees would be planted as space allows to further increase those benefits. Trees would be planted from large size containers to accelerate reestablishment of the GHG sink and to shade the pavement. In the short term, immature tree planting would probably not offset greenhouse gas produced as a result of project construction. However, in the long term tree planting should enhance the carbon sequestration potential of the project site and GHG emission levels would, in theory, continue to improve overtime as the trees became more mature, except as counteracted by increased traffic volumes.

- Caltrans and the CHP are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.
- In addition, Caltrans and SANDAG provide ridesharing services and park-and-ride facilities to help manage the growth in demand for highway capacity.
- The project would incorporate the use of energy efficient appurtenances, such as light emitting diode (LED) traffic signals and inductive sign lighting (ISL) fixtures. LED signal heads consume 10% of the electricity of traditional incandescent lights and ISL sign lighting fixtures consume less than half the power of traditional mercury vapor fixtures.
- According to Caltrans Standard Specification Provisions, idling time for lane closure during construction is restricted to ten minutes in each direction. In addition, the contractor must comply with the Air Pollution Control District's rules, ordinances, and regulations in regards to air quality restrictions.

The following "green" practices and materials would be used, where possible, in the project as part of highway planting and erosion control work:

- PVC irrigation pipe with recycled content.
- Non-chlorinated High Density Polyethylene (HDPE) irrigation crossover conduit.
- Compost and soil amendments derived from sewage sludge and green waste materials.
- Fiber produced from recycled pulp such as newspaper, chipboard, cardboard
- Wood mulch made from green waste and/or clean manufactured wood or natural wood.
- Native and drought tolerant plants species.
- Irrigation controllers including water conservation features and solar or battery power.
- Restricted pesticide use and reduction goals.
- The State of California maintains several websites, which provide public information on measures to improve renewable energy use, energy efficiency, water conservation and efficiency, land use and landscape maintenance, solid waste measures, and transportation alternatives.

Chapter 3: Comments and Coordination

3.1: DOCUMENTING COORDINATION

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including: project development team meetings, interagency coordination meetings. This chapter summarizes the results of Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

- Caltrans has had held monthly PDT meetings since February 2003, and continues to do so. Since early 2007, representatives from the City of San Diego and SDG&E have attended these PDT meetings to discuss and resolve project issues. Both agencies participated in the development of the project.
- Caltrans and SDG&E have coordinated on the scope of the utility relocation to meet the needs of both agencies. Such coordination indicates SDG&E's concurrence with the proposed project.
- Caltrans and the City of San Diego continue to coordinate on the Coastal Development Permit required for this project.
- In May 2002, Caltrans requested and obtained a list of potentially occurring candidate, proposed and federally listed species from the USFWS (Figure 3.1). In March 2008, the USFWS verified that the 2002 species list remained valid.
- In October 2008, Caltrans began informal meetings with the USFWS staff to discuss project impacts pursuant to Section 7 of the Federal Endangered Species Act. Formal consultation for impacts to federally-listed species was initiated on January 20, 2009.
- On March 17th, 2009, the FHWA determined that the project-level conformity analysis submitted by Caltrans for the I-805 HOV/Carroll Canyon Road Extension conforms to the State Implementation Plan (SIP) in accordance with 40 C.F.R. Part 93 (Figure 3.5).
- On March 31, 2009, The USFWS issued a Biological Opinion (BO) (Appendix C)
- In a letter dated December 2nd, 2008, Caltrans requested concurrence that the City would provide dual pane windows at Fire Station #41 (Figure 3.2). Mark Koll, Project Manager for the City of San Diego responded in an e-mail dated December 19th 2008 that the City acknowledges the requirement and will take action to install dual pane windows prior to the opening of Carroll Canyon Road (Figure 3.3).
- The IS/EA was circulated for public review on January 22nd, 2009. The comment period was open from January 22nd until February 22nd, 2009. The Notice of Availability of the IS/EA was published in the Union Tribune and the Mira Mesa

Sentinel and is included as Figure 3.4. Notices were also mailed to elected officials and resource agencies, and other interested parties. A public hearing was held on February 10th at the Woodfin Suites Hotel located at 10044 Pacific Mesa Boulevard in San Diego. A Spanish interpreter was present to translate for Spanish-speaking attendees. The hearing was an “open house” format, and provided the public the opportunity to ask questions and discuss agency coordination, project and construction activities and schedules with staff from Caltrans and SANDAG. The meeting was attended by five community members and resulted in one oral comment given to a stenographer. Four comment letters were received. Comments and responses are included at the end of this chapter. Comments were received from the following:

State

California Department of Fish and Game

Department of Toxic Substances Control

Local Agencies, Organizations, and Businesses

City of San Diego

San Diego Gas and Electric

Public Hearing Comments (verbal)

Jeff Stephens

Comment letters and responses are included as Figures 3.6-3.9

Figure 3.1: USFWS Species Letter



United States Department of the Interior
Fish and Wildlife Service
Ecological Services
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008



In Reply Refer To: FWS-SD-2826.1

Chris Nordby
Ticra Environmental Services
9903 Businesspark Ave., Suite E
San Diego, California 92131-1120

MAY 09 2002

Re: Request for Candidate, Proposed, Threatened, or Endangered Species for Carroll Canyon Road Extension, San Diego County, California

Dear Chris Nordby:

The U.S. Fish and Wildlife Service (Service) has reviewed the information provided in your April 3, 2002, letter to assess the potential presence of federally listed threatened, endangered, or proposed species at the proposed project site referenced above. We do not have site specific information for your project area. However, to assist you in evaluating whether or not the proposed project may affect listed species, we are providing the attached list of species that occur in the general project area. We recommend that you seek assistance from a biologist familiar with your project site, and with the listed species to assess the potential for direct, indirect, and cumulative effects likely to result from the proposed activity. You should also contact the California Department of Fish and Game for State-listed and sensitive species that may occur in the area of the proposed project. Please note that State-listed species are protected under the provisions of the California Endangered Species Act.

If it is determined that the proposed project may affect a listed, proposed species, or the designation of any critical habitat you should initiate consultation (or conference for proposed species) with the Service pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). Informal consultation may be used to exchange information and resolve conflicts with respect to listed species prior to a written request for formal consultation.

Should you have any questions regarding the species listed or your responsibilities under the Act, please call Sandra Marquez of my staff at (760) 431-9440.

Sincerely,

For Nancy Gilbert
Assistant Field Supervisor

Enclosure

Listed Endangered, Threatened and Proposed Species
that may occur near Carroll Canyon Road Extension,
San Diego County, California

Common Name	Scientific Name	Status
<u>BIRDS</u>		
coastal California gnatcatcher	<i>Polioptila californica californica</i>	T
least Bell's vireo	<i>Vireo bellii pusillus</i>	E
<u>PLANTS</u>		
willow monardella	<i>Monardella linoidea ssp. viminea</i>	E

Figure 3.2: Caltrans Letter Requesting Concurrence

Caltrans letter requesting concurrence that the City of San Diego install dual pane windows at the Fire Station #41.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION

DISTRICT 11
4050 TAYLOR STREET
SAN DIEGO, CA 92110
PHONE (619) 688-6729
FAX (619) 688-2587
TTY (619) 688-3214



*Flex your power!
Be energy efficient!*

December 2, 2008

Mr. Mark S Koll, P.E.
City of San Diego
1010 Second Ave., Suite 1200
San Diego, CA. 92101

Dear Mr. Koll:

The California Department of Transportation (Caltrans) has prepared a Noise Study Report (December 2008) for the proposed Interstate 805 HOV Extension/Carroll Canyon Road Extension project in San Diego.

The Noise Study Report determined that the noise levels within the sleeping quarters of Fire Rescue Department Station 41 (Station) located at the intersection of Carroll Canyon Road and Scranton Road exceeded the interior noise abatement criterion (NAC) of 52 dBA. Caltrans Noise Protocol requires consideration of abatement at receptors within 1 dBA or exceeding the NAC. The Noise Study Report is available for review.

It is our understanding that the City of San Diego (City) is proposing improvements to the Station that would include providing dual-pane windows. Dual-pane windows would achieve the required noise reduction and ensure we meet the NAC requirements.

To date we have included the City in our findings of the Noise Study Report and received advice the City is in full support of implementing the dual-pane windows, at the City's expense, to meet our requirements, along with improving the Fire Station. Please reply in writing, your concurrence, including a schedule when the improvements will be undertaken, specifically those relating to the installation of the dual pane windows.

Sincerely,


Majid Kharrati, P.E.
Design Manager

c:

"Caltrans improves mobility across California"

Figure 3.3: E-mail from City of San Diego concurring with noise abatement

"Koll, Mark"

12/19/2008 07:49 AM

To: 'Majid Kharrati'

Cc: 'Shahbaz Alvi', 'Purcell, Carrie', 'Hutchinson, Lorraine', 'Palaseyed, Abi'

Subject: Carroll Canyon Rd. Project Mitigation - Fire Station #41 - Dual Pane Windows

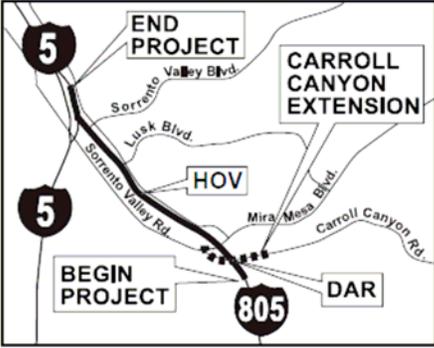
Majid, We have received the attached request. It is understood that the Carroll Canyon Rd. Project will increase noise levels for Fire Station #41, and dual pane windows in the stations sleeping quarters will be required to mitigate the noise as stated in your letter. Therefore, Engineering and Capital Projects department of the City of San Diego acknowledges the requirement and will take action to ensure dual pane windows are installed for the sleeping quarters of Fire Station #41 prior to the opening of Carroll Canyon Rd. A vaible schedule will be developed and provided to Caltrans within the next several months, since it requires input and approval from several different departments or divisions within the City. Thanks

Figure 3.4: Notice of Availability



NOTICE OF AVAILABILITY

of the Draft
Initial Study with
Proposed Mitigated Negative
Declaration/Environmental
Assessment prepared for the
I-805 HOV/Carroll Canyon
Road Extension/DAR Project



WHAT'S BEING PLANNED? The proposed project is located in the Sorrento Valley area of the City of San Diego, San Diego County. The project proposes to construct a four-lane extension of Carroll Canyon Road from Scranton Road east of I-805 to Sorrento Valley Road west of I-805, built on structure; one northbound and one southbound High Occupancy Vehicle (HOV) lane on I-805 from Sorrento Valley Road/Mira Mesa Boulevard interchange to the existing HOV lanes on I-5, just north of the I-805/I-5 junction, and direct access ramps (DAR) from Carroll Canyon Road to the proposed I-805 HOV lanes. In addition to the proposed project, a No Build Alternative is proposed.

The proposed project is a joint effort by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA). A draft Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment (IS/MND/EA) has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) to disclose potential impacts that may result from implementation of the proposed project. Effective July 1, 2007, Caltrans assumed all the United States Department of Transportation Secretary's responsibilities under NEPA pursuant to Section 6005 of the Safe Accountable Flexible Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) codified at 23 U.S.C. 327(a)(2)(A). Caltrans is now the lead federal agency for this undertaking.

The project has the potential for significant impacts to species afforded protection under the Federal Endangered Species Act. These impacts would not be significant after the incorporation of the recommended mitigation measures.

WHY THIS AD? The IS/MND/EA is available for public review and comment from January 22nd to February 20th 2009. The IS/MND/EA is available for review in hardcopy format at the following locations:

<p>Caltrans District Office 4050 Taylor Street San Diego CA 92110</p>	<p>Mira Mesa Branch Library 8405 New Salem Street San Diego, CA 92126</p>
--	--

The IS/MND/EA is also available for review on the Internet at the following link:
<http://www.dot.ca.gov/dist11/envir.htm>

PUBLIC HEARING:

<p>PLACE: Woodfin Suites Hotel 10044 Pacific Mesa Blvd San Diego, CA 92121</p>	<p>TIME: Tuesday, February 10, 2009 6:00 pm to 8:00 pm</p>
---	---

ABOUT THE PUBLIC HEARING: There will be no presentation. This will be an "Open House" format where you will have the opportunity to speak directly with Caltrans representatives about the project and its environmental impacts. All substantive comments will be addressed in the Final Environmental Document.

WHERE YOU COME IN: Your comments will become part of the public record. If you wish, you may submit comments at the meeting via the comment sheets provided, you may mail your comments using the prepaid postage provided at the meeting, or you may submit your comments verbally to the stenographer.

If you cannot attend, please submit your written comments to the following address by February 20th to: Kelly Finn, Environmental Analysis Branch Chief

Caltrans, District 11
4050 Taylor Street, M.S. 242
San Diego CA 92110
(619) 688-0229

Individuals who require special accommodation (American Sign of Foreign Language interpreter; accessible seating, documentation in alternate formation, etc.) are requested to contact the District 11 Public Information Office at (619) 688-6670 at least 10 days prior to the scheduled meeting date. TTY users may contact the California Relay Service TTY line at 711.

CONTACT: For general information about this project, please contact the Project Manager, Arturo Jacobo, at (619) 688-6816. For general information about transportation issues, call the Public Information Office at (619) 688-6670.

Figure 3.5: Air Quality Project Level Conformity Determination



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CALIFORNIA DIVISION
650 Capitol Mall, Suite 4-100
Sacramento, CA. 95814
March 10, 2009

IN REPLY REFER TO
HDA-CA
File # EA: 2T0400
Document # S52518

Pedro Orso-Delgado, District Director
California Department of Transportation
District 11
4050 Taylor Street, M.S. 242
San Diego, CA 92110

Attention: Ms. Kelly Finn

Dear Ms. Finn:

SUBJECT: FHWA Project Level Conformity Determination for I-805 HOV/Carroll Canyon Road Extension

On February 25, 2009, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a request for a project level conformity determination for the I-805 HOV/Carroll Canyon Road Extension, PM R26.5 to R28.7 in San Diego County. The project is in an area that is designated Nonattainment for Ozone and Maintenance for Carbon Monoxide (CO).

The project level conformity analysis submitted by Caltrans indicates that the transportation conformity requirements of 40 C.F.R. Part 93 have been met. The project is included in the San Diego Association of Governments (SANDAG) *2030 Regional Transportation Plan (RTP)* and the *2008 Regional Transportation Improvement Program (RTIP)*. The current conformity determinations for the RTP and RTIP were approved by FHWA and the Federal Transit Administration (FTA) on November 17, 2008. The design concept and scope of the preferred alternative has not changed significantly from those assumed in the regional emissions analysis

Based on the information provided, FHWA finds that the Conformity Determination for the I-805 HOV/Carroll Canyon Road Extension conforms to the State Implementation Plan (SIP) in accordance with 40 C.F.R. Part 93.

If you have any questions pertaining to this conformity finding, please contact Stew Sonnenberg, FHWA Air Quality Specialist, at (916) 498-5889.

Sincerely,

For
Walter C. Waidelich, Jr.
Division Administrator



Figure 3.6: Department of Toxic Substances Control



Linda S. Adams
Secretary for
Environmental Protection

Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

Department of Toxic Substances Control

February 9, 2009

Ms. Kelly Finn
Environmental Analysis Branch Chief
Caltrans District 11 Office
4050 Taylor Street, MS 242
San Diego, California 92110
Luke_serna@dot.ca.gov

DRAFT INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE
DECLARATION / ENVIRONMENTAL ASSESSMENT FOR I-805 HOV/
CARROLL CANYON ROAD EXTENSION PROJECT, CITY OF SAN DIEGO,
(SCH# 2009011064), SAN DIEGO COUNTY

Dear Ms. Finn:

The Department of Toxic Substances Control (DTSC) has received your submitted Initial Study (IS) and Mitigated Negative Declaration (MND)/Environmental Assessment (EA) for the above-mentioned project. The following project description is stated in your document: "The California Department of Transportation (Caltrans) in coordination with the Federal Highway Administration (FHWA) proposes to extend Carroll Canyon Road, a local arterial, and construct High Occupancy Vehicle (HOV) lanes on I-805 from the Carroll Canyon Road extension to the existing HOV lanes at the merge of Interstate 5 (I-5) and I-805. North-facing Direct Access Ramps (DARs) would connect the HOV lanes to the Carroll Canyon Road extension. The project extends 2.2 mi (3.5km) and is located in a developed urban area of City of San Diego. Construction would consist of the installation of new foundations, new steel poles, new underground trench and conduit, and installation of wire, cable and associated hardware." DTSC has the following comments:

- 1) The ND should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents. Please see comment No. 10 below for more information.
- 1) Investigation of the project site was carried out via an Initial Site Assessment (ISA). Results of this report were summarized in the IS/EA and proper remediation measures were included as part of the ECR. Conditions at the site do not pose a threat to human health or the environment as long as measures are implemented.

For all identified sites, the EIR should evaluate whether conditions at the site may pose a threat to human health or the environment. Following are the databases of some of the pertinent regulatory agencies:

Ms. Kelly Finn
 February 9, 2009
 Page 2 of 4

- National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
- Envirostor: A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).
- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- Leaking Underground Storage Tanks (LUST) / Spills, Leaks, Investigations and Cleanups (SLIC): A list that is maintained by Regional Water Quality Control Boards.
- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

2) All environmental investigations, sampling and/or remediation for the site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment investigations should be summarized in the document. All sampling results in which hazardous substances were found should be clearly summarized in a table. Following are the databases of some of the pertinent regulatory agencies:

3) If buildings or other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should be conducted for the presence of other related hazardous chemicals, lead-based paints or products, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.

- 2) The County of San Diego Department of Environmental Health is the regulatory agency that has jurisdiction to oversee hazardous substance cleanup. Findings of investigations are summarized in this document. No known or potentially contaminated sites were identified within the proposed project area.
- 3) No buildings, structures or surface areas are planned for demolition. Precautions would be taken if other related hazardous wastes or materials are identified. They would be remediated in compliance with California environmental regulations and policies.

Ms. Kelly Finn
February 9, 2009
Page 3 of 4

- 4) Project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination.
 - 5) Human health and the environment of sensitive receptors should be protected during the construction or demolition activities. If it is found necessary, a study of the site and a health risk assessment overseen and approved by the appropriate government agency and a qualified health risk assessor should be conducted to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment.
 - 6) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA.
 - 7) If the project plans include discharging wastewater to a storm drain, you may be required to obtain an NPDES permit from the overseeing Regional Water Quality Control Board (RWQCB).
 - 8) If during construction/demolition of the project, the soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented.
 - 9) If the site was used for agricultural, livestock or related activities, onsite soils and groundwater might contain pesticides, agricultural chemical, organic waste or other related residue. Proper investigation, and remedial actions, if necessary, should be conducted under the oversight of and approved by a government agency at the site prior to construction of the project.
 - 10) DTSC can provide guidance for cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies which would not be considered responsible parties under CERCLA, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or
- 4) These measures shall be implemented if necessary.
 - 5) These measures shall be implemented if necessary.
 - 6) These measures shall be implemented if necessary.
 - 7) Caltrans has been issued an NPDES permit by the State Water Resources Control Board to cover all municipal storm water activities within California.
 - 8) If these conditions do occur, appropriate health and safety procedures shall be implemented.
 - 9) The project site has not been used for agricultural, livestock or related activities.
 - 10) Thank you for the additional information.

Ms. Kelly Finn
February 9, 2009
Page 4 of 4

VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Maryam Tasrif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489

If you have any questions regarding this letter, please contact Mr. Rafiq Ahmed, Project Manager, at rahmed@dtsc.ca.gov, or by phone at (714) 484-5491.

Sincerely,



Greg Holmes
Unit Chief
Brownfields and Environmental Restoration Program - Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
stateclearinghouse@opr.ca.gov

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
1001 I Street, 22nd Floor, M.S. 22-2
Sacramento, California 95814
gmoskat@dtsc.ca.gov

CEQA# 2453

Figure 3.7: San Diego Gas & Electric



A Semptra Energy utility®

Dashiell S. Meeks, AICP
 Senior Environmental Specialist
 8315 Century Park Court
 CP21E
 San Diego, CA 92123
 (T) 858-637-3711 (F) 858-637-3700

February 20, 2009

Caltrans District 11
 4050 Taylor Street, MS 242
 San Diego, CA 92110
 Attention: Kelly Finn, Environmental Analysis Branch Chief

Subject: SDG&E Comments on Draft Initial Study (IS) with Proposed Mitigated Negative Declaration (MND)/Environmental Assessment (EA) for the "I-805 HOV/Carroll Canyon Road Extension Project"

Dear Ms. Finn:

This letter follows my discussion with Mr. Luke Serna of your staff regarding SDG&E's perspective on the document referenced above. As you are aware, SDG&E is regulated by the Public Utilities Commission of the State of California (CPUC). The CPUC's General Order 131-D states that "...no electric public utility... shall begin construction...modification...alteration...or addition to an existing electric...power...line without first complying with the provisions of this General Order."

In part, the purpose of the General Order is to be responsive to the requirements of the California Environmental Quality Act (CEQA). The minor relocation/replacement of the 69kV power line required to accommodate this project may qualify for an exemption to the General Order's "Permit to Construct" (PTC), which otherwise may take upwards of 18-24 months to obtain.

One of the exemptions to the PTC is for "power lines or substations to be relocated or constructed which have undergone environmental review pursuant to CEQA as part of a larger project, and for which the final CEQA document (Environmental Impact Report (EIR) or Negative Declaration) finds no significant unavoidable environmental impacts caused by the proposed line or substation."

We feel that this draft of the proposed MND/EA has the potential to satisfy the terms of the aforementioned exemption if certain clarifications are evident in the document, which include, but are not limited to:

1. a- An accurate description of the work to be accomplished to relocate and/or replace SDG&E facilities;
2. b- A discussion of the significance of environmental impacts attributable to the relocation and/or replacement of SDG&E facilities;
3. c- A discussion of mitigation actions that are planned to reduce identified significant or potentially significant environmental impacts to a "less than significant" level; and
4. d- A statement, under each CEQA environmental factor, such as Aesthetics, Air Quality, Biological Resources, Cultural Resources, Green House Gases, etc.) that explicitly states that impacts to the specific environmental factor, due to this SDG&E project, would be less than significant.

1. The description of work to accomplish the relocation/replacement of SDG&E's facilities has been developed in coordination with Caltrans and SDG&E staff. The description of work, as currently stated in the environmental document, reflects the most up to date project design.
2. A discussion of the significance of environmental impacts attributable to the relocation and/or replacement of SDG&E facilities has been placed within Appendix A: CEQA Checklist.
3. Avoidance, minimization and/or mitigation measures specific to utility relocations have been included within Appendix A: CEQA Checklist.
4. Statements that "no impact" or "less than significant impact" would occur are found within Appendix A: CEQA Checklist.

Mr. Serna approved my sending this letter via email on February 20, 2009, with a hard copy to be forwarded by US Mail. Further, he agreed to work with our staff to modify the document to help improve the likelihood that this environmental document could be cited as satisfying the terms of the GO131-D exemption to a PTC mentioned earlier.

Please call me if you'd like to discuss this in more detail. Thank you for your consideration.

Sincerely,



Dashiell S. Meeks, PE, AICP
Senior Environmental Specialist
Environmental Services Department
San Diego Gas and Electric Company
(858) 637-3711

Figure 3-8: California Department of Fish and Game

State of California – The Resources Agency ARNOLD SCHWARZENEGGER, Governor



DEPARTMENT OF FISH AND GAME

South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201



February 23, 2009

Kelly Finn
Environmental Analysis Branch Chief, MS 242
California Department of Transportation, District 11
4050 Taylor Street
San Diego, CA 92110

Subject: Comments on the Draft Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment for the I-805 HOV/Carroll Canyon Road Extension Project (State Clearing House # 2009011064)

Dear Ms. Finn:

The Department of Fish and Game (Department) has reviewed the above-referenced Draft Mitigated Negative Declaration (MND). The following statements and comments have been prepared pursuant to the Department's authority as a Trustee Agency with jurisdiction over natural resources affected by the project (CEQA Section 15386), and pursuant to our authority as a Responsible Agency (CEQA Section 15381) over those aspects of the proposed project that come under the purview of either the California Endangered Species Act (CESA) (Fish and Game Code Section 2050 *et seq.*), or the Streambed Alteration Program (Fish and Game Code Section 1600 *et seq.*). The Department also administers the Natural Community Conservation Planning program.

The proposed project consists of a four-lane extension of Carroll Canyon Road from Scranton Road to Sorrento Valley Road. This extension would be on a structure which would pass under I-805 just north of Carroll Canyon Creek. The project also includes direct access ramps (DARs) from Carroll Canyon Road to new High Occupancy Vehicle (HOV) lanes on I-805. The HOV lanes, one northbound and one southbound, would extend from the Sorrento Valley Road/Mira Mesa Boulevard interchange to the existing HOV lanes on I-5 just north of the I805/I-5 junction. Design features and mitigation measures have been added to the project to avoid or reduce potential environmental impacts. Sensitive biological resources in the vicinity of the project include riparian habitats associated with Carroll Canyon Creek as well as patches of coastal sage scrub on the adjacent slopes. Sensitive species located within or directly adjacent to the project limits that will or may be adversely affected include least Bell's vireo, California gnatcatcher, and Palmer's sagewort. The project is within the boundaries of the City of San Diego Subarea of the Multiple Species Conservation Program (MSCP)

The Department offers the following comments on the MND:

1. The potential for take of least Bell's vireo (LBV), a species listed as endangered pursuant to CESA, was not adequately addressed in the MND. Take as defined by CESA includes the loss of eggs or young resulting from the adult birds abandoning the nest due to adjacent activities such as construction. The discussion in the MND regarding LBV indicates that the project is adjacent to habitat "...known to have been occupied by least Bell's vireo..." The MND states that vireo may be adversely affected by construction noise but suggests that this will not be an

Conserving California's Wildlife Since 1870

1. There were no least Bell's vireo detected during USFWS protocol surveys conducted in 2008. Therefore, the probability of least Bell's vireo being present during construction is believed to be low. The suggested mitigation measure of limiting construction to outside the period of potential occurrence during the spring and summer is not feasible due to greatly increased cost and delayed construction completion. The linear nature of the project makes construction noise attenuation, including deployment of temporary noise barriers, extremely difficult to implement. However, since the species could occur during construction, a qualified biologist will conduct least Bell's vireo surveys during the period when the species may be present. If it is determined that the least Bell's vireo may be affected by construction activities, Caltrans will coordinate with USFWS and DFG to develop mitigation measures and/or any required authorizations. This has been added to the discussion of vireo in the Avoidance, Minimization and/or Mitigation section.

Kelly Finn
February 23, 2009
Page 2 of 3

issue because existing and post construction noise levels will be almost identical. However, the noise and activity associated with the construction itself are unlikely to be the same as either the existing condition or that for post-construction operation of the new roadway. The potential for activity and noise during construction to result in take of this species should have been coordinated with the Department and addressed in the MND. The only proposed mitigation measure is to offset potential indirect effects during construction by removing non-native invasive plants from 0.54 acre along Carroll Canyon Creek. Although this measure would provide some mitigation for long-term indirect impacts of the project to adjacent habitat, it does not address potential construction-related impacts to nesting LBY that could result in take. Appropriate mitigation measures for this potential impact to vireo have been incorporated into previous Department of Transportation (Caltrans) projects, and include such measures as: monitoring for vireo, timing construction to avoid the nesting season, temporary noise barriers, etc. Without additional mitigation, the Department cannot concur that the project with mitigation would have no significant adverse effect on Threatened or Endangered species. The Department representative indicated in the last paragraph of this letter is available to work with Caltrans to resolve this issue. Please keep in mind that a Consistency Determination may not be possible without coordination with the U. S. Fish and Wildlife Service prior to the final Biological Opinion.

2. Maintaining the long-term viability of the biological resources on MSCP preserve lands is dependent on conscientious evaluation and avoidance of the potential impacts associated with adjacent development projects. The biological resources section of the MND should have included an analysis and discussion of the overall impact of the project on the adjacent MSCP preserve, including not only direct, but also indirect and cumulative impacts. For example, a more thorough discussion of lighting is needed. Although the MND indicates that lighting will be directed away from habitat areas, this generally does not prevent an increase in overall illumination in the vicinity. The lighting plan should have been more fully discussed, along with its anticipated effect on the level of illumination in adjacent habitat as compared to the existing condition. Lighting on the Carroll Canyon Road extension and DARs should be limited to the greatest extent possible and should not further illuminate habitat areas, either directly or indirectly. In addition, the Environmental Commitments Record in Appendix C of the MND only addresses lighting during construction, but should include mitigation measures for lighting that will be installed as part of the project.
3. The MND indicates that sycamore trees planted as mitigation for a previous project will be trimmed during project construction. The extent of the trimming, along with other factors such as the proximity of the new roadway, may result in a reduction of their habitat value to the extent they no longer provide adequate mitigation for the impact. This needs to be evaluated and additional mitigation provided if necessary.
4. The MND states that willow monardella is a federally-listed species, but should have acknowledged that it is also state listed as endangered. However, in other respects, the species appears to have been adequately addressed.
5. A Streambed Alteration Agreement may be needed for exotics removal and utility relocations within Carroll Canyon Creek.

2. Potential adverse effects to adjacent biological resources are also a concern to Caltrans. Permanent street lamps on the southern side of Carroll Canyon Road will be limited to approximately 50 meter intervals, with lights of 150 watts each. Lights will be directed away from riparian habitat using light shields to avoid – or at least greatly minimize - lighting into the riparian habitat of Carroll Canyon Creek. The ECR (Appendix D) has been updated to include a provision that permanent lighting installed will be as specified. Based upon field studies in the Biological Study Area, no other potential indirect or cumulative effects are known to adjacent resources.
3. A qualified biologist will determine if the trimmed sycamore trees provide sufficient habitat value for biological resources. If any do not, the trees will be replaced at a 5:1 ratio, as for the oak trees. The ECR in Appendix D of the document includes this provision.
4. The document has been revised to state that the willow monardella is a State-listed endangered species.
5. Caltrans acknowledges that a Streambed Alteration Agreement may be needed for removal of non-native vegetation. Since utility relocations are not anticipated to impact wetlands, or associated wetland riparian habitat, a Streambed Alteration Agreement should not be needed.

Kelly Finn
February 23, 2009
Page 3 of 3

The Department appreciates the opportunity to comment on the draft MND for this project. Any questions regarding this letter and further coordination on this project should be directed to Pam Beare at pbeare@dfg.ca.gov or (760) 788-6760.

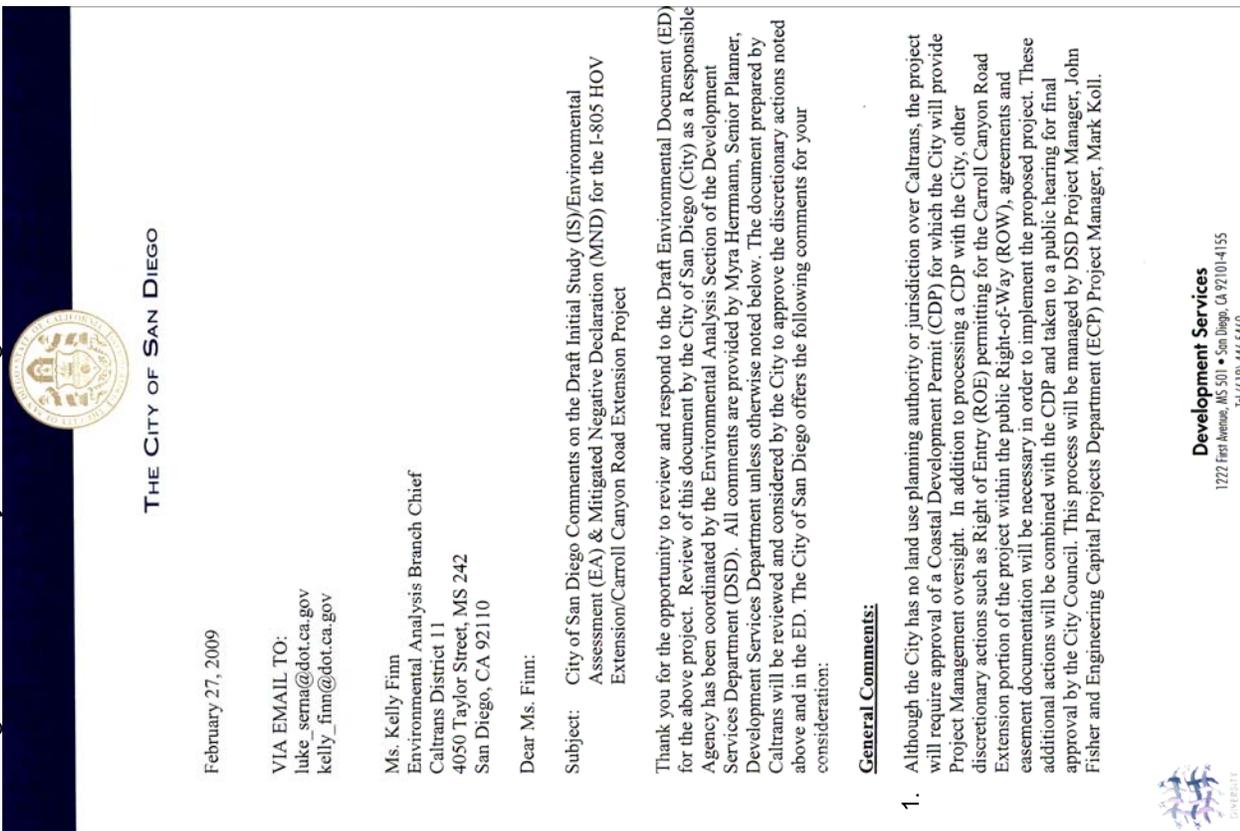
Sincerely,



Edmund J. Pert
Regional Manager
South Coast Region

cc: Scott Morgan (State Clearinghouse, Sacramento)
Kurt Roblek (U.S. Fish and Wildlife Service, Carlsbad)
Pam Beare (Dept. of Fish and Game, San Diego)

Figure 3.9: The City of San Diego



Cultural Resources (Archaeology) Section 2.2.8:

2. The City concurs with the analysis related to cultural resources which could be affected during future construction activities at the project site. As such, any non-Caltrans construction activities would be subject to the Mitigation Monitoring Plan identified in the ED. However, because portions of the project alignment are within the City of San Diego public ROW, significance determinations and disposition of any archaeological resources encountered during construction monitoring should be addressed in consultation with both the City Archaeologist and Caltrans District Archaeologist to ensure that resources are being protected in accordance with CEQA and the City's Historical Resources Regulations & Guidelines.
3. Please note that at the time Caltrans submits construction plans to the City, an environmental review will be conducted to look for specific notes on plans related to the Environmentally Sensitive Area (ESA) staking, flagging and monitoring program identified in the MND.
4. The City also requires attendance at the preconstruction meeting, which should also include the project archaeologist, Native American monitor and the District Archaeologist.
5. Implementation of the adopted monitoring program would reduce potential impacts to subsurface archaeological resources to below a level of significance.

Hazardous Waste/Materials (Section 2.3.5):

6. This section deals specifically with hazardous material and hazardous wastes such as soil containing aerially deposited lead, potentially affecting the project site. However, as documented in the City's previously certified MND, there are approximately 30 regulated soil contamination sites located along the project public ROW. One of those sites is an underground storage tank (UST) for motor vehicle fuel within City of San Diego Fire Station No. 41 at the corner of Scranton and Carroll Canyon Roads. As such, the MND should be modified to include the potential for encountering contaminated soils associated with any of the 30 localities and provisions for remediation incorporated into the Avoidance, Minimization and/or Mitigation Measures.

Biological Environment (Section 2.4):

7. Page 79 of the Biological Environment section includes a table which identifies impacts to key vegetation communities (Table 2.10). This table provides the total amount of temporary and permanent impacts to upland resources for the entire project, but fails to distinguish the quantity of impacts resulting from the project within the City's public ROW for the extension of Carroll Canyon Road. As such, please modify the existing table to show Caltrans project impacts separate from City project impacts or provide a new table with the data requested. This information will be used by City staff in preparation of any reports to City Council for permitting approval.

Cultural Resources Responses:

2. Additions to the ECR have been added to ensure that coordination occurs between Caltrans and City staff regarding archaeological resources.
3. ESAs would be identified on project plans to ensure protection of archaeological resources.
4. The City would be informed and invited to the preconstruction meeting.
5. Comment noted

Hazardous Waste/Materials Responses:

6. Caltrans is aware of the UST that is located near the City's Fire Station. The project would not impact the UST during construction. No other sites would be affected by construction. Any hazardous waste/materials encountered that Caltrans is unaware of would be remediated in compliance with California environmental regulations and policies.

Biological Environment Responses

7. The document has been updated to show separated amounts of impact to vegetation communities within City right-of-way and Caltrans right-of-way.

Threatened and Endangered Species (Section 2.4.5):

This section provides analysis for project impacts to threatened and endangered species and includes mitigation recommendations/requirements based on US Fish and Wildlife Service (USFWS) consultation. The City concurs with the mitigation requirements as stated, but has specific questions with regards to San Diego Fairy Shrimp and California Gnatcatcher off-site mitigation locations. The draft MND indicates that several sites have been identified as potential sites for vernal pool creation or restoration within the City of San Diego. This information will be required as part of the CDP application/submital for review before any permits can be approved. The submital must also include a Restoration Plan and documentation of USFWS concurrence pursuant to the Section 7 consultation process. The draft MND indicates that Coastal Sage Scrub (CSS) habitat was avoided and minimized and would be mitigated at a 2:1 ratio by encumbering CSS Caltrans or SANDAG-owned parcel. This information should be provided as part of the CDP submital process so that the City Council will be able to make coastal permit Findings related to the protection of coastal resources. Lastly, the draft MND identifies measures to offset potential indirect effects to the Least Bell's vireo and associated riparian habitat during construction in the form of non-native invasive plants removal from 0.54 acres along Carroll Canyon Road. The City concurs with this measure. As such, a Non-native Invasive Habitat Removal Plan must be submitted with the CDP for review and approval.

Stormwater Review/Water Quality

The following comments are provided by James Nabong from the City's Storm Water Department, Pollution Prevention Division:

- 12. The City is currently under an order from the Regional Water Quality Board to perform monitoring and other activities pertinent to the pending Los Peñasquitos Lagoon sedimentation/siltation TMDL. The Storm Water Department is responsible for the implementation of the order's requirements. We are aware of the potential costs to the City in complying with the pending TMDL. We want mainly to highlight the potential for increased costs to the City if sufficient measures are in not place to manage sediment loads from this project resulting in the movement of sediment downstream to the impaired lagoon. We are interested in working cooperatively with the project team throughout the duration of this project, but in order to meet the deadline for technical review comments on the proposed MND, we are providing the following comments.

Design Pollution Prevention BMPs

- 15. Because of the pending sediment TMDL for Los Peñasquitos Lagoon, and because Carroll Canyon Creek is a tributary to this lagoon and is a significant source of sediment, we want to emphasize the importance of attenuating peak flows from the impervious surfaces of the project. Due to the fact that the Water Quality Technical Report does not match the current project design, we are missing information on where the different drainage areas discharge and which BMPs are applied to those drainage areas. We recommend that the Water Quality Technical Report be updated to show the current project design and the location of the proposed BMPs so

Threatened and Endangered Species Responses

- 8. Formal Section 7 Consultation with the USFWS is complete. The Biological Opinion provided concurrence with the mitigation strategy in the environmental document to compensate for unavoidable impacts to San Diego fairy shrimp and California gnatcatcher. The impact to San Diego fairy shrimp is outside of the coastal zone. The mitigation locations will be determined sometime prior to construction, which is in agreement with the USFWS requirement.
- 9. A Restoration Plan for the San Diego fairy shrimp mitigation location will be provided to USFWS within six months after project impacts, or in accordance with their requirements.
- 10. CSS impacts in the coastal zone are about [0.20ac (0.08ha) permanent] and [0.34ac (0.14ha) temporary].
- 11. The area of proposed invasive, non-native vegetation (e.g., Arundo) removal is outside of the coastal zone. However, a plan to guide removal of these plant species will be sent to USFWS for review and approval, prior to the work.

Stormwater Review/Water Quality Responses

- 12. Caltrans is a stakeholder in the TMDL for Los Peñasquitos Lagoon (in addition to the City of San Diego, City of Poway, City of Del Mar & the County of San Diego) and has been an active member of the monitoring effort that was recently completed as required by the San Diego RWQCB.
- 13. Caltrans holds the same concerns as the City in preventing storm water pollution and improving water quality. Efforts are being made in the ongoing design phase and would be made during construction to incorporate the appropriate BMP measures to capture sediment laden storm water runoff before leaving the construction site. Permanent Treatment BMPs will be incorporated to address future Waste load Allocations (WLAs) imposed by the San Diego RWQCB.
- 14. Caltrans looks forward to working with the City of San Diego to meet any of your specific NPDES permit requirements within City jurisdiction and incorporate them into the plans and specification of the project. Caltrans will continue working with the city during the construction phase to ensure that the appropriate BMP measures are incorporated to protect water quality.

Design Pollution Prevention BMPs

- 15. According to the Floodplain Study dated July 2005 prepared for the City of San Diego for this project, no peak attenuation is warranted for the project. The proposed project would have an impact on the 100 year floodplain elevation between -0.02 and 0.03ft (-0.006 and 0.009m)

that the effectiveness of the measures to mitigate increased flows can be better assessed. Alternatively, clarifying information can be provided in lieu of updating the WQTR.

Construction BMPs

- 17. Our concern is primarily the control of sediment during construction and after construction until permanent BMPs are established, because of the pending TMDL. Additionally, the City is interested in protecting existing sediment basins downstream of this project from increased sediment loads which could impact the City's cost for maintaining these basins. The City requires measures to ensure protection of water bodies that are impaired for sediment listed on page 35 of the City's Storm Water Standards manual. Requirements for a BMP Implementation Plan on page 34 of the Storm Water Standards manual would apply to this project since it is expected to grade more than 5 acres during the rainy season. We also would like to know why sediment basins are not proposed.

Treatment BMPs

- 19. The proposed bioswales are effective at removing pollutants typically generated from roadways. However, to reiterate the concerns described above, it is not clear which drainage areas of the project are being treated by the bioswales and whether the bioswales are adequately attenuating peak flows such that there will not be increases in sediment movement into the receiving stream.

Continued Maintenance of Permanent BMPs

- 20. A solid maintenance program is critical in ensuring continued performance of these BMPs throughout the life of the project, including not only the maintenance of treatment BMPs, but
- 21. also vegetated slopes, drainage ditches and swales, and outlet protection measures. We recommended adding language to the MND with an emphasis on those BMPs that are intended to reduce sediment loads.
- 22. The Storm Water Department understands that this project is needed. We want to be sure that actions are taken to protect the waterbody from additional sediment loading; therefore, protecting the City and our project partner from potential fines by the Regional Board.

Wastewater Review

The following comments are provided by Mehdi Rastrakhiz from the City's Metropolitan Wastewater Department (MWWD):

- 23. The MWWD has several sewer mains and a trunk sewer crossing I-805 within close proximity to the proposed realignment that may potentially be impacted. As such, the MND should address existing wet utilities and how they are impacted as a result of the roadway realignment. Placement of additional engineered fill or cut over existing sewer pipes has the potential to result in an impact to designed depth of cover and shall be mitigated by main relocation or by equivalent design acceptable to the City Utilities Director.

- 16. The SWDR has been finalized and reflects the current design. A copy will be submitted to the City upon request. After finalization of construction, all slopes will be stabilized with permanent erosion control or planting as shown on the erosion control and landscaping sheets. Tributary areas to the bioswales will be shown as a separate attachment to the SWDR.

Construction BMPs

- 17. Part of Caltrans efforts to prevent any further impairment to the lagoon and to meet future waste load allocation is to contain any sediment resulting from the construction of the project within the construction zone. Construction BMPs are incorporated into the plans for this project based on the anticipated stage construction sheets. By doing so Caltrans can account for the various construction activities anticipated in each stage and potential pollutants generated. Construction BMPs are shown on the plans, included in the specifications, and accounted for in the estimate. Quantities of construction BMPs account for the number of rainy seasons during the construction phase.

In addition, as part of Caltrans efforts to provide incentives for the contractor to maintain the construction BMPs properly throughout the duration of the project, the State pays for a share of the cost of maintenance for soil stabilization and sediment control BMPs. A copy of the water pollution control sheets will be provided to your staff for review upon request.

The Contractor is required to submit a SWPPP prior to begin of work. Part of the contractor's SWPPP is to include a Sampling and Analysis Plan to meet the General Construction Permit requirements. The Sampling Plan requirements are identified in the specifications of the project. Sampling locations and methods have to be identified by the contractor in the SWPPP to be approved by the Resident Engineer.

Permanent Treatment BMPs are going to be planted with native sod or deer grass. The roadway contract will have one year of plant establishment period to ensure the successful establishment of our stabilization efforts for planting. An extended 3-year plant establishment is being proposed for the project.

- 18. Sediment basins are not proposed, however, the SWPPP will indicate the contractor's means and methods in constructing the project while complying with stormwater requirements including managing sediment loads without conflicting with the contractor's access and operations.

Treatment BMPs & Continued Maintenance of Permanent BMPs

- 19. Drainage areas being treated by the bioswales will be shown as an attachment to the SWDR and will be provided to the City upon request. Bioswales are effective at removing Total Suspended Solids (TSS) as well as metals and trash. They are designed to carry the 25-year storm but are not meant for attenuating peak flows for the reasons mentioned under the Design Pollution Prevention BMPs section.

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Ms. Kelly Finn
February 27, 2009

24. The document should be modified to address potential conflicts with the existing sewer system. Specifically, in the event that construction activities limit the crew from accessing City facilities for maintenance, the project should provide temporary maintenance access, repair/replacement of such access as well as permanent easement access.

The City of San Diego as a Responsible Agency greatly appreciates the opportunity to provide our input. We look forward to receipt of the Final MND and submittal of the CDP for processing. If you should have any questions regarding the above comments, please contact Myra Herrmann at (619) 446-5372 or via email at mherrmann@sandiego.gov.

Sincerely,



Cecilia Gallardo, AICP
Assisting Deputy Director

cc: Myra Herrmann, Senior Planner, Development Services Department (MS 501)
Mark Koll, Project Manager, Engineering and Capital Projects Department (MS 908A)
John Fisher, Project Manager, Development Services Department (MS 301)
Gary Geiler, Senior Planner, Development Services Department (MS 501)
City of San Diego Environmental Review and Comment Files
F/IECP PROJECTS

Continued Maintenance of Permanent BMPs

20. As mentioned above under Constructions BMP section, all BMP measures will be implemented to prevent or minimize the potential of sediment leaving the construction zone. After completion of construction, all slopes will be stabilized with permanent erosion control and landscaping surrounding the City street areas. After completion of construction and before final stabilization is implemented, fiber rolls will be placed along the final slopes, around drainage inlets and as check dams in earthen channels to capture sediment until vegetation is established. One year of plant establishment will be added as part of the roadway contract to ensure successful planting efforts.

21. Refer to section 2.3.2 (Avoidance, Minimization and/or Mitigation Measures) for measures being implemented that are intended to reduce sediment loads.

22. Caltrans shares these concerns and will ensure appropriate actions are taken to protect waterbodies from sediment loading.

Waste Water Review Responses

23. Both Caltrans and City of San Diego staff have been in ongoing coordination to ensure that wastewater utilities that are affected are designed in accordance with City standards. Replacement wastewater facilities would be designed and constructed to the satisfaction of the City Utilities Director. The requested information has been added to the Utilities section (2.2.5).

24. Coordination will continue to ensure City maintenance staff can access City facilities during construction.

Chapter 4: List of Preparers

Alsheikh, May - Registered Transportation Engineer, NPDES/Storm Water Compliance Branch, B.S. Civil & Environmental Engineering from San Diego State University, 10 years Caltrans experience

Alvi, Shahbaz Project Engineer, Registered Civil Engineer (P.E.) , MSC Transport Planning and Engineering (Leeds University, UK), 9 years Caltrans experience.

Askew, Kent, RLA, Project Landscape Architect, B.S. Botany, 15 years Caltrans experience.

Baird, Gladys - Associate Environmental Planner (Natural Sciences), B.S. Biology from California State University, San Diego: 9 years Caltrans experience.

Barron, Claudia - Graphic Designer III, B.F.A. Illustration from Syracuse University, 19 years Caltrans experience.

Brownson, Tim - Hydraulics Branch Chief, B.S. Civil Engineering University of Arizona, 20 years Caltrans experience.

Dodson, Kimberly - Transportation Planner, M.S. in Geography with an Emphasis in GIS from San Diego State University. Eight years GIS experience, two years Caltrans experience.

Dowda, Jayne - Environmental Engineering Branch Chief, Professional Engineer, BSCE - San Diego State University, 23 years of Caltrans experience.

Eaton, Maurice - Travel Modeling & Forecasting Branch Chief, Senior Transportation Planner, B.S. Business Administration, University of Redlands; 25 years Caltrans experience.

Finn, Kelly - Environmental Branch Chief, Senior Environmental Planner, M.S. Resources Conservation from University of Massachusetts Amherst; B.A. Biology, Environmental Studies from University of California Santa Cruz; 9 years Caltrans experience.

Hinman, Brian - Senior Transportation Engineer, Supervisor, Office of Geotechnical Design South 2 Branch D, BS Geological Sciences, 1985, San Diego State University; B.S. Civil Engineering, 1991, San Diego State University, 15 years Caltrans experience.

Jacobo, Arturo – Professional Engineer, Project Manager, Senior Transportation Engineer, B.S. Structural Engineering from University of California, San Diego, 18 Years Caltrans experience.

James, Robert - Biologist, Senior Environmental Planner; B.S. in Biology from the University of California, Los Angeles, M.S. in Biology from California State University, Long Beach; 10 years Caltrans experience.

Kent, Barbara - GIS Coordinator, Research Program Specialist II (GIS), M.A. Geography from Northern Arizona University, B.S. Business from University of Redlands; 9 years Caltrans experience.

Kloth, Joel - Environmental Engineering, Engineering Geologist, B.S. in Geology from California Lutheran University; 9 years Caltrans experience.

Kontaxis, Constantine - NPDES/Stormwater Compliance Branch Chief, Senior Civil Engineer, Registered Professional Engineer, B.S. in Civil Engineering from Oregon State University; 10 years Caltrans experience.

Lopez, Waldo R. - Transportation Engineer Civil, B.S. Civil Engineering from National University of Honduras, 17 years Caltrans experience.

Pastor, Bruce - Associate Transportation Planner, B.A. Geography from San Diego State University; 7 years Caltrans experience.

Pedersen, Michael - Environmental Engineering (Noise), Transportation Engineer, Bachelor of Engineering (Civil) from University of Sydney, Sydney, Australia; 10+ years experience; 4 years Caltrans experience.

Rosen, Martin – Senior Environmental Planner, Cultural Resources Liaison for Capital/Local Programs, District Heritage Resource Coordinator, Caltrans PQS-P.I.- Prehistoric Archaeology; B.A. and M.A. from University of California Los Angeles in Anthropology; 28 years Caltrans experience.

Serna, Luke - Environmental Planner, BS Environmental Studies from University of California, Santa Barbara, 3 years Caltrans experience.

Tesar, Jeff - Office of Geotechnical Design, - Engineering Geologist, M.S. in Geology from University of Wroclaw, PL. 23 years of experience in a fields of Engineering Geology and Environmental Geology, including 10 years Caltrans experience.

Threlkeld, Steven W. - Planning, Travel Forecasting and Modeling; Registered Civil Engineer; B.S. Geophysics San Diego State University, 20 years Caltrans experience.

Trudell, Michelle - Associate Environmental Planner, M.A. City Planning from San Diego State University, B.A. Environmental Studies from University of California Santa Barbara, 11 years Caltrans experience.

Wayne, Aly - Transportation Planner, B.S. Environmental Management from Indiana University, Master of City Planning from San Diego State University; 3 years Caltrans experience.

Chapter 5: Distribution List

Federal Agencies

U.S. Fish and Wildlife Service
Carlsbad Field Office
6010 Hidden Valley Road
Carlsbad, CA 92011

State Agencies

State Clearinghouse
Office of Planning and Research
1400 10th Street
Sacramento, CA 95814

California Department of Fish and Game
4949 Viewridge Ave
San Diego, CA 92123

California Regional Water Quality Control
Board
Mr. Chris Means
9174 Sky Park Court, Suite 100
San Diego, CA 92123

State Historic Preservation Officer
Mr. Milford Donaldson
CA Department of Parks & Recreation
1416 9th Street
Sacramento, CA 95814

California Highway Patrol
San Diego Office
4902 Pacific Highway
San Diego, CA 92110

CA Environmental Protection Agency
1001 I Street
Sacramento, CA 95814

Native American Heritage Commission
Mr. Larry Myers
915 Capitol Mall, Room 364
Sacramento, CA 95814

California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

Air Pollution Control District
The Director
10124 Old Grove Road
San Diego, CA 92131

Public Utilities Commission
San Francisco Office (Headquarters)
505 Van Ness Avenue
San Francisco, CA 94102

Federal Elected Officials

Honorable Brian Bilbray
U.S. Representative, 50th District
262 Stevens Avenue, Suite 107
Solana Beach, CA 92075

Honorable Darrell Issa
U.S. Representative, 49th District
1800 Thibodo Road, Suite 310
Vista, CA 92083

Honorable Dianne Feinstein
U.S. Senator
750 B Street, Suite 1030
San Diego, CA 92101

Honorable Barbara Boxer
U.S. Senator
600 B Street, Suite 2240
San Diego, CA 92101

Honorable Duncan Hunter
U.S. Representative, 52nd District
1870 Cordell Court, Suite 206
El Cajon, 92020

Honorable Susan Davis
U.S. Representative, 53rd District
4305 University Avenue, Suite 515
San Diego, CA 92105

State Elected Officials

Honorable Martin Garrick
State Assembly, 74th District
1910 Palomar Point Way Suite 106
Carlsbad, CA 92008

Honorable Christine Kehoe
State Senator, 39th District
2445 Fifth Ave., Suite 200
San Diego, CA 92101

Honorable Lori Saldana
State Assembly, 76th District
1557 Columbia Street
San Diego, CA 92101

Honorable Mark Wyland
1910 Palomar Point Way, Suite 105
Carlsbad, CA 92008

Local Government – City/County

City of San Diego, Development Services
Department
Attn: Myra Herrmann
1222 First Avenue, MS-501
San Diego, CA 92101

City of San Diego, Planning and
Community Investment Department –
MSCP
202 C Street, MS-5A
San Diego, CA 92101

County Clerk's Office
County of San Diego
1600 Pacific Highway
San Diego, CA 92101

County of San Diego
Department of Planning and Land Uses
5201 Ruffin Road, Suite B
San Diego, CA 92123

San Diego Association of Governments
Mr. Rob Rundle
401 B Street
San Diego, CA 92101

City of San Diego Metropolitan Wastewater
Department
9192 Topaz Way
San Diego, CA 92123

City of San Diego, Engineering and Capital
Projects
600 B Street MS-908A
San Diego, CA 92101

Local Elected Officials

Mayor Jerry Sanders
City of San Diego
City Administration Building 11th Floor,
202 C Street, San Diego, CA 92101

County Supervisor Pam Slater-Price
District 3
S.D. County Administration Center
1600 Pacific Highway, Room 335
San Diego, CA 92101

Councilmember Sherri Lightner
City Administration Building
202 C Street, MS -10A
San Diego, CA 92101

Councilmember Carl DeMaio
City Administration Building
202 C Street, MS-10A
San Diego, CA 92101

Native American Organizations

Pala Band of Mission Indians
Mr. Robert Smith, Chair
12196 Pala Mission Road, PMB 50
Pala, CA 92059

Pauma Band of Mission Indians
Mr. Chris Devers, Chair
P.O. Box 369
Pauma Valley, CA 92071

Rincon Band of Luiseño Indians
Ms. Ruth Calac
P.O. Box 68
Valley Center, CA 92082

San Luis Rey Band of Luiseño Indians
Ms. Carman Mojado, Co-Chair
1889 Sunset Drive
Vista, CA 92081

La Jolla Band Luiseño Indians
Mr. Tracy Nelson, Chair
22000 Highway 76
Pauma Valley, CA 92061

Barona Band of Mission Indians
c/o EPA Specialist
1095 Barona Road
Lakeside, CA 92040

Kumeyaay Cultural Repatriation
Committee
Mr. Steve Banegas, Spokesperson
1095 Barona Road
Lakeside, CA 92040

Cuyapaipe Band of Mission Indians
Mr. Harlan Pinto, Sr., Chair
4054 Willows Road
Alpine, CA 91901

Campo Band of Kumeyaay Indians
Ms. Monique La Chappa, Chair
36190 Church Road
Campo, CA 91906

Inaja and Cosmit Band of Mission Indians
Ms. Rebecca M. Osuna, Chair
309 South Maple Street
Escondido, CA. 92025

Jamul Band of Mission Indians
Mr. Kenneth A. Meza, Chair
P.O. Box 612
Jamul, CA 91935

La Posta Band of Mission Indians
Ms. Gwendolyn Parada, Chair
P.O. Box 1120
Boulevard, CA 91905

Manzanita Band of the Kumeyaay Nation
Mr. Leroy Elliott, Chair
P.O. Box 1302
Boulevard, CA 91905

Sycuan Band of the Kumeyaay Nation
Mr. Dan Tucker, Chair
5459 Dehesa Road
El Cajon, CA 92019

Viejas Band of the Kumeyaay Nation
Mr. Bobby L. Barrett, Chair
1 Viejas Grade Road
Alpine, CA 91901

Mesa Grande Band of Mission Indians
Mr. Mark Romero, Chair
P.O. Box 270
Santa Ysabel, CA 92070

San Pasqual Band of Mission Indians
Mr. Allen E. Lawson, Chair
P.O. Box 365
Valley Center, CA 92082

Santa Ysabel Band of Diegueño Indians
Mr. Johnny Hernandez, Spokesperson
P.O. Box 130
Santa Ysabel, CA 92070

Pechanga Band of Luiseño Indians
Mr. Mark Macarro, Chair
P.O. Box 1477
Temecula, CA 92493

Los Coyotes Band of Mission Indians
Ms. Francine Kupsch, Spokesperson
P.O. Box 189
Warner Springs, CA 92086

Clint Linton
P.O. Box 507
Santa Ysabel, CA 92070

Carmen Lucas
P.O. Box 775
Pine Valley, CA 91962

Louie Guassac
P.O. Box 1992
Alpine, CA 91903

Ron Christman
56 Viejas Grade Road
Alpine, CA 91901

Other Agencies

San Diego Gas & Electric Company
8315 Century Park Court, CP21E
San Diego, CA 92123
Attention: Dashiell S. Meeks, PE, AICP

North County Transit District
810 Mission Avenue
Oceanside, CA 92054

Metropolitan Transit Services
1255 Imperial Avenue, Ste. 1000
San Diego, CA 92101-7490

Interested Planning Groups, Organizations, Companies and Citizens

Mira Mesa Community Planning Group
PMB 230
10606-8 Camino Ruiz
San Diego, CA 92126

Qualcomm
Corporate Headquarters
5775 Morehouse Drive
San Diego, CA 92121

Torrey Pines Community Planning Board
P.O. Box 603
Del Mar, CA 92014

San Diego Archaeological Center
Cindy Stankowski Director
16666 San Pasqual Valley Road
Escondido, CA 92027

Pfizer Inc.
3550 General Atomics Court
San Diego, CA 92121

San Diego County Archaeological Society,
Inc.
EIR Review Committee
PO Box A 81106
San Diego CA 92138

Appendix A: CEQA Checklist

Project Title

Interstate 805 HOV/Carroll Canyon Extension Project

Lead Agency name and address

California Department of Transportation
4050 Taylor Street
San Diego, CA 92110

Contact person and phone number

Kelly Finn
Senior Environmental Planner
Environmental Analysis, Branch A
(619) 688-0229

Project Location

Interstate 805, from kilopost 42.6 to 46.2 (postmile 26.5 to 28.7)
San Diego County, California

General Plan Designation

The project is consistent with the Mobility Element of the City of San Diego's General Plan. See section 2.2.2 for more information.

Land Uses

Land uses within the project area include a mixture of industrial, commercial, open space, and public facilities. See section 2.2.1 for more information.

Description of Project

The I-805 HOV Extension/Carroll Canyon Road Extension Project includes extension of Carroll Canyon Road from Scranton Road east of Interstate 805 (I-805) to the intersection of Carroll Canyon Road with Sorrento Valley Road west of I-805. The project also includes HOV lanes from the proposed Carroll Canyon Road extension to the I-5/I-805 freeway merge. See section 1.3 for more information.

Other public agencies whose approval is required

The City of San Diego

USFWS

California Public Utilities Commission (CPUC)

SDG&E's Assessment of Impacts Resulting from Utility Relocation

No impacts would occur to the following resource areas as a result of the proposed utility relocations.

- **Agricultural Resources**
- **Cultural Resources**
- **Geology/Soils**
- **Hazards & Hazardous Materials**
- **Land Use/Planning**
- **Mineral Resources**
- **Population/Housing**
- **Public Services**
- **Recreation**
- **Transportation/Traffic**

Less than significant impacts would occur to the following resources as a result of proposed utility relocations:

Utilities/Service Systems

Utility relocation would have a *less than significant* impact with the inclusion of a plan to maintain services to customers during the relocation activities. See section 2.2.5 for further detail regarding the relocation work that would take place.

Aesthetics/Visual

Proposed utility relocations would occur primarily within the viewshed represented by Key View #2 (refer to section 2.2.7). The existing visual quality is considered low, due to the overhead utility lines and maintenance roads used to service them. The visual character is classified as degraded suburban due to the disturbed nature of the natural landscape features caused by the utility corridor, freeway, and railroad.

These existing utilities would be relocated to alternate overhead structures in the viewshed, and the existing service roads and ancillary utility facilities on the ground would remain. The change in visual quality and character would be low, and the resulting visual impact would be *less than significant*. See section 2.2.7 for further details.

Water Quality

There is a potential for temporary, short term impacts to water quality during utility relocation activities. Such impacts would be avoided and/or minimized through the use of construction site BMPs. Therefore, it is anticipated that there would be a *less than significant impact* to water quality. See section 2.3.2 for project details.

Air Quality

During utility relocation, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, trenching, hauling, welding, and various other activities. Emissions from construction equipment also are anticipated.

The effects on air quality would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of equipment to and from the site.

These emissions would be temporary and limited to the immediate area surrounding the construction site, and therefore would be a *less than significant impact* to air quality. Measures would be incorporated into the project to minimize the emission of fugitive dust, PM₁₀, and PM_{2.5} during construction. See section 2.3.6 for further details.

Noise

Proposed utility relocations would likely generate a temporary, short-term increase in noise. Because this increase would be temporary and limited to the immediate area surrounding the SDG&E utilities to be relocated, it would be a *less than significant impact*.

A combination of attenuation techniques with equipment noise control and administrative measures would be selected minimize noise disturbances during utility relocation activities. See section 2.3.7 for additional project details.

Biological Resources

Proposed utility relocations would occur in areas of Disturbed habitat that are dominated by invasive nonnative grasses and forbs that are adapted to a regime of frequent disturbances. Similar to the nonnative grass species in California, many of the weedy forbs now present in Disturbed habitat are originally from the Mediterranean region. ESAs would be established to protect adjacent biological resources, such as Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Sage Scrub during construction.

No impacts to other biological resources (Riparian Woodland and Southern Willow Scrub) are anticipated with the relocation of utilities, as long as appropriate measures are taken to avoid impacts to Carroll Canyon Creek and its adjacent riparian habitat. Carroll Canyon Creek is crossed by the utility corridor. To avoid impacts, ESAs would be delineated on all project plans and avoided during construction. See section 2.4 for project details.

Greenhouse Gases

It is anticipated that temporary GHG emissions may occur during utility relocation activities. These activities would be short-term and would not contribute to regional GHG emissions or climate change impacts (See section 2.6 for project details). GHG emissions related to utility relocation would be mainly from carbon dioxide (CO₂)

contained in exhaust from off-road diesel construction equipment/vehicles (e.g., idling and operation of backhoes, cranes, and drilling rigs), from on-road trucks used by vendors (to deliver materials to the site) and on-site workers, and from use of portable equipment (e.g. portable generators and wire-pullers). The short-term GHG emissions (over the 30 work-day utility relocation project period) are estimated at 145 metric tons (using the URBEMIS 9.2.4 model in conjunction with estimated vehicle/equipment usage schedules and acreage of active pole and cable stringing sites). Long-term operation of the utility lines would consist of approximately the same maintenance frequency as the existing conditions and therefore would not add to the existing GHGs.

It is evident that the construction emissions of GHG (from the utility relocation activities) are not significant because they are temporary and are further mitigated by the implementation of the California Air Resources Board's (CARB) recently imposed restrictions on diesel vehicle idling and mandates on reduction of emissions from mobile sources. Two of CARB's Early Action Measures (related to GHG reduction) directly address substantial mobile source emissions by imposing energy efficiency requirements (Pavely standards) and low carbon fuel requirements. The Pavely standards have already been issued and are awaiting an EPA waiver to go into effect. The low carbon fuel standard is expected to be issued in April, 2009.

The GHG emissions from the utility relocation project are well below significance thresholds thus far suggested (e.g., 10,000 metric tons/year for construction included in the South Coast Air Quality Management District suggested guidelines, December 2008; 7,000 metric tons/year by Air Resources Board, October 2008). The emissions are also insignificant as compared to the system wide reductions being pursued by SDG&E in accordance with its Long Term Procurement Plan approved by the CPUC in September, 2008. For these reasons, the utility relocation project's contribution to global climate change is not cumulatively considerable and therefore project impacts would be *less than significant*.

The following SDG&E standard operating procedures and protocols are incorporated into the proposed project and would further minimize potential GHG impacts:

- All SDG&E employees and contractors would use vehicles that are in compliance with current CARB regulations.
- Traffic speeds on unpaved roads and the right-of-way would be limited to 15 mph.
- Vehicle idling time would be limited to a maximum of five minutes for vehicles and construction equipment, except where idling is required for the equipment to perform its task.

- The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture Resources	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Hazards & Hazardous Materials	<input type="checkbox"/>	Hydrology/Water Quality	<input type="checkbox"/>	Land Use/Planning
<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise	<input type="checkbox"/>	Population/Housing
<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation/Traffic
<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Appendix B: Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR

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*Flex your power!
Be energy efficient!*

January 14, 2005

TITLE VI POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink that reads "Will Kempton".

WILL KEMPTON

Director

"Caltrans improves mobility across California"

Appendix C: USFWS Biological Opinion



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011



In Reply Refer To:
FWS-SDG-08B0418-09F0555

MAR 31 2009

Mr. Robert James
California Department of Transportation
District 11
4050 Taylor Street
San Diego, California 92110

Subject: Formal Section 7 Consultation for the Interstate 805/Carroll Canyon Road Extension Project, City of San Diego, San Diego County, California

Dear Mr. James:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion on the proposed Interstate 805/Carroll Canyon Road Extension project, in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). The biological opinion addresses the possible effects of the road extension project on the federally endangered San Diego fairy shrimp (*Branchinecta sandiegonensis*; "SD fairy shrimp"). We are providing this biological opinion directly to your agency, the California Department of Transportation (Caltrans), because the project will receive Federal funding through the Federal Highway Administration (FHWA), and for this project, FHWA has designated Caltrans as the non-Federal representative responsible for carrying out section 7 consultation under the Act.

The federally threatened coastal California gnatcatcher (*Polioptila californica californica*; "gnatcatcher") was documented in the western half of the project area immediately north of the proposed Carroll Canyon Road extension in 2002 (Alberts 2002). Subsequent protocol surveys by Varanus (2003) and Caltrans (2008a) did not locate gnatcatchers anywhere in the proposed project footprint. Based on this information indicating that the project site is not presently occupied by gnatcatcher, the Service concurs with your determination that the project, as proposed, is not likely to adversely affect the gnatcatcher, and the gnatcatcher is not addressed in the biological opinion.

We acknowledge that there is potential for gnatcatcher to re-occupy the site prior to project clearing and grading activities. Thus, Caltrans is implementing specific measures to ensure that impacts to gnatcatchers are addressed by the project. Specifically, within the proposed project footprint, preconstruction surveys for the gnatcatcher will be conducted by a Service-approved biologist. If gnatcatchers are observed during the pre-construction survey, Caltrans will contact the Service to determine if additional consultation is necessary.



Caltrans is also offsetting the permanent loss of 0.6 acres [0.24 hectares (ha)] of coastal sage scrub by providing conservation and management of 1.2 ac (0.5 ha) of occupied coastal sage scrub in perpetuity. This conservation action will be coordinated and agreed to with the Service prior to initiating project impacts and implemented within 1 year of the date of this biological opinion. In addition, coastal sage scrub temporarily impacted by construction will be restored in-kind, to the maximum extent practicable, using appropriate native species. A restoration/ landscape plan with success criteria and remedial measures will be coordinated and agreed to by the Service prior to application in the field. These conservation measures committed to by Caltrans will ensure that project area impacts to coastal sage scrub, the primary habitat for gnatcatchers, is offset and that coastal sage scrub will remain in the project area to again provide live in or dispersal habitat for gnatcatchers.

In 2007, a single male federally endangered least Bell's vireo (*Vireo belli pusillus*; "vireo") was documented by URS (2008) along Carroll Canyon Creek within 500 feet (ft) [152 meters (m)] of the proposed Carroll Canyon Road extension. Subsequent protocol surveys in 2008 (Caltrans 2009a) did not detect any vireos within 500 ft (152 m) of the proposed project footprint. The 500-ft (152-m) boundary is used to delimit the distance for which construction noise is likely to result in measurable effects to nesting vireos.

As with the gnatcatcher, Caltrans is implementing specific measures to ensure that the proposed project does not result in unanticipated adverse effects to individual vireo and to support conservation of the species in general. Specifically, Caltrans will conduct vegetation clearing within the construction limits from September 16 to February 14 to avoid the vireo breeding season. If vegetation clearing must occur during the vireo breeding season, then pre-construction surveys for vireo will be conducted to ensure that no breeding or nesting birds are present within or immediately adjacent to the areas impacted. The survey will be conducted by a Service-approved biologist to determine the presence of vireos within 500 ft (152 m) of the proposed project footprint. Should an active nest be located, Caltrans will contact the Service to determine if additional consultation is necessary.

Because the primary effect to vireo from construction-related noise would likely be reduced reproductive capability, non-native plants (*i.e.*, *Arundo donax*) will be removed from 0.54 ac (0.22 ha) of riparian habitat along Carroll Canyon Creek west of I-805. This measure will offset any potential loss in reproduction by enhancing the available nesting habitat for vireo in proximity to the project site (*i.e.*, along Carroll Canyon Creek). The Service will be notified prior to removal to allow sufficient time to review plans and provide any necessary avoidance measures. Based on the current survey information and the conservation measures proposed by Caltrans, the Service concurs with your determination that the project, as proposed, is not likely to adversely affect the vireo, and the vireo is not addressed in the biological opinion.

This biological opinion is based on information provided in the following: (1) Biological Assessment prepared by Caltrans dated January 16, 2009; (2) Draft Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment prepared by Caltrans dated

January 2009; and (3) correspondence, notes, and other information compiled during discussions with Caltrans on the subject project. The complete project file addressing this consultation is maintained at the Service's Carlsbad Fish and Wildlife Office (CFWO).

CONSULTATION HISTORY

We received your agency's request for formal consultation on January 19, 2009. On February 2, 2009, we responded to your request acknowledging initiation of formal consultation. During the consultation period, we met and corresponded with your agency to clarify project information and to discuss conservation measures to avoid, minimize, and offset impacts to the SD fairy shrimp.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The proposed action is FHWA funding for Caltrans to extend Carroll Canyon Road from Scranton Road east of Interstate 805 (I-805) to the intersection of Carroll Canyon Road with Sorrento Valley Road west of I-805 (Figure 1). Caltrans will also provide a business access road from the proposed Carroll Canyon Road to businesses south of Sorrento Valley Road.

The Carroll Canyon Road extension will be an 82-ft (25-m) wide four-lane urban collector approximately 0.52 mile (mi) long [0.8 kilometer (km)]. Approximately 0.31 mi (0.5 km) of the new roadway will be on support columns (*i.e.*, elevated bridge) with the remaining 0.21 mi (0.34 km) on fill (Figure 1). An approximately 328-ft (100-m) long access road for local businesses will be built from the Carroll Canyon Road extension to remove the non-standard distance to the intersection at Sorrento Valley Road and I-805.

North-facing Direct Access Ramps (DARs) from the Carroll Canyon Road extension to the median of I-805 will be constructed, as well as northbound and southbound High Occupancy Vehicle (HOV) lanes within the median from Mira Mesa Boulevard to the existing HOV lanes at Interstate 5. This includes median bridge widening at Sorrento Valley Boulevard undercrossing (UC) (Bridge No. 57-786 L/R) and Mira Mesa Boulevard UC (Bridge No. 57-785 L/R). The north-facing DAR is a two-lane facility, which will be connected to HOV lanes. The existing Carroll Canyon overhead (OH) (Bridge No. 57-787 L/R) will be modified to accommodate the DARs, the southbound lanes at the Mira Mesa Boulevard UC (Bridge No. 57-785 L) will be widened to accommodate realignment of the southbound Mira Mesa loop on-ramp, and the diamond on-ramp will be realigned. Modifications also include southbound shoulder widening south of the existing Carroll Canyon OH (Bridge No. 57-787 L) and northbound shoulder widening north of the Mira Mesa Boulevard UC (Bridge No. 57-785 R) and north of the Sorrento Valley Boulevard UC (Bridge No. 57-786 R). Minor widening/realignment will occur along Sorrento Valley Road / Mira Mesa Boulevard, the southbound off-ramp, and Scranton Road. Extension of the northbound and southbound HOV lanes includes pavement widening in the median area of I-805 and

Sorrento Valley Boulevard UC (Bridge No. 57-786 L/R). A new signalized intersection will be constructed at the intersection of Carroll Canyon Road and the DARs.

Pedestrian facilities include adding an 8-ft (2.4-m) wide sidewalk along the southern side of the proposed Carroll Canyon Road extension. Bike facilities encompassing 6 ft (1.8 m) of the shoulder will be provided along both shoulders of Carroll Canyon Road.

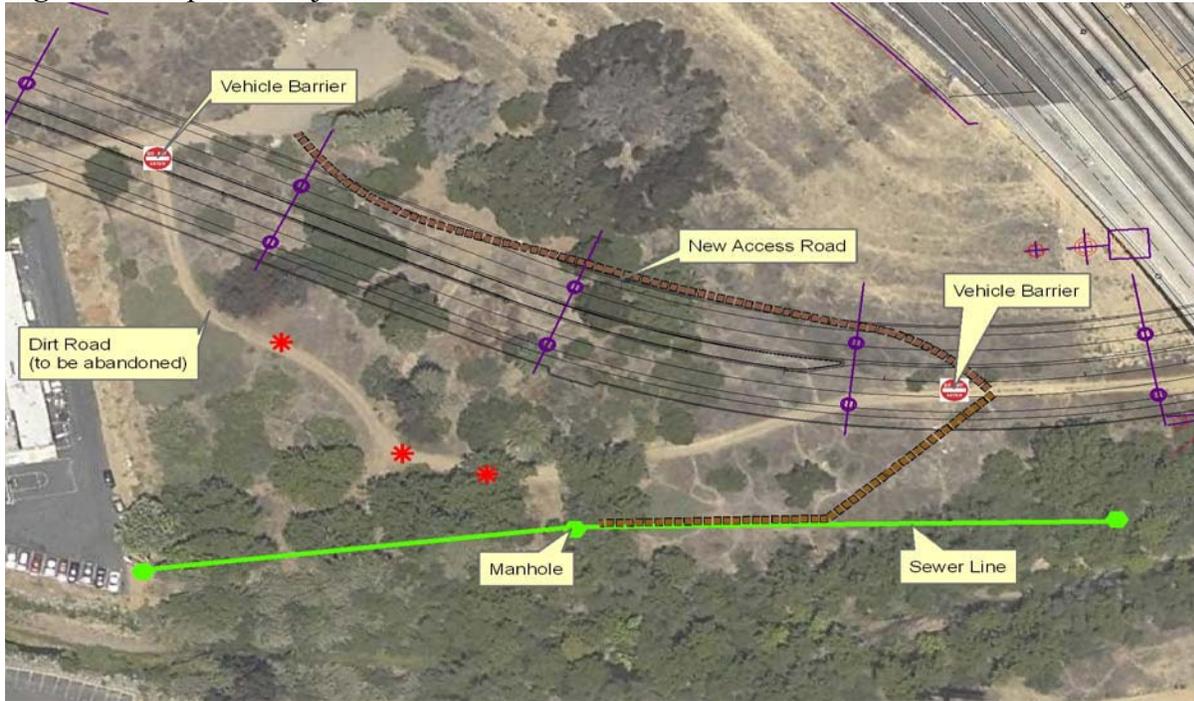
Two staging areas are proposed. One is located on the east side of I-805 north of Carroll Canyon Road, and the other is on the west side of I-805. Two construction access roads will be created resulting in one access road on each side of I-805, both on the north side of Carroll Canyon Creek. One concrete batch plant is proposed on the east side of I-805. Although the exact location of the staging areas, access roads, and concrete batch plant is not presently known, these project features will be located in disturbed, ornamental planting, or developed areas [with the exception of up to 0.2 ac (0.08 ha) of impact to disturbed coastal sage scrub] and will not impact any riparian habitat.

The proposed project also includes the closure of a stretch of dirt road with SD fairy shrimp occupied road pools. A portion of the road will be closed to vehicles using vehicle barriers. A new maximum 12-ft (3.6-m) wide dirt bypass road will be constructed to replace the closed portion of the road (Figure 2). This road will allow for continued access to existing infrastructure (man-holes) while avoiding the remaining SD fairy shrimp occupied road pools.

The proposed project will impact 28.22 ac (11.4 ha) of land supporting native, disturbed, ornamental, and developed areas. Approximately 17.05 ac (8 ha) of these impacts will be permanent and 11.17 ac (4 ha) will be temporary (Table 1).

According to 50 CFR § 402.02 pursuant to section 7 of the Act, the “action area” includes all areas to be affected directly or indirectly by the Federal action. Areas directly impacted include all areas within the project footprint, including construction vehicle access routes, staging areas, and grading areas. Habitat immediately adjacent to the project footprint may be indirectly impacted or degraded by construction activities or later in time due to the developed nature of the road. Thus, we have defined the action area for the proposed project to encompass the project’s direct impact footprint, which is approximately 28.2 ac (11.4 ha) and contains one road pool occupied by SD fairy shrimp (Figure 1), as well as a 0.64-ac (0.26-ha) area that extends south from the project footprint out to an existing dirt road that contains three road pools occupied by SD fairy shrimp (Figure 2). Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area.

Figure 2. Proposed Project in Relation to Road Pools and New Access Road



[Fig 2 Source: I-805 HOV Extension/Carroll Canyon Rd. Extension Project Draft IS/EA & Proposed MND]
 Note: Pools supporting San Diego fairy shrimp are shown by red asterisks. Pools supporting versatile fairy shrimp are not shown. See Figure 3 for a depiction of pools in action area.

Table 1. Impacts: Interstate 805/Carroll Canyon Road Extension Project

	Permanent (acres)	Temporary (acres)
Coastal sage scrub	0.45	0.4
Coastal sage scrub – disturbed	0.15	0.77
Disturbed	9.4	6
Ornamental	2.65	4
Develped	4.4	0
Total	17.05	11.17

Figure 3. Fairy Shrimp and Pool Locations

[Fig 3 Source: I-805 HOV Extension/Carroll Canyon Rd. Extension Project Draft IS/EA & Proposed MND]

Note: Pools a9 and a10 are not represented in this figure. a9 is adjacent to a7 and a10 is adjacent to a3.

Conservation Measures

Caltrans has agreed to implement the following conservation measures as part of the proposed action to avoid, minimize, and offset impacts to SD fairy shrimp.

1. To offset impacts to SD fairy shrimp occupied road pool a7/11 [23 square ft (0.0002 ha)], at least 46 square ft (0.005 ha) of SD fairy shrimp occupied pool habitat will be perpetually preserved and/or restored and managed. This conservation action in support of SD fairy shrimp recovery will be coordinated and agreed upon with the Service prior to initiating project impacts and implemented within 1 year of the date of this biological opinion.

2. Water runoff associated with the new road surfaces and landscaping will be directed away from the onsite road pools containing SD fairy shrimp. No permanent irrigation or water from irrigation systems associated with the project will be permitted to enter the onsite road pools containing SD fairy shrimp.
3. Areas supporting avoided vernal pools supporting SD fairy shrimp, which fall outside the alignment footprint, will be designated as Environmentally Sensitive Areas (ESA) and depicted as such on project maps and plans. No personnel or equipment will be allowed within these areas at any time, unless approved by Caltrans biologists to carry out biological surveys or other conservation measures to enhance SD fairy shrimp habitat.
4. A temporary fence (with silt barriers and/or other appropriate erosion control measures) will be installed around the limits of project impacts (including construction staging areas and access routes and concrete batch plant) to prevent additional impacts to SD fairy shrimp and to prevent the spread of silt from the construction zone into ESAs adjoining the work limits. Fencing will be installed in a manner that does not impact ESAs. Temporary construction fencing will be removed upon project completion.
5. The existing dirt access road located on the north side of Carroll Canyon Creek, west of I-805, and parallel to the proposed Carroll Canyon Road extension where SD fairy shrimp road pools are located will be blocked off from all future vehicle access. Barriers will be installed in a manner to discourage vehicles from accessing the dirt road.
6. Caltrans will hire a Service-approved biologist (project biologist) with a minimum 3 years of vernal pool experience, who will be responsible for overseeing compliance with protective measures. The biologist will monitor construction, at a minimum weekly, to ensure avoidance of SD fairy shrimp-occupied road pools 5-10 and their immediate watersheds. The biologist will also be onsite during installation of ESA fencing and during work immediately adjacent to any of the avoided SD fairy shrimp pools to ensure compliance with the project's conservation measures aimed at avoiding and minimizing impacts to SD fairy shrimp and to produce reports that document compliance with these measures. Caltrans will submit the biologist's name, address, telephone number, and work schedule on the project to the Service at least 7 days prior to the planned date of initiating impacts to SD fairy shrimp habitat. The project biologist will perform the following duties:
 - a. Train all supervisors, (sub) contractors, construction personnel, and employees on the biological resources associated with this project and ensure that this training is completed prior to initiating work on the proposed project. At a minimum, training will include: 1) the purpose for resource protection; 2) a description of the SD fairy shrimp, their habitats and general ecology, and sensitivity to human activities; 3) the conservation measures that are being implemented during project construction;

4) the protocol to resolve conflicts that may arise at any time during the construction process; and 5) the general provisions of the Act, the need to adhere to the provisions of the Act, and the penalties associated with violating the Act. Included in this program will be a fact sheet that includes color photographs of the SD fairy shrimp and its habitat, which will be shown to the employees. Following the education program, the fact sheet will be posted in the contractor and Resident Engineer's office, where they will remain through the duration of the project.

- b. Inspect the fencing and erosion control measures within or up-slope of ESAs a minimum of once per week and immediately before any predicated rain events and immediately after any actual rain events to direct repairs of any breaches in the fence or erosion control measures.
 - c. Halt work, if necessary, and confer with the Service to ensure the proper implementation of conservation measures aimed avoiding and minimizing impacts to SD fairy shrimp. The biologist will report any infraction to the Service within 24 hours of its occurrence.
 - d. Submit a final report to the Service within 60 days of project completion that includes: as-built construction drawings with an overlay of SD fairy shrimp pools that were impacted or avoided; photographs of the avoided SD fairy shrimp pools; and other relevant information documenting that anticipated impacts to habitat for SD fairy shrimp were not exceeded and that general compliance with the project's conservation measures was achieved.
7. Caltrans will ensure that the following conditions are implemented during project construction:
- a. Employees will strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint.
 - b. Disposal or temporary placement of excess fill, brush or other debris will not be allowed in waters of the United States, their banks and/or any depression features or their watersheds.
 - c. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will occur in designated areas within the project impact limits but away from [>100 ft (30 m)] from road pools. These designated areas will be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering waters of the United States and avoided onsite road pools and will be shown on the construction

plans. Contractor equipment will be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" will be designated on construction plans.

STATUS OF THE SPECIES

Listing Status

The SD fairy shrimp was federally listed as endangered on February 3, 1997, (62 *Federal Register* 4925). In September 1998, the Service published the *Recovery Plan for Vernal Pools of Southern California* (Recovery Plan) (Service 1998). The SD fairy shrimp is included in this Recovery Plan. Critical habitat for the SD fairy shrimp was designated on October 23, 2000, (65 *Federal Register* 63438). Critical habitat was remanded, but not vacated, by the Central District Court of California on June 12, 2002. Critical habitat was re-proposed on April 22, 2003, (68 *Federal Register* 19887). Revised critical habitat for the SD fairy shrimp was designated on December 12, 2007 (72 *Federal Register* 70648). No designated critical habitat for the SD fairy shrimp will be affected by the project.

Species Description

The SD fairy shrimp is a small, freshwater crustacean in the family Branchinectidae of the Order Anostraca. The species was originally described by Fugate (1993) from samples collected on Del Mar Mesa, San Diego County. Male SD fairy shrimp are distinguished from males of other species of Branchinecta by differences found at the distal tip of the second antennae. Females are distinguishable from females of other species of Branchinecta by the shape and length of the brood sac, the length of the ovary, and by the presence of paired dorsolateral (located on the sides, toward the back) spines on five of the abdominal segments (Fugate 1993). Adult male SD fairy shrimp range in size from 0.35 to 0.63 in (9 to 16 mm) and adult females are 0.31 to 0.55 in (8 to 14 mm) long.

Distribution

The range of the SD fairy shrimp includes Orange and San Diego counties in southern California, and northwestern Baja California, Mexico (Service 1998, Brown *et al.* 1993). In Baja California, SD fairy shrimp have been recorded at two localities: Valle de Palmas, south of Tecate and Baja Mar, north of Ensenada. A single isolated female was previously reported from vernal pools in Isla Vista, Santa Barbara County, California; however, directed surveys have not located any additional individuals (62 *Federal Register* 4925).

In Orange County, SD fairy shrimp have been documented at Fairview Park (CNDDDB occurrence #11, 1996), Newport Banning Ranch, Irvine Ranch Land Reserve, and within the San Juan Creek watershed at Chiquita Ridge and Radio Tower Road.

In San Diego County, the species occurs in vernal pools from Marine Corps Base Camp Pendleton (MCBCP), inland to Ramona and south through Del Mar Mesa, Proctor Valley, and Otay Mesa. Over 279 and 1,899 pools on MCBCP and Marine Corps Air Station Miramar (MCAS-Miramar) are known to be occupied by SD fairy shrimp, respectively (Service 2008). Of the 62 vernal pool complexes¹ mapped by the City of San Diego², 29 were found to be occupied by SD fairy shrimp and occur at the following localities: Del Mar Mesa (1), Carmel Mountain (1), Mira Mesa (6), Nobel Drive (3), Kearny Mesa (3), Mission Trails Regional Park (1), and Otay Mesa (14) (City of San Diego 2004).

Additional vernal pool complexes with occurrences of SD fairy shrimp located in San Diego County, but not included in the City of San Diego's Inventory include: Carlsbad, San Marcos, Ramona, Poway, Santee, Rancho Santa Fe, Murphy Canyon, Otay Lakes, Imperial Beach, East Otay Mesa, Marron Valley, and Proctor Valley (CNDDDB Occurrence # 27, 2001).

Habitat Affinity

SD fairy shrimp are restricted to vernal pools and vernal pool-like depressions (*e.g.*, ruts in dirt roads). Vernal pools are ephemeral wetlands that occur from southern Oregon through California into northern Baja California, Mexico (Service 1998). They require a unique combination of climatic, topographic, geologic, and evolutionary factors for their formation and persistence. They form in regions with Mediterranean climates where shallow depressions fill with water during fall and winter rains and then dry up when the water evaporates in the spring (Collie and Lathrop 1976; Holland 1976; Holland and Jain 1977, 1988).

Downward percolation of water within the pools is prevented by an impervious subsurface layer consisting of claypan, hardpan, or volcanic stratum (Holland 1976, Holland and Jain 1988). Seasonal inundation makes vernal pools too wet for adjacent upland plant species adapted to drier soil conditions, while rapid drying during late spring makes pool basins unsuitable for typical marsh or aquatic species that require a more persistent source of water. Local upland vegetation communities associated with vernal pools include needlegrass grassland, annual grassland, coastal sage scrub, maritime succulent scrub, and chaparral (Service 1998).

SD fairy shrimp tend to inhabit shallow, small vernal pools and vernal pool-like depressions that range in temperature from 50° to 79° Fahrenheit (F) [10° to 26° Celsius (C)]. They are ecologically dependent on seasonal fluctuations in their habitat, such as absence or presence of water during specific times of the year, duration of inundation, and other environmental factors

¹ Vernal pool complexes are defined as a series of vernal pool groups that are hydrologically connected with similar soil types and species compositions. They were first described and surveyed by Beauchamp and Cass 1979 and subsequently updated in 1986a (Bauder) and 1998 (Recovery Plan).

² The City of San Diego conducted non-protocol surveys for San Diego fairy shrimp. Therefore this inventory may under-represent the true number of vernal pools with occurrences of San Diego fairy shrimp.

that likely include specific salinity, conductivity, dissolved solids, and pH levels (Gonzalez *et al.* 1996, Hathaway and Simovich 1996, and Holtz 2003)

Life History

San Diego fairy shrimp are non-selective, particle-feeding filter-feeders, or omnivores. Detritus, bacteria, algal cells, and other items between 0.3 to 100 microns may be filtered and ingested (Eriksen and Belk 1999). Adult fairy shrimp are usually observed from January to March; however, in years with early or late rainfall, the hatching period may be extended (65 *Federal Register* 63438). SD fairy shrimp have a two-stage life cycle and spend the majority of their life cycle in the cyst stage (Templeton and Levin 1979, Schaal and Leverich 1981, Herzig 1985, Hairston and De Stasio 1988, Venable 1989). After hatching, SD fairy shrimp reach sexual maturity in about 7 to 17 days, depending on water temperature and persist for about 4 to 6 weeks (Hathaway and Simovich 1996). Fairy shrimp mate upon reaching maturity, and female SD fairy shrimp produce between 164 and 479 cysts (eggs) over their lifetime (Simovich and Hathaway 1997). The cysts are either dropped by the females to settle into the mud at the bottom of the pool, or they remain in the brood sac until the female dies and sinks to the bottom (Eriksen and Belk 1999). Fairy shrimp cysts may persist in the soil for several years until conditions are favorable for successful reproduction (Simovich and Hathaway 1997). The cysts will hatch in 3 to 5 days when water temperatures are between 50° and 70 ° F (10° and 20° C) (Hathaway and Simovich 1996). Not all cysts are likely to hatch in a season, thus providing a mechanism for survival if water quality and ponding conditions are not favorable in a given year (Simovich and Hathaway 1997, Ripley *et. al.*, 2004).

Population Trend

The loss of vernal pools that have the potential to support SD fairy shrimp has resulted in a range-wide reduction in diversity and abundance of SD fairy shrimp. Urban and water development, flood control, and highway and utility projects, as well as conversion of wildlands to agricultural use, have eliminated or degraded vernal pools and/or their watersheds in southern California (Jones and Stokes Associates 1987). Historically, vernal pools covered approximately 200 square mi (518 square km) of San Diego County (Bauder and McMillan 1998). Approximately 95 to 97 percent of vernal pools within San Diego County have been lost (Bauder 1986b, Bauder and McMillan 1998, Oberbauer 1990). Most of the remaining vernal pools in San Diego County occur on Redding soils, primarily on MCAS-Miramar (Service 1998).

At the time of listing, San Diego fairy shrimp were known to inhabit a minimum of 25 vernal pool complexes in coastal areas of San Diego, Orange, and Santa Barbara counties, and northwestern Baja California, Mexico (62 *Federal Register* 4925). However, the names and locations of all complexes were not specified in the listing rule, and therefore, it is difficult to ascertain the status of these complexes. Currently, 137 complexes occupied by SD fairy shrimp have been identified in the U.S.; an additional 3 complexes that were identified as occupied at listing have since been

extirpated (Service 2008). Most of these additional complexes fall within the extant range of the SD fairy shrimp known at the time of listing. We expect that these additional complexes and occurrences were occupied at the time of listing, but had not been identified due to lack of survey effort, and do not represent an actual expansion of SD fairy shrimp distribution and range into previously unoccupied areas. Rather, they provide a better understanding of the historical distribution and range of the SD fairy shrimp that was unknown at the time of listing. Therefore, we estimate that the overall SD fairy shrimp distribution has not decreased or increased appreciably since listing. A summary of occupied vernal pool complexes is provided in Appendix 1 of the *San Diego Fairy Shrimp (Branchinecta sandiegonensis) 5-Year Review: Summary and Evaluation* (Service 2008).

Impacts to vernal pools from development have been offset through the restoration, enhancement, and management of habitat. In some cases, due to security of the site and the active management of the vernal pools, the species status has improved. In addition, grants have been awarded to restore habitat in several areas including Otay Mesa, the San Diego National Wildlife Refuge, and Sweetwater Authority lands. Sites that have been restored benefit from fencing and management, which further removes threats from the site that were occurring prior to the restoration efforts.

Current Threats

The SD fairy shrimp still faces the same threats that were identified in the final listing rule throughout its range. These threats can be divided into three major categories: 1) direct destruction of vernal pools and vernal pool habitat as a result of construction, vehicle traffic, domestic animal grazing, dumping, and deep plowing; 2) indirect threats which degrade or destroy vernal pools and vernal pool habitat over time including altered hydrology (*e.g.*, damming or draining), invasion of non-native species, habitat fragmentation, and associated deleterious effects resulting from adjoining urban land uses; and 3) long-term threats including the effect of isolation on genetic diversity and locally adapted genotypes, air and water pollution, climatic variations, and changes in nutrient availability (Bauder 1986a, Service 1998, Bohonak 2005).

Rangewide Conservation Needs

Based on current population trends, threats analysis, and new genetic information, the SD fairy shrimp has the following needs to survive and recover:

1. Vernal pool habitat should be restored and enhanced; this includes expansion of existing populations and re-establishment of populations where habitat and historical conditions are appropriate.
2. Vernal pool management plans should be developed and implemented to maintain hydrologic regimes; watershed and habitat functions; and species viability.
3. Land protection strategies should be developed to prevent further loss and fragmentation of existing habitat.

4. Vernal pool complexes not identified in the Recovery Plan as necessary to stabilize or reclassify the population should be re-evaluated based on their genetic structure to ensure the genetic variation within the SD fairy shrimp population is maintained.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR §402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation, and the impacts of State and private actions which are contemporaneous with the consultation in progress.

The proposed project is located within the northwest portion of the City of San Diego, 1.5 mi (2.4 km) south of the I-805 and Interstate 5 interchange. Topography in the project area consists of a moderate south-facing canyon slope draining into the riparian corridor of Carroll Canyon Creek. The creek flows to Penasquitos Lagoon and out to the Pacific Ocean, approximately 5 river mi (8 km) downstream. The general project area has been previously disturbed by the I-805 Bridge and associated fill, a railroad on the south side of the creek, and dirt roads. Land uses in the vicinity of the site include commercial, business, and transportation.

Within the action area, the 28.22-ac (11.4-ha) project site consists of coastal sage scrub [1.77 ac (0.72 ha)], disturbed (*i.e.*, dirt roads) [15.4 ac (6.23 ha)], ornamental plantings [6.65 ac (2.7 ha)], and developed areas [4.4 ac (1.78 ha)]. Several pools occur in the dirt roads within the action area. The coastal sage scrub habitat is a small island immediately south of the Mira Mesa Boulevard on-ramp to southbound I-805 and north of Sorrento Valley Road where it dead-ends.

Dry and wet season SD fairy shrimp surveys were conducted in the project area during multiple years starting in 2006 (EcoAnalysts, Inc. 2006; URS 2006a, 2006b, 2008, Caltrans 2009a, 2009c). SD fairy shrimp and versatile fairy shrimp (*Branchinecta lindahli*) were found in 6 pools and 15 pools in the survey area, respectively, with both species found in 3 pools (Figure 3 and Appendix A).

All of the pools in the project area consist of tire ruts and ditches within the confines of dirt roads (*i.e.*, road pools) that occur along Carroll Canyon Creek (Figure 3). The pools do not support any vernal pool flora, although they may support plants with wetland indicator status (Caltrans 2009a). These pools occur within the Carroll Canyon Creek floodplain and are disjunct from those found in the I12 complex, which are the nearest natural vernal pools to the project area, occurring on a mesa approximately 0.25 mile (0.4 km) to the south. The road pools within the project area are not likely to be historic vernal pools, but ones created by use of the roads and which became occupied by fairy shrimp over time. How fairy shrimp were introduced to these road pools is unknown. However, it is plausible that cysts from nearby occupied pools (*e.g.*, the I12 complex)

were either transferred to the road pools on vehicle tires or the bodies of wetland-dependent animals (*e.g.*, waterfowl).

The road pools in the project area are currently subject to continual degradation primarily due to vehicle traffic and are of low conservation value, as evidenced by the lack of vernal pool flora and the presence of the versatile fairy shrimp, which is known to occur in disturbed pools.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat that will be added to the environmental baseline, along with the effects of other activities that are interrelated and interdependent with that action. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

Direct Effects

SD fairy shrimp historically occurred in vernal pool complexes throughout the Mira Mesa ecosystem, which is part of the San Diego Central Coastal Mesa Management Area identified in the Recovery Plan (Service 1998). Many of these vernal pool complexes have been developed, converted to agriculture, and/or degraded by OHV use. The Recovery Plan identifies several vernal pool complexes on Mira Mesa. The vernal pool complex within the action area is not identified in the Recovery Plan.

Within the project's direct impact footprint, pool a7/11 [approximately 23 square ft (0.0002 ha)] is the only road pool containing SD fairy shrimp, though nine other road pools [approximately 1,836 square ft (0.017 ha)] supporting the more common versatile fairy shrimp will be impacted (Appendix A and Figure 3). The other three road pools occupied by SD fairy shrimp in the action area are outside of the direct impact footprint (*i.e.*, pools 6, 7 and 8) (Figure 3). However, grading for the proposed project could result in unintentional fill and/or runoff entering these three pools. To avoid these impacts, areas outside of the project's direct impact footprint will be designated as ESA's and fenced prior to initiating project construction. Erosion control (*i.e.*, silt barriers) measures will be implemented in a manner to avoid unintentional fill and runoff into the pools. Additionally, a Service-approved biologist will monitor construction to ensure damage to these pools is avoided.

Because the SD fairy shrimp road pool to be impacted is highly disturbed and not likely in a historic vernal pool complex, it has low long-term conservation value. Soil containing fairy shrimp cysts will not be salvaged from this or any of the other road pools because pools in the action area are known to contain versatile fairy shrimp and are therefore not suitable for

inoculating other created, restored, or enhanced pools. The Recovery Plan does not acknowledge this complex nor identify it as necessary for the stabilization and/or downlisting of SD fairy shrimp.

Caltrans proposes to offset the impacts to 23 square ft (0.0002 ha) of SD fairy shrimp habitat by preserving and/or restoring 46 square ft (0.0004 ha) of SD fairy shrimp habitat off site at a location approved by the Service that is expected to be of higher long-term conservation value. If restoration is proposed, Caltrans will prepare and implement a restoration plan agreed to by the Service. Caltrans will also place a preservation mechanism (*i.e.*, deed restriction, conservation easement, *etc.*) over, as well as prepare and implement a perpetual management, maintenance, and monitoring plan for, the vernal pools to be preserved and/or restored off site.

As stated above, the status of SD fairy shrimp has remained unchanged from the time of listing. This project will not change that determination. The overall acreage of impacts is small relative to the overall habitat available for SD fairy shrimp range-wide and the quality of the pools is poor (road ruts along an established dirt road). Loss of the individual fairy shrimp and cyst bank within this one road pool is not expected to result in an appreciable reduction in the number, reproduction, or distribution of the SD fairy shrimp range-wide. We expect the proposed preservation and/or restoration to adequately offset this small impact and to support recovery of the SD fairy shrimp.

Indirect Effects

The proposed project will introduce additional road infrastructure and landscaping to the project site that could cause increased runoff into three avoided road pools with SD fairy shrimp (*i.e.*, pools 6, 7, and 8). Runoff from the bridge and landscaping could contain contaminants, fertilizer and/or sediments potentially harmful to the SD fairy shrimp. The introduction of eroded sediments or polluted runoff to occupied pools could alter the specific water chemistry (Gonzalez *et al.* 1996) and temperature (Hathaway and Simovich 1996) required by SD fairy shrimp, thus negatively affecting their ability to mature and reproduce (Gonzalez *et al.* 1996, Holtz 2003). To avoid and/or minimize this potential impact, water runoff associated with the new road surfaces and landscaping will be directed away from the onsite road pools containing SD fairy shrimp. No permanent irrigation or water from irrigation systems associated with the project will be permitted to enter the onsite road pools containing SD fairy shrimp.

The road pools in the action area are currently subject to continual degradation from use of the existing roads on which the pools occur. The proposed project will facilitate additional human access into the area supporting the three avoided pools occupied by SD fairy shrimp, which may lead to impacts to these pools such as trash accumulation, human and pet intrusion, trampling, vandalism, and invasion of nonnative species. Caltrans will minimize this potential effect by blocking off both ends of the existing dirt road leading to the avoided pools. However, the barriers will not be maintained by Caltrans as the property is owned by the City of San Diego and not in a

Caltrans right-of-way. Over time, the barriers may be breached, and the benefit of this conservation measure may be short lived.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

The Service is not aware of any future actions that may result in cumulative effects to the SD fairy shrimp in the action area of this project.

CONCLUSION

After reviewing the current status of the SD fairy shrimp, the environmental baseline for the action area, the direct and indirect effects of the proposed action, and the cumulative effects, it is our opinion that the action, as proposed, is not likely to jeopardize the continued existence of the SD fairy shrimp. We reached this conclusion by considering the following:

1. The loss of one degraded road pool and the individual SD fairy shrimp and cyst bank it supports is not expected to appreciably reduce the long-term viability of this species. The loss of approximately 23 square ft (0.0002 ha) of road pool is not large relative to the extent of habitat remaining over the SD fairy shrimp's range. The road pool to be impacted is of low long-term conservation value.
2. Impacts to SD fairy shrimp habitat will be offset through the preservation and/or restoration of a greater area of habitat at a location that is expected to be of higher long-term conservation value.
3. Implementation of a perpetual maintenance and monitoring plan for the preserved and/or restored SD fairy shrimp habitat will ensure that quality habitat for the SD fairy shrimp is available over the long-term thus supporting recovery of the species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as

intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE

The reproductive success of SD fairy shrimp is dependent on seasonal fluctuations in their habitat, such as presence or absence of water during specific times of the year, duration of inundation, and other environmental factors that likely include specific salinity, conductivity, dissolved solids, and pH levels. Therefore, the population of SD fairy shrimp within any pool varies dramatically and can include both adult shrimp and the cyst bank of the pool. The Service is unable to quantify the precise number of SD fairy shrimp and cysts that will be killed by the proposed action because the population size within the road rut pool is unknown and difficult to estimate due to the dynamic conditions associated with SD fairy shrimp habitat. The level of incidental take of fairy shrimp is thus provided in terms of habitat impacts as follows:

- SD fairy shrimp and cysts within road pool a7/11 will be taken in the form of direct mortality by grading and filling activities; the take threshold will be exceeded if any areas supporting SD fairy shrimp outside the 23-square ft (0.0002-ha) a7/11 pool are impacted.

EFFECT OF TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to SD fairy shrimp.

REASONABLE AND PRUDENT MEASURES

We have not identified any additional reasonable and prudent measures beyond the minimization measures committed to by Caltrans, and described in the project description of this biological opinion, that are necessary or appropriate to further minimize the incidental take of the SD fairy shrimp during project implementation.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, Caltrans must comply with terms and conditions which implement the reasonable and prudent measures described above. Since no further reasonable and prudent measures are identified, no terms and conditions are necessary.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

Caltrans should work with the City of San Diego to ensure the barriers blocking access to the road pools occupied by SD fairy shrimp are perpetually maintained to exclude vehicles and other unauthorized access.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes the amendment to formal consultation on the I-805/Carroll Canyon Road Extension Project outlined in materials submitted to us. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

With regard to 2 above, many of the pools within the action area are not currently known to support SD fairy shrimp, and we have addressed impacts in this biological opinion only to pools known to be occupied by SD fairy shrimp as of the 2009 surveys. However, because these unoccupied pools and the SD fairy shrimp occupied pools exist within proximity to each other and along roads open to public access, over time SD fairy shrimp cysts could be introduced by vehicles or wildlife into unoccupied pools. If construction is unexpectedly delayed beyond the anticipated 2011 completion date, we recommend you contact us to determine whether it may be appropriate to conduct additional fairy shrimp surveys.

Mr. Robert James (FWS-SDG-08B0418-09F0555)

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If you have any questions regarding this document, please contact Kurt Roblek at (760) 431-9440, extension 308.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim A. Bartel". The signature is stylized with a large initial "J" and a long horizontal stroke at the end.

Jim A. Bartel
Field Supervisor

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APPENDIX 1. Fairy Shrimp Survey Summary

FAIRY SHRIMP SURVEYS AT I-805/CARROLL CANYON ROAD EXTENSION																					
Year	Survey Type	Pools Sampled																			
		a1	a2/ 59	a3/ 61	a4	a5/ 60	a6/ 56	a7/ 11	a9	a10	5	6	7	8	9	10	57	58	62	63	
2006	Wet										S/L	L			L						
2006	Dry									S	S	S	S	S	S	S					
2007-08	Wet	L	L	L		L											L	L	L	L	L
2008-09	Wet	L	L	L	L	L		L	L												
Impacted		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	No							
Surface Area (sq.ft.)		20	244	196	309	915	152	23	25	25	1076	86	194	258	172	172	22	43	43		97

S = B. sandiegoensis L = B. lindahli

Appendix D: Environmental Commitments Record

OE - Office of Engineer
 RE - Resident Engineer
 NPDES - National Pollution Discharge Elimination System
 PS&E - Plans, Specifications, Estimates

Task and Description	Responsible Branch / Staff	Timing/Phase
NOISE		
Dual pane windows shall be installed by the City of San Diego to abate for interior noise for San Diego Fire-Rescue Station #41.	City of San Diego	Schedule pending
WATER QUALITY	NPDES/OE/RE	PS&E/Construction
Short term potential impacts to water quality during the construction phase are prevented/minimized through the use of Construction site BMPs while the long term potential impacts during the facility operation and maintenance are prevented/minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs.		
Maintenance BMPs would be on-going for the life of the facility and are in accordance with the Storm Water Quality Handbook, Maintenance Staff Guide (Guide).		
Design Pollution Prevention (DPP) BMPs are standard technology-based, non-treatment controls selected to reduce pollutant discharges. DPP BMPs prevent downstream erosion, stabilize disturbed soil areas and maximize vegetated surfaces consistent with Caltrans policies.		
Treatment BMPs must be considered and implemented for the proposed project, as required under the SWMP to prevent or minimize the long-term potential impacts of the project. The project would incorporate six bioswales. The bioswales would be treating approximately 19.77ac (8.0ha) of impervious area, which is equivalent to 140% of the total new impervious area added.		

AIR QUALITY	Environmental Engineering/OE/ RE	PS&E/Construction
<p>The following measures shall be incorporated into the project to minimize the emission of fugitive dust, PM₁₀, and PM_{2.5}</p> <ul style="list-style-type: none"> • Minimize land disturbance. • Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. • Suspend grading and earth moving when wind gusts exceed 25 mph unless the soil is wet enough to prevent dust plumes. • Stabilize the surface of inactive stockpiles. • Limit vehicular paths on unpaved surfaces and stabilize any temporary roads. • Minimize unnecessary vehicular and machinery activities. • Street sweeping shall be conducted where sediment is tracked from the job site onto paved roads, and shall be performed immediately after soil disturbing activities occur or offsite tracking of material is observed. • Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities. 		
<p>The following measure shall be incorporated to minimize exposure to diesel particulate emissions.</p> <ul style="list-style-type: none"> • Locate construction equipment and truck staging and maintenance areas as far as feasible and nominally downwind of schools, active recreation areas, and other areas of high population density. 		
BIOLOGY		
<p>To offset impacts to SDFS occupied road pool a7/11 (23 square feet (0.0002 hectare), at least 46 square feet (0.005 hectare) of SD fairy shrimp occupied pool habitat will be perpetually preserved and/or restored and managed. The location and form of impact offset will be approved by the Service prior to initiating project impacts. The agreed upon offsetting measure will be implemented within one year of the date of this biological opinion. Caltrans will also place a preservation mechanism (i.e., deed restriction, conservation monitoring plan for the vernal pools to be preserved and/or restored off site.</p>	Biology	Pre-Construction Construction

<p>Areas supporting avoided vernal pools supporting SDFS, which fall outside the alignment footprint will be designated as ESA and depicted as such on project maps and plans. No personnel or equipment will be allowed within these areas at any time, unless approved by Caltrans biologists to carry out biological surveys or other conservation measures to enhance SDFS habitat.</p>	<p>Biology</p>	<p>Pre-Construction</p>
<p>A temporary fence (with silt barriers and/or other appropriate erosion control measures) will be installed around the limits of project impacts (including construction staging areas and access routes and concrete bath plant) to prevent additional impacts to SDFS and to prevent the spread of silt from the construction zone into ESAs adjoining the work limits. Fencing will be installed in a manner that does not impact ESAs. Temporary construction fencing will be removed upon project completion.</p>	<p>Biology</p>	<p>Pre-Construction</p>
<p>The existing dirt access road located on the north side of Carroll canyon Creek, west of I-805 and parallel to the proposed Carroll Canyon road extension where SDFS road pools are located will be blocked off from all future vehicle access. Barriers will be installed to discourage vehicles from accessing the dirt road.</p>	<p>Biology</p>	<p>Pre-Construction</p>
<p>Caltrans will hire a Service-approved biologist (project biologist) with a minimum 3 years of vernal pool experience, who will be responsible for overseeing compliance with protective measures. The biologist will monitor construction, at a minimum weekly, to ensure avoidance of SDFS occupied road pools and their immediate watersheds. The biologist will also be onsite during installation of ESA fencing and during work immediately adjacent to any of the avoided SDFS to ensure compliance with the project's conservation measures aimed at avoiding and minimizing impacts to SDFS and to produce reports that document compliance with these measures. Caltrans will submit the biologist's name, address, telephone number, and work schedule on the project to the Service at least 7 days prior to the planned date of initiating impacts to SDFS habitat. The project biologist will perform the following duties:</p>	<p>Biology</p>	<p>Construction</p>
<p>Train all supervisors, (sub) contractors, construction personnel, and employees on the biological resources associated with this project and ensure that training is implemented by all construction personnel prior to working on the proposed project. At a minimum, training will include: 1) the purpose for resource protection; 2) a description of the SD fairy shrimp, their habitats and general ecology, and sensitivity to human activities; 3) the conservation measures given in the biological opinion that should be implemented during project construction; 4) the protocol to resolve conflicts that may arise at any time during the construction process; and 5) the general provisions of the Act, the need to adhere to the provisions of the Act, and the penalties associated with violating the Act. Included in this program will be a fact sheet that includes color photographs of the SDFS, which will be shown to the employees. Following the education program, the fact sheet will be posted in the contractor and Resident Engineer's office, where they will remain through the duration of the Project.</p>	<p>Biology</p>	<p>Pre-Construction Construction</p>

<p>Inspect the fencing and erosion control measures within or up-slope of ESAs a minimum of once per week and immediately before any predicated rain events and immediately after any actual rain events to direct repairs of any breaches in the fence or erosion control measures.</p>	<p>Biology</p>	<p>Construction</p>
<p>Periodically monitor the work area to ensure that work activities do not generate excessive amounts of dust.</p>	<p>Biology</p>	<p>Construction</p>
<p>Halt work, if necessary, and confer with the Service to ensure the proper implementation of species and habitat protection measures. The biologist will report any violation to the Service within 24 hours of its occurrence.</p>	<p>Biology</p>	<p>Construction</p>
<p>Submit a final report to the Service within 60 days of project completion that includes: as-built construction drawings with an overlay of SD fairy shrimp pools that were impacted or avoided; photographs of the avoided SD fairy shrimp pools; and, other relevant information documenting that authorized impacts to habitat for SD fairy shrimp were not exceeded and that general compliance with all conservation measures of this biological opinion was achieved.</p>	<p>Biology</p>	<p>Post-Construction</p>
<p>Caltrans will ensure that the following conditions are implemented during project construction: Employees will strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint.</p>	<p>Biology</p>	<p>Construction</p>
<p>Disposal or temporary placement of excess fill, brush or other debris will not be allowed in waters of the United States, their banks and/or any depression features or their watersheds.</p>	<p>Biology</p>	<p>Construction</p>
<p>All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will occur in designated areas within the project impact limits but away from [>100 feet, (30 meters)] from road pools. These designated areas will be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering waters of the United States and avoided on-site road pools, and will be shown on the construction plans. Contractor equipment will be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" will be designated on construction plans.</p>	<p>Biology</p>	<p>Construction</p>
<p>Establish Environmentally Sensitive Areas (ESAs) on project plans, and in the field, to preserve biological resources adjacent to the project impact area. Maintain ESAs during construction.</p>	<p>Biology/ Construction</p>	<p>Pre-Construction Construction</p>
<p>All vegetation within the construction limits will be cleared from September 16 to February 14 to avoid the gnatcatcher and vireo breeding season. If clearing must occur during the breeding or season, then pre-construction surveys for vireo will be conducted to ensure that no breeding or nesting birds are present within or immediately adjacent to the proposed clearing area. The survey will be conducted by a Service-approved biologist to determine the presence of any vireo within 500 feet (152 meters) of the proposed project footprint. Should an active nest be located, Caltrans will contact the Service to determine if additional consultation is necessary.</p>	<p>Biology Construction</p>	<p>Pre-Construction</p>

Water runoff associated with the new road surfaces and landscaping will be directed away from the on-site road pools containing SDFS. No permanent irrigation or water from irrigation systems associated with the project will be permitted to enter the on-site road pools containing SD fairy shrimp.	Biology Construction	Pre-Construction Construction Post-Construction
Establish bypass road in construction area to avoid road pools supporting San Diego Fairy Shrimp.	Construction	Construction
Replace the impacted coast live oaks at a 5:1 ratio in the construction area.	Construction	Post-Construction
Replace impacted Palmer's sagewort plants at a 2:1 ratio.	Construction	Post-Construction
Remove non-native, invasive plant species from the construction area such as pampas grass, giant reed, freeway iceplant, fennel, yellow-star thistle, crystalline iceplant, artichoke thistle, tree tobacco, Mexican fan palm, and northern catalpa.	Construction	Post-Construction
Prepare restoration plan to remove 0.54ac (0.22ha) of non-native plants. Submit this plan to USFWS for review.	Construction	Construction
Minimize required trimming of sycamore tree branches east of I-805 and north of Carroll Canyon Creek.	Biology Construction	Construction
Review and approve seed mix for Coastal Sage Scrub and Disturbed Coastal Sage Scrub Restoration	Biology	Pre-construction
Conduct on-site restoration for temporary impacts to Coastal Sage Scrub and Disturbed Coastal Sage Scrub after providing USFWS with a restoration plan for review.	Biology Construction	At end of construction
Complete five year plant maintenance and monitoring program and reporting for Coastal Sage Scrub, Disturbed Coastal Sage Scrub, and non-native invasive plants.	Biology	Post construction
Conduct pre-construction survey for California gnatcatcher. If gnatcatcher is observed Caltrans will contact the USFWS	Biology	Pre-Construction

<p>Offset the permanent loss of 0.6ac (0.24ha) of coastal sage scrub by providing conservation and management of 1.2ac (0.5ha) of occupied coastal sage scrub in perpetuity. This conservation action will be coordinated and agreed to with the USFWS prior to initiating project impacts and implemented within one year of submittal of the Biological Opinion to Caltrans. In addition, coastal sage scrub temporarily impacted by construction will be restored in-kind to the maximum extent practicable using appropriate native species. A restoration/landscape plan with success criteria and remedial measures will be coordinated and agreed to by the Service prior to application in the field. These conservation measures committed to by Caltrans will ensure that project area impacts to coastal sage scrub, the primary habitat for gnatcatchers, is offset and that coastal sage scrub will remain in the project area to again provide live in or dispersal habitat for gnatcatchers.</p>	<p>Biology</p>	<p>Pre-Construction</p>
<p>If construction is delayed beyond the anticipated 2011 completion date, Caltrans will contact the USFWS to determine if additional fairy shrimp surveys are needed.</p>	<p>Biology</p>	<p>Construction</p>
<p>Complete maintenance and monitoring program, and reporting for San Diego fairy shrimp mitigation site.</p>	<p>Biology</p>	<p>Post construction</p>
<p>Direct lighting away and/or shield from Carroll Canyon Creek during construction to minimize impacts to wildlife corridor.</p>	<p>Construction</p>	<p>During construction</p>
<p>Permanent lighting will consist of street lamps on the southern side of Carroll Canyon Road and will be limited to 164ft (50m) intervals using lights of no more than 150 watts. This lighting will be directed away from riparian habitat and will require shielding.</p>	<p>Biology/Construction</p>	<p>Construction</p>

VISUAL	Landscape Architecture/OE/RE	PS&E/Construction
<p>Retaining Walls</p> <ul style="list-style-type: none"> Retaining walls that follow the contours of the topography and maintain a constant elevation at the top of wall would be used where appropriate. Wall layouts and profiles would be composed of long radius curves, with no tangents or points of intersection. This type of wall would be visually compatible with surrounding terrain and provide room at the base for a slope that would contain landscape screening. Retaining walls would be located at the top of slope wherever possible in road fill sections to provide a buffer area for landscape screening between the wall and the community. In areas too narrow to place a planting pocket, retaining walls would be recessed behind the face of safety barriers at a sufficient distance to allow architectural features to be included on the face of the retaining walls. In areas where space for architectural detailing would not exist, vertical concrete safety barriers would be considered. Vertical barriers add 12in (301mm) of additional width in which architectural elements such as mechanically stabilized earth (MSE) wall panel relief, pilasters, and wall caps can be included. Architectural features, textures and integral concrete colors would be used to mitigate the appearance of retaining wall surfaces. Walls would incorporate architectural features such as pilasters and caps to provide shadow lines, provide relief from monolithic appearance, and reduce their apparent scale. Enhanced materials such as mosaic tile and weathering steel would also be used where appropriate to meet community context and design goals. Mechanically stabilized earth (MSE) walls would have custom designed panels that include integral color, and an enhanced surface texture. <p>Bridge Structures</p> <ul style="list-style-type: none"> A 8ft (2.4m) wide sidewalk would be located on the southern side of Carroll Canyon Road Bridge. It would receive a surface score pattern. Pedestrian lighting, enhanced railings, and other urban amenities would be provided on Carroll Canyon Bridge to be consistent with local values and goals. Slope paving and raised medians would be enhanced with integral concrete color, texture, and deeply textured facing materials such as veneer block, integral pavers, or natural rock. 		

<p>Storm Water Facilities</p> <ul style="list-style-type: none"> Storm water facilities such as bio-swailes would be located beyond free recovery and sight distance areas wherever possible to allow trees and landscape screening to be installed. Planting within the facilities would be consistent with surrounding landscape planting whenever possible. The facilities would appear to be natural landscape features such as dry streambeds or riparian pools and would be shaped in an informal, curvilinear manner where feasible. Slope grading would incorporate slope rounding, variable gradients, and be similar to the surrounding topography to deemphasize a defined outer edge where feasible. Rock slope protection would have a natural appearance and consist of aesthetically pleasing whole material of various sizes that is consistent in appearance with native rock in the area where feasible. Maintenance access drives would be located in unobtrusive areas away from local streets and would consist of inert materials or herbaceous groundcover that is visually compatible with the surrounding landscape where feasible. Visible concrete structures and surfaces would receive integral color and be of special design if appropriate. Concrete drainage aprons would be integrated with other hard surfaces such as gore paving, and be consistent in color and texture where feasible. Standpipes and other vertical appurtenances would be placed in unobtrusive locations and be fabricated of weathering steel or painted an unobtrusive color if appropriate. Bio-swailes and linear drainage ditches would be designed as soft surface dual use facilities such as recreational trails or maintenance access roads when feasible. 		
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<p>Landscaping</p> <ul style="list-style-type: none"> • Freeway landscaping with drought tolerant ornamental and native trees, shrubs, and groundcover would be planted. Areas adjacent to existing native habitat would receive native landscaping. Native landscaping would be designed in consultation with the District Biologist. • Mitigation landscaping located within City right-of-way would consist of native and drought tolerant trees, shrubs, grasses, and inert groundcover that would be sustainable without supplemental irrigation subsequent to the conclusion of the extended plant establishment period. • All landscaped areas would receive permanent irrigation. • All landscaped areas would receive an extended plant establishment period of three years. • The Willow Oak and adjacent historic tree grouping would be protected as an ESA during construction. Selected mature specimen California Sycamore trees near the biological ESA at Carroll Canyon Creek would be protected and each candidate tree would be chosen in consultation with the project engineer to ensure adequate space to be provided for project construction. A mature California Sycamore adjacent to Sorrento Valley Road would be preserved. ESA areas would extend 5ft (1.5m) beyond the drip line of each tree. 		
<p>Lighting, Signage, and Miscellaneous Freeway Appurtenances</p> <ul style="list-style-type: none"> • Lighting and signage pedestals on structures would occur at pilasters or be incorporated in other architectural features. • Concrete lighting and signage pedestals would be designed in such a way that vertical barrier transitions are not required. • Lighting and signage in the DAR would be designed to harmonize with overhead struts and architectural features. • Electrical and signal equipment at ramp termini would be placed in visually unobtrusive locations. • Gore paving would incorporate enhanced materials consistent with corridor design themes found in other projects in the vicinity. 		

CULTURAL RESOURCES	Cultural Resource Staff/OE/RE	PS&E/Construction
<p>CA-SDI-2723 would be avoided. To ensure the site is not indirectly damaged during construction, the site area would be staked and clearly marked. The Contractor would be required to submit a plan showing all necessary access to the work area and protective measures to be implemented with approval of the Caltrans Resident Engineer (Engineer). The existing surface of the archaeological site would be protected with engineering fabric or other suitable barrier materials approved by the Engineer prior to placement of fills, access roads, etc. Similar measures would be implemented for the placement of temporary falsework pads within the site area. The placement of protective measures work in the site vicinity would be monitored by an archaeologist and Native American monitor. The ESA would be listed in the contract's Special Provisions. No excavation would be allowed within the ESA. Limited access to the ESA would be permitted as approved by the Engineer and contingent upon all previously mentioned protective measures having been implemented. No work in the ESA would be performed outside the presence of the Engineer. The Engineer would be notified of all work in and over/above the ESA at a minimum of two weeks in advance of the anticipated start of the activities. Caltrans Archaeologist, City Archaeologist, and Native American monitor would attend the preconstruction meeting to make everyone aware of the cultural areas to be avoided, and to establish the proper protocols to ensure that monitors are present where construction occurs in the vicinity of CA-SDI-2723. Upon the completion of all construction activities, the protective measures covering the archaeological site would be removed.</p> <p>If cultural materials should be discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until qualified personnel could assess their nature and significance. Consultation with the City Archaeologist and Caltrans Archaeologist would ensure that if anything is discovered during construction that Section 106, CEQA, and City Guidelines would be followed. Should remains be discovered and further evaluation be necessary, construction would be diverted away from the find and sufficient time would be allowed for the proper professional recovery of the remains. Remains would be cleaned, catalogued, analyzed, reported, and curated in accordance with all appropriate professional archaeological standards.</p>		

<p>If human remains should be discovered, State Health and Safety Code §7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to PRC §5097.98, if remains are thought to be Native American, the coroner would notify the NAHC who would then notify the Most Likely Descendent (MLD). The party discovering the remains would contact the District Archaeologist, so that consultation may take place with the MLD to provide for the respectful treatment and disposition of the remains. Further provisions of PRC §5097.98 would be followed, as applicable.</p>		
<p style="text-align: center;">PERMITS</p> <p>Coastal Development Permit (Local Coastal Program – City of San Diego) A coastal development permit shall be acquired and conditions required shall be incorporated into the project design.</p>	<p>Stewardship Staff/OE/RE</p>	<p>PS&E/Construction</p>
<p>A Federal Consistency Determination would be required from the CCC's Federal Consistency Office</p>		
<p style="text-align: center;">HAZARDOUS WASTE</p> <ul style="list-style-type: none"> • A lead compliance plan shall be written to address the handling of ADL. • Chemically treated wood in guardrails and signposts that are removed or replaced must be treated as hazardous waste and would require special handling and disposal. • Prior to disturbance of any painted surfaces, sampling should be performed to assess the presence of lead. Suspect surfaces, including guardrails, piping, and pavement striping should be sampled and analyzed, and if present, appropriate abatement actions shall be implemented in accordance with applicable regulatory requirements. • Prior to commencement of excavation activities, a Site Specific Health and Safety Plan shall be prepared to protect the health of both workers and the public. 	<p>Environmental Engineering/OE/RE</p>	<p>PS&E/Construction</p>

PALEONTOLOGY	Paleontology Staff/OE/RE	PS&E/Construction
<ul style="list-style-type: none"> • A qualified principal paleontologist (M.S. or PhD in paleontology or geology familiar with paleontological procedures and techniques) would be retained to be present at pre-grading meetings to consult with grading and excavation contractors. • Paleontological monitor, under the direction of the qualified principal paleontologist would be on site to inspect cuts for fossils at all times during original grading involving sensitive geologic formations. • When fossils are discovered, the paleontologist (or paleontological monitor) would recover them. Construction work in these areas would be halted or diverted to allow recovery of fossil remains in a timely manner. • Fossil remains collected during the monitoring and salvage portion of the mitigation program would be cleaned, repaired, sorted, and cataloged. • Prepared fossils, along with copies of all pertinent field notes, photos, and maps, would then be deposited in a scientific institution with paleontological collections. • A final report would be completed that outlines the results of the mitigation program. 		