

Chapter 4 – California Environmental Quality Act Evaluation

4.1 Determining Significance under CEQA

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or some lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA does require Caltrans to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

4.2 Less than Significant Effects of the Proposed Project

The following impacts would have a less than significant effect on the environment:

- Air Quality
- Cultural Resources
- Energy
- Farmland
- Floodplains
- Growth
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Paleontology
- Parks and Recreational Facilities
- Pedestrian and Bicycle
- Traffic & Transportation
- Utilities and Emergency Services

For a full discussion of environmental consequences for the above issues, please see related sections in Chapter 3.

4.3 Less than Significant Impacts with Mitigation and/or Minimization

4.3.1 Natural Communities

As described in *Section 3.17*, the proposed project would result in impacts to riparian, wetland and eelgrass habitat for natural communities. Impacts would range from 539.3 ha (1332.0 ac) under the 10+4 with Barrier alternative to 512.7 ha (1266.33 ac) under the 8+4 with Buffer alternative. The 10+4 with Buffer alternative and 8+4 with Barrier alternative would result in 525.8 ha (1298.7 ac) and 535.1 ha (1321.66 ac), respectively.

Impacts to 9.88 ha (24.41 ac) to 13.10 ha (32.35 ac) of riparian and wetland habitat, depending on the selected alternative, would be considered significant. Impacts to sensitive habitats would total between 31.51 ha (77.83 ac) and 33.68 ha (83.19 ac), depending on the selected alternative, and would also be considered significant.

In addition, permanent impacts to eelgrass for each of the alternatives range from 0.04 ha (0.1 ac) impacted by the 8+4 with Buffer alternative to 0.1 ha (0.24 ac) impacted by the 10+4 with Barrier alternative. Temporary impacts would be similar for all alternatives at approximately 0.1 ha (0.25 ac) of eelgrass impacted. Impacts to eelgrass would be considered significant.

4.3.2 Noise

Determination for noise impact under the CEQA, comparison is made between the No Build noise level and the build noise level. A significant traffic noise impact is considered to occur if the increase between the two noise levels and the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of receptors affected, and the absolute noise level. The CEQA noise analysis is completely independent of the NEPA 23 CFR 772 analysis discussed in Chapter 3, which is centered on noise abatement criteria.

The *Noise Study Report* assesses the potential noise impacts associated with the *I-5 NCC Project*. Noise impacts are presented in *Section 3.15*, where tables for each segment show the existing traffic noise levels and predicted noise levels for all alternatives. The proposed build alternatives would increase noise levels between 3-5 dBA in most locations by 2030, with some areas potentially experiencing an increase as high as 9 dBA change. Soundwalls are recommended at various locations to abate for highway traffic noise (*Section 3.15*). Soundwalls are proposed in locations where receptors are predicted to experience a noise level of 75 dBA or above with the proposed build alternatives (*Section 3.15*). Implementation of proposed noise abatement would reduce noise impacts to less than significant.

Construction Impacts

Construction activities, including 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 construction and utility relocations activities, it would be a less than significant impact. A combination of attenuation techniques with equipment noise control and administrative measures would be selected to minimize noise disturbances during construction and utility relocation activities. See *Section 3.15* for additional details.

4.3.3 Wetlands and Other Waters

As described in *Section 3.18* of this document, impacts to wetlands and other waters of the U.S. would range 9.29 ha (22.97 ac) under the 8+4 with Buffer alternative to 11.67 ha (28.86 ac) under the 10+4 with Barrier alternative. Impacts to jurisdictional waters would be considered significant under CEQA.

4.4 Unavoidable Significant Environmental Effects

Impacts to Community Cohesion (for the two barrier alternatives) and Visual/Aesthetics would remain significant after mitigation identified in *Chapter 3*.

4.4.1 Visual/Aesthetics

As described in *Section 3.7*, all four alternatives would result in highly adverse changes to the existing visual environment along the project corridor. While impacts to visual resources would be similar for all four alternatives, the 10+4 with Barrier Alternative would result in the greatest change to the existing visual environment because this alternative would require the greatest amount of additional pavement. Conversely, the 8+4 with Buffer alternative would result in the least amount of change to the existing visual environment, because it would require the least amount of additional pavement. The proposed project would affect two existing views in San Diego, two existing views in Solana Beach, seven existing views in Encinitas, four existing views in Carlsbad, and one existing view in Oceanside. Impacts to these views range from moderate visual impact to high visual impact and are considered significant.

4.4.2 Community Character and Cohesion

The 10+4 with Barrier alternative would displace a 47-unit apartment complex in northern Carlsbad within an area identified as exhibiting traits of elevated community cohesion: namely, a relatively high concentration of linguistically isolated Spanish-speaking households, as well as a high proportion of minority populations. As discussed in *Section 3.4*, displaced residents living in these 47 units may be difficult to relocate as the availability of apartments within Carlsbad with similar rental rates is not adequate. If relocation is not feasible in Carlsbad and up to 47 families are relocated outside of the community, this may adversely impact community cohesion in the area, which would be considered a significant impact.

4.5 Significant Irreversible Environmental Changes

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and secondary impacts generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. The following resources would be converted: wetlands, sensitive species and natural communities, farmlands, homes, floodplain, cultural resources, and visual resources.

4.6 Climate Change

4.6.1 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) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide (CO₂), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoriform), HFC-134a (s, s, s, 2 – tetrafluoroethane), and HFC-152a (difluoroethane).

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. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency (EPA). The waiver was denied by EPA in December 2007. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. However, on January 26, 2009, it was announced that EPA will reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. This standard is the same standard that was proposed by California, and so the California waiver request has been shelved.

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 2020 and 3) 80 percent below the 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 CARB create a plan, which 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.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate GHG as a pollutant under the Clean Air Act (Massachusetts vs. Environmental Protection Agency et al., 549 U.S. 497 (2007)). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

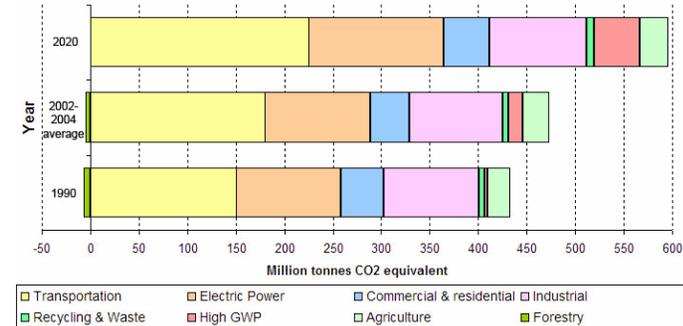
- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)--in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.²

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

² <http://www.epa.gov/climatechange/endangerment.html>

As part of its supporting documentation for the Draft Scoping Plan, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.



Taken from: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>
Figure 4-1 California Greenhouse Gas Inventory

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 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation (see Climate Action Program at Caltrans (December 2006), Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006. This document can be found at: <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

4.6.2 Project Analysis

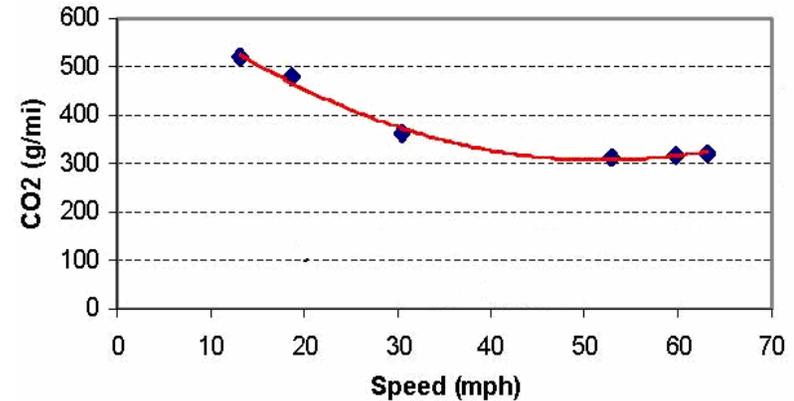
One of the main strategies in the Caltrans' Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour (see Figure below). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors GHG emissions, particularly CO₂, may be reduced.

In *Chapter 1* of this document, it is written that the overall project purpose is to maintain or improve the existing and future traffic operations in the I-5 north coastal corridor in order to improve the safe and efficient regional movement of people and goods for the planning design year of 2030. This HOV/Managed Lanes project is designed to reduce congestion and/or vehicle time delays, as evidenced in section 1.3.2 of this document, by better matching traffic demand with a transportation system that can efficiently handle traffic volumes. This project includes four Direct Access Ramps (DARs) that provide access for HOV/Managed Lanes users directly on to the HOV/Managed Lanes. Transportation System Management (TSM), Multi-Modal and Transportation Demand Management (TDM) Alternatives were incorporated (*Section 2.2.4*).

The average time to travel the project area in 2030 for the northbound direction would be between approximately 27 and 39 minutes during the morning peak and approximately 67 and 69 minutes during the evening peak. The average time to travel the project area in 2030 for the southbound direction would take between approximately 53 and 54 minutes during the morning peak and approximately 40 and 48 minutes during the evening peak. The average time for travel for northbound directions in 2030 for the 10+4 Barrier/Buffer alternatives would be approximately 25 and 27 minutes in the morning and approximately 30 and 36 minutes during the evening peak. The average time to travel the project area for 10+4 Barrier/Buffer alternatives in the southbound direction would be between approximately 28 and 35 minutes during the morning peak and approximately 26 and 30 minutes during the evening peak. The average time for travel in 2030 for northbound direction for 8+4 Barrier/Buffer alternatives would be between approximately 27 and 29 minutes in the morning and approximately 45 and 50 minutes during the evening peak. The average time for travel in the southbound direction in 2030 for 8+4 Barrier/Buffer alternatives would be between approximately 36 and 47 minutes in the morning and approximately 29 and 30 minutes during the evening peak.

This project is included in the 2007 Federal Statewide Transportation Improvement Program (FSTIP) and is included in the San Diego Association of Governments (SANDAG) 2030 Regional Transportation Plan / Pathways for the Future (RTP) and the 2008 Regional Transportation Improvement Program (RTIP).

The 2030 RTP included that the consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with construction activities and the operation of passenger, public transit, and commercial vehicles results in GHG emissions that cause global climate change (also referred to herein as “climate change” and “global warming”). In addition, alternative fuels like natural gas (including CNG and liquid natural gas [LNG]), ethanol, and electricity (unless derived from solar, wind, nuclear, or another energy source that does not produce carbon emissions) also result in GHG emissions and contribute to global climate change.



Source: Center for Clean Air Policy— [http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20\(1-13-04\).pdf](http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf)

Figure 4-2 Fleet CO₂ Emissions versus Speed (Highway)

4.6.3 Quantitative Analysis

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 I-5 Northcoast Series 11 GHG regional Effect's travel demand models were utilized 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 4.1*

Table 4.1: Average Difference in Regional CO₂ Emissions

Alternative	Model Year	Fuel Consumption (gal/day)	Efficiency Fuel Savings (gal/day)	Diesel Fuel Consumption (gal/day)	Efficiency Fuel Savings (gal/day)	Regional CO ₂ Annual Avg. Emissions (tons/day)	Efficiency CO ₂ Savings (tons/day)
2006 Existing	2006	4,139,840	na	497,950	na	44,940	na
2030 No Build	2030	5,866,570	na	655,770	na	64,260	na
2030 10+4 w/DAR's	2030	5,829,250	37,320	657,040	-1,270	63,910	350
2030 8+4 w/DAR's	2030	5,830,190	36,380	657,150	-1,380	63,920	340

Compared to the No Build Alternatives, implementation of the Alternative 10 + 4 Barrier/Buffer is estimated to reduce 2030 CO₂ emissions in the San Diego Region by up to 350 tons per day. Compared to the No Build Alternatives, implementation of the Alternative 8 + 4 Barrier/Buffer is estimated to reduce 2030 CO₂ emissions in the San Diego Region by up to 340 tons per day. These decreases would be due to the decreased congestion along the corridor and improved travel times along the corridor. Therefore, it is concluded that regional transportation efficiency would be increased and overall CO₂ emission 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.

4.6.4 Construction Emissions

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

Air Quality measures to minimize emissions for construction include:

- Use low-emission onsite mobile construction equipment where feasible.
- Maintain equipment in tune per manufacturer's specifications.
- Retard diesel engine injection timing by two to four degrees unless not recommended by manufacturer (due to lower emission output in-place).

- Use reformulated, low-emission diesel fuel.
- Substitute electric and gasoline-powered equipment for diesel-powered equipment where feasible.
- Use catalytic converters on gasoline-powered equipment.
- Do not leave inactive construction equipment idling for prolonged periods.

Traffic & Transportation measures to minimize energy consumption and GHG emissions include the following.

- Construction phasing plan to identify sequence of construction and to help minimize traffic delays.
- Traffic delays controlled to the extent feasible during periods of many simultaneous construction operations.

Comprehensive Traffic Management Plan (TMP) would further minimize delays during construction. TMP is designed to increase driver awareness, ease congestion, and minimize delay during construction.

Components include:

- o Public Awareness Program including changeable message signs, public service announcements via media, and 800 number.
- o Traffic Operations Strategies Program which includes ongoing evaluation of traffic operations and provides incident response during construction, CHP construction zone speed reduction enforcement, alternate route strategies.

4.6.5 AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as CARB works to implement the Governor's Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a \$238.6 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding through 2016.³ As shown on the figure below, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

³ Governor's Strategic Growth Plan, Fig. 1 (<http://gov.ca.gov/pdf/gov/CSGP.pdf>)

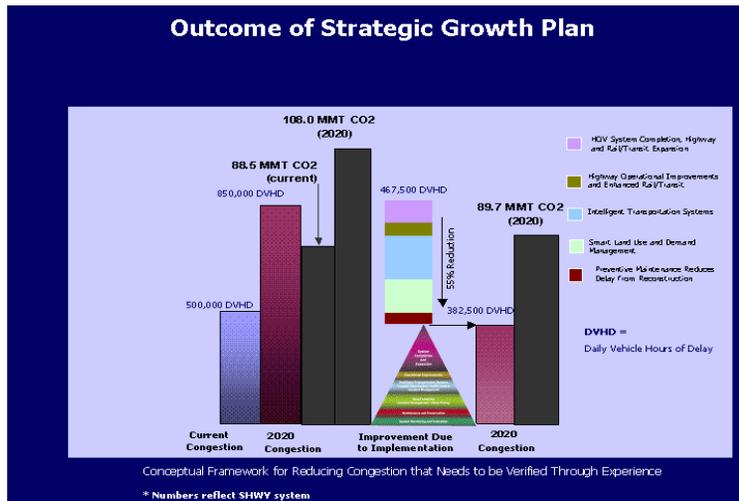


Figure 4-3 Outcome of Strategic Growth Plan

As part of the Climate Action Program at Caltrans (December 2006, <http://www.dot.ca.gov/docs/ClimateReport.pdf>), 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, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by EPA and CARB. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the UC Davis.

Table 4.2 summarizes Caltrans' and statewide efforts for implementation in order to reduce GHG emissions. For more detailed information about each strategy, please see Climate Action Program at Caltrans (December 2006); it is available at <http://www.dot.ca.gov/docs/ClimateReport.pdf>.



Table 4.2: Climate Change Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.007	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	3.6
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.67

4.6.6 Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects would vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08 which directed a number of state agencies to address California’s vulnerability to sea level rise caused by climate change.

The California Resources Agency (now the Natural Resources Agency, (Resources Agency)), through the interagency Climate Action Team, was directed to coordinate with local, regional, state and federal public and private entities to develop a state Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California’s vulnerability to the identified impacts and then outline solutions that can be implemented within and across state agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, Resources Agency was directed to request the National Academy of Science to prepare a *Sea Level Rise Assessment Report* by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- relative sea level rise projections for California, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- the range of uncertainty in selected sea level rise projections;
- a synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems; and
- a discussion of future research needs regarding sea level rise for California.

Furthermore Executive Order S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level affecting safety, maintenance and operational improvements of the system and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have

filed a Notice of Preparation, and/or are programmed for construction funding the next five years (through 2013), or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data. (Executive Order S-13-08 allows some exceptions to this planning requirement).

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted as part of Governor’s Schwarzenegger’s Executive Order on Sea Level Rise and is mobilizing to be able to respond to the National Academy of Science report on *Sea Level Rise Assessment* which is due to be released by December 2010. Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans would be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

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

1. Caltrans and the California Highway Patrol 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.
2. In addition, Caltrans, SANDAG, participating corporations, and local governments are providing ridesharing services and park-and-ride facilities to help manage the growth in demand for highway capacity.
3. The project would incorporate the use of energy efficient lighting, such as LED traffic signals. LED bulbs — or balls, in the stoplight vernacular — cost \$60 to \$70 apiece but last five to six years, compared to the one-year average lifespan of the incandescent bulbs previously used. The LED balls themselves consume 10 percent of the electricity of traditional lights, which would also help reduce the projects CO₂ emissions.¹

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.

¹ Knoxville Business Journal, “LED Lights Pay for Themselves,” May 19, 2008 at <http://www.knoxnews.com/news/2008/may/19/led-traffic-lights-pay-themselves/>.

4.7 Mitigation Measures for Significant Impacts under CEQA

Supporting documentation of all CEQA resource evaluation is provided in Chapter 3 of this Draft EIR/EIS. Discussion of all impacts avoidance, minimization and/or compensation measures is under the appropriate topic headings in Chapter 3. Implementation of these measures would reduce significant impacts to below a level of significance under CEQA for Noise, Natural Communities and Wetlands for the State.

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Chapter 5 – Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. The input and advice helps to determine the scope of environmental documentation, the level of analysis, potential impacts, mitigation measures and related environmental requirements. Projects as large as the *I-5 NCC Project* benefit from Federal, State and local agency consultation and public participation. This participation has been accomplished through a variety of formal and informal methods, including: Scoping meetings, project development team meetings, interagency coordination meetings, and a Major Investment Study. Numerous community meeting with service groups, homeowners associations and business organizations have helped gain an understanding of the public concerns as the project is developed. This chapter summarizes the results of Caltrans and FHWA's efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

5.1 Project Scoping Process

In 2001, Caltrans held preliminary public scoping meetings, prior to environmental analysis, to introduce the project concept. These preliminary public scoping meetings were held on the following dates and locations:

- March 27, 2001 in Carlsbad
- April 17, 2001 in Encinitas
- May 16, 2001 in Del Mar
- June 21, 2001 in Oceanside

Notice of Preparation

On October 20, 2004, a Notice of Preparation (NOP) was filed with the San Diego County Clerk, and distributed to appropriate State and local agencies and organizations. On January 12, 2004, a Notice of Intent (NOI) was published in the Federal Registrar in accordance with NEPA. Copies of the NOP and NOI are included as Figures 5.1.1 and 5.1.2, respectively.

Comments on the NOP were received from the following:

- California Coastal Commission (requested an in-depth alternatives analysis, specifically other modal alternatives, and to focus on impact avoidance and restoration to sensitive resources)
- City of Solana Beach (requested analysis of four additional alternatives)
- Morton Printz (requested an extension of the public comment period)
- Faye Detsky-Weil (concerned with increased traffic and decreasing quality of life; lack of transit alternatives, and right-of-way takes)
- San Dieguito Lagoon Committee (requests in-depth analysis of wetland, floodway and floodplain impacts; a mitigation program for potential impacts; and discussion of project alternatives)
- California Department of Fish and Game (requests in-depth discussion on a range of reasonable project alternatives that avoid or lessen significant effects of the proposed project; address consistency with habitat conservation plans; address edge-effects; address construction and operational noise levels; and discuss best management practices)
- City of Del Mar (requests traffic improvements/modifications at various intersections)
- City of Carlsbad (requests notification of the availability of the Draft EIR)

- Native American Heritage Commission (requests various actions to identify and mitigate project-related impacts on cultural resources)
- Willow Design, Inc. (proposes a conceptual study of two independent "side-by-side" freeways)

Notice of Intent

Comments on the NOI were received from the following:

- U.S. Environmental Protection Agency (concerns focused on establishment of purpose and need; impacts to water resources, biological resources, and air quality; impacts to cultural resources; impacts to environmental justice communities; and analysis of cumulative impacts)
- U.S. Fish and Wildlife Service (requests in-depth discussion on a range of reasonable project alternatives that avoid or lessen significant effects of the proposed project; address consistency with habitat conservation plans; address edge-effects; address construction and operational noise levels; and discuss best management practices)

The formal scoping meetings were held in 2004 at the following locations:

- Jan. 7 Carlsbad Library - George & Patricia Gowland Meeting Room - 1775 Dove Lane
- Jan. 13 Oceanside High School - Multi Purpose Room - 100 S. Horn Street
- Jan 27 Encinitas Community Center - Room 142B - 1140 Oakcrest Park Drive
- Feb. 10 Solana Beach City Hall - Council Chambers - 635 South Coast Highway 101
- Feb. 17 Del Mar City Hall - Council Chambers Room 1050 Camino Del Mar
- March 2 San Diego - Westfield Shopping Town UTC - Forum Hall behind Wells Fargo Bank

Additional Project Outreach

Two newsletters were sent out and/or made available. The first edition was mailed directly to more than 100,000 addresses within one mile east or west of the freeway. A postcard was also sent out to the same area informing residents that the second edition of the newsletter, along with additional project information was available on the project web site at www.keepsandiegomoving.com. The project web site has been frequently updated providing accurate and timely information to anyone who is interested.

In October 2006, city staff and private citizens representing Solana Beach, Encinitas, Carlsbad, and Oceanside met with Caltrans project team members to identify possible mitigation and enhancement measures to integrate natural and cultural resources into freeway improvements. Basic functions of the study were identified as "enhance visual characteristics," and "preserve community character." The team developed 71 enhancement strategies to support these functions. Results were presented to elected officials of each city. These meetings were held:

- In San Diego on April 19, 2006 at the Sycamore Ridge School
- In Solana Beach with City staff on February 4, 2005 and July 6, 2006
- In Encinitas on August 23, 2005 at the Paul Ecke Central Elementary School
- In Encinitas on August 24, 2005 at Encinitas City Hall
- In Encinitas on August 25, 2005 at Cardiff Elementary School.
- In Carlsbad on May 2, 2006 at the City of Carlsbad
- In Oceanside on June 20, 2006 at the City of Oceanside

Since 2004, the *I-5 NCC Project* Caltrans Project Management has attended meetings, conducted surveys, presented handouts/mailers, and given presentation to Local Communities and Planning Groups; Homeowners Associations; Chambers of Commerce; City Council meetings; and, local

politician sponsored meetings in an effort to update interested parties and the public on the status of the project. These meetings allowed communities to review project information on proposed the “10+4” and “8+4” alternatives and provide informal public input.

In 2004, additional project outreach was held on the following dates and locations:

- January 7, 2004 in Carlsbad
- January 13, 2004 in Oceanside
- January 27, 2004 in Encinitas
- February 10, 2004 in Solana Beach
- February 17, 2004 in Del Mar
- March 2, 2004 in San Diego

The following concerns were identified:

- Purpose, need and location for potential widening
- Private property impacts
- Community cohesiveness
- Traffic, pedestrian, and bicycle
- Noise
- Growth
- Parks and views, including the sewer treatment plant
- Resource impacts: biological resources, including lagoons, air quality, and water quality
- Cumulative impacts

Previously, community interaction was sought through informational meetings between December 1997 and January 1998 as part of the North Coast Transportation Study that served as the MIS developed in partnership with SANDAG. After completion of the MIS and the PSR(PDS) in 2000, four information meetings were held between March and June 2001 in Del Mar, Solana Beach, Carlsbad, and Oceanside. In October 2000, Caltrans, SANDAG, city staff, and private citizens began the process to identify opportunities for enhancement features that were presented to the elected officials of each city. This continued with meetings from January 2005 to September 2006 with Caltrans, SANDAG, council and staff members of the cities to develop the *I-5 North Coast Community Enhancement Plan*. In addition monthly traffic working meetings occurred from February 2005 to January 2007 for discussion of the project between Caltrans staff, city engineers, and planning personnel.

5.2 Project Development Team Meetings

An I-5 North Coast Project Development Team (PDT) meeting was assembled by Caltrans and FHWA in 2000 to serve as the technical advisory committee and internal decision-making body for the project. The PDT consists of both Caltrans’ staff representatives from Program Management and the various technical divisions (such as Environmental Planning, Design, Right of Way, etc.), FHWA, and representatives from other interested agencies. The PDT met (and continues to meet) monthly during the course of project development as issues arise requiring technical direction or resolution.

Agencies participating in the PDT include:

- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service (USFWS)

- U.S. Army Corps of Engineers (ACOE)
- National Oceanic and Atmospheric Association / National Marine Fisheries Service (NOAA/NMFS)
- California Department of Fish and Game (CDFG)
- California Coastal Commission (CCC)
- Regional Water Quality Control Board (RWQCB)
- San Diego Association of Governments (SANDAG)

Caltrans, SANDAG, and the Cities of San Diego, Del Mar, Solana Beach, Encinitas, Carlsbad, and Oceanside also worked closely as partners in the development of the proposed project.

Cooperating Agencies

There is a need for early coordination and cooperation with Federal, State, and local agencies. . According to CEQ 40 CFR 1508.5, "cooperating agency" means any Federal agency, other than a lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative. Upon request of the lead agency, any federal agency with jurisdiction by law shall be a cooperating agency. Any other federal agency with special expertise with respect to any environmental issue may be a cooperating agency. An agency may request to be designated as a cooperating agency. *Table 5.1* below identifies the cooperating agencies coordination.

On April 27, 2004 FHWA invited USEPA, USFWS, ACOE, and NOAA/NMFS to become cooperating agencies. On May 20, 2004 USEPA declined invitation to participate as a cooperating agency, since USEPA is participation via the NEPA 404 MOU process (see *Section 5.3*). FHWA received agreement to participate as a cooperating agency from USFWS, ACOE, and NOAA/NMFS. On May 3, 2010 FHWA sent an invitation and subsequently received agreement to participate as a cooperating agency from the US Coast Guard.

5.3 NEPA – Section 404 Integration Process

On December 10, 2004, Caltrans signed an interagency Memorandum of Understanding (MOU) committing to integrate NEPA and Section 404 of the Clean Water Act in transportation planning, programming, and implementation stages for federal aid surface transportation projects requiring a Permit under Section 404. Under the MOU process, the FHWA, USFWS, NOAA/NMFS, ACOE, and EPA, were asked to concur on the following two checkpoints: 1) Purpose and Need Statement; and 2) Identification of the range of alternatives and consideration of the criteria used to select and analyze the range of alternatives to be studied in the Draft EIR/EIS. The Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) Determination and Conceptual Mitigation Plan would be discussed for concurrence after document circulation.

The consolidation of these processes provide for more timely decision making while improving the over all quality of those decisions. Caltrans coordination efforts included inviting for consultation non-signatory State Regulatory Agencies: the CDFG, CCC staff, and the RWQCB to implement the MOU. Letters concurring on the project Purpose and Need, Screening Criteria and the Range of Alternatives under study were received from EPA, ACOE and USFWS (*Figures 5-1 to 5-12*). The *Table 5.1* below provides the dates of the NEPA/404 meetings held during the project development process.

Table 5.1: NEPA/404 Consultation and Coordination

Date	Topic(s)
11/12/2003	Kickoff Meeting
3/3/2004	Meeting discussed: Purpose and Need
4/20/2004	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, and Project Alternatives
5/20/2004	Received EPA letter that declined FHWA's invitation to participate as a cooperating agency, since EPA is participating via the NEPA 404 MOU process
7/28/2004	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, Project Alternatives, Lagoon Restoration, and list of proposed projects with independent utility and logical termini (I-5/SR-56 and I-5 /Lomas Santa Fe)
9/28/2004	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, and Project Alternatives
11/02/2004	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, and Project Alternatives
December and January 2005	Concurrence with Purpose and Need: ACOE 1/19/2005; EPA 1/10/2004[sic]; USFWS 1/3/2005; NOAA 12/17/2004;
1/20/2005	Field Review. Purpose and Need, Criteria for Alternative Selection, and Project Alternatives
3/23/2005	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, Project Alternatives, and Biological resources
4/27/05	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, Project Alternatives, Lagoon Restoration for mitigation plan and Proposed projects with independent utility and logical termini (I-5 HOV Extension and I-5/Genesee Interchange)
May and June 2005	Concurrence with Screening Criteria: ACOE 6/29/2005; USFWS 5/25/2005; EPA 5/23/2005 and NOAA 5/19/2005
9/13/2005	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, Project Alternatives, Lagoon Restoration for mitigation plan
October 2005	Concurrence with I-5/ Genesee Project as independent from the I-5 NCC Project USFWS 11/1/2005; ACOE 10/26/2005; EPA 10/26/2005; NOAA 10/21/2005
11/15/2005	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, Project Alternatives, Lagoon Restoration for mitigation plan
11/15/2005	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, Project Alternatives, Lagoon Restoration for mitigation plan
1/19/2006	Meeting discussed: Lagoon Restoration and Coastal Habitat
3/30/2006	Meeting discussed: Lagoon restoration, Opportunities and Constraints for future community enhancements
6/6/2006	Meeting discussed: Purpose and Need, Criteria for Alternative Selection, Project Alternatives, Lagoon Restoration for mitigation plan and Proposed projects
8/1/2006	Meeting discussed: Geotechnical investigation, Coastal access, and lagoon restoration
August 2006	Concurrence with Range of Alternatives: EPA (not dated); USFWS 8/24/2006; ACOE 8/21/2006; NOAA 8/7/2006
9/21/2006	Meeting discussed: San Diego Bay National Wildlife Refuge Comprehensive Conservation Plan - Habitat Enhancement and Restoration Proposals
6/6/2007	Meeting discussed: Lagoon restoration, proposed projects with independent utility and logical termini (I-805 DAR with HOV Extension), and Corridor Mobility Improvement Account (CMIA) discussion
July 2007	Concurrence with I-805 DAR with HOV Extension as independent from the I-5 NCC Project; NOAA 7/10/07; USFWS 6/6/2007; Verbal at meeting 5/22/08 EPA, and ACOE
5/22/08	Meeting discussed: I-5 NCC Project Status, status of other projects along I-5, coordination with mass transit and not to preclude LOSSAN, lagoons, and wildlife corridors

5.4 Additional Consultation and Coordination with Public Agencies

Considerable coordination has occurred with both public resource and regulatory agencies throughout the environmental review process beginning in 2001. FHWA and Caltrans have worked closely with representatives of various federal, state, regional and local agencies. The agencies were formally or informally contacted and consulted during the preparation of the environmental analysis.

Since 2007, SANDAG and Caltrans in coordination with the Coastal Commission staff have met bi-monthly separate to advance the PWP/TREP. The PWP/TREP meetings were designed to continue the process that would maintain and improve transportation facilities within the I-5 North Coast Corridor and address coastal resource impacts on project-by-project basis. The PWP/TREP provides a planning, analytical, and implementation mechanism to address improvements throughout the corridor as a system consistent with the policies of the Coastal Act. A Coastal Commission staff member was assigned fulltime for this project has attended the bi-monthly PWP/TREP meetings.

Concurrence on Proposed Section 4(f) De Minimis Use

SAFETEA-LU Section 6009(a) amends existing Section 4(f) legislation to allow the USDOT to determine that certain uses of a Section 4(f) land would have no adverse effect on the protected resource. Such *de minimis* impacts on publicly owned parks; recreational areas of national, state or local significance; wildlife or waterfowl refuges; or lands from a historic site of national, state or local significance are defined as those that do not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f) (49 USC 303[d]; 23 USC 138[d]). When FHWA proposes to make a *de minimis* impact finding, it must provide an opportunity for public comment on the proposed finding (currently this is included in the public comment period for the I-5 NCC Project Draft EIR/EIS). In addition, the official(s) with jurisdiction over the Section 4(f) resource in question must: a) with regard to historic properties, concur, in writing, with FHWA's proposed finding of 'no adverse effect' or 'no historic properties affected' in accordance with 36 CFR part 800; or b) in the case of parks, recreation areas, and wildlife and waterfowl refuges, concur in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection (23 CFR § 774.5[b]). To comply with Section 6009(a), FHWA and Caltrans are coordinating with the SHPO, who has jurisdiction over the two historic Built Environment 4(f) resources, and informed them that the proposed project's use of the 4(f) resource is being considered for a *de minimis* finding. Two of these historic properties would not be adversely affected. The Section 4(f) resources are summarized in Section 3.3, Section 3.8 and detailed in Appendix A.

The PDT was assembled by Caltrans and FHWA in 2000 to serve as the technical advisory committee and internal decision-making body for the project. This monthly PDT consists of Caltrans staff, Caltrans staff on behalf of FHWA, and representatives from other public agencies including USFWS, ACOE, NOAA/NMFS, CDFG, RWQCB, CCC, SHPO, NAHC, Camp Pendleton, and the Cities of San Diego; Del Mar; Solana Beach; Encinitas; Carlsbad; and Oceanside. FHWA and Caltrans has undertaken extensive efforts to integrate the proposed project with the adjacent/adjoining cities. There were several community meetings held within the project area, as well as, formal and informal consultations with the cities and jurisdictions. Coordination occurred within these meetings throughout the development of the project that informed officials with jurisdiction over a specific resource that potential use of the resource is proposed. The proposed *de minimis* determinations were prepared in consultation with the agencies having jurisdiction over the resources and centered on a.) significance of the property, b.) primary purpose of the land, c.) proposed use and impacts, and d.) proposed measures to avoid and/or minimize harm. Continuing efforts between FHWA and Caltrans these cities to work cooperatively to avoid conflicts with state transportation facilities are ongoing.

State Historic Preservation Officer Coordination (SHPO)

As required by federal and state law, an agency must take into account how its undertaking may affect historic properties/historical resources listed in or eligible for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). The SHPO is the primary consulting agency that FHWA and Caltrans must coordinate with for concurrence determinations on eligibility and project effects to eligible resources. The Historic Property Survey Report (HPSR) is submitted to the SHPO to: (1) document the Native American consultation efforts; (2) identify cultural resources within a project's Area of Potential Effects (APE); (3) seek its concurrence on NRHP and CRHR eligibility determinations; (4) identify project effects to eligible resources; and (5) propose methods to resolve adverse effects to eligible resources.

Table 5.2: SHPO Consultation and Coordination

Date	Topic(s)
March 16, 2007	Caltrans submits HPSR and technical studies to SHPO for review and concurrence on eligibility determinations
April 29, 2007	SHPO requests 30-day extension to complete HPSR review
July 2, 2007	No SHPO response; Caltrans notifies SHPO it is moving forward in the Section 106 process
December 4, 2007	Caltrans submits Finding of Effect (FOE) document to FHWA for review
December 27, 2007	FHWA concurs in FOE findings and forwards document to SHPO for its review
March 17, 2008	SHPO concurs in FOE findings

The next step in the Section 106 consultation with the SHPO would involve preparation of a Memorandum of Agreement (MOA) to outline how FHWA and Caltrans would mitigate for adverse effects to two prehistoric archaeological sites within the project's APE. A MOA is in preparation and would be signed and executed prior to the Final EIR/EIS. The MOA would define the roles and responsibilities of the FHWA, SHPO, Caltrans, and Native America representatives in the undertaking. The MOA would also provide opportunities for concurring parties to be signatories to the document that would carry out its stipulations. The MOA would outline how any project effects to historic properties/historical resources would be addressed prior to completion of construction.

Native American Heritage Commission (NAHC) and Native American Coordination

Consultation with NAHC, and appropriate tribes, and Native American individuals has been ongoing since the earliest days of the project dating back to 2002, when the first archaeological survey for the project was undertaken. Consultation would continue until all project-related activities have been completed.

Table 5.3: NAHC and Native American Consultation and Coordination

Date	Topic(s)
2002 through 2006	Native tribes contacted to provide monitors for archaeological test excavations; monitors present during all subsurface excavation efforts
November 2, 2004	NAHC reply; sacred lands search is negative; a list of contacts is provided
August 5, 2005	Manzanita Band of the Kumeyaay Nation contacts Caltrans; requests monitors be present during any subsurface investigations
November 14, 2005	Caltrans requests an updated list of appropriate Native American groups/individuals in the project region
November 20, 2005	Kwaaymii/Laguna band monitors Carmen Lucsas sends CA-SDI-16639 letter and Photographs from monitoring effort.
December 4, 2005	Kumeyaay Monitor Clint Linton sent letter documenting monitoring effort for site CA-SDI-4553.
December 18, 2005	Kwaaymii/Laguna band monitors Carmen Lucsas sends CA-SDI-12121 letter and Photographs from monitoring effort.
January 13, 2006	Letters sent to tribes/individuals identified by NAHC seeking their input on information regarding cultural issues within the project's footprint
January 20, 2006	Pala Band of Mission Indians replies; informs Caltrans project is outside their traditional territory
January 26, 2006	Native American Cultural Resource Consultation replies; requests Native American monitors be present during construction
March 12, 2006	Soboba Band of Mission Indians replies; suggests consultation with other Luiseño tribes closer to the project area
July 27, 2006	Caltrans meets with Mel Vernon a Luiseño Educator and Ruth Calac a Luiseño, to discuss; project, avoidance procedures, and the interpretive display at the scenic overlook.
September 22, 2006	Kwaaymii/Laguna Band of Indians sends Caltrans Native American monitor report for CA-SDI-17928
December 14, 2006	Caltrans letter to Kumeyaay Cultural repatriation Committee (KCRC); request a meeting to arrange for repatriation of one human bone from archaeological site CA-SDI-17928
January 12, 2007	Human bone repatriated to KCRC
March 14, 2007	Caltrans met with Kwaaymii and KCRC; field visit to CA-SDI-17928
May 23, 2007	Kwaaymii representative approves soundwall for portion of CA-SDI-12670 to be adversely affected
May 24, 2007	Caltrans contacts NAHC for Most Likely Descendant for CA-SDI-12670 if soundwall is constructed there
June 25, 2008	Letter from Advisory Council on Historic Preservation (ACHP) in response to undertaking notification declining to participate in Section 106 process (see Figure 5-4).
August 7, 2008	Caltrans meets KCRC to present Archaeological Treatment Plans for CA-SDI-12670 and CA-SDI-17928

SCH NO. _____
Gregory J. Smith, Registrar/County Clerk
 OCT 20 2004
 DEPT. OF TRANSPORTATION

NOTICE OF PREPARATION

To: County Clerk
 County Administration Center
 1600 Pacific Highway, Room 260
 San Diego CA 92101

From: California Dept. of Transportation
 District 11
 2829 Juan Street
 San Diego, CA 92110

Subject: **Notice of Preparation of a Draft Environmental Impact Report**
Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(b), 15103, 15376.

Project Title: North Coast Interstate 5 Corridor Project

Project Location: On Interstate 5 from La Jolla Village Drive in San Diego north along I-5 to Vandegrift Boulevard in Oceanside, California and on Interstate 805 from just north of Mira Mesa Blvd to the Interstate 5/Interstate 805 merge.

Project Description: Caltrans proposes to add high occupancy vehicle (HOV) lanes in each direction along the corridor. One general purpose lane in each direction may also be added from Del Mar Heights Road to State Route 78. The project would also include interchange improvements and auxiliary lanes where needed and approximately five direct access ramps (DARs) to allow transit vehicles and carpools a transition point into the designated HOV lanes.

This is to inform you that the California Department of Transportation in cooperation with the Federal Highway Administration will be the lead agency and will prepare an environmental impact report/statement (EIR/EIS) for the project described within this notice. Your participation as a responsible agency is requested in the preparation and review of this document.

We need to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval actions for the project.

A more detailed project description, location map, and the potential environmental effects are contained in the attached materials.

A copy of the Initial Study () is (is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please direct your response to Jason A. Reynolds, Chief-Environmental Analysis Branch A, MS 46 Telephone (658) 616-6609, at the address shown above. Please supply us with the name for a contact person in your agency.

Date 10/16/04 Signature Jason A. Reynolds
 Title Branch Chief

Figure 5-2.1: Notice of Preparation

[4910-22]

DEPARTMENT OF TRANSPORTATION
 Federal Highway Administration

ENVIRONMENTAL IMPACT STATEMENT: SAN DIEGO COUNTY, CALIFORNIA

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of Intent

SUMMARY: The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for a proposed highway project in San Diego County, California.

FOR FURTHER INFORMATION CONTACT: Cesar Perez, South Region Team Leader, Federal Highway Administration, 650 Capitol Mall Suite 4-100, Sacramento, California 95814, Telephone: (916) 498-5065.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the California Department of Transportation will prepare an environmental impact statement (EIS) on a proposal to improve Interstate 5 (I-5) in San Diego County, California. The proposed improvement would involve the addition of high occupancy vehicle (HOV) lanes/Managed Lanes and general purpose lanes to existing I-5 from the City of San Diego to the City of Oceanside for a distance of approximately 28 miles.

Improvements to the corridor are considered necessary to provide for the existing and projected traffic demand. Also, included in this proposal are the addition of auxiliary lanes, direct access ramps (DARs), and interchange improvements where needed. Alternatives under consideration include (1) taking no action; (2) adding two HOV lanes in each direction plus one general purpose lane in each direction. Incorporated into and studied with the build alternative will be design variations at the six lagoons along the corridor. Alternatives associated with those areas will include (1) retaining walls within existing fill slopes; (2) widening on existing fill slopes; (3) removing existing fill in lagoons and bridging the lagoons; (4) elevated HOV lanes on an independent structure.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, and local agencies, and to private organizations and citizens who have previously expressed or are known to have interest in this proposal. A series of public scoping meetings will be held in each city along the north coast I-5 corridor between January and February 2003. Public notice will be provided indicating the time and place of the scoping meetings.

To ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments, and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to the FHWA at the address provided above.

Figure 5-2.2: Notice of Intent

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(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on: January 5, 2004

/s/ Cesar E. Perez
 Cesar E. Perez
 South Region Team Leader

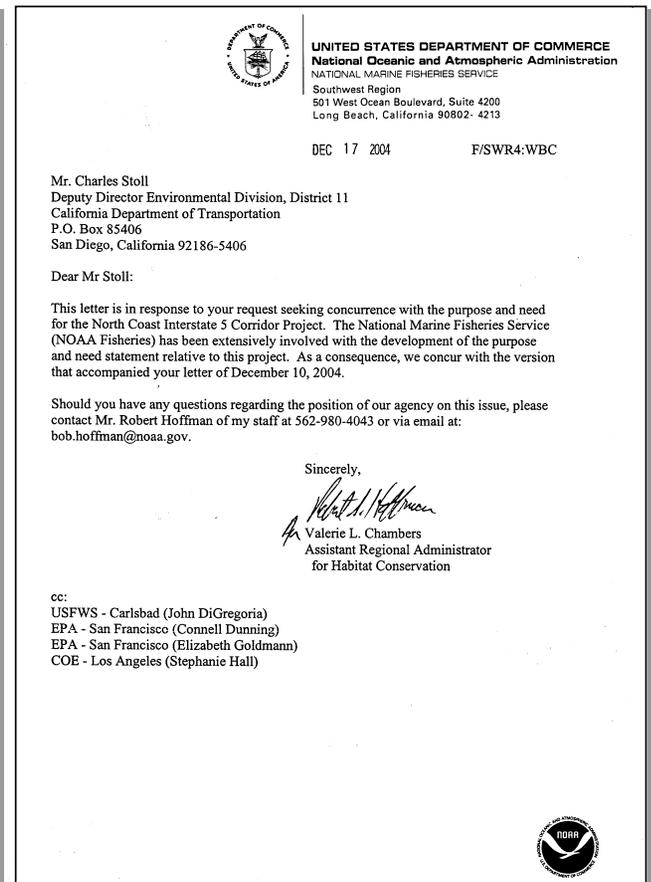
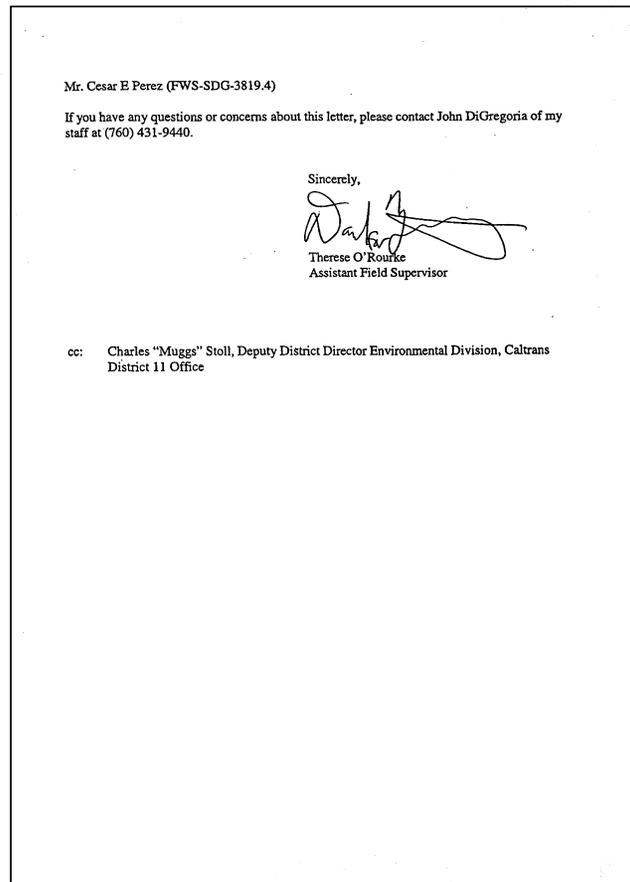
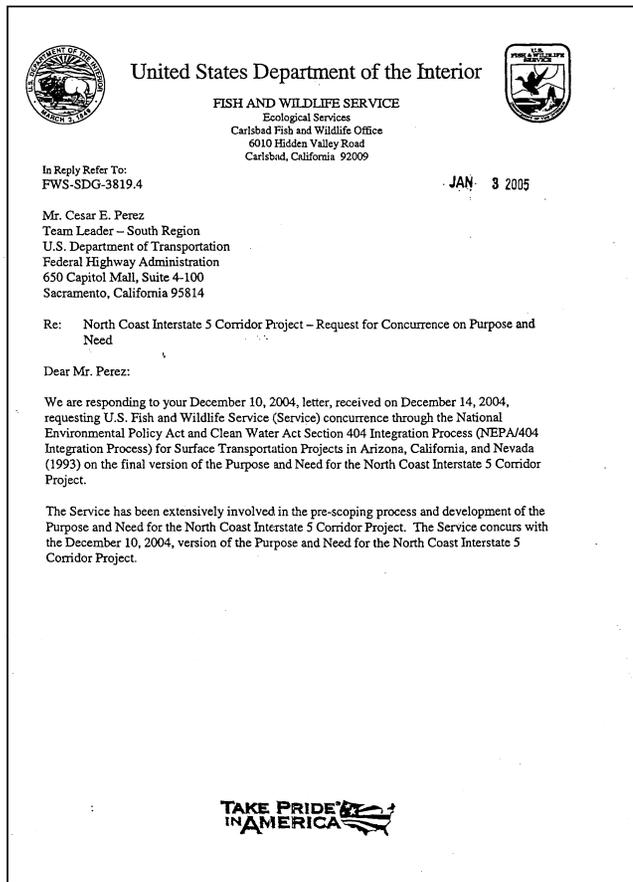


Figure 5-3.1: USFWS Concurrence with Purpose and Need

Figure 5-3.2: NOAA/MNFS Concurrence on Purpose and Need

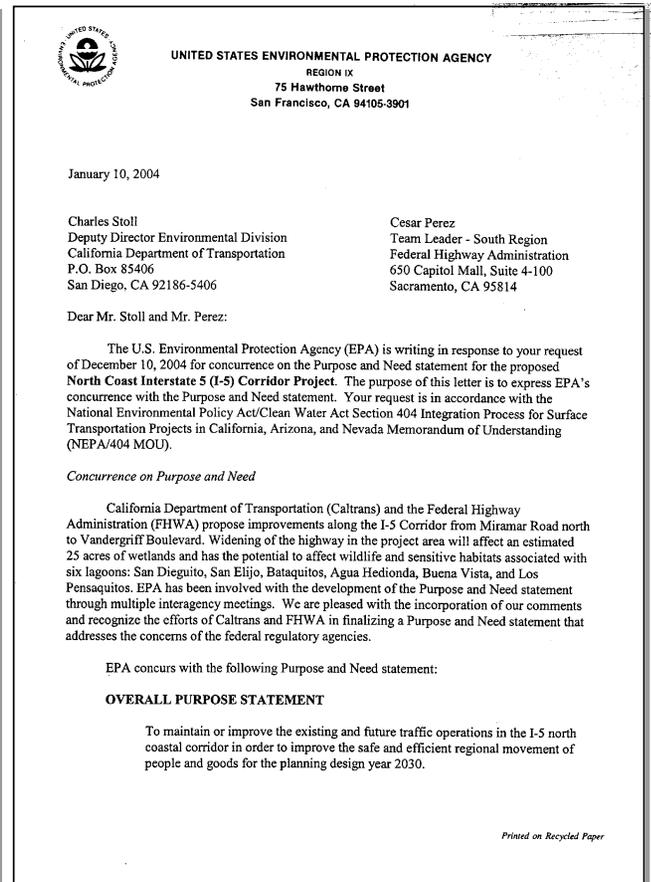
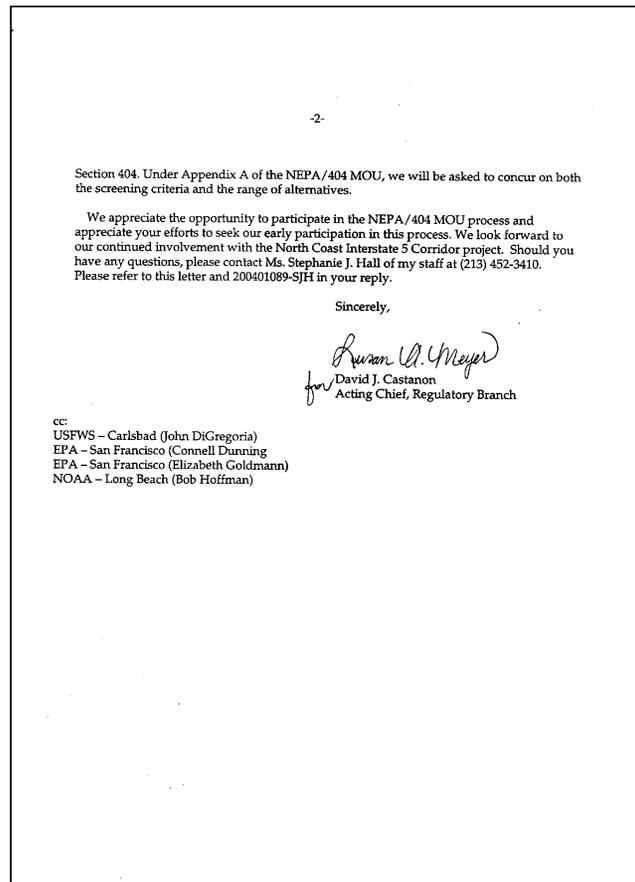
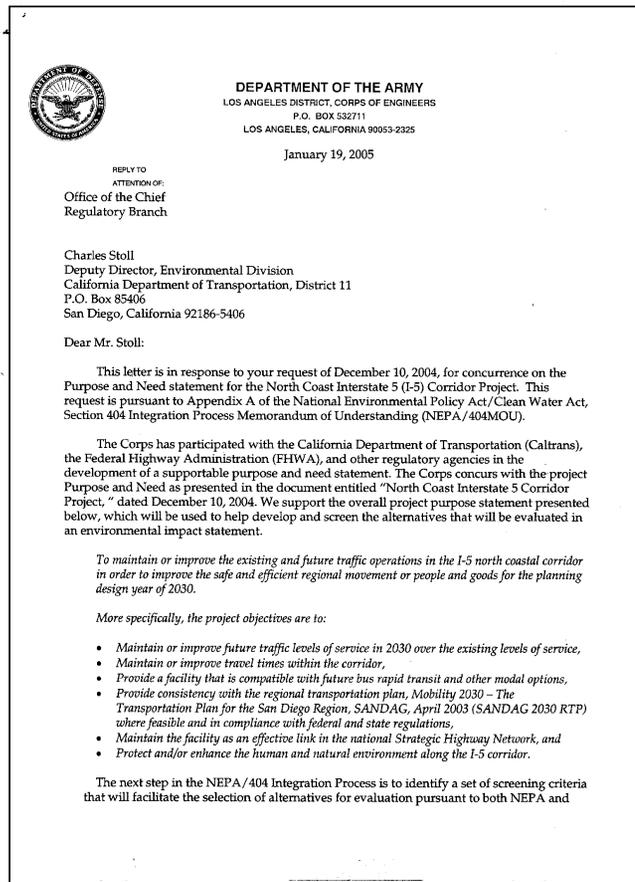


Figure 5-3.3: ACOE Concurrence with Purpose and Need

Figure 5-3.4: EPA Concurrence with Purpose and Need

PROJECT OBJECTIVES

The objectives of this project are to:

- Maintain or improve future traffic levels of service in 2030 over the existing levels of service,
- Maintain or improve travel times within the corridor,
- Provide a facility that is compatible with future bus rapid transit and other modal options,
- Provide consistency with the regional transportation plan, Mobility 2030 - The Transportation Plan for the San Diego Region, SANDAG, April 2003 (SANDAG 2030 RTP) where feasible and in compliance with federal and state regulations,
- Maintain the facility as an effective link in the national Strategic Highway Network, and
- Protect and/or enhance the human and natural environment along the I-5 corridor.

Status of Other Transportation Projects along the I-5 Corridor

On September 9, 2004 a manager-level meeting was convened to discuss the Purpose and Need statement as well as the status of multiple projects along the I-5 Corridor that are in various stages of planning and construction. At that time, and in previous interagency meetings, EPA as well as Army Corps of Engineers, Fish and Wildlife Service, and National Marine Fisheries Service, expressed concerns regarding the potential for decisions resulting from other projects along the corridor to preclude the analysis of a range of reasonable alternatives to be studied through the North Coast I-5 Corridor Project. Caltrans and FHWA committed to discuss this matter internally and to provide a response to the regulatory agencies regarding this issue. As of this date, EPA has received no formal response regarding our concerns. While it does not affect our concurrence on the Purpose and Need statement, resolution on this matter is integral to an understanding of the scope of the North Coast I-5 Corridor Project as the NEPA/404 integration process continues.

Other Federal Mitigation Efforts

Several mitigation projects that were established as permitting requirements for other federal projects occur within the footprint of the proposed project, including the Bataquitos Lagoon Enhancement Project and the San Onofre Nuclear Generating Station (SONGS) Marine Mitigation Program. The Bataquitos Lagoon Enhancement Project is one of the largest wetland restoration projects undertaken as mitigation for a port project in the United States and was developed as a requirement to mitigate resources lost in the Outer Los Angeles Harbor due to dredging and construction. The SONGS Marine Mitigation Program is an environmental enhancement program developed to mitigate unavoidable impacts to the marine environment resulting from operation of the SONGS Units 2&3 cooling water systems. The program includes restoring degraded wetlands at San Dieguito Lagoon, improving the in-plant fish protection systems, and funding for Coastal Commission staff oversight and monitoring of these mitigation projects. Because these mitigation efforts are required as a result of federal permitting actions, it will be important for Caltrans and FHWA to develop alternatives that are designed to allow for

2

the continued implementation of these mitigation commitments.

We are pleased that the Purpose and Need statement indicates that Caltrans and FHWA "will seek to not impede these efforts and will identify opportunities to offset potential project impacts to the maximum extent practicable" and that "enhancements to the conditions of sensitive environmental habitat will be incorporated, where feasible and practicable when considering cost, logistics, and technology." This supports the objective of "protecting and/or enhancing the natural environment" and conveys the transportation agencies' intentions to protect the coastal lagoon ecosystem during project development.

Thank you for this opportunity to participate in the development of the North Coast I-5 Corridor Study Purpose and Need statement. We look forward to continued participation in this project through the NEPA/404 MOU. If you have any questions or comments, please feel free to contact me at 415-972-3854. You can also contact Connell Dunning at 415-947-4161 (dunning.connell@epa.gov) or Elizabeth Goldmann at 415-972-3398 (goldmann.elizabeth@epa.gov).

Sincerely,

 Lisa B. Hanf, Manager
 Federal Activities Office

cc: John DiGregoria, Fish and Wildlife Service
 Stephanie Hall, Army Corps of Engineers
 Bob Hoffman, National Marine Fisheries Service

3

08/24/2006 09:35 FAX T604315902 US FISH AND WILDLIFE 002

United States Department of the Interior
 FISH AND WILDLIFE SERVICE
 Ecological Services
 Carlsbad Fish and Wildlife Office
 6010 Hidden Valley Road
 Carlsbad, California 92011

AUG 24 2006

In Reply Refer To:
 FWS-SDG-3819.9

Ms. Susanne Glasgow
 Deputy District Director
 Environmental Division
 Department of Transportation
 2829 Juan Street
 P.O. Box 85406, M.S. 46
 San Diego, California 92110

Subject: Concurrence on Range of Alternatives for North Coast Interstate 5 Corridor Project

Dear Ms. Glasgow:

The U.S. Fish and Wildlife Service (Service) has received your letter dated August 1, 2006, requesting our concurrence on the range of alternatives for the North Coast Interstate 5 Corridor Project to be considered in the draft Environmental Impact Statement. Those alternatives include the 10+4 with Buffer, 10+4 with Barrier, 8+4 with Buffer, 8+4 with Barrier, and the No Build Alternative. You have also requested our concurrence on the removal of the 8+2HOV alternative from further review.

Information provided during previous meetings has given details on the reason for dropping the 8+2HOV alternative. The Service concurs with removing the 8+2HOV alternative from further consideration due to the projects facility in meeting future traffic needs. Also, the Service concurs on the list of alternatives for further consideration and acknowledges that a number of projects would continue to go forth in the No Build Alternative scenario.

If you have any questions with regards to this letter please contact Kurt Roblek of my staff (760-431-9440, ext. 308).

Sincerely,

 Therese O'Rourke
 Assistant Field Supervisor

Cc: Robert Hoffman, NOAA
 Connell Dunning, EPA
 Elizabeth Goldman, EPA
 Stephanie Hall, Corps

TAKE PRIDE IN AMERICA

Figure 5.3.4: (cont.)

Figure 5.3.5: USFWS Concurrence with Range of Alternatives

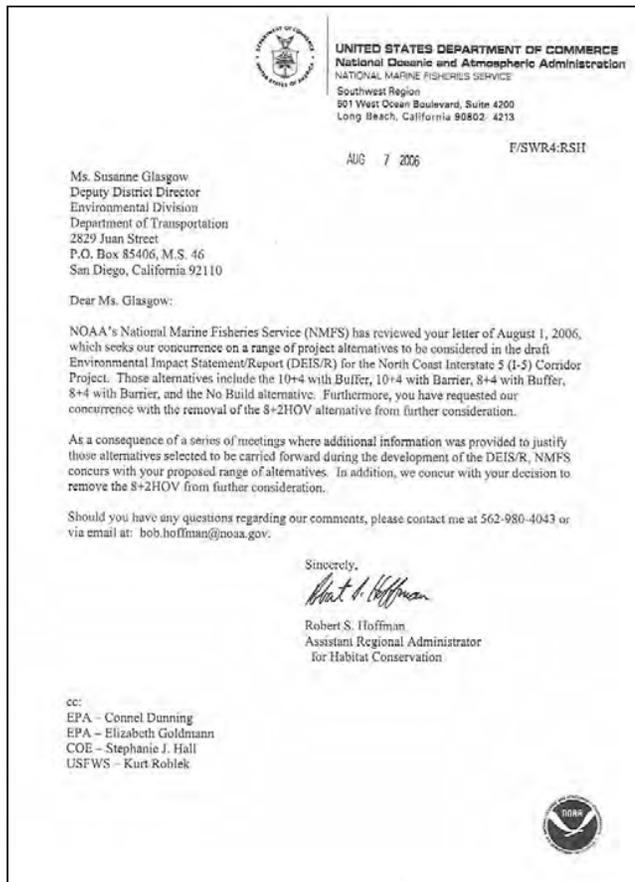


Figure 5-3.6: NOAA/NMFS Concurrence with Range of Alternatives

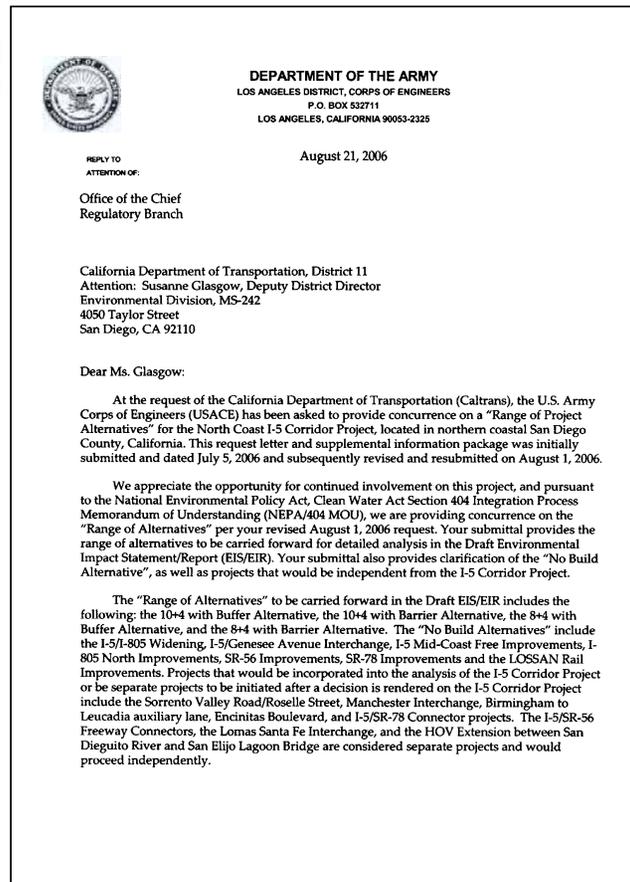
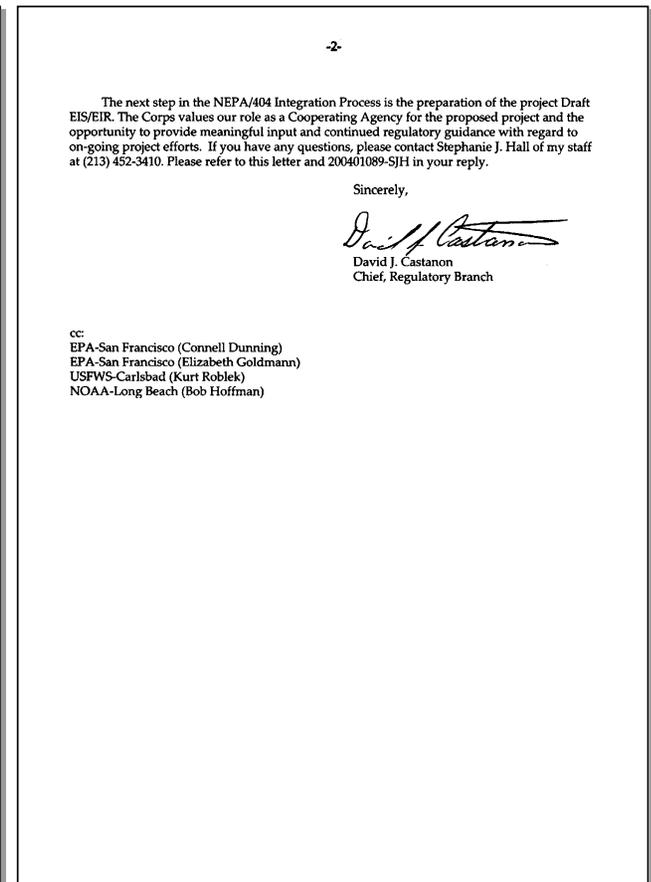


Figure 5-3.7: ACOE Concurrence with Range of Alternatives



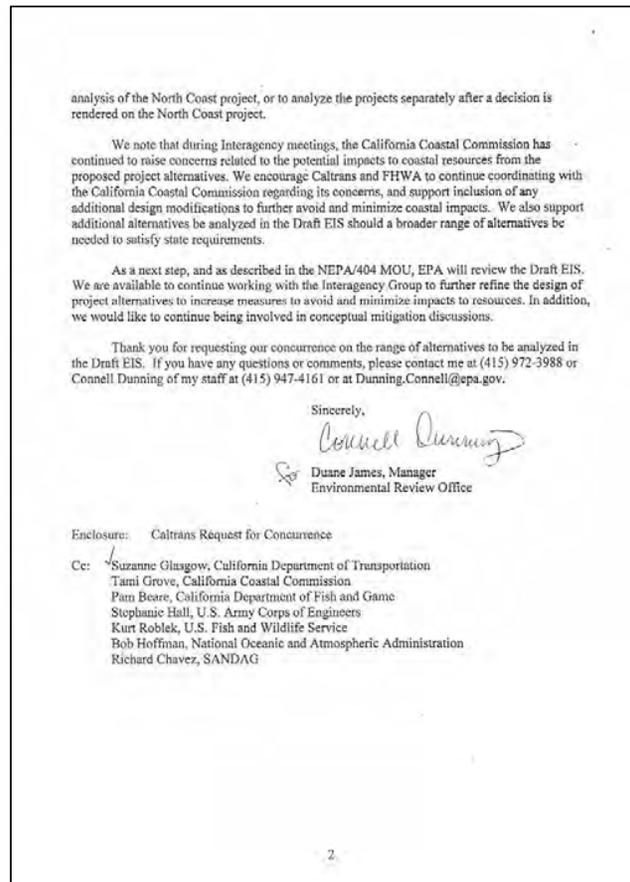
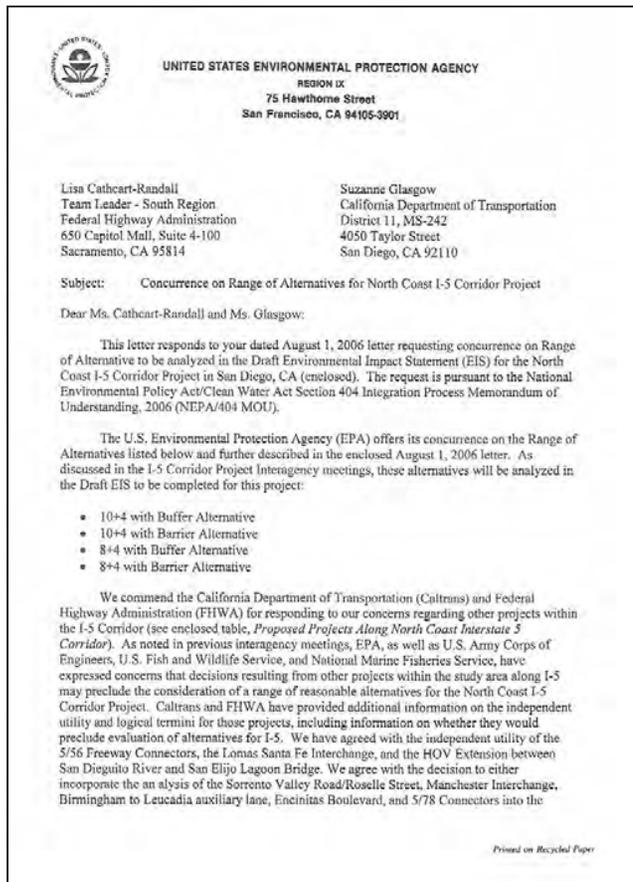


Figure 5-3.8: EPA Concurrence with Range of Alternatives

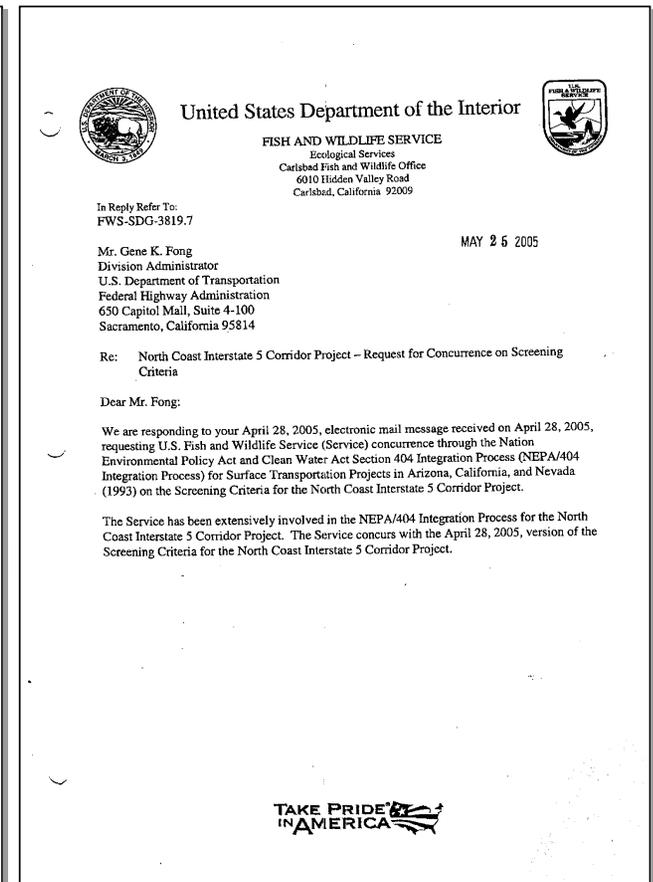


Figure 5-3.9: USFWS Concurrence with Range of Alternatives

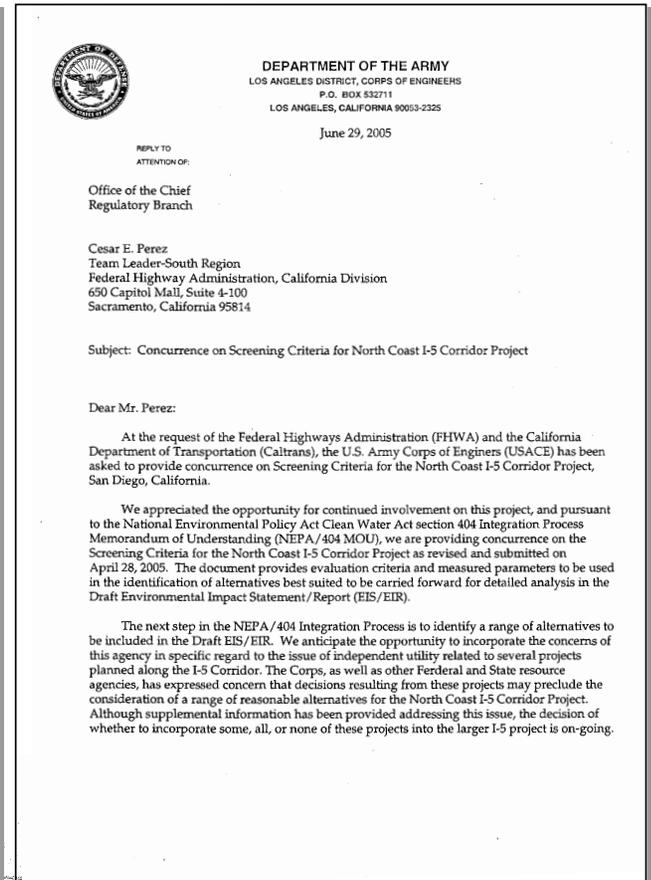
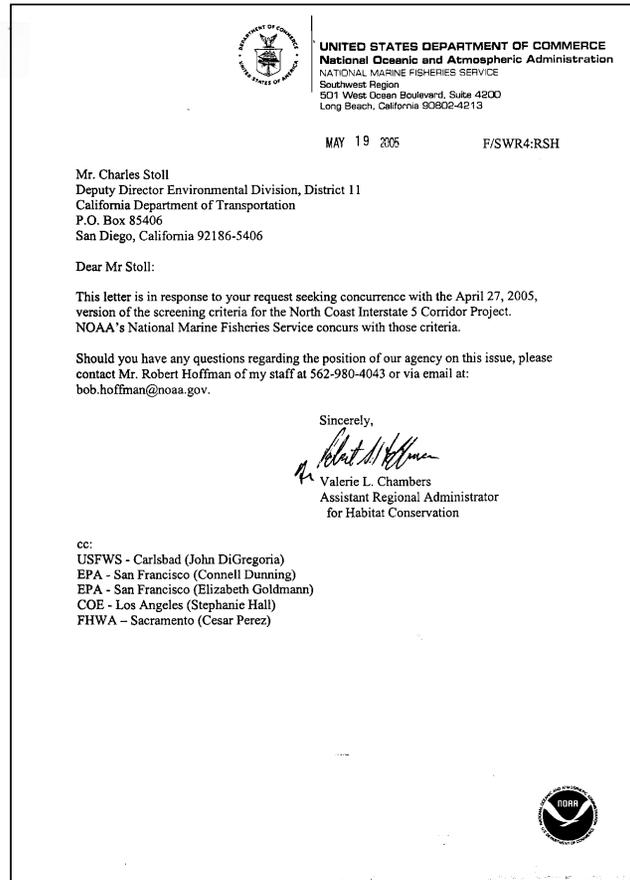
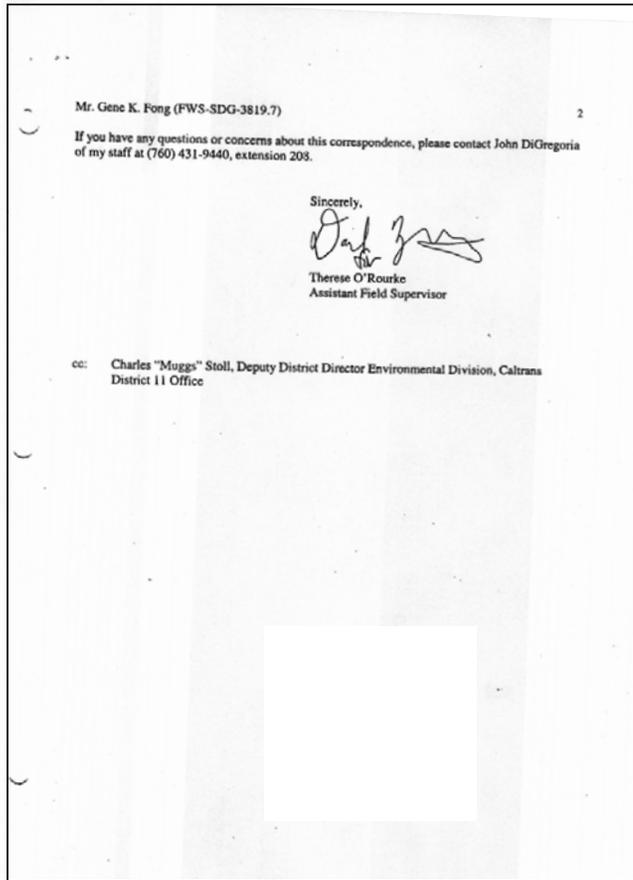


Figure 5.3.9: (cont.)

Figure 5.3.10: NOAA/NMFS Concurrence with Criteria Matrix

Figure 5.3.11: ACOE Concurrence with Criteria Matrix

-2-

Once again, we appreciate this opportunity for continued involvement in the development of this project. If you have any questions, please contact Stephanie J. Hall of my staff at (213) 452-3410. Please refer to this letter and 200401089-SJH in your reply.

Sincerely,

 David J. Castanon
 Chief, Regulatory Branch

cc:
 EPA (Connell Dunning)
 EPA (Elizabeth Goldmann)
 USFWS (John DiGregoria)
 NOAA (Robert Hoffman)
 Caltrans (Gladys Baird)

Figure 5.3.11: (cont.)

05/24/05 08:28 415 744 1598 U.S.EPA/OFA 001



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION IX
 75 Hawthorne Street
 San Francisco, CA 94105-3901

May 23, 2005

Cesar E. Perez
 Team Leader - South Region
 Federal Highway Administration
 650 Capitol Mall, Suite 4-100
 Sacramento, CA 95814

Subject: Concurrence on Screening Criteria for North Coast I-5 Corridor Project

Dear Mr. Perez:

This responds to your letter, dated April 20, 2005, requesting concurrence on Screening Criteria for the North Coast I-5 Corridor Project in San Diego, CA. The request is pursuant to Appendix A of the National Environmental Policy Act/Clean Water Act Section 404 Integration Process Memorandum of Understanding (NEPA/404 MOU).

EPA offers our concurrence on the Screening Criteria as they are presented in the enclosed document entitled, "Screening Criteria Table - North Coast Interstate 5 Corridor Project," as revised and sent on April 28, 2005. As discussed in the I-5 Corridor Project Agency Meetings, these screening criteria will be used to narrow the broad set of initial alternatives to a final set of alternatives for detailed assessment in the Draft Environmental Impact Statement (EIS). We commend Federal Highway Administration and the other project sponsors for your diligent work in compiling this comprehensive list of criteria and your willingness to incorporate resource agency suggestions to minimize environmental impacts through this process.

The screening criteria, as defined here, should form the basis for a revised set of criteria, which will be used to evaluate alternatives in the Draft and Final EIS. This evaluation will ultimately lead to selection of a preferred alternative. We expect that this latter set of criteria will rely on more detailed information for environmental impacts, generally not available at this early stage. Your excellent work on these screening criteria forms a solid basis for the final criteria to be included in the Draft EIS.

As a next step, and as described in the NEPA/404 MOU, we will work with FHWA and the other project sponsors to identifying a range of alternatives to be included in the Draft EIS. We also look forward to coordination on EPA's concerns regarding the independent utility of multiple projects planned along the I-5 Corridor. As noted in previous interagency meetings, EPA as well as Army Corps of Engineers, Fish and Wildlife Service, and National Marine Fisheries Service, have expressed concerns that decisions resulting from these projects may preclude the consideration of a range of reasonable alternatives for the North Coast I-5 Corridor

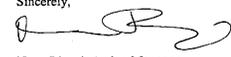
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Figure 5.3.12: EPA Concurrence with Criteria Matrix

05/24/05 08:28 415 744 1598 U.S.EPA/OFA 002

Project (I-5). Caltrans and FHWA have provided additional information on the independent utility and logical termini for those projects, including information on whether they would preclude evaluation of alternatives for I-5. We have agreed with the independent utility of the State Route 56 Improvement Project in the City of San Diego but have remaining concerns with several interchange projects along the corridor, especially at Manchester. EPA is meeting with FHWA and Caltrans to discuss whether these other projects should be incorporated into, or separated from, the I-5 project. We appreciate the efforts by Caltrans and FHWA on this matter.

Thank you for requesting our agreement on Screening Criteria to identify alternatives that will be analyzed in the Draft EIS. If you have any questions or comments, please contact me or Connell Dunning of my staff at (415) 947-4161 or at Dunning.Connell@epa.gov.

Sincerely,

 Nova Blazej, Acting Manager
 Environmental Review Office

Enclosure: Screening Criteria Table

Cc: Charles "Muggs" Stoll, California Department of Transportation
 John DiGregoria, Fish and Wildlife Service
 Stephanie Hall, Army Corps of Engineers
 Bob Hoffman, National Marine Fisheries Service
 Tami Grove, California Coastal Commission
 Pam Beare, California Department of Fish and Game

2

Screening Criteria Table - North Coast Interstate 5 Corridor Project	
Evaluation Criteria	Measured Parameter
1. Traffic Flow and Congestion Relief	Total hours of vehicle travel; daily vehicle hours of delay compared to No Build; LOS (A, B, C ...); Peak Period Miles of LOS F; Origin-Destination Travel Times along I-5 Corridor
2. Compatible with future bus rapid transit and other modal options	Accommodate mass transit included in 2030 RTP
3. Impacts to FEMA 100-year floodplains	Acres
4. Impacts to Waters of the U.S. including wetlands and coastal lagoons	Acres directly and indirectly affected
5. Impacts to Waters of the State including wetlands	Acres directly and indirectly affected
6. Impacts to Coastal Commission wetlands	Acres directly and indirectly affected
7. Impacts to transitional/upland habitats associated with wetlands and shading of wetlands	Effects on hydrology (sedimentation) and tidal circulation
8. Impacts to Federal and State T and E plant species	Acres permanently and temporarily affected
9. Impacts to Federal and State T and E animals species	Species directly and indirectly affected
10. Impacts to Federal and State listed T and E habitat	Species directly and indirectly affected
11. Impacts to existing permitted restoration efforts	Acres of habitat directly and indirectly affected
12. Impacts to biological core areas and linkages including those in NCCP areas	Acres of existing restoration efforts directly and indirectly affected
13. Economic impacts to the region	Yes/No
14. Impacts to Environmental Justice communities	Hours of delay times average cost per hour of delay
15. Residential units displaced	Yes/No, number of communities affected
16. Community Connectivity	Number of residential units
17. Businesses displaced	Number and type of facility that can restore connectivity
18. New Right of Way	Number of businesses
19. Project Cost-including Right of Way acquisition and construction	Acres acquired
20. Estimated biological mitigation costs	Total Cost (in millions)
21. Number of 4(f) resources affected	Total Cost/Acre
22. Eligible and listed cultural resource sites affected	Name/type of resource/acres affected
23. Noise Impacts	Number of eligible and number of listed sites affected
24. Visual Impacts	Number of receptor sites that exceed Noise Abatement Criteria
25. Median planting remain	Square footage of walls
26. Mature Tree Removal	Effects on public views of ocean/scenic resource areas
27. Maintainability of Facility	Yes/No and type of planting
28. Geometric Design Standards	Number and type of trees
29. Consistency with local land use and circulation plans	High/Medium/Low
30. Water Treatment	Number of design exceptions/type
31. Hazardous Wastes	Plans non-conforming
32. Air Quality	Water Quality Standards
	Number of known sites
	Number of residences and sensitive receptors within 100 meters of the freeway and number of VMT

Figure 5-3.12: (cont.)

STATE OF CALIFORNIA – THE RESOURCES AGENCY
 ARNOLD SCHWARZENEGGER, Governor

OFFICE OF HISTORIC PRESERVATION
 DEPARTMENT OF PARKS AND RECREATION
 P.O. BOX 942868
 SACRAMENTO, CA 94296-0001
 (916) 653-9624 Fax: (916) 653-9824
 calshpo@ohp.parks.ca.gov
 www.ohp.parks.ca.gov

March 17, 2008 Reply To: FHWA070320A

Gene K. Fong, Division Administrator
 Federal Highway Administration
 California Division
 650 Capitol Mall, Suite 4-100
 Sacramento, CA 95814

Re: Finding of Effect for the Proposed I-5 North Coast Corridor Project, San Diego County, CA

Dear Mr. Fong:

Thank you for consulting with me about the subject undertaking in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*.

The Federal Highway Administration (FHWA) requested a finding of effect for the above cited undertaking. An inventory and determinations of eligibilities had been previously forwarded for our comments.

The undertaking will affect both archeological and built environment resources. While effects to most historic properties can be avoided either by conditions or design, two archeological properties will be adversely affected. While Caltrans' request makes various effects determination, the undertaking will have an adverse effect. I concur with this finding.

The adverse effects to the two archeological sites are the results of construction of sound walls. Caltrans proposes to mitigate these effects through data recovery and design of the sound walls. The sound walls are proposed in portions of the sites which show evidence of surface and to some extent, subsurface disturbance. The walls have been designed to limit deep disturbance through placement of footings every eight feet rather than continuous. Data recovery will be limited to the ADI and will focus on those areas where footings are proposed and the most intact archeological resources are present.

Caltrans has included an ESA Action Plan, two research designs and a draft MOA with their finding of effect. The research designs and the ESA Action Plan seem reasonable. My only question is why these three separate documents are not incorporated into a single historic property treatment plan? Caltrans proposes to add the ESA Action Plan

Figure 5-4.1: SHPO Concurrence

Mr. Fong
 March 17, 2008
 Page 2 of 2

as a construction stipulation, but for the purposes of the MOA, it would be cleaner and simpler to incorporate all of these documents into a single plan.

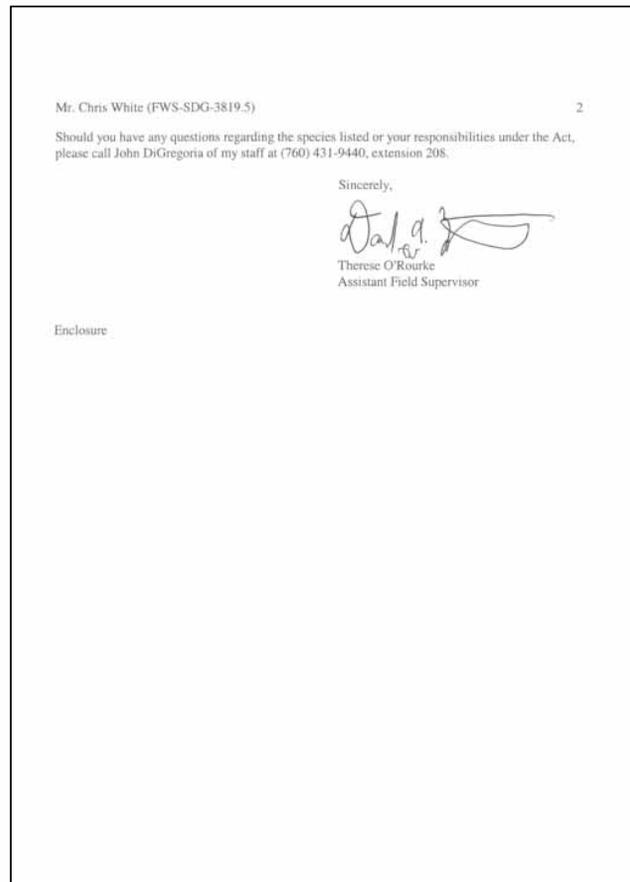
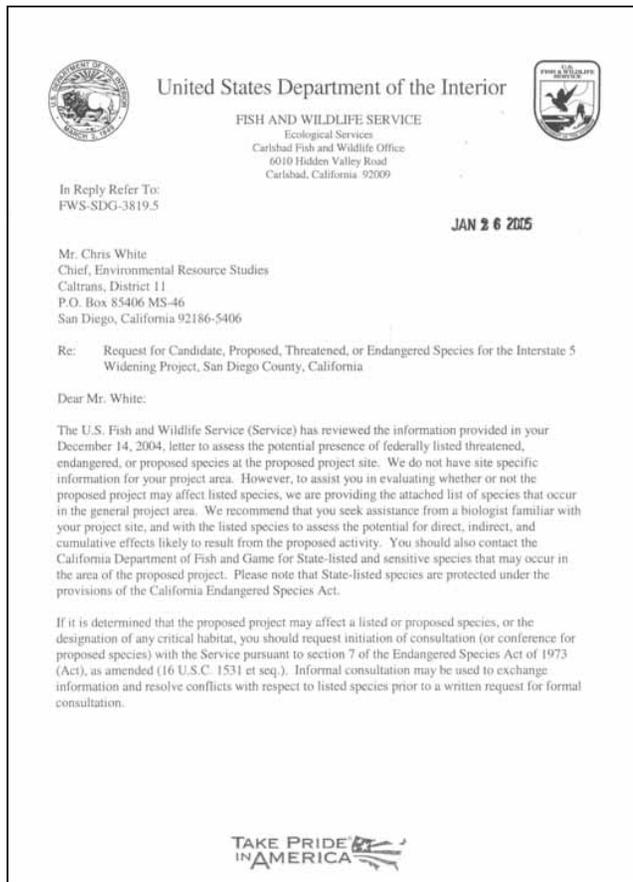
The MOA would benefit from three major changes. First, does FHWA plan to participate in this MOA or should it be formatted for Caltrans to participate as the Agency Official? If the latter is the case, the MOA should include reference to the MOU delegating Caltrans such authority. Second, as noted above, by incorporating the two research designs and ESA Action Plan into a single Historic Property Treatment Plan would make the MOA much simpler. The HPTP could be become an appendix to the MOA and the citation could provide for changes to the plan without amending the MOA. Reference to treatment of individual properties would be added to the plan and not called out in the MOA. Finally, the MOA should use standard administrative stipulations which are found in most of OHPs MOAs and PAs rather than the ones proposed. Other editorial changes are necessary such as Caltrans agreeing to implement the stipulations of the agreement document.

In summary, given the limited nature of the adverse effects, the proposed treatment of historic properties is reasonable.

Thank you for considering historic properties as part of your project planning. If you have any questions, please contact Dwight Dutschke of my staff at your earliest convenience at (916) 653-9134 or e-mail at ddutschke@parks.ca.gov or Natalie Lindquist at (916) 654-0631 or e-mail at nlindquist@parks.ca.gov.

Sincerely,

 Milford Wayne Donaldson, FAIA
 State Historic Preservation Officer



Mr. Chris White (FWS-SDG-3819.5) 2

Should you have any questions regarding the species listed or your responsibilities under the Act, please call John DiGregoria of my staff at (760) 431-9440, extension 208.

Sincerely,

 Therese O'Rourke
 Assistant Field Supervisor

Enclosure

Mr. Chris White (FWS-SDG-3819.5) 3

Listed Endangered, Threatened and Proposed Species
 that may occur in the vicinity of Interstate 5
 in San Diego County, California

Common Name	Scientific Name	Status
<u>BIRDS</u>		
coastal California gnatcatcher	<i>Poliotilta californica californica</i>	T
least Bell's vireo	<i>Vireo bellii pusillus</i>	E
western snowy plover	<i>Charadrius alexandrinus nivosus</i>	T
brown pelican	<i>Pelecanus occidentalis</i>	E
light-footed clapper rail	<i>Rallus longirostris levisipes</i>	E
California least tern	<i>Sterna antillarum browni</i>	E
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E
<u>INVERTEBRATES</u>		
San Diego fairy shrimp	<i>Branchinecta sandiegonensis</i>	E
Riverside fairy shrimp	<i>Streptocephalus woottoni</i>	E
<u>PLANTS</u>		
Del Mar manzanita	<i>Arctostaphylos glandulosa ssp. crassifolia</i>	E
Encinitas Baccharis	<i>Baccharis vanessae</i>	E
San Diego ambrosia	<i>Ambrosia pumila</i>	E
San Diego button celery	<i>Eryngium aristulatum var. parishii</i>	E
San Diego mesa mint	<i>Pogogyne abramsii</i>	E
spreading navarretia	<i>Navarretia fossalis</i>	T
thread-leaved brodiaea	<i>Brodiaea filifolia</i>	T

E=Endangered T=Threatened

Figure 5-4.2: USFWS Listed Endangered, Threatened and Proposed Species

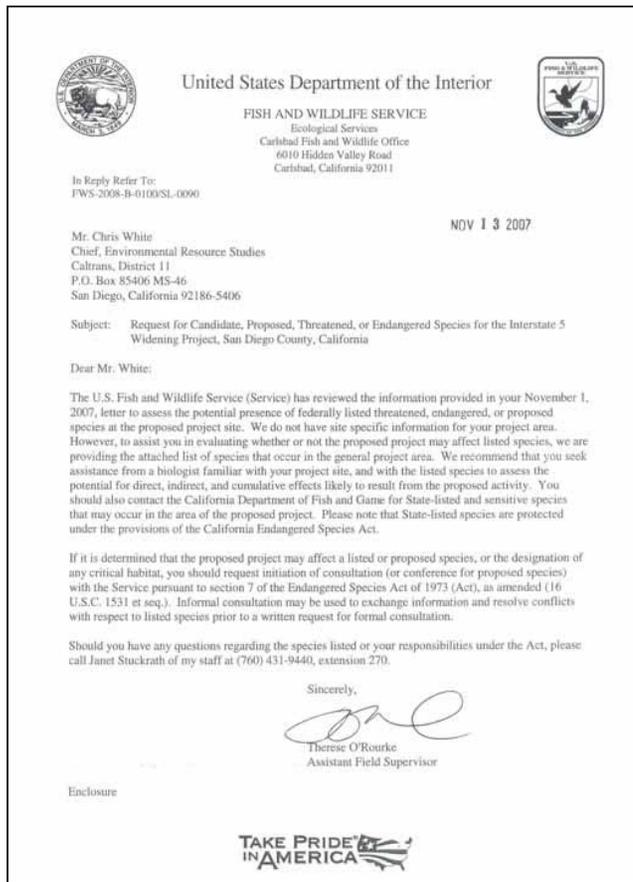


Figure 5-4.2: (cont.)

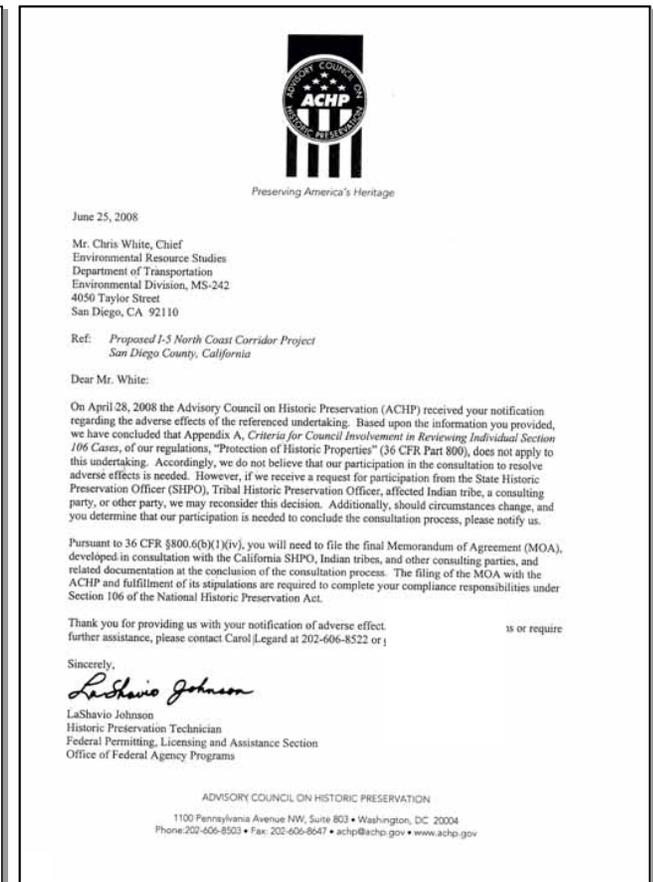


Figure 5-4.3: ACHP Response to Undertaking Notification

2

Chapter 6 – List of Preparers

This Draft EIR/EIS and related technical studies were prepared by and under the supervision of Caltrans District 11 staff and other contributors identified below.

FHWA

Cesar E. Perez, P.E., Senior Transportation Engineer, State Programs, Master of Science Transportation, University of Nebraska, Bachelor of Science Civil Engineering, University of Puerto Rico, 32 years of experience.

California Department of Transportation – District 11

Bruce April, Senior Environmental Planner, Branch Chief - Environmental Stewardship and Agency Coordination; Bachelor of Science Biology, San Diego State University, 18 years Caltrans experience.

May Alsheikh, P.E. Transportation Engineer, Bachelor of Science Civil Engineering, Bachelor of Science, Civil Engineering, San Diego State University, Licensed Civil Engineer, PE, 11 years Caltrans experience.

Kent Askew, Project Landscape Architect; Bachelor of Science Botany, San Diego State University, Registered Landscape Architect (CA #4165), 17 years Caltrans experience.

Gladys T. Baird, Associate Environmental Planner (Natural Sciences); Bachelor of Science Biology, San Diego State University, 8 years Caltrans experience.

Deb Dominici, Registered Professional Archaeologist (RPA), Environmental Resource Studies; Master of Arts Anthropology, San Diego State University, 30 years Caltrans experience.

Jayne Dowda, Branch Chief, Environmental Engineering; Registered Civil Engineer, Bachelor of Science Civil Engineering, San Diego State University, 21 years Caltrans experience.

Ted J Evans, P.E., Project Engineer; Bachelor of Science Environmental Resources Engineering, Humboldt State University, 12 years Caltrans experience.

Kelly Finn, Senior Environmental Planner; Master of Science Natural Resources Conservation, Bachelor of Arts Biology and Environmental Studies, University of California, Santa Cruz, Master of Science Natural Resources Conservation, University of Massachusetts, Amherst 8 years Caltrans experience.

Mike Fordham, Transportation Engineer, Registered Civil Engineer, Master of Science Civil Engineering (Geotechnical); Bachelor of Science Civil Engineering, University of Nevada, Reno, 12 years Caltrans experience.

Susanne Glasgow, Deputy Director Environmental, Bachelor of Arts Geography, Resource and Environmental Conservation, San Diego State University, 37 years Caltrans experience.

Shay Lynn M. Harrison, Associate Environmental Planner; Bachelor of Science Environmental Science, University of California at Riverside, 11 years Caltrans experience.

Allen Holden, Jr., PE, TMP Manager of DTM Branch; Registered Civil Engineer/Registered Traffic Engineer, Master of Science. in Civil Engineering, University of Texas at Arlington, Bachelor of Science Civil Engineering, Cornell University, 30 years Caltrans experience.

Kevin Hovey, Senior Environmental Planner; Masters of Arts Anthropology, University of California at Riverside, 7 years Caltrans experience.

Arturo Jacobo, P.E., Senior Transportation Engineer, Project Manager; Registered Civil Engineer, Bachelor of Science Structural Engineering, San Diego State University, 20 years Caltrans experience.

Ken James, P.E., Transportation Engineer, Route Manager, Traffic Operations; Registered Civil Engineer, Bachelor of Science Civil Engineering, Texas Tech University, 10 years Caltrans experience.

Majid Kharrati, P.E., Senior Transportation Engineer, Project Manager; Registered Civil Engineer, Bachelor of Science Civil Engineering, University of California, Irvine, 27 years Caltrans experience.

Allan Kosup, Corridor Director and Supervising Transportation Engineer; Registered Civil Engineer, Bachelor of Science Civil Engineering, Professional Engineer 1987, 27 years Caltrans experience.

Thomas Nipper, Project Management Assistant, Associate Environmental Planner (acting), 10 years Caltrans experience.

Jorge A. Perez-Valdes, P.E., Project Engineer; Registered Civil Engineer, Masters of Science Civil Engineering, San Diego State University, Bachelor of Science Civil Engineering, Instituto Tecnológico de Tijuana, 12 years Caltrans experience.

Keith Ploettner, P.E., Senior Transportation Engineer, Design Manager; Registered Civil Engineer and Traffic Engineer, Bachelor of Science Civil Engineering, San Diego State University, 25 years Caltrans experience.

Martin D. Rosen, Senior Environmental Planner, Heritage Resources Coordinator; Master of Science and Bachelor of Science Anthropology, University of California at Los Angeles, 29 years Caltrans experience.

Sue Scatolini, Associate Environmental Planner (Natural Sciences); Masters of Science Ecology, San Diego State University, Bachelor of Science Aquatic Biology, University of California at Santa Barbara, 10 years Caltrans experience.

Luke Serna, Environmental Planner; Bachelor of Science Environmental Studies, University of California Santa Barbara, 5 years Caltrans experience.

Michelle Trudell, Associate Environmental Planner; Masters of Science City Planning, San Diego State University, Bachelor of Science Environmental Studies, University of California at Santa Barbara, 12 years Caltrans experience.

Chris White, Senior Environmental Planner, Environmental Resource Studies; Masters of Science Anthropology, University of California at Los Angeles, 27 years Caltrans experience.

Aly Wayne, Transportation Planner; Master of Arts City Planning, Bachelor of Science Environmental Management and System Planning, San Diego State University, 3 years Caltrans experience.

EDAW

Cynthia Curtis, Senior Environmental Analyst; Master of Arts Conservation Biology, Victoria University of Wellington New Zealand, Bachelor of Science Environmental Studies, University of California at Santa Barbara, 3 years experience.

Michael Downs, Senior Social Scientist; Doctor of Philosophy Anthropology, Master of Arts Anthropology, Bachelor of Arts Psychology and Anthropology, University of California, San Diego, 13 years experience.

Bill Graham, Principal, Master of City Planning Urban and Regional Planning; Master of Arts Anthropology, San Diego State University, 27 years experience.

Laurel Howard, Environmental Analyst; Bachelor of Arts Natural Resource and Environmental Geography, San Diego State University, 3 years experience.

Cindy Kinkade, Environmental Project Manager; Master of Arts Environmental Management, Master of Arts Public Policy, Duke University, Bachelor of Science Biology, San Diego State University, 4 years experience.

Nick Larkin, Urban and Environmental Planner; Master of Arts Urban Planning, San Diego State University, Bachelor of Arts Urban Studies and Planning, California State University Los Angeles, 5 years experience.

Addie Olazabal, Environmental Planner; Bachelor of Arts Natural Resource and Environmental Geography, San Diego State University, 3 years experience.





Chapter 7 – Distribution List

Federal Government

<p>Mark Cohen * U.S. Army Corps of Engineers Los Angeles District Office P.O. Box 532711 Los Angeles, CA 90053-2525</p>	<p>Elizabeth Goldman * Environmental Protection Agency Region IX Federal Activities Office - CMD-2 75 Hawthorne St., WTR-8 San Francisco, CA 94105-3901</p>	<p>Connell Dunning * Environmental Protection Agency Region IX Federal Activities Office, CED-2 75 Hawthorne St. San Francisco, CA 94105-3901</p>	<p>Director * Office of Environmental Policy and Compliance Department of the Interior Main Interior Building, MS 2340 1849 C St. Washington, DC 20240</p>	<p>Regional Director * Federal Emergency Management Agency Region IX, Bldg. 105 Presidio, CA 94129</p>
<p>Susan Wynn * U.S. Fish & Wildlife Service 6010 Hidden Valley Road Carlsbad, CA 92011</p>	<p>Kurt Roblek * U.S. Fish & Wildlife Service 6010 Hidden Valley Road Carlsbad, CA 92011</p>	<p>Director * Office of Environmental Affairs Dept. of Health and Human Services 200 Independence Ave., SW, Rm. 537 F Washington, DC 20201</p>	<p>Office of the Secretary * U.S. Department of Agriculture 1400 Independence Ave., SW Washington, DC 20250</p>	<p>Commander * 11th Coast Guard District Coast Guard Island Building #42 Alameda, CA 94501</p>
<p>Environmental Protection Agency * Office of Federal Activities EIS Filing Section Ariel Rios Building (South Oval Lobby) Mail Code 2252-A, Room 7241 1200 Pennsylvania Ave., NW Washington, DC 20444</p>	<p>Director * U.S. Department of Energy Office of Environmental Compliance 1000 Independence Ave. SW Rm. 4G-064 Washington, DC 20585</p>	<p>Leslie Rogers * Federal Transit Admin., Region IX 201 Mission St., Ste. 2210 San Francisco, CA 94105</p>	<p>Environmental Clearance Officer * Dept. of Housing and Urban Development 450 Golden Gate Ave. P.O. Box 36003 San Francisco, CA 94102</p>	<p>Centers for Disease Control * Environmental Health and Injury Control Special Programs Group 1600 Clifton Rd., Mail Stop F-29 Atlanta, GA 30333</p>
<p>Robert R. Smith * U.S. Army Corps of Engineers 16885 West Bernardo Drive, Ste. 300Q San Diego, CA 92127</p>	<p>Area Conservationist * Natural Resources Conservation Svc. (Formerly U.S. Soil Conservation Svc.) Area II 318 Cayuga St., Ste. 206 Salinas, CA 93901</p>	<p>Robert Hoffman * National Marine Fisheries Service 501 West Ocean Blvd. Long Beach, CA 90802-4250</p>	<p>Attn. EIR Review * National Park Service 1111 Jackson St., Ste. 700 Pacific Great Basin System Support Office Oakland, CA 94607</p>	<p>David Valenstein * Federal Railroad Administration Office of Railroad Development 1200 New Jersey Ave., SE MS-20 Washington, DC 20590</p>
<p>Susan Sturges * Environmental Protection Agency Region IX Federal Activities Office, CED-2 75 Hawthorne Street San Francisco, CA 94105-3901</p>	<p>Janet Stuckrath * U.S. Fish & Wildlife Service 6010 Hidden Valley Road, Suite 101 Carlsbad, CA 92011</p>			

* A hardcopy was sent to recipient.

Federal Elected Officials

The Honorable Susan Davis *
 U.S. House of Representatives
 53rd District
 4305 University Avenue, Suite 515
 San Diego, CA 92105

The Honorable Dianne Feinstein *
 United States Senate
 750 B Street, Suite 1030
 San Diego, CA 92101

The Honorable Darrell Issa *
 U.S. House of Representatives
 49th District
 1800 Thibodo Rd., Suite 310
 Vista, CA 92083

The Honorable Barbara Boxer *
 United States Senate
 600 B Street, Suite 2240
 San Diego, CA 92101

The Honorable Brian Bilbray *
 U.S. House of Representatives
 50th District
 462 Stevens Avenue, Suite 107
 Solana Beach, CA 92075

State Government

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 EIR Regional Impact Division
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 Sacramento, CA 95812

Milford Donaldson
 State Historic Preservation Officer
 CA Dept of Parks & Recreation
 1416 9th St.
 Sacramento, CA 95814

David Webb, Captain
 California Highway Patrol
 Oceanside Border Communications
 Center
 1888 Oceanside Blvd.
 Oceanside, CA 92054-3486

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 CA Dept. of Fish & Game
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Pam Beare
 CA Dept. of Fish & Game
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Tam Doduc, Chairperson
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 Sacramento, CA 95814

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 State Clearinghouse
 Office of Planning & Research
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Sherilyn Sarb, Deputy Director
 California Coastal Commission
 San Diego Coast District Office
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Denise Stillinger, President San Elijo Lagoon Conservancy P.O. Box 230634 Encinitas, CA 92023	Bruce C. Foster, Senior Vice President Regulatory Affairs Southern California Edison P.O. Box 800 Rosemead, CA 91770	Larry Perondi, Superintendent Oceanside Unified School District 2111 Mission Ave. Oceanside, CA 92054	Attn. EIR Review * San Diego Public Library - Central 820 E Street San Diego, CA 92101	Debra L. Reed, President San Diego Gas & Electric Co. 8330 Century Park Ct. San Diego, CA 92123
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Director City of San Diego City Planning & Community Investment Planning Division 202 C Street, MS 5A San Diego, CA 92101	Attn. EIR Review * Encinitas Library 540 Cornish Drive Encinitas, CA 92024	Attn. EIR Review Cardiff School District 1888 Montgomery Ave. Cardiff, CA 92007	Attn. EIR Review Encinitas Union School District 101 S. Rancho Santa Fe Road Encinitas, CA 92024	Attn. EIR Review San Diego Regional Chamber of Commerce 402 West Broadway, Suite 1000 San Diego, CA 92101
Attn. EIR Review San Dieguito Union High School District 710 Encinitas Blvd. Encinitas, CA 92024	Sharon Garrow, President Solana Beach Chamber of Commerce 210 W. Plaza P.O. Box 623 Solana Beach, CA 92075	Michael J. Bardin, General Manager Santa Fe Irrigation District 5920 Linea Del Cielo Rancho Santa Fe, CA 92067	Jim Barrett, Director City of San Diego Water Department 600 B Street, Ste. 400, MS 904a San Diego, CA 92101	City Planner City of Oceanside Planning Department 300 N. Coast Highway Oceanside, CA 92054
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Director City of Del Mar Fire Department 1050 Camino del Mar Del Mar, CA 92014	Jerry Hittleman, Director City of Oceanside Planning Department 300 N. Coast Highway Oceanside, CA 92054	Attn. EIR Review * Del Mar Library 1309 Camino del Mar Del Mar, CA 92014	Kevin M. Hardy, General Manager City of Carlsbad Carlsbad Municipal Water District P.O. Box 9009 Carlsbad, CA 92018	Nancy Wasko Del Mar Regional Chamber of Commerce 1104 Camino del Mar, Suite 1 Del Mar, CA 92014

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The Honorable Maggie Houlihan,
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**Appendix A:
Resources Evaluated Relative to the
Requirements of Section 4(f) and Proposed *De Minimis* Determinations
for the I-5 North Coast Corridor Project
San Diego, California**

October 2009



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CHAPTER 1.0 – INTRODUCTION

The following discusses existing and planned properties adjacent to the proposed Interstate 5 (I-5) North Coast Corridor Project (NCC Project or proposed project) that may warrant protection under Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966. The discussion is prepared in support of the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) being prepared for the proposed project. Figure 1 shows the proposed project's regional location. Figures 2 and 3 show the locations of the potential 4(f) resources evaluated in this document.

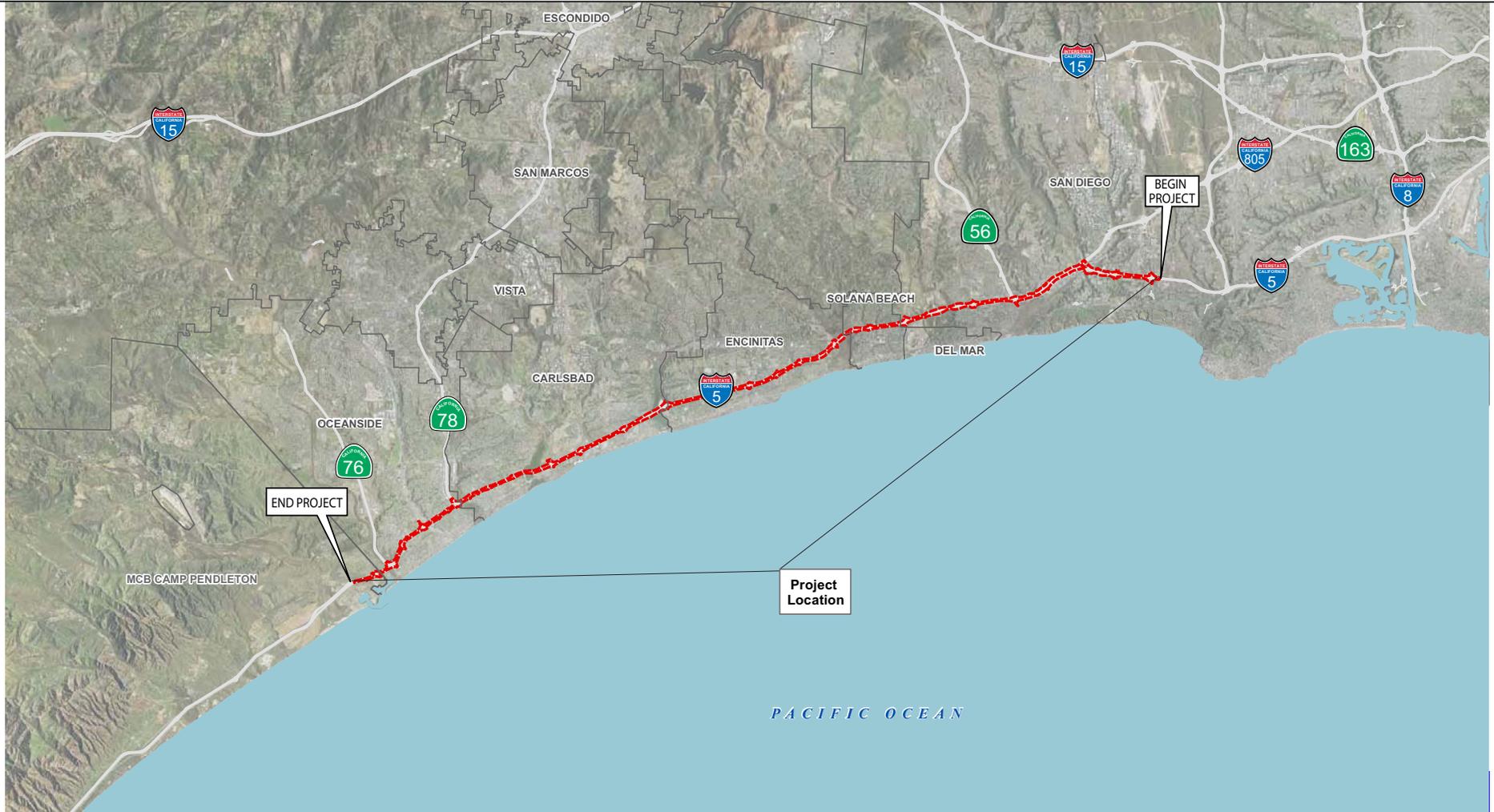
Section 4(f) of the USDOT Act of 1966, codified in federal law as 49 U.S.C. 303, declares that "[it] is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that "the Secretary [of Transportation] may approve a transportation program or project...requiring the use of any publicly owned land from a public park, recreation area, wildlife and waterfowl refuge of national, State or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from such use; or
- consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on a Section 4(f) property.

Section 4(f) also requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and Housing and Development in developing transportation projects and programs that use lands protected by Section 4(f). Reviews by these Departments are not required for Programmatic 4(f) Evaluations or *de minimis* findings.

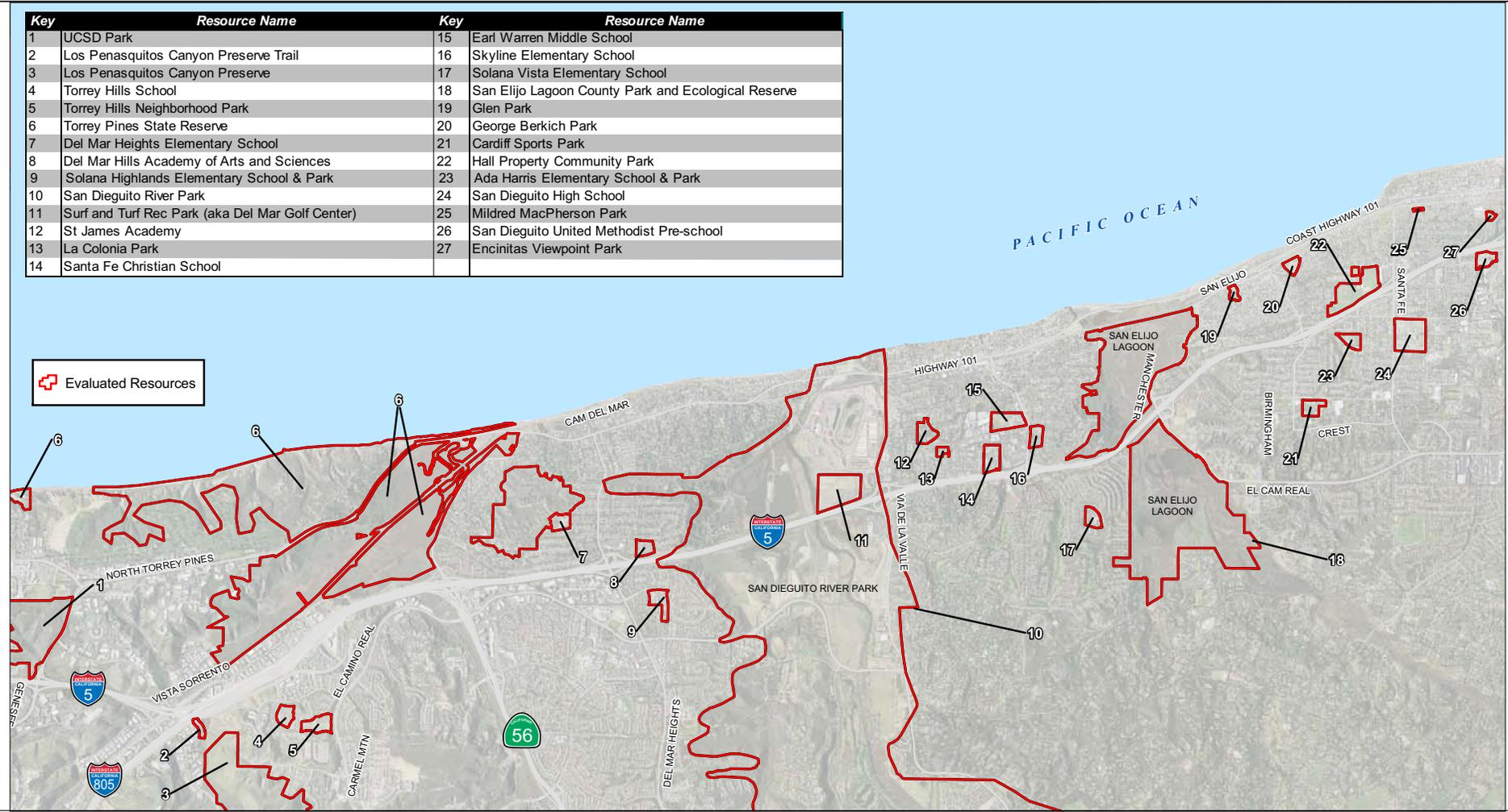
This Appendix is organized into five chapters: Chapter 1 addresses regulatory language, Chapter 2 offers a brief project description of each build alternative, Chapter 3 identifies all potential Section 4(f) resources within a half mile radius of the project and analyzes the resources afforded protection under Section 4(f) that are not directly used, Chapter 4 is a *de minimis* impact analysis for five parks and two historic resources, and Chapter 5 identifies references.



Source: DigitalGlobe 2008, SanGIS 2008, MCB Camp Pendleton 2004
3 1.5 0 3 Miles
Scale: 1:190,080; 1 inch = 3 mile(s)

Figure 1
Regional Map

Key	Resource Name	Key	Resource Name
1	UCSD Park	15	Earl Warren Middle School
2	Los Penasquitos Canyon Preserve Trail	16	Skyline Elementary School
3	Los Penasquitos Canyon Preserve	17	Solana Vista Elementary School
4	Torrey Hills School	18	San Elijo Lagoon County Park and Ecological Reserve
5	Torrey Hills Neighborhood Park	19	Glen Park
6	Torrey Pines State Reserve	20	George Berkich Park
7	Del Mar Heights Elementary School	21	Cardiff Sports Park
8	Del Mar Hills Academy of Arts and Sciences	22	Hall Property Community Park
9	Solana Highlands Elementary School & Park	23	Ada Harris Elementary School & Park
10	San Dieguito River Park	24	San Dieguito High School
11	Surf and Turf Rec Park (aka Del Mar Golf Center)	25	Mildred MacPherson Park
12	St James Academy	26	San Dieguito United Methodist Pre-school
13	La Colonia Park	27	Encinitas Viewpoint Park
14	Santa Fe Christian School		



Evaluated Resources

Source: DigitalGlobe 2008, SanGIS 2008
 4,000 2,000 0 4,000 Feet
 Scale: 1:48,000; 1 inch = 4,000 feet

Figure 2

Resources - Southern Portion

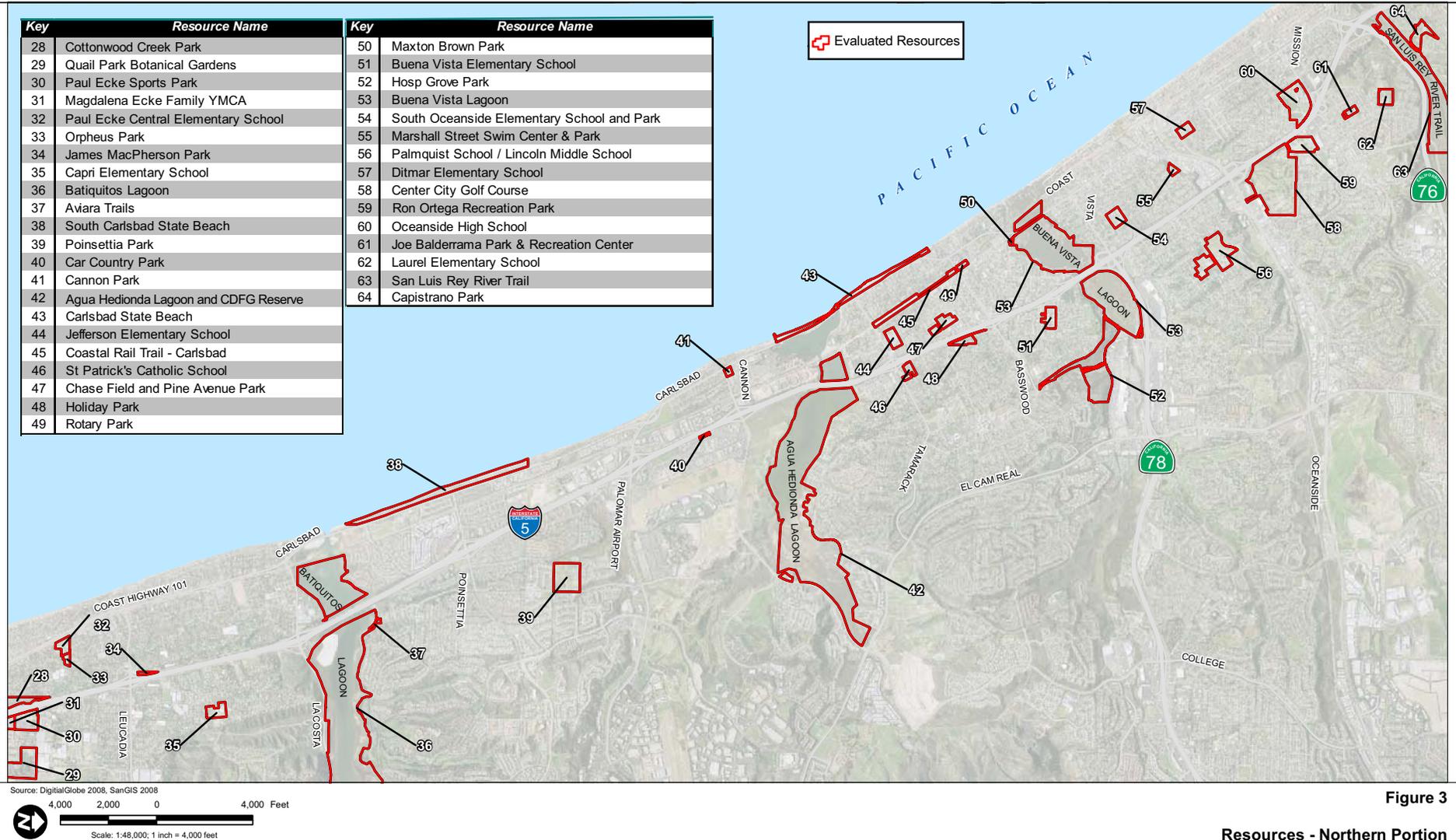


Figure 3

Resources - Northern Portion

CHAPTER 2.0 – PROJECT DESCRIPTION

Four build alternatives and one no-build alternative are under consideration for the I-5 NCC Project. These alternatives are briefly described as follows. Please refer to Chapter 2 of the Draft EIR/EIS for a detailed description of the project alternatives:

10 + 4 with Barrier Alternative

- The 10+4 with Barrier alternative would construct one High Occupancy Vehicle (HOV)/Managed Lane in each direction from Voigt Drive to just south of Manchester Avenue.
- To provide a continuous HOV lane through the I-5/I-805 junction, a freeway-to-freeway connector ramp would be constructed to connect the proposed HOV/Managed Lanes beginning at Voigt Drive to the existing HOV lanes that begin just north of the I-5/I-805 junction.
- Two HOV/Managed Lanes would be constructed in each direction from just south of Manchester Avenue to Harbor Drive/Vandegrift Boulevard.
- From Del Mar Heights Road to State Route 78 (SR-78), a concrete barrier would separate HOV/Managed Lanes from general-purpose lanes. Standard shoulder widths of 3.0 m (10 ft) would be provided on either side of the barrier.
- From Voigt Drive to Del Mar Heights Road, and from SR-78 to Harbor Drive /Vandegrift Boulevard, painted stripes of variable widths would serve as a buffer, in lieu of a barrier, separating HOV/Managed Lanes from general-purpose lanes.
- Direct Access Ramps (DAR) would provide new freeway access for HOV/Managed Lanes users at Voigt Drive, Manchester Avenue, Cannon Road and Oceanside Boulevard.
- One general-purpose lane would be constructed in each direction on I-5 from just south of Del Mar Heights Road to SR-78.
- Auxiliary lanes would be constructed at various locations.

10 + 4 with Buffer Alternative

The 10+4 with Buffer alternative would function similarly to the 10+4 with Barrier alternative but would separate HOV/Managed Lanes from general-purpose lanes with a 1.2-m (4-ft) variable buffer width in lieu of the barrier.

8 + 4 with Barrier Alternative

- The 8+4 with Barrier alternative would construct one HOV/Managed Lane in each direction from Voigt Drive to just south of Manchester Avenue.
- To provide a continuous HOV lane through the I-5/I-805 junction, a freeway-to-freeway connector ramp would be constructed to connect the proposed HOV/Managed Lanes beginning at Voigt Drive to the existing HOV lanes that begin just north of the I-5/I-805 junction.
- Two HOV/Managed Lanes would be constructed in each direction from just south of Manchester Avenue to Harbor Drive/Vandegrift Boulevard.
- From Del Mar Heights Road to State Route 78 (SR-78), a concrete barrier would separate HOV/Managed Lanes from general-purpose lanes. Standard shoulder widths of 3.0 m (10 ft) would be provided on either side of the barrier.
- From Voigt Drive to Del Mar Heights Road to Harbor Drive /Vandegrift Boulevard, painted stripes of variable widths would serve as a buffer, in lieu of a barrier, separating HOV/Managed Lanes from general-purpose lanes.

- DARs would provide new freeway access for HOV/Managed Lanes users at Voigt Drive, Manchester Avenue, Cannon Road and Oceanside Boulevard.
- Auxiliary lanes would be constructed at various locations.

No general purpose lane would be construction with the 8+4 with Barrier Alternative.

8 + 4 with Buffer Alternative

The 8+4 with Buffer alternative would function similarly to the 8+4 with Barrier alternative but would separate HOV/Managed Lanes from general-purpose lanes with a 1.2-m (4-ft) variable buffer width in lieu of the barrier.

Coordination

This project has been developed in coordination with various federal, state, regional and local agencies. FHWA is the lead agency for the National Environmental Policy Act (NEPA) and the California Department of Transportation (Caltrans) is the lead agency for the California Environmental Quality Act (CEQA). In support of the Draft EIR/EIS, these proposed *de minimis* determinations were prepared in consultation with the agencies having jurisdiction over the resources and centered on a.) significance of the property, b.) primary purpose of the land, c.) proposed use and impacts, and d.) proposed measures to avoid and/or minimize harm (refer to *Chapter 5: Comments and Coordination* for more details).



CHAPTER 3.0 –DISCUSSION OF PROPERTIES

To create a comprehensive list of resources that could potentially be subject to analysis under Section 4(f), Google Earth aeriels, field reviews were conducted to identify potential resources. The list was cross-checked with the General Plan Recreation Elements and parks and recreation websites of the cities in which the resources are located. All potential Section 4(f) resources within one-half mile of the NCC Project corridor are tabulated below. This chapter discusses parks, recreational facilities, wildlife refuges and historic properties found within or adjacent to the project area for 1) public ownership, 2) public access, 3) eligible historic properties, 4) permanent use of the resource and analysis of the use, and 5) analysis of proximity impacts.

From this analysis, the following list was developed. The locations of each property are shown in Figures 2 and 3. After assembly of this list, the properties were researched to determine if they met the criteria for eligibility as Section 4(f) properties. The remaining properties were inspected to confirm their location with respect to the proposed project and to inventory the attributes of each property. In certain cases the actual property was found to be outside the half-mile limit of the study area. Therefore, the properties outside the half-mile limit of the study area were deleted from the analysis.

Table 1. Potential Section 4(f) Resources and Distance from I-5 NCC Project

Map ID	Resource	City	Dist (km) to I-5	Dist (mi) to I-5
1	UCSD Park	San Diego	0.16	0.10
2	Los Peñasquitos Canyon Reserve Trail	San Diego	0.02	0.01
3	Los Peñasquitos Canyon Preserve	San Diego	0.61	0.38
4	Torrey Hills School	San Diego	0.40	0.25
5	Torrey Hills Neighborhood Park	San Diego	0.65	0.40
6	Torrey Pines State Reserve	San Diego	0.27	0.17
7	Del Mar Heights Elementary School	San Diego	0.58	0.36
8	Del Mar Hills Academy of Arts and Sciences	San Diego	0.39	0.24
9	Solana Highlands Elementary School & Park	San Diego	0.35	0.22
10	San Dieguito River Park	San Diego	0.00	0.00
11	Surf and Turf Recreation Park (aka Del Mar Golf Center)	San Diego	0.02	0.01
12	St James Academy	San Diego	0.08	0.05
13	La Colonia Park	Solana Beach	0.34	0.21
14	Santa Fe Christian School	Solana Beach	0.19	0.12
15	Earl Warren Middle School	Solana Beach	0.55	0.34
16	Skyline Elementary School	Solana Beach	0.29	0.18
17	Solana Vista Elementary School	Solana Beach	0.53	0.33
18	San Elijo Lagoon County Park and Ecological Reserve	Solana Beach & Encinitas	0.00	0.00
19	Glen Park	Encinitas	0.60	0.37
20	George Berkich Park	Encinitas	0.77	0.48
21	Cardiff Sports Park	Encinitas	0.71	0.44
22	Hall Property Community Park	Encinitas	0.00	0.00
23	Ada Harris Elementary School & Park	Encinitas	0.23	0.14
24	San Dieguito High School	Encinitas	0.45	0.28

Map ID	Resource	City	Dist (km) to I-5	Dist (mi) to I-5
25	Mildred MacPherson Park	Encinitas	0.64	0.40
26	San Dieguito United Methodist Pre-school	Encinitas	0.18	0.11
27	Encinitas Viewpoint Park	Encinitas	0.31	0.19
28	Cottonwood Creek Park	Encinitas	0.76	0.47
29	Quail Park Botanical Gardens	Encinitas	0.48	0.30
30	Paul Ecke Sports Park	Encinitas	0.00	0.00
31	Magdalena Ecke Family YMCA	Encinitas	0.04	0.03
32	Paul Ecke Central Elementary School	Encinitas	0.60	0.37
33	Orpheus Park	Encinitas	0.39	0.24
34	James MacPherson Park	Encinitas	0.01	0.01
35	Capri Elementary School	Encinitas	0.61	0.38
36	Batiquitos Lagoon	Carlsbad	0.00	0.00
37	Aviara Trails	Carlsbad	0.24	0.15
38	South Carlsbad State Beach	Carlsbad	0.53	0.33
39	Poinsettia Park	Carlsbad	0.56	0.35
40	Car Country Park	Carlsbad	0.01	0.01
41	Cannon Park	Carlsbad	0.56	0.35
42	Agua Hedionda Lagoon and CDFG Reserve	Carlsbad	0.00	0.00
43	Carlsbad State Beach	Carlsbad	0.64	0.40
44	Jefferson Elementary School	Carlsbad	0.51	0.32
45	Coastal Rail Trail - Carlsbad	Carlsbad	0.03	0.02
46	St Patrick's Catholic School	Carlsbad	0.16	0.10
47	Chase Field and Pine Avenue Park	Carlsbad	0.11	0.07
48	Holiday Park	Carlsbad	0.00	0.00
49	Rotary Park	Carlsbad	0.77	0.48
50	Maxton Brown Park	Carlsbad	0.71	0.44
51	Buena Vista Elementary School	Carlsbad	0.10	0.06
52	Hosp Grove Park	Carlsbad	0.61	0.38
53	Buena Vista Lagoon	Carlsbad & Oceanside	0.00	0.00
54	South Oceanside Elementary School and Park	Oceanside	0.27	0.17
55	Marshall Street Swim Center and Park	Oceanside	0.40	0.25
56	Palmquist School / Lincoln Middle School	Oceanside	0.48	0.30
57	Ditmar Elementary School	Oceanside	0.72	0.45
58	Center City Golf Course	Oceanside	0.00	0.00
59	Ron Ortega Recreation Park	Oceanside	0.03	0.02
60	Oceanside High School	Oceanside	0.05	0.03
61	Joe Balderrama Park & Center	Oceanside	0.24	0.15
62	Laurel Elementary School	Oceanside	0.69	0.43
63	San Luis Rey River Trail	Oceanside	0.00	0.00
64	Capistrano Park	Oceanside	0.34	0.21



3.1 RESOURCES NOT PROTECTED BY SECTION 4(f)

The properties in Table 2 are not subject to the provisions of Section 4(f) because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, and/or 4) the project does not permanently use the property and does not hinder the preservation of the property.

Table 2. Resources Not Protected by Section 4(f) and Type

Map ID	Resource	City	Type	Notes
11	Surf and Turf Recreation Park (Del Mar Golf Center)	San Diego	golf and tennis	private
12	St James Academy	San Diego	playground and fields	private
14	Santa Fe Christian School	Solana Beach	playground and fields	private
26	San Dieguito United Methodist Pre-school	Encinitas	playground and fields	private
29	Quail Park Botanical Gardens	Encinitas	gardens	private
31	Magdalena Ecke family YMCA	Encinitas	gym, pool, skate park, and indoor soccer fields	private
32	Paul Ecke Central Elementary School	Encinitas	playground and fields	closed to the public
34	James MacPherson Park	Encinitas	park	no access
35	Capri Elementary School	Encinitas	playground and fields	closed to the public
44	Jefferson Elementary School	Carlsbad	playground and fields	closed to the public
46	St Patrick's Catholic School	Carlsbad	playground and fields	private
62	Laurel Elementary School	Oceanside	playground and fields	closed to the public

3.2 SECTION 4(f) RESOURCES EVALUATED FOR PROXIMITY IMPACTS

All public and publicly accessed parks, recreational facilities, and wildlife refuges within approximately 0.8 km (0.5 mi) of any of the project alternatives have been identified and inspected. The attributes contributing to the Section 4(f) resources listed in Table 3 below have been inventoried and the effects of the project upon these attributes evaluated. It is not expected that the proposed project would result in a constructive use due the project's proximity to these resources. Each of these Section 4(f) resources is described briefly below.

Table 3. Section 4(f) Resources and Type

Map ID	Resource	City	Type
1	UCSD Park	San Diego	community park
2	Los Peñasquitos Canyon Reserve Trail	San Diego	trail
3	Los Peñasquitos Canyon Preserve	San Diego	open space
4	Torrey Hills School	San Diego	sports fields
5	Torrey Hills Neighborhood Park	San Diego	community park
6	Torrey Pines State Reserve	San Diego	open space
7	Del Mar Heights Elementary School	San Diego	playground and fields
8	Del Mar Hills Academy of Arts and Sciences	San Diego	playground and fields
9	Solana Highlands Elementary School & Park	San Diego	community park
13	La Colonia Park	Solana Beach	community park
15	Earl Warren Middle School	Solana Beach	playground and fields
16	Skyline Elementary School	Solana Beach	playground and fields
17	Solana Vista Elementary School	Solana Beach	playground and fields
19	Glen Park	Encinitas	community park
20	George Berkich Park	Encinitas	community park
21	Cardiff Sports Park	Encinitas	sports fields
22	Hall Property Community Park	Encinitas	community park
23	Ada Harris Elementary School & Park	Encinitas	community park
24	San Dieguito High School	Encinitas	sports fields
25	Mildred MacPherson Park	Encinitas	community park
27	Encinitas Viewpoint Park	Encinitas	community park
28	Cottonwood Creek Park	Encinitas	community park
33	Orpheus Park	Encinitas	community park
36	Batiquitos Lagoon	Carlsbad	open space
37	Aviara Trails	Carlsbad	trail
38	South Carlsbad State Beach	Carlsbad	beach, open space
39	Poinsettia Park	Carlsbad	community park
40	Car Country Park	Carlsbad	community park
41	Cannon Park	Carlsbad	community park
43	Carlsbad State Beach	Carlsbad	beach, open space
45	Coastal Rail Trail - Carlsbad	Carlsbad	trail
47	Chase Field and Pine Avenue Park	Carlsbad	sports fields and community park
48	Holiday Park	Carlsbad	community park
49	Rotary Park	Carlsbad	community park
50	Maxton Brown Park	Carlsbad	passive recreation
51	Buena Vista Elementary School	Carlsbad	playground and fields
53	Hosp Grove Park	Carlsbad	community park

Map ID	Resource	City	Type
54	Buena Vista Lagoon	Carlsbad & Oceanside	open space
55	South Oceanside Elementary School and Park	Oceanside	community park
56	Marshall Street Swim Center and Park	Oceanside	community park
57	Palmquist School / Lincoln Middle School	Oceanside	playground and fields
58	Ditmar Elementary School	Oceanside	playground and fields
60	Ron Ortega Recreation Park	Oceanside	sports fields
61	Oceanside High School	Oceanside	sports fields
62	Joe Balderrama Park & Center	Oceanside	community park
64	San Luis Rey River Trail	Oceanside	trail / bike path
65	Capistrano Park	Oceanside	community park

UCSD Park

This park, owned by the University of California San Diego (UCSD), is located on the University campus, approximately 0.16 km (0.10 mi) west of I-5. It is accessible by vehicular traffic along Canyon View Road and by pedestrians from the UCSD campus. There is no dedicated parking for the park, although parking is available in pay lots nearby. There are three other parks within two miles of the park. This park is approximately 125 ha (309 ac) in size and is divided into three types of natural reserves: ecological reserve, grove reserve, and restoration lands as identified in the 1989 Long range Development Plan for UCSD. Ecological Reserve areas are biologically sensitive and no buildings, roads or driveways are permitted. Grove Reserve includes the eucalyptus stands that are distributed throughout the campus. Restoration Lands are areas that have been disturbed by erosion, invasive vegetation, and past military use, but could be restored to enhance biological value. The park's natural features include canyons, steep slopes, native vegetation, and hiking trails that are open to the public. The park's status as publicly owned qualifies UCSD Park as a resource subject to Section 4(f) protection. There would be no use (as defined by Section 4(f)) of any portion of park, and public access would not change as the I-5 NCC Project would not impact Canyon View Road or the UCSD campus. The topography of the area prevents direct views of the proposed project, and there are other campus facilities between the park's trails and I-5. The topography also acts as a natural barrier from freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use of UCSD Park because the proximity of the project would not impair the protected activities, features, or attributes of the park.

Los Peñasquitos Canyon Preserve and Trail

Los Peñasquitos Canyon Preserve is an open space park, including a system of trails, jointly owned and administered by the City and County of San Diego, and accessible on the south side of Sorrento Valley Boulevard, approximately 1.6 km (1.0 mi) east of Vista Sorrento Parkway. The Preserve is located approximately 0.61 km (0.38 mi) from I-5; however, a hiking trail extends westward beyond the Preserve boundary to Vista Sorrento Parkway. The preserve is approximately 1,619 ha (4,000 ac) of Peñasquitos and Lopez canyons and is characterized by steep slopes, riparian stream corridors, flat mesa tops, and grassy hillsides. It hosts a diverse collection of flora and fauna. The preserve allows biking and hiking on designated trails. The preserve and trail's status as a publicly owned open space park makes Los Peñasquitos Canyon Preserve and Trail a resource subject to Section 4(f) protection. There would be no

use of any of the trails by the proposed project, nor would the project impact any of the access points to the Preserve. Scenic views from the trails would not be substantially impaired, as the canyon topography obscures most views of I-5. This topography also acts as a natural sound barrier. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions, and there would be no change in drainage patterns for the area. Therefore, the proposed project is not expected to cause a use of Los Peñasquitos Canyon Preserve because the proximity of the project would not impair the protected activities, features, or attributes of the preserve.

Torrey Hills School

Torrey Hills School is a public elementary school in the Del Mar Union School District, located approximately 0.40 km (0.25 mi) east of I-5. It is accessible via Calle Mar de Mariposa. The playground and sports field include three backstops, four unlighted basketball courts, eight handball courts, and three tot lots. These facilities are open to the public and publicly owned and are therefore protected under Section 4(f). There would be no use of the resource by the proposed project, and access to the school would not change as the proposed project would not impact Calle Mar de Mariposa. There are several blocks of development between the school and the proposed project, which act as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not substantially impair the protected activities, features, or attributes of the school.

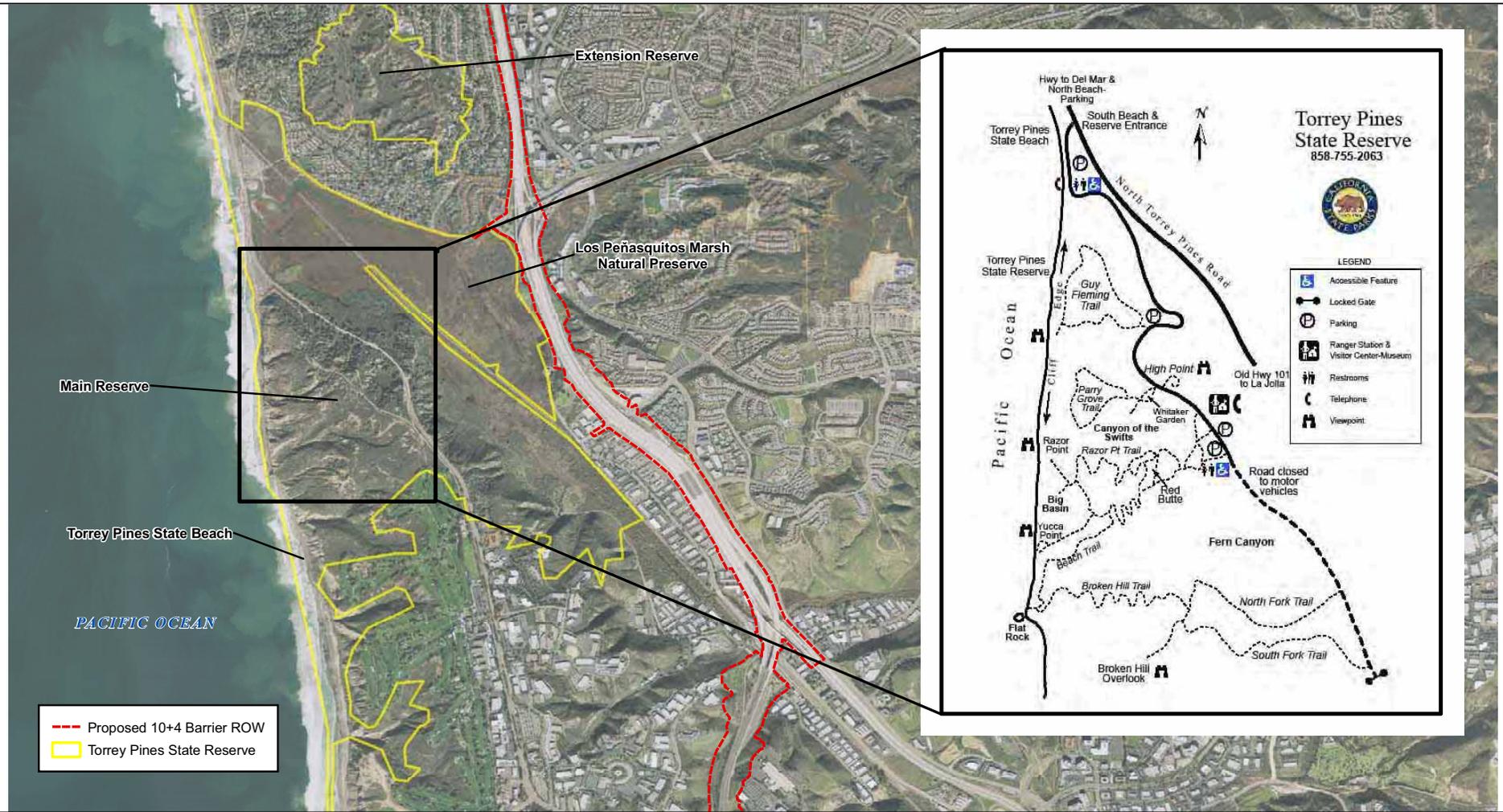
Torrey Hills Neighborhood Park

Torrey Hills Neighborhood Park is a 6.07 ha (15.0 ac) public park, located approximately 0.65 km (0.40 mi) east of I-5. It is accessible from Calle Mar de Mariposa. Facilities at the park include two lighted baseball fields, one large multipurpose field, one unlighted basketball court, picnic tables, and one tot lot. Public access and ownership makes Torrey Hills Neighborhood Park a resource subject to Section 4(f) protection. None of the proposed project alternatives would require a use of any portion of the park. Access to the park would not change as the project would not impact Calle Mar de Mariposa. The topography acts as a natural barrier from freeway noise. Vegetation, views, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the park.

Torrey Pines State Reserve

Torrey Pines State Reserve is located in the northwest corner of the City of San Diego. The Reserve is managed by the California Department of Parks and Recreation. The Reserve, as shown in Figure 4, is 809 ha (2,000 ac) of land surrounded by the Pacific Ocean to the west, the City of Del Mar to the north, the community of La Jolla to the south, and I-5 to the east. The Reserve consists of several components, including the Main Reserve, an Extension Reserve, Los Peñasquitos Marsh Natural Preserve, and Torrey Pines State Beach. The Main Reserve and Los Peñasquitos Lagoon are the portions of the Reserve located closest to the proposed project.

The Reserve includes a Visitor Center located at 12600 North Torrey Pines Road, and approximately 12.1 km (7.5 mi) of hiking trails, 8.9 km (5.5 mi) of which are located within the Main Reserve. Public ownership and use of the park and trails within the Main Reserve is provided at the main park entrance off of Camino Del Mar along Torrey Pines Park Road. Four developed viewpoints are located within the trail network (see Figure 4 insert). The Reserve offers a variety of programs for the public and volunteers ranging from interactive presentations and guided tours to trail maintenance. The Reserve is open daily from 8:00 a.m. until sunset. The visitor center opens daily at 9:00 a.m.



Source: DigitalGlobe 2008; SanGIS 2009; Caltrans 2006; California State Parks 2006

2,500 1,250 0 2,500 Feet

Scale: 1:30,000; 1 inch = 2,500 feet

Figure 4
Torrey Pine State Reserve

The mouth of Los Peñasquitos Lagoon is located at the northern end of the main reserve. Los Peñasquitos Lagoon is encompassed by the Los Peñasquitos Marsh Natural Preserve and is one of the last salt marsh areas and waterfowl refuges remaining in southern California. Los Peñasquitos Lagoon is home to several rare and endangered species of birds and serves as a stopping and nesting place for many migratory birds.

There would be no Section 4(f) use of the Reserve by the proposed project. All improvements associated with the proposed project near the Reserve, including Los Peñasquitos Lagoon, would take place within the existing Caltrans right-of-way. Access would not change as the proposed project would not impact North Torrey Pines Road or Torrey Pines Park Road. The proposed project is visible from the Reserve. Most of the developed viewpoints (see Figure 4 insert) are westerly toward the Pacific Ocean. However, views from the park toward the proposed project would not be affected since the I-5 freeway is visible in the existing condition and improvements to I-5 associated with the proposed project would not substantially alter existing views. Freeway noise in the Reserve is inaudible due to topography and the distance to I-5. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use of the Reserve because the proximity of the project would not substantially impair the protected activities, features, or attributes of the reserve.

Del Mar Heights Elementary School

Del Mar Heights Elementary School is a public elementary school in the Del Mar Union School District, located approximately 0.58 km (0.36 mi) west of I-5 on the top of the slope. It is accessible to vehicular traffic on Boquita Drive off of Del Mar Heights Road. The playground and sports fields at the school include one unlighted basketball court, two unlighted baseball fields, one handball court, and two tot lots. These facilities are open to the public on afternoons and weekends. Public access and ownership qualify these campus facilities as a resource afforded protection under Section 4(f). There would be no use of the school by the proposed project, and access would not be changed as there would be no impact to Del Mar Heights Road in this area. Visual impacts remain consistent with existing views. Noise measurements taken at adjacent receptors indicate existing noise levels between 64 decibels (dBA) and 69 dBA, which is above the 67 dBA Noise Abatement Criteria (NAC) for Category B receptors, which include residences, recreational areas, picnic areas, playgrounds, active sport areas, parks, motels/hotels, schools, churches, libraries, and hospitals. For more information on the fundamentals of noise, please refer to Chapter 3.15 in the Draft EIR/EIS. The future with no-build would increase the dBA by one. A soundwall at that location was found to be unreasonable. Since, increases in noise less than 3 dBA are generally not perceptible by the human ear, noise levels would remain consistent the existing conditions. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use of the school because the proximity of the project would not impair the protected activities, features, or attributes of the school.

Del Mar Hills Academy of Arts and Sciences

Del Mar Hills Academy is a public elementary school in the Del Mar Union School District, located approximately 0.39 km (0.24 mi) west of I-5, and accessible by vehicular traffic along Mango Drive off of Del Mar Heights Road. The playground and sports field includes two unlighted basketball courts, one asphalt volleyball court, one unlighted baseball field, three tot lots, and a YMCA Boys and Girls Club building. These facilities are open to the public on afternoons and weekends. Public access and ownership qualify these campus facilities as a resource afforded protection under Section 4(f). There would be no use of the resource by the proposed project, and access would not be changed as there would be no impact to Del Mar Heights Road in this area. Noise measurements taken at three receptors on the recreational facilities on the campus indicate existing noise levels between 64 decibels (dBA) and 69 dBA, which is

above the 67 dBA Noise Abatement Criteria (NAC) for Category B receptors, which include residences, recreational areas, picnic areas, playgrounds, active sport areas, parks, motels/hotels, schools, churches, libraries, and hospitals. For more information on the fundamentals of noise, please refer to Chapter 3.15 in the Draft EIR/EIS. The future with no-build would increase the dBA by one. A soundwall at that location was found to be unreasonable. Since, increases in noise less than 3 dBA are generally not perceptible by the human ear, noise levels would remain consistent the existing conditions. Views of the project from the Academy are very limited and would remain consistent with existing views. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use of Del Mar Hills Academy because the proximity of the project would not impair the protected activities, features, or attributes of the Academy.

Solana Highlands Elementary School and Park

Solana Highlands Elementary is a public elementary school in the Solana Beach School District, located approximately 0.35 km (0.22 mi) east of I-5, accessible from Long Run Drive off of High Bluff Drive. Solana Highlands Park is a community park adjacent to the elementary school with two unlighted baseball fields, two unlighted basketball courts and two unlighted half-court basketball courts, two handball courts, and two tot lots. These facilities are open to the public on afternoons and weekends. Public access and ownership qualify these campus facilities as a resource afforded protection under Section 4(f). There would be no use of the resource property by the proposed project, and access would not be changed as there would be no impact to Long Run Drive or High Bluff Drive in this area. Views of the project from the school and park are very limited as there are five blocks of development between the school, park and the proposed project, which also act as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the school and park.

La Colonia Park

La Colonia Park is a 0.73-ha (1.79-ac) community park located 0.34 km (0.21 mi) west of I-5 in the Eden Gardens community of Solana Beach. It is accessible from Stevens Avenue. Facilities at the park include one half-court basketball court, one tot lot, a large grass area for active and passive uses, and a picnic area with barbecues and picnic tables. Public ownership and access qualify La Colonia Park as a resource subject to Section 4(f) protection. There would be no use of the park by the proposed project, and access to the school would not change as the project would not impact Stevens Avenue. Views of the project to the freeway are very limited as there is development between the park and the proposed project, which acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the school and park.

Earl Warren Middle School

Earl Warren Middle School is a public school in the San Dieguito Union High School District, located approximately 0.55 km (0.34 mi) west of I-5, accessible from Stevens Avenue off of Lomas Santa Fe Drive. The playground and sports fields include three unlighted basketball courts, two unlighted half-court basketball courts, four backstops, four volleyball nets, and pull-up bars. These facilities are open to the public when school is not in session. They are often rented out to sports leagues on weekends. Public ownership and access qualify these campus facilities as a resource afforded protection under Section 4(f). There would be no use of the resource by the proposed project. Access to the school would not change as the project would not impact Stevens Avenue or Lomas Santa Fe Drive in this area. Views of the project

from the school are very limited as there is development between the school and the proposed project, which also acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the school.

Skyline Elementary School

Skyline Elementary is a public school in the Solana Beach School District, located approximately 0.29 km (0.18 mi) west of I-5, accessible from Lomas Santa Fe Drive. The playground and sports fields include two unlighted basketball courts, three unlighted half-court basketball courts, three handball courts, two back stops, and two tot lots. These facilities are open to the public on afternoons and weekends. This public ownership and access qualify these campus facilities as a resource afforded protection under Section 4(f). There would be no physical use of the facilities by the proposed project, and access to the school would not change as the project would not impact Lomas Santa Fe Drive in this area. Views of the project from the school are very limited as there are several blocks of development, including retail and dining establishments, between the school and the proposed project, which also act as a sound barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the school.

Solana Vista Elementary School

Solana Vista Elementary is a public school in the Solana Beach School District, located approximately 0.53 km (0.33 mi) east of I-5, accessible from Santa Victoria. The playground and sports field include one unlighted basketball court, one unlighted half-court basketball court, two handball courts, and one tot lot. These facilities are open to the public on afternoons and weekends. This public ownership and access qualify these campus facilities as a resource afforded protection under Section 4(f). There would be no use of the school by the proposed project, as access to the school would not change and there are no impacts to Santa Victoria. Views of the project from the school would be very limited as there are five blocks of development between the school and the proposed project, which act as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the provisions of Section 4(f) are not triggered.

Glen Park

Glen Park is a public park owned by the City of Encinitas, located approximately 0.60 km (0.37 mi) west of I-5, accessible from Orinda Drive. The 1.82-ha (4.49-ac) park has one unlighted basketball court, one unlighted tennis court, one volleyball court, one tot lot, picnic benches, and a Scout and Youth Center. Public ownership and access make Glen Park a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project. Access to the school would not change as the project would not impact Orinda Drive. Views of the project from the park are very limited as there is housing development between the park and the project, which acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the park.

George Berkich Park

George Berkich Park is a public park owned by the Cardiff School District, adjacent to Cardiff Elementary School, located approximately 0.77 km (0.48 mi) west of I-5. It is accessible from Montgomery Avenue. The 1.8 ha (4.5 ac) park has one unlighted basketball court and two additional basketball hoops, one unlighted

baseball field, one tot lot, and a picnic area with benches. Public ownership and access make George Berkich Park a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project, and access to the park would not change as the project would not impact Montgomery Avenue. Views of the project from the park are obstructed by several blocks of development and natural topography, which acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the park.

Cardiff Sports Park

Cardiff Sports Park is a public park owned by the City of Encinitas located approximately 0.71 km (0.44 mi) east of I-5. It is accessible from Lake Drive. The 3.7 ha (9.2 ac) has four lighted baseball fields. Public ownership and access make Cardiff Sports Park a resource subject to Section 4(f) protection. There would be no use of the park by the proposed project, and access to the park would not change as the project would not impact Lake Drive. Views of the project from the park are obstructed by eight blocks of development and natural topography, which also act as a barrier to freeway noise, vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the park.

Hall Property Community Park

Hall Property Community Park along the I-5 right-of-way is a park planned for construction by the City of Encinitas. The Hall Property Community Park Final Environmental Impact Report (EIR) was certified by the City in 2008 (EDAW 2008). The City of Encinitas purchased the approximately 18-ha (44-ac) site for park development in May 2001. The Park plan includes a mixture of active and passive uses. Active uses would include softball/baseball fields, a basketball court, multiuse turf fields, a teen center, a dog park, an amphitheatre, a skate park, and possibly an aquatic facility. Passive uses would include gardens, picnic areas, trails, and a scenic overlook (Figure 5).

The City coordinated with Caltrans on the park design to ensure that implementation of the proposed project would not require a 4(f) use of lands planned for the park. In the Hall Property Community Park Final Program EIR, the City has agreed to an easement dedication of land that would provide the right-of-way needed to improve I-5, therefore the provisions of 4(f) are not triggered (23 CFR § 774.11[i]).

Park access would not change as the project would not impact Somerte Avenue or Warwick Avenue. The proposed project is visible from the park. However, views from the park toward the proposed project would not be affected since the I-5 freeway is visible in the existing condition and improvements to I-5 associated with the project would not substantially alter existing views. It is not known at this time if the proposed project would increase noise levels in the park. At this time, the City of Encinitas has not finalized details of the park design, and therefore grading plans are not available. Caltrans would, however, continue to coordinate with the City, and once final grading and landscape plans are available, noise measurements would be taken to determine if noise levels in the park exceed the NAC for Category B receptors. If noise levels exceed the NAC, then noise abatement would be considered for areas of frequent human-use that would benefit from a noise reduction. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use of Hall Property Community Park because the proximity impacts would not substantially impair the protected activities, features, or attributes of the park.



Source: DigitalGlobe 2008; SanGIS 2007; Caltrans 2007

750 375 0 750 Feet

Scale: 1:9,360; 1 inch = 780 feet

Figure 5
Hall Property Community Park

Ada Harris Elementary School and Park

Ada Harris School is a public elementary school in the Cardiff School District, located approximately 0.23 km (0.14 mi) east of I-5. It is accessible from Windsor Road off of Villa Cardiff Drive. Ada Harris Park is a community park contiguous to the elementary school with three unlighted basketball courts, one back stop, one soccer field, one handball court, and one tot lot. These facilities are open to the public on afternoons and weekends. This public access and ownership qualifies these campus facilities as a resource afforded projection under Section 4(f). There would be no use of the resource by the proposed project, and access to the school and park would not change as the project would not impact Windsor Road or Villa Cardiff Drive. Views of the project from the school and park are obstructed by six blocks of development and natural topography, which acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the school and park.

San Dieguito High School

San Dieguito Academy is a public school in the San Dieguito Union High School District, located approximately 0.45 km (0.28 mi) east of I-5 and accessible from Santa Fe Drive. Facilities at San Dieguito Academy include one unlighted soccer field and dirt track, one unlighted baseball field, four unlighted basketball courts, four lighted tennis courts, and pull-up bars. The sports fields are open to the public during weekday afternoons, and the tennis courts are open to the public on the weekends. Public access and ownership qualify these campus facilities as a resource afforded projection under Section 4(f). There would be no use of the school by the proposed project, and access to the school would not change. Views of the freeway from the school are obstructed by several blocks of development, which acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the school.

Mildred MacPherson Park

Mildred MacPherson Park is a public mini-park owned by the City of Encinitas, located approximately 0.64 km (0.40 mi) west of I-5. It is accessible from South Vulcan Avenue off of Santa Fe Drive. The 0.4-ha (1-ac) park includes one unlighted half-court basketball court, one tot lot, and picnic facilities. Public ownership and access make Mildred MacPherson Park a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project and access to the park would not change as the project would not impact South Vulcan Avenue or Santa Fe Drive. Views of the project from the park are obstructed by several blocks of development, which acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions.

Encinitas Viewpoint Park

Encinitas Viewpoint Park is a public neighborhood park owned by the City of Encinitas, located approximately 0.31 km (0.19 mi) west of I-5, and accessible from East D Street off of South Vulcan Avenue. The 1.1-ha (2.7-ac) park includes one tot lot, picnic facilities, and passive recreation space.

The park has specified hours for off-leash dog activity. Public ownership and access qualify the park as a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project, and access to the park would not change as the NCC Project would not impact South Vulcan Avenue or East D Street. Views of the project from the park are limited as there are several blocks of residential development between the park and the proposed project. The development also acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the

existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not substantially impair the protected activities, features, or attributes of the park.

Cottonwood Creek Park

Cottonwood Creek Park is a 3.3-ha (8.2-ac) public park owned by the City of Encinitas. The park is located approximately 0.76 km (0.47 mi) west of I-5 at the northeast corner of the Encinitas Boulevard and North Vulcan Avenue, west of the intersection of Encinitas Boulevard and I-5. Cottonwood Creek Park includes two unlighted half-court basketball courts, two lighted tennis courts, a gazebo, a climbing rock, one tot lot, and passive recreation areas, including two nature viewing areas with picnic tables. It is separated from I-5 by existing development and is not immediately adjacent to the freeway. Public ownership and access qualify Cottonwood Creek Park as a resource subject to Section 4(f) protection.

The proposed project would not use any portion of the existing park. All improvements associated with the proposed project near the existing and future portions of Cottonwood Creek Park would take place within the existing Caltrans right-of-way. Access to the park would not change as the proposed project would not impact North Vulcan Avenue or Encinitas Boulevard. Commercial development partially obscures the proposed project from Cottonwood Creek Park. However, unobscured views would not be affected since the I-5 freeway is visible in the existing condition. The view of the freeway is dominated by the view east down Encinitas Boulevard showing the bridge passing over Encinitas Boulevard. Improvements to I-5 associated with the proposed project would not dramatically alter the existing view, as they would consist primarily of the widening of the existing bridge. Commercial business, distance from the proposed project, and terrain act as barrier from freeway noise for the park. Vegetation, wildlife, air quality, and water quality would remain similar to the existing environment. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not substantially impair the protected activities, features, or attributes of the park.

Orpheus Park

Orpheus Park is a neighborhood park owned by the City of Encinitas, located approximately 0.39 km (0.24 mi) west of I-5, accessible from Orpheus Avenue. The 1.2-ha (2.9-ac) park includes one tot lot, picnic facilities, limited off-leash dog hours, and passive recreation space. Public ownership and access qualify Orpheus Park as a resource subject to Section 4(f) protection. There would be use of the resource by the proposed project, and access to the park would not change as the project would not impact Orpheus Avenue. Views of the project from the park are obscured by topography and several blocks of residential development, which act as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the park.

Batiquitos Lagoon

Batiquitos Lagoon Ecological Reserve is a wetlands preserve serving a variety of wildlife habitat on the coast between Encinitas and Carlsbad in Figure 6. It is surrounded by the Pacific Ocean to the west; steep hills to the south traversed by La Costa Avenue; gentle slopes to the north adjacent to the Aviara development and golf course; and San Marcos Creek to the east, which serves as the connection between Batiquitos Lagoon and the watershed farther east. Batiquitos Lagoon is approximately 247 ha (610 ac) in size. The lagoon's watershed includes portions of the cities of Carlsbad, San Marcos, and Encinitas. The lagoon's primary freshwater tributaries are San Marcos Creek to the east, which flows under El Camino Real, and Encinitas Creek to the south, which empties into the lagoon under La Costa Avenue.



Source: AirPhotoUSA 2006; SanGIS 2006; Caltrans 2007
1,000 500 0 1,000 Feet
Scale: 1:12,000; 1 inch = 1,000 feet

- Nature Trail
- Batiquitos Lagoon
- Batiquitos Lagoon
- Existing ROW

Figure 6
Batiquitos Lagoon

Batiquitos Lagoon is currently owned by the State of California and is preserved as a State Ecological Reserve with public access, a resource subject to Section 4(f) protection. Batiquitos Lagoon is currently managed by a number of agencies as a restoration project initiated by the Port of Los Angeles to compensate for the loss of marine resources resulting from construction of new cargo terminals in the Port of Los Angeles. The Port of Los Angeles is working with the City of Carlsbad, the California Department of Fish and Game (CDFG), the California State Lands Commission, the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS) to restore Batiquitos Lagoon. Batiquitos Lagoon includes a Nature Center, located at 7380 Gabbiano Lane, and a public hiking trail 3.2 km (2 mi) long. The public hiking trail begins at the end of Gabbiano Lane and continues almost to El Camino Real on the east end of the lagoon (see Figure 6). Public access to the trail is provided from the public parking lot near the Nature Center and four public parking lots along Batiquitos Drive (Batiquitos Lagoon Foundation 2006).

There would be no use of Batiquitos Lagoon by the proposed project. All improvements associated with the proposed project, including proposed enhancements to the existing Park and Ride lot, trails, and the nature center, would take place within the existing Caltrans right-of-way. Access would not change as the NCC Project would not impact Gabbiano Lane or Batiquitos Drive. The proposed project is visible from Batiquitos Lagoon. Views from the park toward the proposed project would not be substantially affected as the freeway is visible in the existing condition and improvements to I-5 associated with the proposed project would occur within the right-of-way and would not dramatically alter the existing view.

Existing noise levels at Batiquitos Lagoon are estimated to be between 62 and 64 dBA. Modeling indicates the proposed project would result in a noise increase of approximately 2 to 4 dBA, with maximum sound levels estimated at 68 dBA. Vegetation would remain similar to the existing conditions. Wildlife in the area include gnatcatchers on the north shore in east and west basins near the Caltrans right-of-way. They gnatcatchers fly in and out of Caltrans right-of-way all along the east basin. Also in the east basin is an island near the Caltrans right-of-way where Least Terns nest. There is no single standard or threshold for determining adverse noise effects on bird species, however, and studies that have identified noise effects for other bird species have not been scientifically proven to affect the species found at Batiquitos Lagoon. Furthermore, existing noise in excess of 70 dBA occurs over various wetland and upland habitats along the I-5 NCC Project corridor where bird populations exist.

In addition, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use of Batiquitos Lagoon because the proximity impacts would not substantially impair the protected activities, features, or attributes of the lagoon.

Aviara Trails

The Lagoon Trail of the Aviara Trails system is 3.4 km (2.1 mi) in length and parallels the Batiquitos Lagoon's north shore. It is located approximately 0.24 km (0.15 mi) east of I-5 and is accessible to the public from Gabbiano Lane. The trail's status as a publicly owned recreation area makes the Aviara Trails a resource subject to Section 4(f) protection. There would be no use of the trail by the proposed project. Access to the trail could include trail improvements extending the trail into Caltrans right-of-way if maintenance agreements are reached. Otherwise there is no change to public streets as the project would not impact Gabbiano Lane. The proposed project is visible from the Lagoon Trail. Views from the trail toward the proposed project would not be substantially affected since the I-5 freeway is visible in the existing condition. Improvements to I-5 associated with the proposed project would not dramatically alter the existing view. Vegetation, wildlife, air quality, and water quality would remain similar to the existing

conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not substantially impair the protected activities, features, or attributes of the trails.

South Carlsbad State Beach

South Carlsbad State Beach is a 4.8-km (3-mi) stretch of beach, located approximately 0.53 km (0.33 mi) west of I-5. It is accessible from Carlsbad Boulevard. The beach is open to the public for swimming, surfing, fishing, picnicking, and camping. Public ownership qualifies South Carlsbad State Beach as a resource subject to Section 4(f) protection. There would be no use of the beach by the proposed project. Access to the beach would not change as the NCC Project would not impact Carlsbad Boulevard. The proposed project has limited views from the beach due to topography and development located, including a power plant, between the beach and the proposed project. Unobscured views from the beach towards the proposed project would not be substantially altered since I-5 is visible in the existing conditions. The improvements to I-5 associated with the proposed project would not dramatically alter existing views. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not substantially impair the protected activities, features, or attributes of South Carlsbad State Beach.

Poinsettia Park

Poinsettia Park is a 17-ha (42-ac) public park, located approximately 0.56 km (0.35 mi) east of I-5, and accessible to the public from Hidden Valley Road. Facilities at the park include three lighted baseball fields, ten lighted tennis courts, two lighted basketball courts, one lighted soccer field, picnic tables, and one tot lot. Public ownership and access qualify Poinsettia Park a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project. Access to the park would not change as the project would not impact Hidden Valley Road. Views of the project from Poinsettia Park are limited as there is development between the park and the freeway, which acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the park.

Car Country Park

Car Country Park, owned by the City of Carlsbad, is a small 0.42-ha (1.03-ac) passive recreation area along Paseo Del Norte. The park is located immediately adjacent to I-5, and situated between several car dealerships to the north and south. The park contains land areas, a picnic table, landscaping, and a meandering sidewalk. No other facilities are located at the park. Public ownership and access qualify Car Country Park as a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project. Access to the park would not change as the project would not impact Paseo Del Norte. The proposed project is visible from Car Country Park, as there are no barriers between the park and I-5. However, views from the park toward the proposed project would not be substantially affected since the I-5 freeway is visible in the existing condition and improvements to I-5 associated with the proposed project would not dramatically alter the existing view. Existing noise levels are estimated at approximately 75 dBA. Future noise levels with the proposed project are anticipated to increase between 3 to 5 dBA at this location, which would likely be perceptible to the healthy human ear. However, the estimated increase in noise due to the project would not likely deter people who might otherwise decide to visit the park. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not substantially impair the protected activities, features, or attributes of the park.

Cannon Park

Cannon Park is a 1-ha (2.4-ac) public park, located approximately 0.56 km (0.35 mi) west of I-5, accessible from Cannon Road and Carlsbad Boulevard. The park has one basketball court, one volleyball court, one backstop, picnic tables, and a tot lot area. Public ownership and access qualify Cannon Park as a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project, and access to the park would not change as the project would not impact Cannon Road or Carlsbad Boulevard. Views from the park toward the proposed project would remain unchanged since existing views are obstructed by topography, residential and commercial development, as well as by the Encina Power Plant. This development also acts as a barrier from freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the park.

Carlsbad State Beach

Carlsbad State Beach is a 2.3-km (1.4-mi) stretch of State-owned beach, located approximately 0.64 km (0.40 mi) west of I-5 and accessed along Carlsbad Boulevard. The beach is open to the public for swimming, surfing, fishing, scuba diving, sunbathing, and other beach-related activities. Public ownership and access qualify Carlsbad State Beach as a resource subject to Section 4(f) protection. There would be no use of the beach by the proposed project. Access to the beach would not change as the project would not impact Tamarack Avenue. The proposed project cannot be viewed from the beach as there are many blocks of development, including the Encina Power Plant, between the beach and the proposed project. Freeway noise is inaudible from the beach due to distance from I-5, wave action from the ocean, and existing development and topography. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not impair the protected activities, features, or attributes of the beach.

Coastal Rail Trail – Carlsbad

The Coastal Rail Trail in Carlsbad is a 1.9-km (1.2-mi) stretch of trail, located approximately 0.54 km (0.33 mi) west of I-5, accessible from Tamarack Avenue and Oak Avenue. Activities on the trail include walking/jogging and biking. Public ownership and access qualify the Coastal Rail Trail as a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project, and access to the trail would not change as the project would not impact Tamarack Avenue or Oak Avenue. The proposed project cannot be viewed from the trail as there are several blocks of residential and commercial development between the park and the proposed project, which acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not substantially impair the protected activities, features, or attributes of the trail.

Chase Field

Chase Field is a 1.1-ha (2.7-ac) playing field located approximately 0.11 km (0.07 mi) west of I-5. It is accessible from Harding Street off of Carlsbad Village Drive. Facilities include three lighted baseball fields and a snack bar. The field's status as a publicly owned park with public access qualifies the field as a resource subject to Section 4(f) protection. There would be no use of the field by the proposed project, and access to the field would not change as the project would not impact Harding Street or Carlsbad Village Drive in this area. Views from the field toward the freeway are obscured by two blocks of development, which also act as a barrier to freeway. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because

the proximity of the project would not substantially impair the protected activities, features, or attributes of Chase Field.

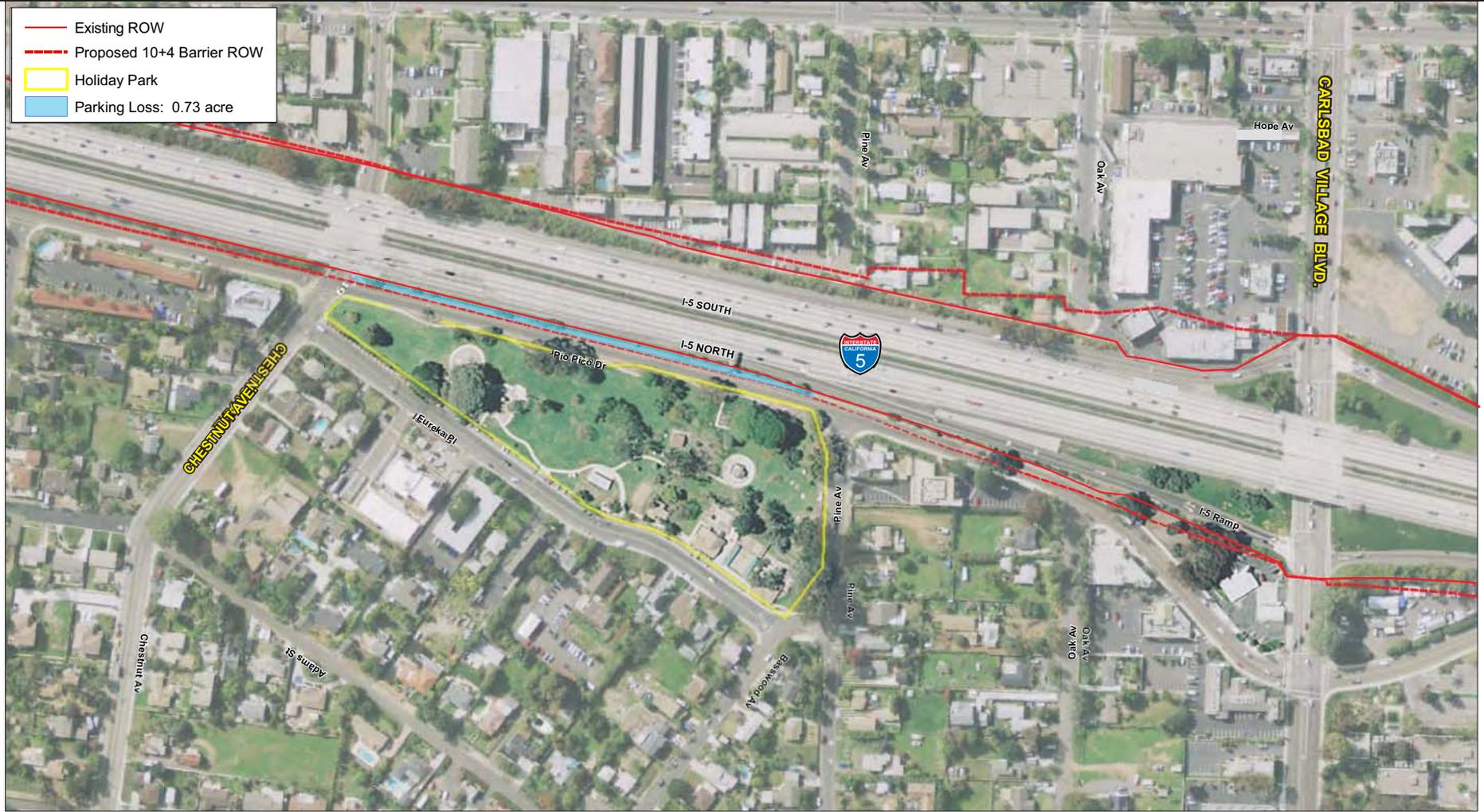
Pine Avenue Community Park

The Pine Avenue Community Park is a 3.1-ha (7.7-ac) park adjacent to Chase Field, located approximately 0.18 km (0.11 mi) west of I-5 and accessible from Harding Street off of Carlsbad Village Drive. Facilities at Pine Avenue Park include a lighted soccer field, a lighted baseball field, two half-court basketball courts, picnic tables, and a tot lot area. Public ownership and access qualify the park as a resource subject to Section 4(f) protection. There would be no use of the park by the proposed project, and access to the park would not change as the project would not impact Harding Street or Carlsbad Village Drive in this area. Views of the project from the park are obscured by two blocks of development, which also act as a barrier to freeway. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity of the project would not substantially impair the protected activities, features, or attributes of the park.

Holiday Park

Holiday Park is a 2.4-ha (5.9-ac) public park, owned by the City of Carlsbad, located on the corner of Chestnut Avenue and Pio Pico Drive (Figure 7). Holiday Park features horseshoe pits, a picnic area, a tot lot play area, restrooms, and large shade trees. There would be no use of Holiday Park by the proposed project. However, implementation of the 10+4 with Barrier Alternative would require the use of a 0.3-ha (0.73-ac) strip of the existing Pio Pico Drive. The location of this right-of-way use is shown in Figure 7. Currently, parking is allowed on the east side of Pio Pico Drive. The loss of this existing street right-of-way would stretch approximately 244 m (800 ft) along Pio Pico Drive and displace on-street parking. Based on an assumption of one parking space equaling 6.1 m (20 ft), the loss of 244 m (800 ft) of available parking would result in a loss of 40 available parking spaces. Three small parking lots exist at the park itself with approximately 30 parking spaces each, resulting in a net total of approximately 90 parking spaces. Five of these parking spaces are reserved for handicapped parking. Street parking is allowed on the majority of the streets surrounding the park. Field reconnaissance at the park was conducted on two separate occasions to determine if parking was constrained in the existing condition. One site visit was conducted on a summer evening during the workweek when it was expected that the majority of residents surrounding the park were home. Another was conducted on a Saturday afternoon in the summer when it can be expected that the park would have a large number of patrons. During both visits, it was observed that the parking lots adjacent to the park were approximately half full; fewer than 10 cars were observed along Pio Pico Drive itself, and the majority of the street parking surrounding the park was vacant. Consequently, the loss of parking along Pio Pico Drive would not substantially reduce parking available for Holiday Park. Access patterns would change slightly with the loss of on-street parking along Pio Pico Drive, but adequate parking would remain available in the immediate vicinity.

Existing views of the freeway atop a low embankment would be replaced by a retaining wall, topped by a proposed soundwall. Although the wall would alter views to the west, this would not affect activities at the park. Additionally, noise levels would actually be reduced slightly with construction of the soundwall. The retaining/soundwall would be between 3.6-7.6 m (12-15 ft) in height and feature architectural detailing (see I-5 NCC Draft EIR/EIS, Figures 3-7.66 through 37.69). Landscaping would also be provided at the base of the wall. If, during final design, it is found that conditions have substantially changed, noise abatement may not be necessary at some locations. The final decision of the noise abatement would be made upon completion of the project design and the public involvement processes. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project would not cause a



Source: EDAW 2007; DigitalGlobe 2008; SanGIS 2009
200 100 0 200 Feet
Scale: 1:2,400; 1 inch = 200 feet

Figure 7
Holiday Park

constructive use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the park.

Rotary Park

Rotary Park is a 0.3-ha (0.8-ac) public park, located approximately 0.77 km (0.48 mi) west of I-5. It is accessible from Grand Avenue and Carlsbad Village Drive. The park has a gazebo and benches. Public ownership and access qualify Rotary Park a resource subject to Section 4(f) protection. There would be no use of the park by the proposed project, and access to the park would not change as the project would not impact Grand Avenue or Carlsbad Village Drive in this area. Views of the project from the park would be obscured by ten blocks of development, including retail and restaurants. This development also act as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the park.

Maxton Brown Park

Maxton Brown Park is a 0.4-ha (1.0-ac) public park located approximately 0.71 km (0.44 mi) west of I-5. It is accessible from Laguna Drive and State Street off of Carlsbad Boulevard. The park includes picnic tables and barbecue facilities. Public ownership and access qualify Maxton Brown Park a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project. Access to the park would not change as the project would not impact Laguna Drive, State Street, or Carlsbad Boulevard. Views of the project from the park are obscured by several blocks of development, which act as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the park.

Buena Vista Elementary School

Buena Vista Elementary is a public school in the Carlsbad Unified School District, located approximately 0.10 km (0.06 mi) east of I-5, accessible from Buena Vista Way off of Pio Pico Drive. Facilities at Buena Vista Elementary include three basketball courts, one volleyball court, and two handball courts. These facilities are open to the public on afternoons and weekends. This public access and ownership qualify these school facilities as a resource afforded protection under Section 4(f). There would be no use of the school by the proposed project, and access to the school would not change as the project would not impact Buena Vista Way or Pio Pico Drive in this area. Views of the project from the school are limited, as there are three blocks of development between the school and the proposed project. Improvements to I-5 associated with the proposed project would not dramatically alter existing views. The proposed project would reduce freeway noise below existing levels with the construction of the proposed soundwall. The wall height would be 3.0 m (10ft) and the length is 132 m (433 ft). If, during final design, it is found that conditions have substantially changed, noise abatement may not be necessary at some locations. The final decision of the noise abatement would be made upon completion of the project design and the public involvement processes. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the park.

Hosp Grove Park

Hosp Grove Park is a public park owned by the City of Carlsbad, located approximately 0.61 km (0.38 mi) east of I-5 at the corner of Jefferson Street and Monroe Street, near Buena Vista Lagoon. Facilities at the 26.32-ha (65.03-ac) park include picnic tables, a tot lot, and a 2.4-km (1.5-mi) walking trail. The remainder of the park is a eucalyptus grove. Public ownership and access qualify Hosp Grove Park as a resource subject to Section 4(f) protection. There would be no use of the park by the proposed project, and access to the park would not change as the project would not impact Jefferson Street or Monroe Street. The proposed project is visible from Hosp Grove Park. However, views to and from the park toward the proposed project would not be affected since the I-5 freeway is visible in the existing conditions, and improvements to I-5 associated with the proposed project would not dramatically alter the existing views. Commercial business, distance from the proposed project, and terrain act as barrier from freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the park.

Buena Vista Lagoon

Buena Vista Lagoon is an approximately 142-ha (350-ac) freshwater lagoon that is managed as an ecological preserve by the CDFG. The Buena Vista Lagoon Foundation, a nonprofit organization, advocates lagoon conservation and restoration marsh and wetlands areas. Buena Vista Lagoon, as shown in Figure 8, is located between the Cities of Oceanside and Carlsbad and is bordered by the Pacific Ocean in the west; urban development, SR-78, and Jefferson Street to the east; and urban development to north and south. The Buena Vista Lagoon Foundation, a nonprofit organization, advocates lagoon conservation and restoration.

The Nature Center at 2202 South Coast Highway in Oceanside operated by Buena Vista Audubon Society. Fishing and passive recreation such as picnicking are permitted at the lagoon. The Nature Center staff provides guided nature walks. The lagoon's status as publicly owned ecological preserve and recreation area makes the Buena Vista Lagoon subject to Section 4(f) protection.

There would be no use of Buena Vista Lagoon by the proposed project. All improvements associated with the proposed project near Buena Vista Lagoon would take place within the existing Caltrans right-of-way. The proposed project is visible from Buena Vista Lagoon. However, views from the lagoon toward the proposed project would not be substantially changed since the I-5 freeway is visible in the existing. Existing noise levels at Buena Vista Lagoon were measured at 53 dBA at one receptor and 63 dBA at two other receptors. Noise modeling found that noise at the lagoon resulting from operation of the proposed project would increase by no more than 2 dBA for all three receptors. This increase in noise would not substantially impair Buena Vista Lagoon's ability to function as an ecological preserve. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use of Buena Vista Lagoon because the proximity impacts would not substantially impair the protected activities, features, or attributes of the lagoon.

South Oceanside Elementary School and Park

South Oceanside Elementary is a public elementary school in the Oceanside Unified School District, located approximately 0.27 km (0.17 mi) west of I-5. It is accessible from South Home Street off of Cassidy Street. South Oceanside Park is a community park adjacent to the elementary school with one baseball field and one additional backstop, three basketball courts, two tennis courts, and one tot lot. Public ownership and access qualify South Oceanside Park as a resource subject to Section 4(f) protection. There would be no use of the resource property by the proposed project, and access to the



Source: DigitalGlobe 2008; SanGIS 2009; Caltrans 2007; California Fish and Game South Coast Region 2006



Figure 8
Buena Vista Lagoon

school would not change as the project would not impact South Horne Street or Cassidy Street. Views of the project from the school are limited, as there is development between the school and the proposed project. This development also acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the school and park.

Marshall Street Swim Center and Park

Marshall Street Swim Center is an indoor public pool located approximately 0.40 km (0.25 mi) west of I-5. It is accessible at the end of Marshall Street, off of California Street. The adjacent park has a playground and passive recreation space with open grass areas and picnic benches. Public ownership and access qualify Marshall Street Swim Center and Park as a resource subject to Section 4(f) protection. Access to the swim center and park would not change as the project would not impact Marshall Street or California Street. Views of the project from the property are limited, due to topography and development between the Swim Center/Park and the proposed project. This topography and development also acts as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of this property.

Palmquist School and Lincoln Middle School

Palmquist Elementary is a public school in the Oceanside Unified School District, located approximately 0.48 km (0.30 mi) east of I-5. It is accessible from California Street. Adjacent to Palmquist is Lincoln Middle School, also part of the Oceanside Unified School District and accessible from California Street. The playground and sports field include eight unlighted basketball courts, seven backstops, a cinder track, four volleyball nets, playground equipment, and approximately 4.0 ha (10 ac) of grass. These facilities are open to the public on afternoons and weekends. This public access and ownership qualifies these campus facilities as resources afforded protection under Section 4(f). There would be no use of the resource by the proposed project, and access to the schools would not change as the project would not impact California Street. Views of the project from the schools are obscured by several blocks of development which also act as a barrier to any freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of these schools.

Ditmar Elementary School

Ditmar Elementary is a public school in the Oceanside Unified School District, located approximately 0.72 km (0.45 mi) west of I-5, accessible from Ditmar Street off of Oceanside Boulevard. The sports fields and playground are open to the public on afternoons and weekends. This public access and ownership qualifies these campus facilities as a resource afforded protection under Section 4(f). There would be no use of the school by the proposed project. Access to the school would not change as the project would not impact Ditmar Street or Oceanside Boulevard in this area. Views of the project from the school is obscured by a canyon and approximately ten blocks of development, which also act as a barrier to any freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the school.

Ron Ortega Recreation Park

Ron Ortega Recreation Park is a 4.9-ha (12-ac) community park, located approximately 0.03 km (0.02 mi) east of I-5, accessible from Brooks and Maxson Streets off of Mission Avenue. The park includes two lighted baseball fields, two tot lots, a picnic area, and a snack bar that are open to the public. Public ownership and access make Ron Ortega Recreation Park a resource subject to Section 4(f) protection. There would be no use of the park by the proposed project, and access to the park would not change as the project would not impact Brooks or Maxson Streets or Mission Avenue in this area. Views of the project from the park are very limited due to grade separation and existing development between the park and proposed project. A soundwall is proposed at this location and would reduce future project noise levels to below existing levels. The wall height is 3.7 m (12 ft) and 4.3 m (14 ft), while the length is 258 m (845 ft). If, during final design, it is found that conditions have substantially changed, noise abatement may not be necessary at some locations. The final decision of the noise abatement would be made upon completion of the project design and the public involvement processes. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the park.

Oceanside High School

Oceanside High School is a public high school in the Oceanside Unified School District, located approximately 0.05 km (0.03 mi) west of I-5, with fields parallel to southbound I-5. It is accessible from Mission Avenue, and from South Horne Street off of Mission Avenue. Facilities at the high school include eight outdoor basketball courts, and a lighted football field and track. These facilities are open to the public on afternoons and weekends. This public access and ownership qualify these campus facilities as a resource afforded protection under Section 4(f). There is no direct use of the school property by the proposed project. The school access off Mission Avenue would be modified slightly as a result of the proposed improvements to the I-5/Mission Avenue interchange, but these modifications would not eliminate any existing turn movements into and out of the school, and pedestrian accessibility would be improved. Measurements taken at the school's athletic fields, which is a Category B activity for noise protocol that exceeds the 67 dBA recommend with existing noise levels that range between 69 and 75 dBA. The project is predicted to increase noise levels at this location by approximately 1 to 2 dBA (refer to Section 3.15 *Noise*). However, increases in noise less than 3 dBA are generally not perceptible by the human ear. A soundwall was considered feasible, but not reasonable. Therefore a noise barrier was not recommended. Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. The proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the school.

Joe Balderrama Park and Recreation Center

The Joe Balderrama Park and Recreation Center is a 1.2-ha (3-ac) complex located approximately 0.24 km (0.15 mi) east of I-5. It is accessible from San Diego Street off of Mission Avenue. The park includes one lighted basketball court, two lighted tennis courts, two handball courts, two tot lots, an indoor recreation area, and picnic areas. Additionally, the Cesar Chavez Resource Center is located on-site, which is a 1,115-m² (12,000-ft²) facility with multipurpose meeting rooms. Both the park and center are open to the public. Public ownership and access qualify the Joe Balderrama Park and Recreation Center a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project, and access to the park and center would not change as the project would not impact San Diego Street or Mission Avenue in this area. Views of the proposed project would be obscured by several blocks of residential and commercial development, which act as a barrier to freeway noise.

Vegetation, wildlife, air quality, and water quality would remain similar to the existing conditions. Therefore, the proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of these facilities.

Capistrano Park

Capistrano Park is a 5.7-ha (14-ac) community park located approximately 0.34 km (0.21 mi) east of I-5 and accessible from Capistrano Drive. The park includes one lighted baseball field, one unlighted baseball field, two lighted tennis courts, one unlighted basketball court, one tot lot, and picnic tables. Public ownership and access qualify Capistrano Park a resource subject to Section 4(f) protection. There would be no use of the resource by the proposed project, and access to the park would not change as the project would not impact Capistrano Drive. Views of the proposed project from the park are limited by topography and several blocks of development, which also act as a barrier to freeway noise. Vegetation, wildlife, air quality, and water quality would remain similar to the existing environment. Therefore, the proposed project is not expected to cause a use because the proximity impacts would not substantially impair the protected activities, features, or attributes of the park.

CHAPTER 4.0 – SECTION 4(f) RESOURCES PROPOSED FOR *DE MINIMIS* FINDING

SAFETEA-LU Section 6009(a) amends existing Section 4(f) legislation to allow the USDOT to determine that certain uses of a Section 4(f) land would have no adverse effect on the protected resource. Such *de minimis* impacts on publicly owned parks; recreational areas of national, state or local significance; wildlife or waterfowl refuges; or lands from a historic site of national, state or local significance are defined as those that do not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f) (49 USC 303[d]; 23 USC 138[d]). When FHWA proposes to make a *de minimis* impact finding, it must provide an opportunity for public comment on the proposed finding (currently this is included in the public comment period for the *I-5 NCC Project Draft EIR/EIS*). In addition, the official(s) with jurisdiction over the Section 4(f) resource in question must: a) with regard to historic properties, concur, in writing, with FHWA's proposed finding of 'no adverse effect' or 'no historic properties affected' in accordance with 36 CFR part 800; or b) in the case of parks, recreation areas, and wildlife and waterfowl refuges, concur in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. (23 CFR § 774.5[b]). To comply with Section 6009(a), FHWA and Caltrans are coordinating with the SHPO, who has jurisdiction over the two historic Built Environment 4(f) resources, and informed them that the proposed project's use of the 4(f) resource is being considered for a *de minimis* finding. Two of these historic properties would not be adversely affected.

The following discussion examines instances where the I-5 NCC Project would use a portion of resources eligible for protection under Section 4(f), including five park properties and two historic resources. In each instance the amount of land to be used at each resource is quantified. In instances where different build alternatives would result in differing levels of use of the Section 4(f) property, these differences are quantified. The extent to which the proposed project would adversely affect activities, features, or attributes of the Section 4(f) resource are examined using the 10+4 Barrier first, since it has the largest footprint.

4.1 SAN DIEGUITO RIVER PARK

The San Dieguito River Park (SDRP) encompasses approximately 35,612 ha (88,000 ac) of land, stretching from the mouth of San Dieguito Lagoon east along the San Dieguito River to Ironside Spring on Volcan Mountain, just north of Julian. The San Dieguito River Park is a Joint Powers Authority (JPA). The term "Joint Powers Authority" (JPA) means that some public agencies have agreed to jointly share certain powers, such as the power to manage and acquire land. The SDRP is administered by the San Dieguito River Valley Regional Open Space Park JPA, who is working to create a regional open space greenway and park system by preserving and restoring land along the length of the San Dieguito River watershed. This open space greenway and park system is planned to be integrated by a corridor of walking, equestrian, and bicycle trails that would extend from the Pacific Ocean to Volcan Mountain.

Implementation of the proposed project would have the potential to use small quantities of land in the western portion of the SDRP. As shown in Figure 9, the coastal area of the SDRP encompasses approximately 178 ha (440 ac) and is bordered by the Pacific Ocean to the west, El Camino Real to the



Source: DigitalGlobe 2008; SanGIS 2009; Caltrans 2007; San Dieguito River Park 2007

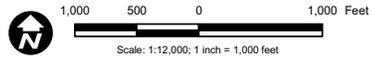
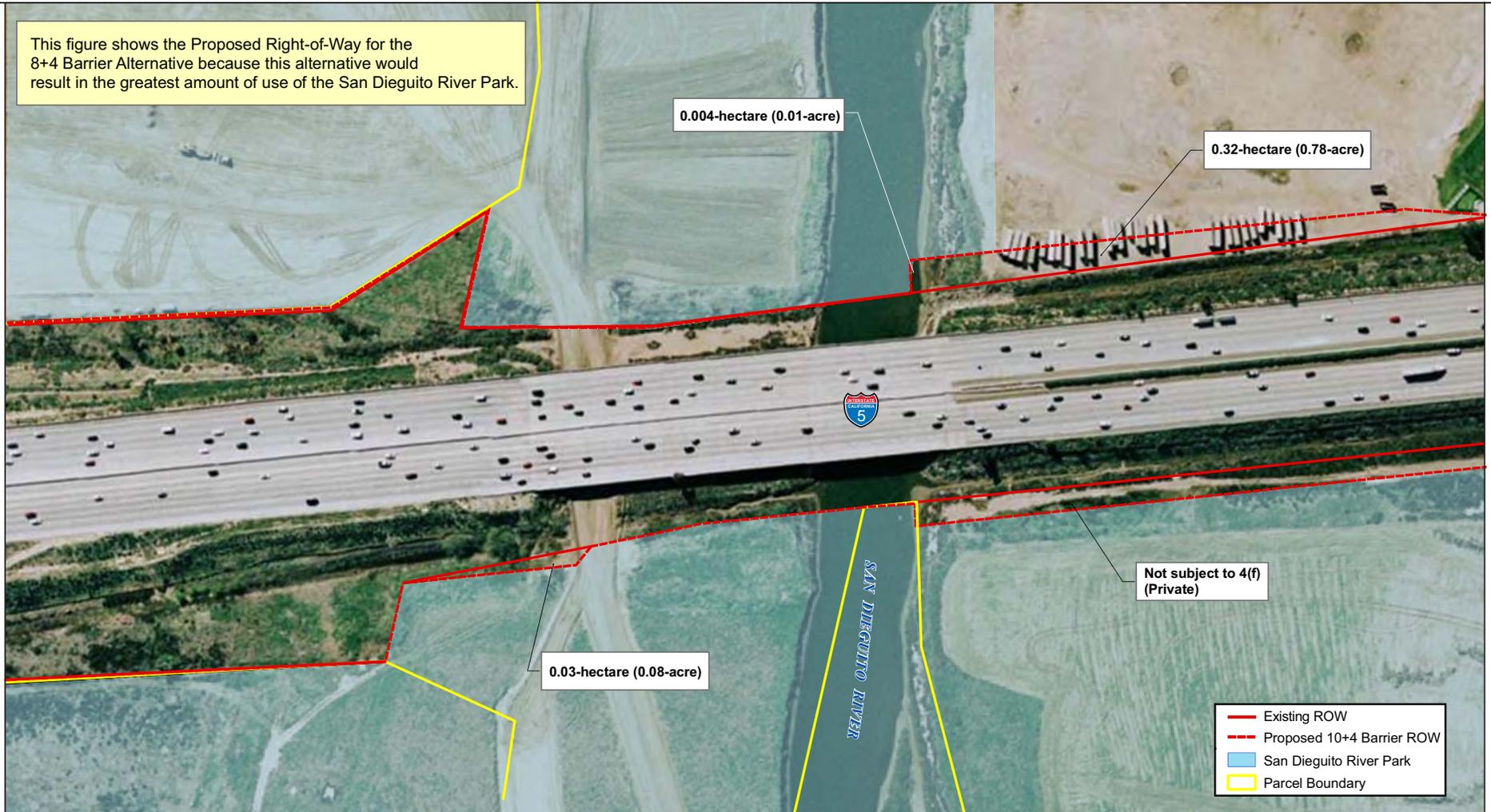


Figure 9
 Coastal Area of the San Dieguito River Park

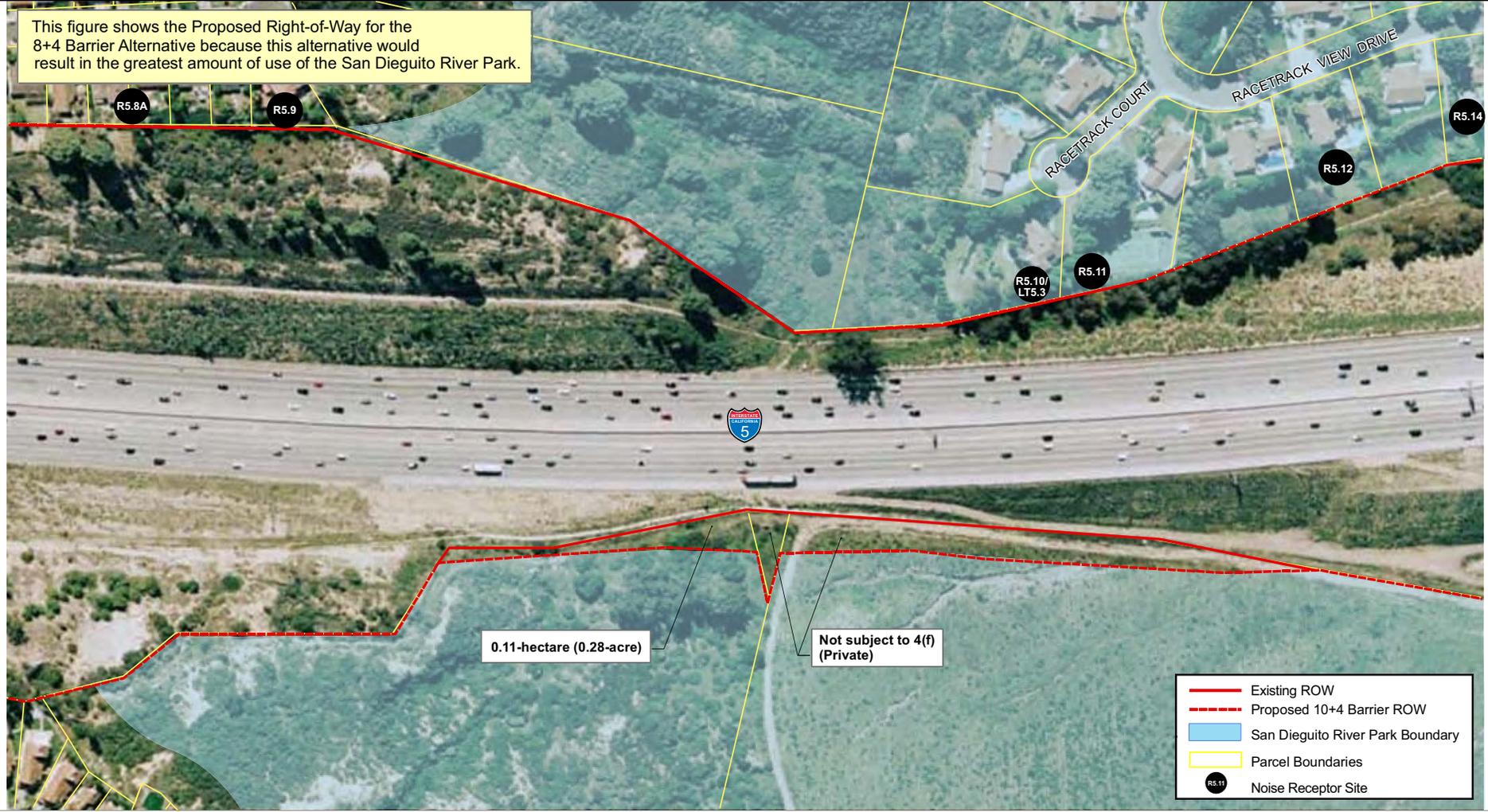


Source: DigitalGlobe 2008; SanGIS 2009; Caltrans 2007

150 75 0 150 Feet

Scale: 1:1,824; 1 inch = 152 feet

Figure 10
Impacts to the Coastal Area of the San Dieguito River Park



Source: DigitalGlobe 2008; SanGIS 2009; Caltrans 2007
 150 75 0 150 Feet
 Scale: 1:1,800; 1 inch = 150 feet

Figure 11
Impacts to the San Dieguito River Park



east, Via de la Valle to the north, and the northern edge of the Carmel Valley planning area to the south. The coastal area of the SDRP is bisected by I-5, is located entirely within the coastal zone, and is located within the incorporated boundaries of the cities of Del Mar and San Diego. The SDRP has a variety of different land owners, for the JPA: CDFG, State of California 22nd District Agricultural Association, the cities of San Diego and Del Mar, Southern California Edison (SCE), and the North County Transit District. The SCE is a privately owned utility agency and not subject to Section 4(f) provisions. The western area of the SDRP is currently managed by the JPA through implementation of the San Dieguito Wetlands Restoration Project. In addition, that was developed in collaboration with local, state, and federal agencies including the California Coastal Commission, USFWS, NMFS, CDFG, and the cities of San Diego and Del Mar. The San Dieguito Wetlands Restoration project was initiated to mitigate impacts on marine fish populations resulting from the cooling water systems of San Onofre Nuclear Generating Station Units 2 & 3.

Access to the coastal area of the SDRP for recreational uses is currently very limited. Access is currently limited to one short trail, the Riverpath Del Mar, located near the Del Mar Public Works Yard, along Jimmy Durante Boulevard. Two new trails are proposed as a part of the restoration of the coastal area of the SDRP. The Coast-to-Crest Trail would extend from west to east and cross underneath the I-5 bridge parallel to the San Dieguito River, and the Mesa Loop Trail is proposed for the southeastern portion of the SDRP. A nature center is also proposed along the Coast-to-Crest trail east of I-5. The park's status as a publicly owned open space preserve, wetlands restoration area, and regional open space greenway and park system qualify the SDRP as a resource subject to protection under Section 4(f).

4.1.1 Impacts

Implementation of each of the build alternatives of the I-5 NCC Project would result in the need to use small quantities of SDRP land. Table 4 shows the approximate area of use for the SDRP land that would be required for each alternative.

Table 4. Area of 4(f) Use of the SDRP by Alternative

SDRP Total Area	10+4 with Barrier Alternative	10+4 with Buffer Alternative	8+4 with Barrier Alternative	8+4 with Buffer Alternative
35,612 ha (88,000 ac)	0.40 ha (0.99 ac)	0.28 ha (0.69 ac)	0.36 ha (0.89 ac)	0.27 ha (0.67 ac)

10+4 with Barrier Alternative

Area of Land to Be Used

Implementation of the 10+4 with Barrier Alternative would require use of approximately 0.40 ha (0.99 ac) of SDRP land, which is less than 0.001% of the total SDRP area (Table 2). Approximately 0.15 ha (0.37 ac) of this use would occur on property owned by the State of California, while the remaining 0.25 ha (0.62 ac) would occur on property owned by the City of San Diego (Figures 11 and 12).

Facilities, Functions, and/or Activities Affected

The SDRP is being developed as a regional open space greenway and park system by preserving and restoring land along the length of the San Dieguito River watershed that would be integrated by a corridor of walking, equestrian, and bicycle trails that would extend from the Pacific Ocean to Volcan Mountain. Implementation of the 10+4 with Barrier Alternative would result in minor land uses that would not permanently affect any of the existing trails within the SDRP. The portion of the Coast-to-Crest Trail that would cross underneath I-5, within Caltrans right-of-way, would be subject to temporary closures during construction activities. No permanent use of the trail would occur.

The 10+4 with Barrier Alternative would convert small areas, together totaling 0.40 ha (0.99 ac) of undeveloped land located at the park's boundary with the existing I-5 right-of-way. These minor land uses would not impact the park, because this undeveloped land does not possess any unique features or perform any vital functions that if lost would affect the SDRP's ability to function as a 4(f) resource.

Access

No access points of the SDRP would be affected by the 10+4 with Barrier Alternative. Access to trails would not be affected by the 10+4 with Barrier Alternative. The Crest Canyon Trail within the park is accessible at Racetrack View Drive. Impacts to the future Coast-to-Crest Trail would not be considered a permanent use of Section 4(f), as described above.

Visual Quality

Implementation of the 10+4 with Barrier Alternative would not substantially alter the visual quality of the area because the proposed project entails widening the existing freeway. Currently, I-5 bisects the coastal setting of the SDRP. The 10+4 with Barrier Alternative would not affect the dominant scenic elements of the 4(f) resource, which are the river, marsh areas, and vast open scenic views compared to the impacts of the existing I-5 freeway.

Noise

Noise modeling for the I-5 NCC Project modeled future I-5 traffic volume increases based on a 10+4 future development scenario. The noise model identified the existing noise levels and projected the future noise levels at three receptors within the coastal area of the SDRP. The receptor with the loudest existing noise level was 66 dBA. This receptor also had a predicted future noise level at that location of 68 dBA, an increase of 2 dBA. This 2 dBA increase was predicted at three noise receptors within SDRP. Noise modeling indicates that similar increases would occur across the entire open lagoon area that dominates the coastal area of the SDRP, typically ranging between 2 to 3 dBA. This 2 to 3 dBA increase is not generally perceptible to the human ear.

Vegetation

The SDRP land proposed for permanent use, as defined by Section 4(f), includes several locations on the east and west sides of I-5, at the base of the berm constructed as part of the original I-5 freeway. There is one location on the west side of I-5, and vegetation where this use would occur is in the SDRP coastal area, and consists of open water (non-wetland waters of the U.S.), disturbed habitat and developed land (dirt parking lot). No sensitive species occur in this location. There are two locations on the east side of I-5 where a permanent use is proposed. Vegetation in the first location (refer to Figure 10) on the west side of the freeway is about 0.02 ha (0.05 ac) of disturbed habitat and about 0.01 ha (0.03 ac) of disturbed wetland. Vegetation on the east side of the freeway is 0.004 ha (0.01 ac) of saltmarsh and 0.32 ha (0.78 ac) disturbed habitat. The land in the western portion, is planned for wetland habitat creation by SCE as part of the SDRP restoration. The second location

(refer to Figure 11) is at the base of a hill that sits above the east side of I-5, outside the coastal area. Vegetation where this impact would occur consists of a mix of disturbed coastal sage scrub and nonnative grassland about .11 ha (0.28 ac)... Disturbed coastal sage scrub and nonnative grassland impacted by the proposed project would be mitigated with at least a 1:1 ratio via habitat restoration/creation ratios agreed upon by the resource agencies as a part of the overall mitigation plan for the proposed project. This mitigation would ensure that impacts to vegetation would not adversely affect any of the activities, features, or attributes of the SDRP that qualify the resource for protection under Section 4(f).

Wildlife

Sensitive species such as coastal California gnatcatchers and Belding's savannah sparrows currently use the habitat near the I-5 freeway and are exposed to existing noise levels up to 66 dBA. Implementation of the 10+4 with Barrier Alternative would result in a noise increase of an additional 2 to 3 dBA, and would not substantially increase the potential for noise to impact these sensitive species. As described in Section 3.21 Threatened and Endangered Species of the DEIR/EIS, there is no single standard or threshold for determining adverse noise effects on bird species. Prior studies that have indicated a possible noise effect threshold for certain species of songbirds have not been scientifically shown to be valid for the species listed above. Although a healthy human ear can barely perceive changes on the order of 3 dBA, it is unclear what level is perceptible to bird species in general, and less clear as to what is discernible to the above species. Some bird species within the lagoon and its periphery are expected to be exposed to an increase of 2 dBA, but the relative effects are likely to vary, due to the nonlinear scale in which noise is measured. An increase from 66 to 68 dBA Leq requires a relatively greater amount of acoustic energy than an increase from 56 to 58 dBA Leq. As such, the birds within the future 66 dBA Leq noise contour may be affected to a greater degree than the rest of the populations of these species.

It should be noted that under existing conditions, noise in excess of 70 dBA occurs over various wetland and upland habitats along the I-5 NCC Project corridor that either support, or have the potential to support, special status bird species. Although population numbers have undergone natural fluctuations over the years, these species continue to forage, nest, breed, and otherwise consistently occur within suitable habitat during the breeding season in areas subjected to a wide range of noise levels.

10+4 with Buffer Alternative

Implementation of the 10+4 with Buffer Alternative would require use of approximately 0.28 ha (0.69 ac) of publicly owned land, which is less than 0.001% of the total SDRP area (see Table 4). Approximately 0.15 ha (0.37 ac) of this use would occur on property owned by the State of California, while the remaining 0.13 ha (0.32 ac) would occur on property owned by the City of San Diego.

Similar to the 10+4 with Barrier Alternative, the areas proposed for use would not result in permanent impacts to any of the trails that are officially designated as a part of the SDRP, and would require a use of land that does not possess any unique features or perform any vital functions that if lost would affect the SDRP's ability to function as a 4(f) resource.

Use associated with the 10+4 with Buffer Alternative would not affect the visual quality of the SDRP because they would simply extend the Caltrans' right-of-way boundary outward slightly and ultimately

result in a view of the area adjacent to I-5 very similar to the existing condition. Noise increases associated with the 10+4 with Buffer Alternative would not generally be perceptible to the human ear. Loss of vegetation associated with the 10+4 with Buffer Alternative would be minimal due to post-project revegetation.

8+4 with Barrier Alternative

Implementation of the 8+4 with Barrier Alternative would require permanent use of 0.36 ha (.89 ac) of publicly owned land, which is less than 0.001% of the total SDRP area (Table 4). Approximately 0.31 ha (0.78 ac) of this use would occur on property owned by the State of California, while the remaining 0.05 ha (0.12 ac) would occur on property owned by the City of San Diego. The area proposed for use associated with the 8+4 with Barrier Alternative is slightly larger than that identified for the 10+4 with Barrier Alternative. However, impacts, and proposed mitigation measures would be very similar to those identified for the other alternatives.

8+4 with Buffer Alternative

Implementation of the 8+4 with Buffer Alternative would require use of approximately 0.27 ha (0.67 ac) of publicly owned land, which is less than 0.001% of the total SDRP area (Table 4). Approximately 0.15 ha (0.37 ac) of this use would occur on property owned by the State of California, while the remaining 0.12 ha (0.30 ac) would occur on property owned by the City of San Diego. Impacts and proposed mitigation associated with the 8+4 with Buffer Alternative would be similar to those identified for the other three alternatives, only they would be slightly smaller because this alternative would result in the smallest amount of use.

4.1.2 No Build Alternative

The No-Build Alternative would not require a use of any portion of the SDRP.

4.1.3 Measures to Minimize Harm

The proposed project has been designed in coordination with both state and federal resource agencies through the NEPA/404 Integration Process to minimize impacts, where possible, by reducing the amount of right-of-way and limiting the grading footprint to minimize impacts to natural resources while still meeting project objectives. Disturbed coastal sage scrub and nonnative grassland to be impacted by the proposed project would be mitigated with at least a 1:1 ratio via habitat restoration/creation ratios agreed upon by the resource agencies as a part of the overall mitigation plan for the proposed project.

4.1.4 Proposed De Minimis Finding

Implementation of the proposed project would not impede the ability of the SDRP to function as a publicly owned open regional open space park. Access to the park would not be impeded temporarily or permanently. The proposed project would not permanently interfere with existing trails, or the planned

Coast-to-Crest trail. The visual character of the park would be unchanged as the coastal area of the SDRP is already bisected by the I-5. The additional lanes constructed as part of the I-5 NCC Project would not substantially alter views. Increases in noise levels would not be noticeable to park users. Areas of natural vegetation disturbed through construction would be restored with native plant species. Wildlife, air quality, and water quality would remain similar to the existing conditions. It is not expected that the use of up to 0.46 ha (1.14 ac) of the SDRP would not adversely affect any of the activities, features, or attributes of the publicly owned open regional open space park that qualify the resource for protection under Section 4(f), and is proposed as *de minimis*.

4.2 SAN ELIJO LAGOON ECOLOGICAL RESERVE

The San Elijo Lagoon Ecological Reserve is located between the cities of Encinitas and Solana Beach and extends inland to the community of Rancho Santa Fe (Figure 12). The Reserve is bordered by the Pacific Ocean to the west, and a mix of residential and undeveloped land to the east, north, and south. The entire Reserve is approximately 404 ha (1,000 ac) in size. It is primarily a shallow-water estuary fed by a 199-km² (77-mi²) watershed with two main tributaries, Escondido Creek and Orilla Creek, and is divided into basins by Highway 101, the railway, and I-5. It contains a diverse habitat with six plant communities including coastal strand, salt marsh, freshwater marsh, riparian scrub, coastal sage scrub, and mixed chaparral. The habitat supports a variety of plant and wildlife species.

The Reserve is owned by the State of California to the west of I-5 and by the County of San Diego to the east of I-5. The County of San Diego and CDFG have an agreement to operate both the eastern and western basins of San Elijo Lagoon as a State Ecological Reserve under the administration of the County of San Diego Department of Parks and Recreation. The boundary of the Reserve is contiguous with Caltrans right-of-way where I-5 bisects the two basins. The Reserve includes over 8 km (5 mi) of hiking trails open to the public (see Figure 12). These trails can be reached from the north end of Rios Avenue, Santa Carina Drive, and Santa Helena Drive on the south side of the lagoon in Solana Beach, and along El Camino Real at Orilla Creek in the community of Rancho Santa Fe at the east end. The trailheads in Solana Beach lead to hiking trails, and the trailhead at Orilla Creek is a joint hiking/equestrian facility. The joint trail system is restricted to the East Basin as the riprap slope protection under the I-5 bridge at Manchester Avenue prevents equestrian passage into the West Basin. A Nature Center, located at 2710 Manchester Avenue in Encinitas on the northwest side of the Reserve, provides county ranger offices, a parking lot, restrooms, drinking water, and a 1.6 km (1 mi) loop trail.

Visitor usage of the Reserve is estimated between 55,000 to 65,000 visitor use days per year (entry onto the Reserve is equal to one visitor use day). Visitors are primarily residents of the surrounding neighborhoods and jogging is popular along the southern trails. School field trips are held at the Nature Center. The park's status as a publicly owned ecological Reserve and recreation area qualifies the Reserve as a resource subject to protection under Section 4(f).

4.2.1 Impacts

Table 5 shows the area of approximate use for the Reserve that would be required for each alternative.

Table 5. Area of 4(f) Use for the San Elijo Lagoon Ecological Reserve by Alternative

San Elijo Lagoon Ecological Reserve Total Area	10+4 with Barrier Alternative	10+4 with Buffer Alternative	8+4 with Barrier Alternative	8+4 with Buffer Alternative
404 ha/1000 ac	0.09 ha/ 0.22 ac	0.06 ha/ 0.15 ac	0.08 ha/ 0.20 ac	0.04 ha/ 0.09 ac

10+4 with Barrier Alternative

Area of Land to Be Used

Implementation of the 10+4 with Barrier Alternative would require use of approximately 0.09 ha (0.22 ac) of Reserve land on the west side of the south end of the I-5 berm extending north into San Elijo Lagoon (which is about 0.022% of the total Reserve area (Table 5)). Approximately 0.06 ha (0.15 ac) of this use would occur on property owned by the County of San Diego, while the remaining 0.03 ha (0.07 ac) would occur on property owned by the State of California. The area proposed for permanent use associated with the 10+4 with Barrier Alternative represents the greatest area of use among the four alternatives, and is shown in Figure 13. This minor use would not impact any of the trails or other activity areas that are officially designated as a part of the Reserve or the Nature Center. Additionally, this undeveloped land does not possess any unique features or perform any vital functions that if lost would affect the Reserve ability to function as a 4(f) resource.

Access

The 10+4 with Barrier Alternative would not affect any existing means of gaining access to the Reserve. It would not impact any of the existing trailheads, which are well removed from the freeway corridor. Project construction would result in the installation of falsework that would temporarily block an area connecting the East Basin and West Basin, located under the I-5 bridge. This connection weaves through the riprap underneath the south end of the existing freeway bridge. The area is not included in Reserve trail maps and is not a permitted use of Caltrans right-of-way.

Visual Quality

Use associated with the 10+4 with Barrier Alternative would not affect the visual quality of the Reserve. The area proposed for use by the project is located in the southeastern portion of the West Basin where the Reserve borders the existing I-5 Caltrans right-of-way. The area currently consists of undeveloped land located at the base of the berm, constructed as a part of the original freeway development, and a hill that sits above I-5. The minor use would simply extend the Caltrans' right-of-way boundary outward slightly and ultimately result in a view of the area adjacent to I-5 very similar to the existing condition.

Implementation of the 10+4 with Barrier Alternative would not substantially alter the visual quality of the area because the proposed project entails widening the existing freeway. The scenic quality of the Reserve would not be affected because it is bisected by I-5 in the existing condition. The 10+4 with Barrier Alternative would not affect the dominant scenic elements of the 4(f) resource, which are the marsh areas and wide open scenic views, when compared to the views already created by the existing I-5 freeway.



Source: DigitalGlobe 2008; SanGIS 2009; County of San Diego 2005; Caltrans 2007



Figure 12
San Elijo Lagoon Ecological Reserve

Noise

Existing noise levels in the Reserve range from 60 dBA to 67 dBA. Modeling of future noise conditions indicated that the Reserve would experience a minimal (i.e., 1 dBA) increase in traffic-related noise. This 1 dBA increase would be imperceptible to park users.

Vegetation

The Reserve land used by 10+4 with Barrier Alternative is located in the southeastern portion of the West Basin where the Reserve borders the existing I-5 Caltrans' right-of-way (Figure 12). It currently consists of undeveloped land located at the base of the berm constructed as a part of the original freeway development. About 0.05 ha (0.13 ac) of vegetation in this area consists of disturbed coastal sage scrub, and several eucalyptus trees. Disturbed coastal sage scrub modified by the proposed project would be mitigated with at least a 1:1 ratio via habitat restoration/creation ratios agreed upon by the resource agencies as a part of the overall mitigation plan for the proposed project.

Wildlife

No sensitive wildlife species have been detected on the small quantity of Reserve land immediately adjacent to the I-5 NCC Project. Implementation of the 10+4 with Barrier Alternative would result in a noise increase of 1 dBA, and would not substantially increase the potential for noise to impact sensitive species. Therefore, this increase in noise would not substantially impair the Reserve's ability to function as wildlife habitat.

10+4 with Buffer Alternative

Implementation of the 10+4 with Buffer Alternative would require the use of 0.06 ha (0.15 ac) of Reserve land along the I-5 bridge abutments, which is about 0.014% of the total Reserve area (Table 5). Approximately 0.05 ha (0.12 ac) of this use would occur on property owned by the County of San Diego, while the remaining would consist of 0.01 ha (0.02 ac) of property owned by the State of California. The area of Reserve land proposed for use by the 10+4 with Buffer Alternative is considerably smaller than the 10+4 with Barrier Alternative. In all other respects its potential effects upon the Reserve as a 4(f) resource are as described above.

8+4 with Barrier Alternative

Implementation of the 8+4 with Barrier Alternative would require the use of approximately 0.08 ha (0.20 ac) of publicly owned land along the I-5 bridge abutments, which is about 0.019% of the total Reserve area (Table 5). Approximately 0.06 ha (0.15 ac) of this use would occur on property owned by the County of San Diego, while the remaining 0.02 ha (0.05 ac) would occur on property owned by the State of California. The area of Reserve land proposed for use by the 8+4 with Barrier Alternative is considerably smaller than the 10+4 with Barrier Alternative. In all other respects its potential effects upon the Reserve as a 4(f) resource are as described above.

8+4 with Buffer Alternative

Implementation of the 8+4 with Buffer Alternative would require the use of approximately 0.04 ha (0.09 ac) of publicly owned land along the I-5 bridge abutments, which is about 0.099% of the total Reserve area (Table 5). Approximately 0.03 ha (0.07 ac) of this use would occur on property owned by the County of San Diego, while the remaining 0.01 ha (0.02 ac) would occur on property owned by the State of California. The area of Reserve land proposed for use by the 8+4 with Buffer Alternative is considerably smaller than the 10+4 with Barrier Alternative. In all other respects its potential effects upon the Reserve as a 4(f) resource are as described above.

4.2.2 No Build Alternative

Implementation of the No-Build Alternative would not require a use of any portion of the Reserve.

4.2.3 Measures to Minimize Harm

The proposed project has been designed in coordination with the City of Encinitas, as well as state and federal resource agencies to minimize impacts, where possible, by reducing the amount of right-of-way and limiting the grading footprint to minimize impacts to natural resources. After project implementation, access to the Reserve would be enhanced by proposed trailhead improvements and the improvement of a designated trail, permitted as a secondary use within the Caltrans right-of-way, connecting the West and East basins (refer to Chapter 2). Disturbed coastal sage scrub vegetation impacted by the proposed project would be mitigated via habitat restoration/creation ratios agreed upon by the resource agencies as a part of the overall mitigation plan for the proposed project.

4.2.4 Proposed De Minimis Finding

Under any I-5 NCC Project alternative, the quantity of Reserve land proposed for use is extremely small. Access to existing trailheads and designated trails would be unaffected, and after project implementation would be enhanced. The visual character of the Reserve would not be measurably altered by the freeway widening. The very small quantity of vegetation removed would be mitigated. Increases in traffic-related noise would not be noticeable to park users and would not impair the wildlife habitat functions of the Reserve. It is not expected that use of up to 0.09 ha (0.22 ac) of Reserve land would not adversely affect any of the activities, features, or attributes of the Reserve that qualify the resource for protection under Section 4(f) and is proposed as *de minimis*.

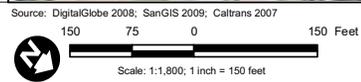
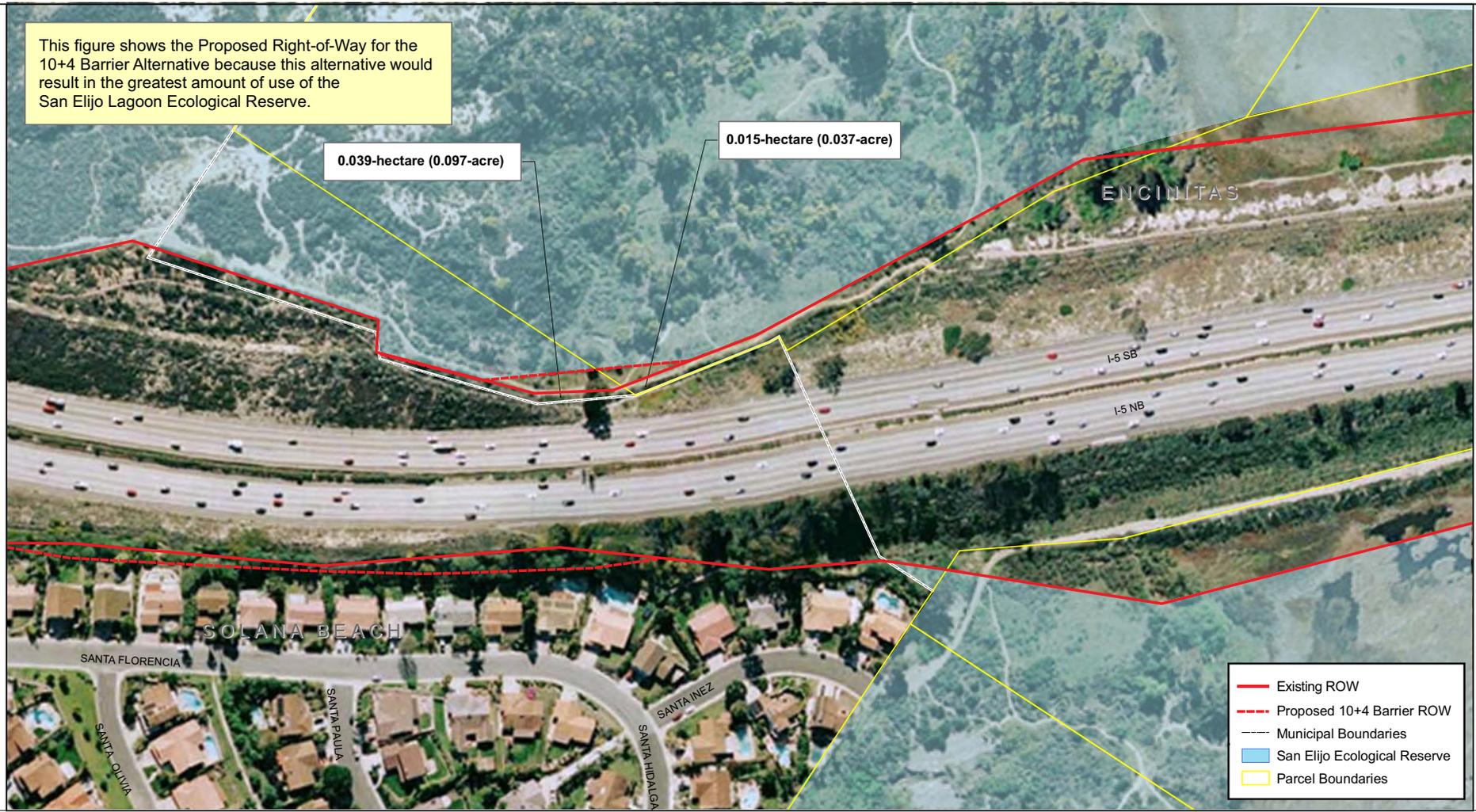


Figure 13
Impacts to the San Elijo Lagoon Ecological Reserve

4.3 PAUL ECKE SPORTS PARK/YMCA

The Paul Ecke Sports Park and YMCA, located in Encinitas, is an approximately 3.8-ha (9.3-ac) park located at 278 Saxony Road north of the intersection of Encinitas Boulevard and I-5. The Park is owned by the YMCA, which leases the park to the City of Encinitas. The Paul Ecke family donated land to the YMCA between 1968 and 1985, and dedicated the land in 1992. There is a 25-year lease agreement ending in 2014 (with option to renew for an additional 10 years), under which the park is operated by the City of Encinitas. This public use qualifies the Park as a resource subject to Section 4(f) protection. The Park consists of three lighted baseball fields. These fields are used for baseball, little league baseball, and adult softball, and the outfields are also used for soccer and flag football. The fields are used mainly for organized sports leagues, but the fields are also open to non-league uses when league play is not in action. The Park is open from 8 a.m. to 11 p.m. The western edge of the park abuts the existing Caltrans right-of-way.

4.3.1 Impacts

Table 6 shows the area of approximate use for the Park that would be required for each alternative.

Table 6. Area of 4(f) Use for Paul Ecke Sports Park by Alternative

Paul Ecke Sports Park Total Area	10+4 with Barrier Alternative	10+4 with Buffer Alternative	8+4 with Barrier Alternative	8+4 with Buffer Alternative
8.09 ha/20 ac	0.23 ha/ 0.57 ac	0.20 ha/ 0.50 ac	0.20 ha/ 0.50 ac	0.04 ha/ 0.09 ac

10+4 with Barrier Alternative

Area of Land To Be Used

Implementation of the 10+4 with Barrier Alternative would require use of approximately 0.23 ha (0.57 ac) of land operated by the City of Encinitas, which is approximately 2.8% of the total area of the Park (Table 6). The land to be used by the 10+4 with Barrier Alternative is park property but not part of the sports field but is located on the existing manufactured slope below the Park adjacent to the boundary with the existing Caltrans right-of-way (Figure 14).

Facilities, Functions, and/or Activities Affected

The use of Park land by the I-5 NCC Project build alternatives would occur on the slope below the Park adjacent to the existing Caltrans right-of-way. It would not displace any function or feature of the Park.

Access

Public access to the Park is located at 200 Saxony Road at the Park's eastern boundary. Implementation of any of the I-5 NCC Project build alternatives would not affect this access.

Noise

Two noise measurements and future predictions were conducted for the Park. Future noise modeling predicted that traffic-generated noise levels at these two receptors would increase by 2 dBA with the proposed project. This 2 dBA increase would not be perceptible to the human ear.

10+4 with Buffer Alternative

Implementation of the 10+4 with Buffer Alternative would require use of a approximately 0.20 ha (0.50 ac) of land operated by the City of Encinitas, which is approximately 2.4% of the total area of the Park (Table 6). Impacts associated with the 10+4 with Buffer alternative would be similar to those identified for the 10+4 with Barrier Alternative, only slightly smaller.

8+4 with Barrier Alternative

Implementation of the 8+4 with Barrier Alternative would require use of approximately 0.20 ha (0.50 ac) of land operated by the City of Encinitas, which is approximately 2.4% of the total area of the Park (Table 6). Impacts associated with the 8+4 with Barrier alternative would be similar to those identified for the 10+4 with Barrier Alternative, only slightly smaller.

8+4 with Buffer Alternative

Implementation of the 8+4 with Buffer Alternative would require use of approximately 0.04 ha (0.09 ac) of land operated by the City of Encinitas, which is approximately 0.49% of the total area of the Park (Table 6). Impacts associated with the 8+4 with Barrier alternative would be similar to those identified for the 10+4 with Barrier Alternative, only slightly smaller.

4.3.2 No Build Alternative

Implementation of the No-Build Alternative would not require a use of any portion of the Park.

4.3.3 Measures to Minimize Harm

The proposed project has been designed in coordination with the City of Encinitas, as well as state and federal resource agencies to minimize impacts, where possible, by reducing the amount of right-of-way and limiting the grading footprint to minimize impacts to natural resources.

4.3.4 Proposed De Minimis Finding

Implementation of any of the I-5 NCC build alternatives would not result in impacts to the park property that is usable for any of the park activities. The proposed project would not adversely affect any of the activities, features, or attributes that qualify the resource for protection under Section 4(f) and is proposed as *de minimis*.



Figure 14
Impacts to the Paul Ecke Sports Park

4.4 AGUA HEDIONDA LAGOON

Agua Hedionda Lagoon, located in Carlsbad, is an approximately 162-ha (400-ac), man-made water body that was constructed in 1954 (Busch Gardens 2006). Agua Hedionda Lagoon, as shown in Figure 15, is surrounded by the Pacific Ocean to the west, undeveloped land to the east, the Encina Power Plant to the south, and residential development to the north. Agua Hedionda Lagoon is connected to the Pacific Ocean through an inlet channel and to Agua Hedionda Creek and its tributaries in the inner lagoon.

Agua Hedionda Lagoon is owned by Cabrillo Power II, a privately owned corporation, who leases the lagoon to the City of Carlsbad to manage recreational and commercial uses. This long-term lease began in 1957, and is to be renewed every ten years. This agreement turns over operation of the lagoon to the City of Carlsbad, which makes the resource subject to Section 4(f) protection. The City of Carlsbad allows boating and water skiing on the lagoon and the YMCA operates a canoeing center. A white seabass research facility, jointly managed by Hubbs/Seaworld and CDFG, is located at the lagoon, as is a commercial mussel-growing facility. These recreational, research, and commercial activities would not be impacted during construction of the proposed project.

CDFG manages a 75-ha (186-ac) Ecological Reserve consisting of wetlands located at the eastern end of the lagoon (see Figure 15). This ecological Reserve is owned by the State of California and therefore represents a resource subject to Section 4(f) protection. However, this ecological Reserve is located approximately 914 m (3,000 ft) east of the proposed project. Implementation of the proposed project would not require use of any land within the Agua Hedionda Lagoon CDFG Reserve.

4.4.1 Impacts

Table 7 shows the area of approximate use for Agua Hedionda Lagoon that would be required for each alternative.

Table 7. Area of 4(f) Use for Agua Hedionda Lagoon by Alternative

Agua Hedionda Lagoon Total Area	10+4 with Barrier Alternative	10+4 with Buffer Alternative	8+4 with Barrier Alternative	8+4 with Buffer Alternative
75 ha/186 ac	2.0 ha/ 4.94 ac	1.40 ha/ 3.60 ac	1.80 ha/ 4.40 ac	1.06 ha/ 02.60 ac

10+4 with Barrier Alternative

Area of Land to Be Used

Implementation of the 10+4 with Barrier Alternative would require use of approximately 2.0 ha (4.94 ac) of open water and undeveloped land leased to the City of Carlsbad, which is approximately 2.6% of the total area of the Agua Hedionda Lagoon (Table 7; Figure 16).

Facilities, Functions, and/or Activities Affected

Recreation activities at Agua Hedionda Lagoon include boating, water skiing, and canoeing. Minor uses of open water and undeveloped land associated with the 10+4 with Barrier Alternative would occur at the lagoon's boundary with I-5 and would not affect any of these recreation activities at the lagoon.

These uses would also not affect the 75-ha (186-ac) CDFG Ecological Reserve, which is located approximately 914 m (3,000 ft) east of the proposed project.

Access

Public access to Agua Hedionda Lagoon is provided at Harrison Street and Bayshore Drive. Additional private access points are provided at the Carlsbad Boat Club and Bristol Cove. Implementation of the 10+4 with Barrier Alternative would not affect any of these access points.

Visual Quality

Land used by the 10+4 with Barrier Alternative would not affect the visual quality of Agua Hedionda Lagoon. The areas where land along the edge of I-5 would be used currently consist of open water and undeveloped land at the lagoon's boundary with I-5. The use and use of small amounts of City leasehold land would simply extend the Caltrans right-of-way boundary outward slightly and ultimately result in a view of the area adjacent to I-5 very similar to the existing condition.

Noise

Existing traffic noise levels adjacent to the freeway are approximately 68 to 70. Future noise levels at the Lagoon are projected to increase approximately 2 dBA over a majority of the Lagoon. This 2 dBA increase would not be perceptible to the human ear.

Vegetation

Land used by the 10+4 with Barrier Alternative is located where Agua Hedionda Lagoon borders the existing I-5 Caltrans right-of-way and currently consists of open water and undeveloped land. Vegetation in this area consists of eel grass at 0.04 ha (0.10 ac), and 1.9 ha (4.84 ac) disturbed coastal sage scrub, coastal sage scrub, nonnative woodland, ornamental, and disturbed habitat. Vegetation to be modified by the proposed project would be mitigated with at least a 1.2:1 ratio for eel grass, 1:1 ratio for disturbed coastal sage scrub, and 2:1 ratio for coastal sage scrub and sensitive upland habitats via habitat restoration/creation ratios agreed upon by the resource agencies as part of the overall mitigation plan for the proposed project.

Wildlife

The majority of Agua Hedionda Lagoon, including the area that would be used by the 10+4 with Barrier Alternative, is managed by the City as a recreation area and does not serve as an ecological reserve or any other type of wildlife preserve. No special status bird species were observed within the I-5 study area around Agua Hedionda Lagoon. The only portion of the lagoon reserved for wildlife is the 75-ha (186-ac) CDFG Ecological Reserve in the eastern portion of the lagoon. Land use associated with the 10+4 with Barrier Alternative would not affect the CDFG Ecological Reserve. Additionally, the increase in traffic noise levels that would result with the proposed project would not substantially increase the potential for noise to impact sensitive species.

10+4 with Buffer Alternative

Implementation of the 10+4 with Barrier Alternative would require use of approximately 1.40 ha (3.50 ac) of open water and undeveloped land leased to the City of Carlsbad, which is approximately 01.86% of the total area of Agua Hedionda Lagoon (Table 7). Similar to the 10+4 with Barrier Alternative, these minor land uses would not permanently affect any recreation activities at the lagoon. In all other respects, the impacts of this alternative would be identical to those discussed above.



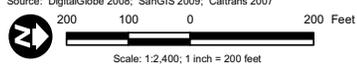
Source: DigitalGlobe 2008; SanGIS 2009; Caltrans 2007
 750 375 0 750 Feet
 Scale: 1:9,000; 1 inch = 750 feet

Figure 15
Agua Hedionda Lagoon

This figure shows the Proposed Right-of-Way for the 10+4 Barrier Alternative because this alternative would result in the greatest amount of use of the Agua Hedionda Lagoon.



Source: DigitalGlobe 2008; SanGIS 2009; Caltrans 2007



200 100 0 200 Feet
Scale: 1:2,400; 1 inch = 200 feet

Figure 16
Impacts to Agua Hedionda Lagoon

8+4 with Barrier Alternative

Implementation of the 8+4 with Barrier Alternative would require use of approximately 1.80 ha (4.40 ac) of open water and undeveloped land leased to the City of Carlsbad, which is approximately 2.4% of the total area of Agua Hedionda Lagoon (Table 7). Similar to the 10+4 with Barrier Alternative, these minor land uses would not permanently affect any recreation activities at the lagoon. In all other respects, the impacts of this alternative would be identical to those discussed above 8+4 with Buffer Alternative.

8+4 with Buffer Alternative

Implementation of the 8+4 with Buffer Alternative would require use of approximately 1.06 ha (2.60 ac) of open water and undeveloped land leased to the City of Carlsbad, which is approximately 0.141% of the total area of Agua Hedionda Lagoon (Table 7). Similar to the 10+4 with Barrier Alternative, these minor land uses would not permanently affect any recreation activities at the lagoon. In all other respects, the impacts of this alternative would be identical to those discussed above.

4.4.2 No Build Alternative

The No-Build Alternative would not require a use of any portion of Agua Hedionda Lagoon.

4.4.3 Measures to Minimize Harm

The proposed project has been designed in coordination with both state and federal resource agencies through the NEPA/404 Integration Process to minimize impacts, where possible, by reducing the amount of right-of-way and limiting the grading footprint to minimize impacts to natural resources. Coastal sage scrub and disturbed coastal sage scrub to be impacted by the proposed project would be mitigated via habitat restoration/creation at ratios agreed upon by the resource agencies as a part of the overall mitigation plan for the proposed project.

4.3.4 Proposed De Minimis Finding

Implementation of the proposed project would not impede the ability of the lagoon to recreation of boating, water skiing, and canoeing. Nor would it affect the 75-ha (186-ac) CDFG Ecological Reserve. Public and private access to the lagoon would not be affected. The proposed project would not interfere with existing trails, or planned trails. The visual character of the lagoon would be unchanged; the use and use of small amounts of City leasehold land would simply extend the Caltrans right-of-way boundary outward slightly and ultimately result in a view of the area adjacent to I-5 very similar to the existing condition. Increases in noise levels would not be noticeable to lagoon users. Areas of natural vegetation disturbed through construction would be restored with native plant species. It is not expected that use of 2.10 ha (5.18 ac) of the lagoon would not adversely affect any of the activities, features, or attributes of the publicly owned open regional open space park that qualify the resource for protection under Section 4(f), and is proposed as *de minimis*.

4.5 CENTER CITY GOLF COURSE

The Center City Golf Course is an 18-hole municipal golf course open to the public located at 2323 Greenbrier Drive in the city of Oceanside (Figure 17). The golf course is also known as Goat Hill because of the hills and valleys located throughout the golf course. The golf course is located at the northeast corner of the I-5/Oceanside Boulevard Interchange.

4.5.1 Impacts

Area of Land To Be Used

Implementation of the proposed project would require a use of 0.36 ha (0.89 ac) of the 28.32 ha (70 ac) golf course property for construction of the Direct Assess Ramp (DAR) connecting Oceanside Boulevard with future HOV lanes (Figure 18). Each build alternative would require almost the same area of use. The locations of the land that would be used are shown in Figure 17.

Facilities, Functions, and/or Activities Affected

Land required for use by the proposed project is located at the southern edge of the golf course northwest of the Ralph's shopping center, and adjacent to I-5 along the western edge of the golf course. The land northwest of the Ralph's shopping center is located outside of the actual golf course boundary and does not serve as a portion of any of the fairways or greens. The land adjacent to I-5 along the western edge of the Golf course property is downhill from the golf course and is located approximately 91 to 305 m (300 to 1,000 ft) away from the closest holes and fairways. Due to its location downhill from the golf course and distance from the golf course, this land does not affect play at any of the holes on the western edge of the property.

Access

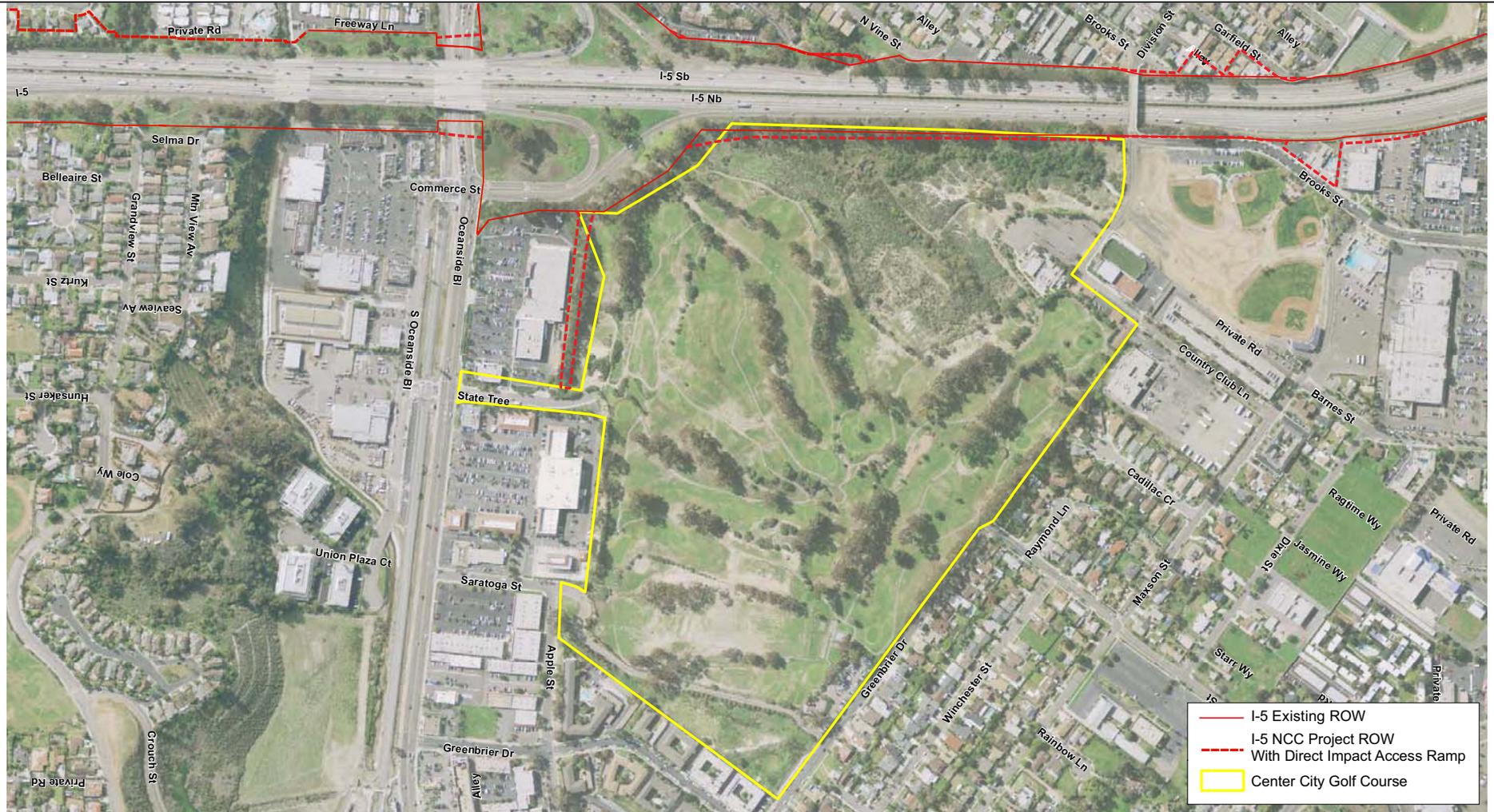
Access to the golf course is provided from Greenbrier Drive in Oceanside. The Build Alternatives would not affect this access point.

Visual Quality

The land proposed for use by the build alternatives would result in some alterations to the visual character of the southwest portion of the golf course. The land used along the freeway margin would result in minimal visual change for golfers. Land in this area slopes downward from the golf course. While a number of downslope eucalyptus trees would be removed, sufficient trees remain at the top of the slope to screen views to the west. More changes would occur to the south as a result of the construction of the DAR. Figure 19 depicts the current and simulated future view from the southwestern portion of the golf course south toward the rear of the Ralph's shopping center. The current view is of the rear of the Ralph's store and is dominated by a line of eucalyptus trees, behind which the store's loading dock is visible. After DAR construction, the view would be dominated by an elevated roadway. A large fence with plantings would partially screen this view. While the southerly views of golfers on this portion of the course would be altered, it would not affect their recreational activity.

Noise

The Noise Study Report prepared for the proposed project found that noise levels at the golf course would increase from 66 dBA in the existing condition to 67 dBA with the proposed project (Caltrans 2008). This 1 dBA increase would not be perceptible to the human ear. As such, it would not impair play at the golf course.



Source: EDAAW 2007; DigitalGlobe 2008; SanGIS 2009
 400 200 0 400 Feet
 Scale: 1:4,800; 1 inch = 400 feet

Figure 17
Center City Golf Course



Source: DigitalGlobe 2008; SanGIS 2009; Caltrans 2007

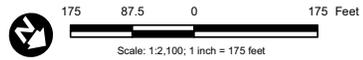


Figure 18
Impacts to the Center City Golf Course



Source: Caltrans District 11 2008

Figure 19
Oceanside DAR Simulation South Side of Center City Golf Course

Vegetation

Land proposed for use by the proposed project is located at the southern margin of the golf course adjacent to the rear of the Ralph's shopping center, and in the northeast quadrant of the I-5/Oceanside Boulevard interchange. Vegetation to be displaced consists of non-native grassland and eucalyptus woodland. Loss of these vegetation types would not be considered adverse.

4.5.2 No Build Alternative

The No-Build Alternative would not require a use of any portion of the golf course.

4.5.3 Measures to Minimize Harm

The proposed project has been designed in coordination with the City of Oceanside, and state and federal resource agencies to reduce, where possible, the amount of right-of-way and limit the grading footprint to minimize impacts to natural resources.

4.5.4 Proposed De Minimis Finding

The portions of golf course land requiring use do not possess any features or attributes that, if lost, would impede the ability of the golf course to function as a golf course. Therefore, the proposed project would not adversely affect any of the activities, features, or attributes that qualify the golf course for protection under Section 4(f) and is proposed as *de minimis*.

4.6 HISTORIC PROPERTIES

A Historic Property Survey Report (HPSR) and Finding of Effect (FOE) were prepared by Caltrans to evaluate the potential for a Section 4(f) use of historic resources. The HPSR was based on archaeological and architectural surveys conducted to identify properties within the project area that may be eligible for listing in the National Register of Historic Places (National Register), in compliance with Section 106 of the National Historic Preservation Act, CEQA, and Section 5024 of the California Public Resources Code. The FOE discussed the project's effect on those eligible resources in compliance with these same laws and determined if and/or what type of 4(f) use would occur.

4.6.1 Impacts

Land Use

Implementation of the proposed project would require the use of two historic properties (one architectural resource with contributing landscape features, and one floricultural property consisting of three parcels) eligible for listing in the National Register. These properties' eligibility for listing in the National Register qualifies these resources as subject to protection under Section 4(f). The architectural resource meets National Register Criterion C at the local level of significance as distinctive examples of its style and period, and as one of the most architecturally distinguished residences in Encinitas. The residence's property boundaries coincide with the current parcel boundaries, and contributing features include the house, garage, and the row of palm trees at the west end of the front yard. The second

resource, the floricultural property, meets National Register Criterion A at the local level of significance for its association with floriculture in the Encinitas, Leucadia, and Carlsbad areas in the early to mid-20th century. The property consists of three parcels and the contributing features are the structures on the property, exotic flowering plants, mature eucalyptus trees, and conifer trees. It is an intact representative example of an increasingly rare property type, as suburban growth consumes much of the former agricultural land in the coastal communities of northern San Diego County.

Implementation of the proposed project would have no adverse effect on the qualities of either of the properties that make them eligible for listing in the National Register. The use of the first property would result from a partial take that would result in the loss of some vegetation/landscaping and outbuildings at the east end of the parcel. Almost the same area of use for this property would be required for all the build alternatives.

The use of the second property would result from the construction of a proposed soundwall that would abate for traffic noise predicted to exceed 75 dBA with the proposed project (refer to soundwall S723 in Chapter 3.15). This soundwall recommended to be 2.4m (8ft) high and 215m (705ft) long would require the same area of use for all build alternatives. Not constructing this soundwall would avoid the use of this property. However, installation of this soundwall would actually enhance the historical setting of this property by reducing existing noise levels, as well as future noise levels associated with the proposed project. Thus, improving the historic setting experience. The color of the barrier would be selected based on its ability to blend in with the surrounding area, while transparent panels would be considered to allow scenic views from the property, and to allow views of the property from I-5. If, during final design, it is found that conditions have substantially changed, noise abatement may not be necessary at some locations. The final decision of the noise abatement would be made upon completion of the project design and the public involvement processes.

Caltrans notified FHWA and the State Historic Preservation Officer (SHPO) that the project's "Effects" for these two properties were "Not Adverse" due to minimal impacts that would not affect those qualities that contribute to the properties' eligibility. On March 17, 2008, SHPO concurred with FHWA that the treatment of historic properties in the FOE was reasonable (*Figure 5 -4.1*).

4.6.2 Avoidance Alternatives

The No-Build Alternative would not require a use of either of these historic properties.

4.6.3 Measures to Minimize Harm

The proposed project has been designed to minimize impacts and use, where possible, by reducing the amount of new right-of-way and limiting the grading footprint to minimize impacts to resources. No additional mitigation is required for these properties.



4.6.4 **Proposed De Minimis Finding**

Impacts associated with the proposed project would not adversely affect any of the activities, features, or attributes that qualify these historic properties for protection under 4(f), and are proposed as *de minimis*.

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ARNOLD SCHWARZENEGGER, Governor

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August 25, 2009

**TITLE VI
POLICY STATEMENT**

The California State 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, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.


RANDELL H. IWASAKI
Director

**Appendix B:
Title VI Policy Statement**

"Caltrans improves mobility across California"



Appendix C: Relocation Assistance Information

DECLARATION OF POLICY

"The purpose of this title is to establish a **uniform policy for fair and equitable treatment** of persons displaced as a result of federal and federally assisted programs in order that such persons **shall not suffer disproportionate injuries** as a result of programs designed for the benefit of the public as a whole."

The Fifth Amendment to the U.S. Constitution states, "No Person shall...be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation." The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations, Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

FAIR HOUSING

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This Act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations, and also are given a detailed explanation of Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

RELOCATION ASSISTANCE ADVISORY SERVICES

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are "decent, safe and sanitary." Nonresidential displacees will receive information on comparable properties for lease or purchase (For business, farm and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and

reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning Federal and State assisted housing programs, and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable "decent, safe and sanitary" replacement dwelling, available on the market, is offered to them by Caltrans.

RESIDENTIAL RELOCATION PAYMENTS

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

Moving Costs

Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until Caltrans obtains control of the property in order to be eligible for relocation payments.

Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property), may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum combination of these three supplemental payments that the owner-occupant can receive is \$22,500. If the total entitlement (without the moving payments) is in excess of \$22,500, the Last Resort Housing Program will be used (See the explanation of the Last Resort Housing Program below).

Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable "decent, safe and sanitary" replacement dwelling will be more than the present rent of the displacement

dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the Down Payment section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 180 days, in addition to moving expenses, is \$5,250. If the total entitlement for rent supplement exceeds \$5,250, the Last Resort Housing Program will be used.

In order to receive any relocation benefits, the displaced person must buy or rent and occupy a "decent, safe and sanitary" replacement dwelling within one year from the date Caltrans takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

Down Payment

The down payment option has been designed to aid owner-occupants of less than 180 days and tenants in legal occupancy prior to Caltrans' initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of \$5,250. The one-year eligibility period in which to purchase and occupy a "decent, safe and sanitary" replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the \$22,500 and \$5,250 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced;
- Specific arrangements needed to accommodate any family member(s) with special needs;
- Financial ability to relocate into comparable replacement dwelling which will adequately house all members of the family;
- Preferences in area of relocation;
- Location of employment or school.

NONRESIDENTIAL RELOCATION ASSISTANCE

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows:

Moving Expenses

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the right-of-way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to \$2,500, for reasonable expenses actually incurred.

Reestablishment Expenses

Reestablishment expenses related to the operation of the business at the new location, up to \$10,000 for reasonable expenses actually incurred.

Fixed In Lieu Payment

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses which meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than \$1,000 nor more than \$20,000.

ADDITIONAL INFORMATION

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, *except* for any Federal law providing local "Section 8" Housing Programs.

Any person, business, farm or nonprofit organization which has been refused a relocation payment by Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate, may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans right-of-way. California's law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.





**Appendix D:
Environmental Commitment Record
(ECR)**



Environmental Commitments Record

Interstate 5 North Coast Corridor Project Improvements

Environmental Generalist: Shay Lynn M. Harrison File: 11-SD-5
 Phone: 619-688-0190 KP: R45.75/R89.15 (PM R28.4/R55.4)
 Date: December 2009 EA: 235800

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
Geotechnical Investigations								
Design Kick Off								
Environmental PS&E Review Meeting								
Pre-Construction Meeting								
Pre-Job Meeting								
Mid Construction Meeting								
Design Features Memorandum								
Environmental Compliance Review								
Community Impacts								
Landscape and streetscape improvements would be provided in affected areas, where possible, and would be consistent with the visual atmosphere, historic architecture, and native vegetation in the area.								
Reconfiguration of interchanges, overcrossings and undercrossings along the project corridor would improve pedestrian and bicycle facilities, provide linkages, and allow for improvements to public transit. Most notably, project features would serve to improve and facilitate connectivity between communities east and west of I-5 in locations that have been previously bisected by the freeway.								
Preparation of a Traffic Management Plan (TMP) to minimize traffic delays and closures through the use of various traffic handling practices.								
Public awareness program would be developed to inform the public of upcoming detours and								



Task and Brief Description	Responsible Branch/Staff	Timing/Phase	Action Taken to Comply with Task	Task Completed	Remarks	Environmental Compliance
construction schedules.						
Traffic impacts around schools would be noted in the TMP.						
Equipment would have sound-control devices to minimize noise, and other specifications to turn off idling equipment and installing temporary acoustic barriers around stationary construction noise sources would be implemented.						
Construction equipment and truck staging and maintenance areas would be located as far as feasible and nominally downwind of schools, active recreation areas, and other communities of high-population density.						
Relocations						
Provide relocation assistance to eligible residents. Displacees that may face difficulty finding suitable relocation resources would be eligible for assistance from Caltrans through the State's relocation program or Last Resort Housing (LRH) Program options, including LRH payments.						
Utilities and Emergency Services						
The Construction Zone Enhancement Enforcement Program (COZEEP) involves the presence of CHP to improve project safety by encouraging motorists to slow down and use care while driving through construction zones.						
Freeway Service Patrol program would be developed, a cooperative effort between Caltrans, SANDAG and the CHP to alleviate incident-related traffic congestion by operating tow services to aid stranded or disabled vehicles on urban freeways during morning and afternoon commuter periods.						
Emergency providers and law enforcement officials would be informed of all detours to avoid or minimize increases in response times.						
All applicable regulations regarding solid waste would be complied with as related to construction.						
Coordination with utility companies would occur during final design and construction to finalize relocation efforts.						
Impacts to resources would be avoided when utilities are relocated, and Environmentally Sensitive Areas (ESAs) would be delineated when working near sensitive areas to prevent construction activities from impacting resources.						
Traffic & Transportation/Pedestrian & Bicycle Facilities						
Construction would be staged to minimize traffic delays.						
A comprehensive Traffic Management Plan (TMP) to further minimize delays would be developed after selection of a preferred alternative but prior to the start of construction. Traffic delays would be controlled to the extent feasible during periods of many simultaneous construction operations. The TMP is designed to increase driver awareness, ease congestion, and minimize delay during construction. Many TMP components would be implemented prior to construction and could continue after construction with local funding. The components of the TMP would be:						



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<p><u>Public Awareness Program</u>: Strategies that would be considered to increase public awareness may include one or more of the following items: Mailings – construction bulletins, newsletters, public notices Speakers bureau Public service announcements: radio, television, and newspapers Paid advertising Signs along roadway: changeable message signs Telephone information line, hotline, "800" number Updates to local businesses Webpage</p> <p><u>Traffic Operations Strategies Program</u>, which would include ongoing evaluation of traffic operations and would provide for incident response during construction: Strategies that would be considered may include one or more of the following items: TMP evaluation and adjustment Alternate route strategies Temporary signal location California Highway Patrol enforcement of construction zone speed limits during lane closures Freeway Service Patrol</p>								
<p>Pedestrian and Bicycle facilities The TMP would also include components for pedestrians and bicyclists along with consideration for the motoring public. As well as the items listed for the motoring public, signs would be used, as appropriate, to provide notices of bike and pedestrian closures, detours and other pertinent information. Temporary access would be provided where possible.</p>								
<p>Visual Aesthetics Whenever possible, soundwalls would incorporate planting on both sides. In some cases, retaining walls and/or a concrete barrier at the edge of the shoulder may be needed to provide the required planting space. In some areas, the use of setbacks and return sections in wall layouts would be used. In cases where the right-of-way is narrow, a minimum 1.5 m (5 ft) wide planting area would be provided between the back of the barrier and the face of the wall. In areas too narrow to place a planting pocket, the soundwall would be recessed behind the face of barrier at a sufficient distance to allow architectural features to be included on the face of the soundwall. Placing a soundwall directly on top of a concrete barrier should be avoided if at all possible. In areas where space for architectural detailing does not exist, vertical concrete safety barriers would be considered. Vertical barriers add 302 mm (12 in) of additional width in</p>								



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which architectural elements such as pilasters and wall caps can be included.						
In situations where noise receptors are located above the elevation of the freeway, soundwalls located at the top of slope on the right-of-way line or on private property would be used if the benefited property owner agrees to maintain wall surfaces.						
If possible, translucent materials would be placed on top of soundwalls to reduce their apparent height and create a greater sense of openness. Translucent materials should be placed above areas of potential vehicle impact, out of easy reach, and should consist of vandal-resistant materials.						
Signage with movable elements or self illuminated features such as changeable message signs would be excluded from viewsheds containing scenic resources if at all possible. The DLA would assist in the placement of all such signage.						
Architectural detailing such as pilasters, wall caps, interesting block patterns, and offset wall layouts would be used to add visual interest and reduce the apparent height of the walls. Poured-in-place integrally colored concrete construction techniques would be encouraged where visual consistency with retaining walls is desired. Enhanced surface materials such as mosaic tile and weathering steel should also be used where appropriate.						
Retaining walls that follow the contours of the topography and maintain a constant elevation at the top of wall shall be used where appropriate. Wall layouts and profiles should be composed of long radius curves, with no tangents or points of intersection. Wall faces should be battered at a 1:6 horizontal/vertical ratio.						
Where appropriate, retaining walls over 6 m (19.7 ft.) tall would be divided into separate structures sufficiently offset from one another to create a planting area between the two.						
Whenever possible, retaining walls would be located at mid slope, in cut sections to provide a buffer area for landscape screening between the wall and the freeway.						
Wherever possible, retaining walls would be located at the top of slope in fill sections to provide a buffer area for landscape screening between the wall and the community.						
In areas where insufficient space exists to include planting buffers between freeway retaining walls and adjacent community features such as frontage roads, the use of viaduct retaining walls would be considered. Viaduct retaining walls would cantilever the roadway to form a wall recess in which spatial articulation and planting can occur.						
In areas where retaining walls must be placed close to the traveled way, space would be reserved between the wall and the safety barrier to include a 1.5 m (5 ft) wide planting pocket.						
In areas too narrow to place a planting pocket, the retaining wall would be recessed behind the face of barrier at a sufficient distance to allow architectural features to be included on the face of the retaining wall.						
In areas where space for architectural detailing does not exist, vertical concrete safety barriers would be considered. Vertical barriers add 301 mm (12 in) of additional width in which architectural elements such as mechanically stabilized earth wall panel relief, pilasters, and wall caps can be included.						
Wall faces would be battered at a 1:6 horizontal/vertical ratio wherever possible to reduce the apparent scale of the wall and give the wall a more natural appearance. The batter also can serve as a barrier safety shape where the base of wall exhibits a smooth surface facing						



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traffic.						
Alternatives to standard cable rail barrier would be used to complement enhanced wall designs. Options would include integral solid concrete parapets or alternative metal materials. Design details would be contained in the corridor design guidelines.						
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 surface materials such as mosaic tile and weathering steel would also be used where appropriate to meet community design goals.						
Mechanically stabilized earth (MSE) walls can have custom designed panels that include integral color, enhanced surface texture, and a pattern reveal on each panel. Placement of landscaped slopes, soundwalls, barriers, drainage conveyances, and other roadway features can require special design.						
Low profile safety barriers would be used if at all possible in areas where standard height barriers would diminish views of scenic resources from the freeway.						
To ensure bridge type selection and design consistency, a corridor design guidelines report would be prepared and would outline the themes and feasibility of the design features throughout the corridor.						
Wherever possible, abutments would be short seat abutments placed at the top of slopes. The visual mass of abutments would be minimized as much as possible. High cantilever abutments would be used in locations where space does not exist for short seat abutments at the top of a slope.						
Where overcrossing structures are replaced, high cantilever abutments would be used in lieu of secondary tie back walls. At each overcrossing, bridge abutments would be of the same type to produce a symmetrical appearance. Temporary tie back walls would be terrain contoured walls and would receive architectural features consistent with permanent walls in the viewshed. Temporary tie back walls would be removed when overcrossing structures are reconstructed.						
In locations where retaining walls must be incorporated into abutments, they would be designed as terrain contoured walls if possible, and be located away from the edge of shoulder to allow space for a planted buffer at their base.						
Slope paving would be enhanced with integral concrete color, texture, and deeply textured facing materials such as veneer block or natural rock.						
Bridge signage would be designed to visually integrate with bridge architecture. Concrete sign pedestals would be consistent in appearance with bridge design themes.						
Sidewalks would be provided on both sides of each overcrossing. Sidewalk widths would be selected based on SANDAG regional guidelines (<i>Planning and Designing for Pedestrians</i> , June 2002) and local pedestrian design guidelines. Where possible, sidewalks would receive score patterns, surface texture, and/or integral color.						
Wherever possible, low profile barrier separations between pedestrian and vehicular traffic would be provided on overcrossings where Caltrans policy prohibits or restricts architectural features and pedestrian amenities on or near concrete bridge rails. Sidewalks in these locations would be a minimum of 3 m (10 ft) in width.						



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Pedestrian lighting, enhanced fencing and railings, and other urban amenities would be provided on each overcrossing whenever feasible. Local agency streetscape design guidelines would be continued within Caltrans right-of-way at each overcrossing, and interchange whenever feasible. Container trees located on structures would also be provided in locations where the responsible local agency has requested them and agreed to maintain them in perpetuity.								
Where possible, bicycle shoulders, lanes, or paths would be provided on both sides of each overcrossing. A minimum shoulder width of 1.2 m (4 ft) would be provided for Class 3 facilities.								
Bridge abutments should be of the same type on all four quadrants to give widened undercrossings a symmetrical appearance.								
Bridge widening should be done using box girder construction wherever possible. Girders should be similar in appearance on both sides of the bridge to produce a symmetrical appearance.								
In locations where street widening occurs, tie back walls should be terrain contoured walls, and receive architectural features consistent with those required for retaining walls.								
Pedestrian sidewalks 3 m (10 ft) in width (minimum) should be provided at undercrossings on both sides of the street wherever possible. Wherever possible, existing sidewalk configurations on local streets should be continued across Caltrans right-of-way.								
Bicycle shoulders, lanes, or paths should be provided at each undercrossing. A minimum shoulder width of 1.2 m (4 ft) should be provided for Class 3 facilities.								
Enhanced pedestrian lighting including bridge soffit lighting should be provided at each undercrossing.								
Slope paving at undercrossings should be enhanced with deeply textured facing materials such as scored veneer block or natural rock to add visual interest and deter graffiti.								
Mitigation measures listed for overcrossing and undercrossing structure symmetry, abutment design, tie back walls, slope paving, sidewalks, bicycle routes, and streetscape features would also apply to freeway bridges as appropriate.								
See-through bridge rails such as Caltrans Type 80 rail should be used on freeway bridges with views to ocean, rivers, lagoons or other scenic resources.								
Pedestrian overcrossings should be a minimum of 4.6 m (15 ft) in width.								
Pedestrian lighting, enhanced fencing, railings, architectural features, and other urban amenities should be provided on each pedestrian overcrossing. Existing streetscape elements and design themes should be continued within Caltrans right-of-way.								
DAR retaining walls should have a 4.6 m (15 ft) maximum height allowing approximately 3 m (10 ft) of minimum vertical clearance under the connecting ramp structure.								
Pedestrian and bicycle traffic on existing overcrossings to be converted to DAR overcrossings should be routed to a separate pedestrian overcrossing structure in the immediate vicinity, if possible.								
On structures where pedestrians are present, sidewalks should be 4.6 m (15 ft) in width on each side. Bridge barriers, fences, and sidewalks should be designed to provide standard stopping sight distance at DAR termini to enable pedestrians to be visible to drivers. Barrier separations between pedestrian and vehicular traffic should be provided if Caltrans policy								



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requires bridge barriers to adhere to freeway crash standards.						
Bicycle shoulders, lanes, or paths should be provided on both sides of each DAR overcrossing open to non-vehicular traffic. A minimum shoulder width of 1.2 m (4 ft) should be provided for Class 3 facilities.						
Pedestrian lighting, enhanced fencing and railings and other urban amenities should be provided on each DAR local street overcrossing and be consistent with local values and goals. Existing streetscape elements and design themes should be continued within Caltrans right-of-way at each DAR overcrossing. Local streetscape guidelines should be followed. Container trees located on structures should also be provided in locations where the responsible local agency has requested them and agreed to maintain them in perpetuity.						
Continuity of street and pedestrian facilities should be maximized wherever possible by converting existing non-stop freeway ramp entries and exits to ramp termini placed perpendicular to the street. The use of roundabouts should also be considered to create a more balanced relationship between interchange and community by decreasing required roadway width.						
Establishment of a continuous pedestrian realm on both sides of local streets as they pass through the interchange should be accomplished by utilizing design features such as street trees, pedestrian lighting, landscaped parkways located between sidewalk and curb, enhanced sidewalk paving that continues across freeway ramps, and islands of refuge in street and ramp medians. Pedestrian and transit facilities should conform to SANDAG Pedestrian Design Guidelines and any applicable local streetscape design standards and guidelines. Urban design features such as benches, bollards (short posts to divert or exclude automobiles), directional signage, and trash receptacles should also be included as appropriate. Specific guidelines and/or specific interchange streetscape plans should be developed as part of the corridor design guidelines.						
Bicycle facilities should be preserved or upgraded to conform to the San Diego Regional Bike Plan, applicable local standards, and General Plan circulation element goals.						
Interchange landscaping should reflect the visual character and goals of its locality. Enhanced interchange landscaping should be considered in cases where the responsible local agency would provide maintenance in perpetuity. Entry features should be included as transitional visual elements into local communities where appropriate. Traditional decorative entry signage with text should not be used. Specific interchange landscape themes may be developed as part of the corridor design guidelines.						
Detention basins located at freeway interchanges or in areas of high visibility should incorporate the following design features. Basins would be located at least 3 m (10 ft) from clear recovery zones whenever possible to allow landscape screening to be installed. Basins should appear to be natural landscape features, such as, dry streambeds or riparian areas. Where possible they should be shaped in an informal, curvilinear manner, incorporate slope rounding, variable gradients, and be similar to the surrounding topography to deemphasize a defined outer edge. Maintenance access drives should be located in unobtrusive areas away from local streets and would consist of drivable inert materials with or without herbaceous groundcover that is visually compatible with the surrounding landscape. All visible concrete structures and surfaces should be of special design and adhere to the corridor design						



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<p>guidelines. Rock slope protection would consider use of aesthetically pleasing whole material of various sizes. Whenever feasible, standpipes and other vertical appurtenances should be placed in unobtrusive locations and be painted an unobtrusive color. Where possible, bio-swales should be located in non-obtrusive areas, be designed to appear as natural features, and incorporate applicable mitigation measures listed above for detention basins.</p>						
<p>The use of Caltrans standard freeway appurtenances on local streets should be avoided or minimized wherever possible. Crash cushions, metal beam guardrail, end anchor assemblies, concrete barriers, sign standards, light standards, signal standards, and chain link fencing are examples of such features that would be addressed in the corridor design guidelines. The use of access control fencing at interchanges should be minimized and located in unobtrusive locations when its use is necessary. Electrical control cabinets and other utility boxes should be located in unobtrusive locations away from sidewalks wherever possible. Raised medians should be used wherever possible to allow for pedestrian islands of refuge, create a visual break in the ground plane and provide space for street tree planting.</p>						
<p>Site amenities for transit users should be provided such as covered bus shelters, pedestrian lighting, benches, litter receptacles, tree grates, bollards, and bicycle racks. Landscaping and enhanced pedestrian paving would be an integral part of the station features. A sidewalk 3 m (10 ft) in width should be provided along the west side of the transit center access road from the bus platform to Manchester Avenue. It should be located 1.8 m (6 ft) from the back of curb to create a landscaped parkway.</p>						
<p>The corridor design guidelines would contain a landscape concept plan for the project. In general, freeway landscaping should be consistent with the character of adjacent community landscape. In communities that are characterized by ornamental landscaping, freeway landscaping that includes drought tolerant ornamental trees, shrubs, and groundcover would be installed. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted. Areas adjacent to native habitat would receive native landscaping.</p>						
<p>Since the project would result in the loss of a majority of existing landscaped roadside areas, steps should be taken to create new areas for mitigation replacement planting within the freeway facility at the edge of shoulder, between concrete median and separator barriers, or between barriers and walls wherever the available width allows. Minimum widths for planting are 0.6 m (2 ft) between barrier and wall, and 1.8 m (6 ft) between median or separator barriers. Where possible, safety barriers at the edge of shoulder should facilitate tree and shrub planting in roadside areas that are too narrow to allow standard free recovery area planting setbacks to be used.</p>						
<p>Existing median oleanders would be preserved wherever possible. Since freeway widening would disturb the roots of existing plants, the following measures would be implemented. A new automatic irrigation system would be installed in the median and the oleanders would be irrigated and fertilized on a regular basis before, during, and after project construction. The oleanders would be watered, fertilized, and pruned under the direction of a certified arborist prior to the commencement of median grading. The oleanders would remain in place undisturbed during construction. Existing non-vigorous oleanders would be replaced with</p>						



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new oleanders planted from #5 containers at the direction of the Resident Engineer. Oleanders that do not survive during construction or plant establishment would be replaced using oleanders planted from #5 containers. A plant establishment period of one year would be provided. Following plant establishment, a mitigation monitoring period of three years would be implemented to ensure plant survival.						
In locations where freeway widening brings traffic into close proximity to parallel local streets such as Ida Avenue in Solana Beach, Villa Cardiff Drive, Devonshire Drive, Orpheus Avenue, and Piraeus Street in Encinitas, Avenida Encinas in Carlsbad, and Brooks Street, Garfield Street, and Buena Street in Oceanside, landscape buffers would be created between the freeway and street. Buffers would include elements such as street trees and shrubs, sidewalks, and solid screen walls for access control. Inclusion of some buffers may require local street widths to be adjusted. Implementation of this mitigation measure is contingent on local agency approval and commitment to maintain the streetscape buffer in perpetuity.						
Slopes shall be graded 1:2 or flatter to support planting and irrigation. Steeper slopes may be possible if they are serrated and contain benches wide enough to accept plants from 15 gallon containers. Grading shall utilize techniques such as slope rounding, slope sculpting, and variable gradients to approximate the appearance of natural topography.						
Lighting and signage pedestals on structures should be placed at pilasters or be incorporated in other architectural features, where possible.						
Freeway lighting and signage should conform to the corridor design guidelines, where possible.						
Concrete lighting and signage pedestals should be designed in such a way that vertical barrier transitions are not required.						
Electrical and signal equipment at ramp termini should be placed in visually unobtrusive locations.						
Median barriers would receive integral concrete color and the application of a heavy sandblast texture to barrier surfaces visible from the freeway. Heavy sandblast texture would create an irregular surface relief to a depth of 9.5 mm (3/8").						
Gore paving would incorporate enhanced materials consistent with corridor design themes found in the corridor design guidelines.						
Access control fencing shall be placed in visually unobtrusive locations of interchanges and bridges where possible. It is recommended that it be of special design and consist of enhanced materials where appropriate and maintained by the responsible local agency in perpetuity.						
Concrete interceptor ditches would not be placed adjacent to residential property, at interchanges, or adjacent to pedestrian use areas if at all possible. Alternatives such as subterranean drainage placed below finish grade or planted geo-reinforced drainage surfaces would be used.						
Detention basins located in areas visible to the public would incorporate the same mitigation features required for basins located at interchanges.						
Bio-swales and linear drainage ditches would be designed to appear as natural features and incorporate applicable mitigation measures listed above for detention basins.						
Where possible, retaining walls and soundwalls near right-of-way boundaries should be						



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designed in such a way that access control fencing would not be needed. The "dead" spaces that occur between walls and fences should be avoided if at all possible.						
Concrete interceptor ditches should not be placed adjacent to residential property, at interchanges, or adjacent to pedestrian use areas if possible. Alternatives such as subterranean drainage placed below finish grade or a planted geo-reinforced drainage surface would be used when possible.						
Concrete drainage devices located in areas of high visibility would be located, designed, and colored to be unobtrusive in appearance.						
The use of pervious concrete for storm water pollution prevention should be considered. Project features such as interceptor ditches, inlet aprons, gutters, maintenance access roads, maintenance vehicle pullouts, and parking lots could consist of pervious concrete and perhaps reduce the project footprint.						
Real estate parcels in whole or in portion that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space. This would be considered at the request of the responsible local agency and relinquished to them to maintain in perpetuity.						
Existing overhead utilities that are located near the freeway and requiring relocation due to freeway widening would be relocated underground where possible.						
Cultural Resources						
The adverse effects to archaeological sites CA-SDI-12670 and CA-SDI-17928 could result from proposed soundwall construction. Before construction, location of the soundwalls would be flagged and footing locations for the pilings would then be inspected according to the Archaeological Treatment Plan. Caltrans would undertake a data recovery program to recover data from those portions of the sites to be impacted. If human bone, associated grave artifacts, or items of cultural patrimony are found during the archaeological excavation, standard procedures for consultation and for deciding on the ultimate disposition of those remains would be followed.						
The Action Plan would be developed to identify the individuals involved, and their roles and responsibilities for implementing the plan. The construction contract would also contain language related to unanticipated discoveries should they be made during construction, including diverting activities away from such finds until an archaeologist could assess their nature and significance. If unanticipated discoveries would occur, Section 106 consultation with the SHPO would be reopened, if appropriate.						
Caltrans would undertake other efforts to avoid causing indirect impacts to eligible archaeological sites located adjacent to, but outside the APE, including: Archaeological and Native American monitoring; establishment of ESAs around the sites in question; and contingencies if unanticipated discoveries would be made during construction, including diverting activities away from such finds until a qualified archaeologist could assess their nature and significance. If unanticipated discoveries occur, Section 106 consultation with the SHPO would be reinitiated. If unanticipated discovery of prehistoric human remains occurs, then the County Coroner, California Native American Heritage Commission, and the most						



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likely Native American descendents (MLDs) would be contacted. If the remains could not be left in place, then consultations with the MLDs would decide the most appropriate and sensitive treatments for the remains.						
If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find.						
If unanticipated human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner would be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the Coroner would notify the Native American Heritage Commission (NAHC), who would then notify the MLD. At the same time, the person who discovered the remains would contact the District 11 Chief of the Environmental Resources Branch so that they could work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 would be followed, as applicable.						
Hydrology and Water Quality						
Los Peñasquitos Creek structure would be designed to entirely span the floodplain.						
Best Management Practices would be implemented to address potential Water Quality impacts during the planning and design, construction, and operational stages.						
Short-term impacts to water quality during the construction phase would be prevented/minimized through the use of Construction site BMPs.						
Minimization measures would be implemented during construction at crossings over six designated "navigable" waterways. Minimization measures at waterways can typically be, but not limited to: flagging the perimeter of the proposed impact area to restrict access; training all contractors and construction personnel on sensitive resources, such as navigable vessel use; scheduling construction outside of breeding season or conducting pre-construction surveys for presence/absence of sensitive species; restricting equipment, material storage and staging to disturbed areas; designing project to avoid/reduce stormwater impacts where feasible, otherwise, control sediment with silt fencing, gravel bags, hay bales and fiber rolls; controlling of fugitive dust, restriction changing oil and/or refueling to designated areas, constructing velocity dissipation structures at drainage outlets; during night time construction, all lighting shall be directed to the construction area; temporary diversion of water around the work area by use of sandbags or gravel dams, or cofferdams.						
Long term impacts during Caltrans operation and maintenance of its facilities would be mitigated through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs.						
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 and appropriate mitigation, if required.						
If the proposed project proceeds to the design phase, the locations of these treatment BMPs would be further evaluated to determine whether they could be incorporated or rejected due						



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to hydraulic feasibility, right-of-way, and/ or environmental constraints. Even if the sites were found not to be practicable locations, vegetation would be maximized throughout the area.						
The District Erosion Control Specialist, in coordination with the District Biologist and Landscape Architect, would determine the appropriate planting/seeding mix that would meet the water quality objective, as well as the landscaping, and/or habitat scheme of the area.						
Geology / Soils / Seismic / Topography						
The use of large retaining structures to accommodate embankment widening over the lagoons would be avoided when possible.						
Drainage for proposed improvements would be constructed in accordance with Caltrans Highway Design Manual.						
Impacts to water quality would be minimized by directing surface runoff away from the top of slopes, and also by not allowing runoff to discharge over the top of slopes.						
Surface water would be conveyed offside by appropriate erosion-reducing devices.						
Where groundwater is present, subsurface drainage devices would be installed.						
Settlement waiting periods would be employed at all soft soil locations before establishment of the final grade.						
Caltrans personnel would be present during project construction to observe all cuts, foundation subgrade, and embankment subgrade to assure that all provisions are enforced. If unanticipated subsurface conditions are encountered, a geotechnical representative would be notified to make additional recommendations to the Resident Engineer, who in turn, would direct the contractor. Instrumentation for measuring settlement or slope distress, and periodic surveying for ground movement would be included during construction in areas where the potential for ground movement or failure exists.						
Grading and roadway work would be performed in accordance with Caltrans Standard Plans and Specifications.						
To avoid surface erosion, which may supply an unacceptable sediment load to the watershed, temporary slopes would not be left unprotected throughout the wet season. Concentrated flows would not be allowed on slopes.						
Concentrated flows would not be allowed on slopes.						
Appropriate construction scheduling, soil trackifiers, geosynthetic mats, and plastic sheeting are some of the techniques that may be used to avert excessive slope erosion.						
Paleontology						
A qualified principal paleontologist (M.S. or Ph.D. 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						



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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 Paleontological Resource Assessment Report would be prepared by the San Diego Natural History Museum. This report would outline the results of the mitigation program.						
Hazardous Waste/Materials						
Environmental Engineering shall be kept informed of parcel takes and changes in scope or design.						
Since there are chemical constituents present in soil and groundwater within the I-5 corridor, soil excavation activities shall be performed under the guidelines of a site-specific Soil Management Plan and Health and Safety Plan.						
The Department of Toxic Substances Control (DTSC) lead variance would be followed for ADL soil excavated in the median. Soil excavated as a whole along the shoulders may be reused as clean material with regard to ADL, unless soil adjacent to the shoulder is segregated from the whole. The DTSC lead variance will apply for segregated soil from the shoulder. Otherwise, the disposal of ADL soil would be a necessary and disposal of lead impacted soil to a Class I landfill. A NPDES permit shall be obtained, which would include measure for impacts to service stations. However, if soil from abutment excavations at Via de la Valle, Birmingham Drive, Brooks Street, Palomar Airport Road, Carlsbad Village Drive, and Mission Avenue would be exported, the soil may require further characterization for petroleum hydrocarbons, volatile organic compounds, or semi-volatile organic compounds to evaluate the proper disposal method. Investigation near the Olympus and Maxson Street Landfills did not encounter wastes associated with the landfill. It is recommended that widening activities in the vicinity of the landfills be performed to the west, avoiding the landfills. If parcels were acquired at these landfill locations, excavated soil would require further characterization to evaluate the proper disposal method. If soil from locations containing farmland and nurseries is exported, further characterization for pesticide/herbicides would be warranted to evaluate the proper disposal method. Chemical spills along I-5 would be unknown a contingency of would be written into the construction contract to deal with this potential hazardous waste issue.						
Asbestos and lead paint may be in structures demolished during construction and must be handled and disposed of properly.						
Treated wood waste in sight and guardrail posts must be handled and disposed of properly.						
Air Quality						
Air Quality measures to minimize emissions for construction include: <ul style="list-style-type: none"> • Use low-emission onsite mobile construction equipment where feasible • Maintain equipment in tune per manufacturer's specifications 						



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<ul style="list-style-type: none"> • Retard diesel engine injection timing by two to four degrees unless not recommended by manufacturer (due to lower emission output in-place) • Use reformulated, low-emission diesel fuel • Substitute electric and gasoline-powered equipment for diesel-powered equipment where feasible • Use catalytic converters on gasoline-powered equipment • Do not leave inactive construction equipment idling for prolonged periods 								
<p>Impacts from fugitive dust, PM₁₀, and PM_{2.5} would be minimized by the following strategies:</p> <ul style="list-style-type: none"> • Minimal land disturbance • Use of watering trucks to minimize dust • Suspension of grading and earth moving activities when wind gusts exceed 25 mph unless the soil is wet enough to prevent dust plumes • Covering of trucks when hauling dirt • Dirt pile stabilization if piles are not removed immediately • Limited vehicular paths and stabilization of any temporary roads • Minimal vehicular and machinery activities • At least once per day paved streets would be swept where there is evidence of dirt that has been carried on to the roadway • Revegetation of disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities • Removal of unused material 								
<p>To minimize exposure to diesel particulate emissions the following measures would be implemented: Construction equipment and truck staging and maintenance areas would be located as far as feasible and nominally downwind of schools, active recreation areas, and other areas of high population density</p>								



Task and Brief Description	Responsible Branch/Staff	Timing/Phase	Action Taken to Comply with Task	Task Completed	Remarks	Environmental Compliance
<p>Noise</p> <p>The following control measures would be implemented in order to minimize noise disturbances at sensitive receptors during periods of construction:</p> <ul style="list-style-type: none"> All equipment items would 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. Idling equipment would not be allowed. A construction noise-monitoring program would be implemented to limit impacts Noisier operations would be planned during times least sensitive to receptors Noise levels would be kept relatively uniform and; impulsive noises avoided Good public relations relations would be maintained with the community to minimize objections to the unavoidable construction impacts. Frequent activity updates of all construction activities would be provided. 						
<p>Energy</p> <p>Efforts to minimize energy consumption during construction include:</p> <ul style="list-style-type: none"> Public awareness campaigns to encourage carpooling and commuting during non-peak traffic hours. The recycling of materials, such as, damaged metal beam/guardrail, light standards, pipes, bridge materials, and /or used rebar salvaged as metal scrap. The use of recycled materials, such as, asphalt and concrete roadway materials through creation of road-base materials after crushing and grinding. The salvage of material such as roadside sign posts, and sign structures, chain link fence fabric, lighting standards, and/or traffic signal standards and appurtenances. The use of energy-efficient construction vehicles. 						
<p>Biology</p> <p>All native habitats outside the permanent and temporary construction limits would be designated as Environmentally Sensitive Areas (ESA) on project maps.</p> <p>ESAs shall be temporarily fenced during construction with orange plastic snow fence.</p> <p>No access would be allowed within the ESAs.</p> <p>Cut slopes would be revegetated with native upland habitats with similar composition to those within the project limits.</p> <p>Fill slopes and areas adjacent to wetlands and drainages would be revegetated with appropriate native upland and wetland species.</p> <p>Revegetated areas would have temporary irrigation and be planted with native container plants and seeds selected by the biologist.</p>						



Task and Brief Description	Responsible Branch/Staff	Timing/Phase	Action Taken to Comply with Task	Task Completed	Remarks	Environmental Compliance
There would be at least three years of plant establishment/ maintenance on revegetated slopes to control invasive weeds and ensure that the plants become established.						
Bioswales and detention basins would be planted with appropriate native species as determined by the biologist and storm water personnel.						
Slopes adjacent to developed urban areas would be vegetated with native and drought tolerant non-invasive species selected by the biologist and landscape architect.						
Interchanges located in urban areas would be landscaped with native or ornamental non-invasive species.						
Any seeding of native upland habitats would be completed between October and February to ensure that the seed has proper conditions for germination.						
Duff from areas with CSS, maritime succulent scrub, and maritime chaparral would be saved to aid in revegetation of the slopes with native habitats.						
All temporary impact areas would be revegetated and restored to pre-existing conditions.						
Wetlands and Other Waters						
All debris from the replacement of old bridges or construction of new bridges would be contained, so that it does not fall into rivers and lagoons.						
Appropriate best management practices (BMP) would be used to control erosion and sedimentation. No sediment or debris would be allowed to enter the creeks, rivers, or lagoons.						
Bioswales and detention basins would be placed throughout the project limits to filter runoff prior to reaching wetlands and other waters of the U.S.						
Fueling of construction equipment would occur at a designated area at a distance greater than 30 m (98.4 ft) from drainages/lagoons, and associated plant communities to minimize water quality impacts.						
Fuel cans and fueling of equipment would take place outside the drainages.						
Studies underway to determine if water flow under lagoon bridges could be enhanced with design changes to the bridges.						
Sensitive Plant Species						
Seed would be collected or plants would be salvaged to the extent practicable in the impact areas. Salvaged plants and seed would be planted in mitigation sites, on revegetated new slopes, or in revegetated areas that were temporarily impacted.						
Sensitive Animal Species						
To minimize impacts to nesting migratory bird species, all native vegetation and nonnative shrubs and trees within the impact areas would be removed outside of the breeding season (February 15 to August 31), if possible. Otherwise, a qualified biologist would thoroughly survey all vegetation prior to removal to ensure there are no nesting birds onsite. If nesting birds are identified onsite, vegetation removal would be delayed until the chicks have fledged or the nest has failed.						



Task and Brief Description	Responsible Branch/Staff	Timing/Phase	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
Exclusion devices would be installed on bridge drain holes and ledges during the non-breeding season (September 1 through February 15) to stop swallows, swifts, and any other birds from nesting on or within bridges to be demolished.								
The lagoons are important stop over, resting, and foraging habitats for birds migrating along the Pacific flyway. To minimize impacts to migratory birds, construction would not occur in more than two lagoons at any one time.								
Exclusion devices would be installed on bridge drain holes and ledges during the non-breeding season (September 1 through February 15) to stop swallows, swifts, and any other birds or bats from nesting on or within bridges to be demolished.								
Measures listed under natural communities and wetlands and other waters of the U.S. concerning minimizing sediment entering the lagoon and habitat protection would minimize affects to EFH.								
Threatened & Endangered Species								
A channel large enough for fish passage would be kept open throughout construction within the San Luis Rey River and all of the lagoons.								
All pile driving near the lagoons would be completed outside the bird breeding season (February 15-August 31) to minimize construction noise impacts to bird species around the lagoons.								
A qualified biologist would be made available for both the pre-construction and construction phases to review grading plans, address protection of sensitive biological resources, and monitor ongoing work. The biologist shall be familiar with the habitats, plants, and wildlife of the Project area, and maintain communications with the resident engineer, to ensure that issues relating to biological resources are appropriately and lawfully managed.								
Detention basins would be placed in many of the loop ramps, and bioswales would be placed on many of the slopes to treat runoff from the freeway.								
Lighting used at night for construction would be shielded away from ESAs.								
Dust generated by proposed operations would be controlled with BMPs.								
Locations of the endangered Del Mar manzanita have been identified and avoided to the maximum extent practicable. Del Mar manzanita individuals growing immediately adjacent to brow ditches that would require reconstruction for proper slope drainage with plants that not be avoided would be salvaged and placed in a compensatory mitigation site for the project.								
Invasive Species								
Special care would be taken when transporting, use and disposing of soils with invasive weed seeds.								
All heavy equipment would be washed and cleaned of debris prior to entering a lagoon area, to minimize spread of invasive weeds.								



Task and Brief Description	Responsible Branch/Staff	Timing/Phase	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
Cut slopes would be revegetated with native upland habitats with similar composition to those within the project limits. Fill slopes and areas adjacent to wetlands and drainages would be revegetated with appropriate native upland and wetland species. The revegetated areas would have temporary irrigation and be planted with native container plants and seeds selected by the biologist. There would be at least three years of plant establishment/ maintenance on these slopes to control invasive weeds and ensure that the plants become established.								
Bioswales and detention basins would be planted with appropriate native species as determined by the biologist and storm water personnel. Slopes adjacent to developed urban areas would be vegetated with native and drought tolerant non-invasive species selected by the biologist and landscape architect. Interchanges located in urban areas would be landscaped with native or ornamental non-invasive species								



Appendix E: Farmland Conversion Impact Rating Form

U.S. DEPARTMENT OF AGRICULTURE Natural Resources Conservation Service		NRCS-CPA-106 (Rev. 1-91)	
FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS			
PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request	7/24/07
1. Name of Project I-5 North Coast Corridor		5. Federal Agency Involved	Federal Highway Administration
2. Type of Project Highway Improvements Project		6. County and State	San Diego, CA
PART II (To be completed by NRCS)		1. Date Request Received by NRCS	7/24/07
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).		2. Person Completing Form	C. Calvert
4. Acres Irrigated		Average Farm Size	
69,537		80	
5. Major Crop(s) Nursery, Flower, Fruit/Nut	6. Farmable Land in Government Jurisdiction Acres: 112,974 % 4	7. Amount of Farmland As Defined in FPPA Acres: 91,812 % 4	
8. Name Of Land Evaluation System Used CA - Storie System	9. Name of Local Site Assessment System None	10. Date Land Evaluation Returned by NRCS 7/26/07	
PART III (To be completed by Federal Agency)		Alternative Corridor For Segment	
		Corridor A	Corridor B
A. Total Acres To Be Converted Directly		1,630	1,616
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0
C. Total Acres In Corridor		1,630	1,616
		Corridor C	Corridor D
		1,628	1,604
PART IV (To be completed by NRCS) Land Evaluation Information			
A. Total Acres Prime And Unique Farmland		561	551
B. Total Acres Statewide And Local Important Farmland		418	416
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		1	1
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		1	1
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)		Data Not Available	
		51.73	51.76
		51.74	51.81
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points	
1. Area in Nonurban Use	15	0	0
2. Perimeter in Nonurban Use	10	5	5
3. Percent of Corridor Being Farmed	20	0	0
4. Protection Provided By State And Local Government	20	20	20
5. Size of Present Farm Unit Compared To Average	10	0	0
6. Creation Of Nonfarmable Farmland	25	0	0
7. Availability Of Farm Support Services	5	5	5
8. On-Farm Investments	20	15	15
9. Effects Of Conversion On Farm Support Services	25	0	0
10. Compatibility With Existing Agricultural Use	10	5	5
TOTAL CORRIDOR ASSESSMENT POINTS	160	50	50
PART VII (To be completed by Federal Agency)			
Relative Value Of Farmland (From Part V)	100	51.73	51.76
Total Corridor Assessment (From Part VI above or a local site assessment)	160	50	50
TOTAL POINTS (Total of above 2 lines)	260	50 01.73	50 01.74
1. Corridor Selected:	2. Total Acres of Farmlands to Be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
This will be determined through the NEPA process	34,400 16,040 to 16,300		YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
5. Reason For Selection:			
The selected alternative will be determined at a later date, based on a thorough analysis of all issue areas, including impacts to wetlands and biological resources, the local community, traffic, air/noise, and others.			
Signature of Person Completing this Part			DATE
<i>Kelly Jimm</i>			8/1/07
NOTE: Complete a form for each segment with more than one Alternate Corridor			



Appendix F: List of Acronyms

%	Percent
µg/cm ³	Micrograms per cubic meter
du/ac	dwelling units per acre
du/ha	dwelling units per hectare
ac	Acre(s)
AADT	Average Annual Daily Traffic
AAQS	Ambient Air Quality Standards
ACM	Asbestos Containing Materials
ACOE	United States Army Corps of Engineers
ACHP	Advisory Council on Historic Preservation
ADI	Area of Direct Impact
ADT	Average Daily Traffic
AMSL	Above Mean Sea Level
APCD	Air Pollution Control District
APE	Area of Potential Effect
APN	Assessor Parcel Numbers
ASR	Archaeological Survey Report
BCLA	Biological Core and Linkage Area
BLM	United States Bureau of Land Management
BMP	Best Management Practice
BVTAC	Buena Vista Lagoon Foundation and Technical Advisory Committee
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
Cal/EPA	California Environmental Protection Agency
CBI	Conservation Biology Institute
CCC	California Coastal Commission
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CDP	Census Designated Place
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFD	Community Facilities District
CFR	Code of Federal Regulations
CFS	Cubic feet per second



CHP	California Highway Patrol	FHWA	Federal Highway Administration
CIA	Community Impact Assessment	FMMP	Farmland Mapping and Monitoring Program
CMP	Congestion Management Program	FP	State of California Fully Protected Species
CMS	Changeable Message sign or Cubic meter per second	FPPA	Farmland Protection Policy Act
CNDDB	California Natural Diversity Database	FRA	Federal Rail Administration
CNPS	California Native Plant Society	FSTIP	Federal Statewide Transportation Improvement Program
CO	Carbon Monoxide	FT	Federal Threatened
CSMP	Corridor System Management Plan	ft	Foot or feet
CSS	Coastal Sage Scrub	ft ²	Square foot or feet; foot or feet squared
CTC	California Transportation Commission	FTA	Federal Transit Administration
CVREP	Carmel Valley Restoration Enhancement Project	FTIP	Federal Transportation Improvement Program
CWA	Clean Water Act	FY	Fiscal Year
CZMA	Coastal Zone Management Act of 1972		
		GIS	Geographic Information System
DAR	Direct Access Ramp	GSRD	Gross Solids Removal Devices
dB	Decibel		
dBA	A-weighted decibel	ha	Hectare(s)
dBA _{Leq}	A-weighted decibel equivalent sound level	HAS	Hydrologic Sub Areas
DEIR	Draft Environmental Impact Report	HCM	Highway Capacity Manual
DEIS	Draft Environmental Impact Statement	HCP	Habitat Conservation Plan
DLA	District Landscape Architect	HHS	Health and Human Services
DOT	Department of Transportation	HMP	Habitat Management Plan
DPP	Design Pollution Prevention	HOV	High Occupancy Vehicle
DRIR	Draft Relocation Impact Report	HPSR	Historic Property Survey Report
du	Dwelling Unit	HRT	Hydraulic Resident Time
		HWCL	Hazardous Waste Control Law
		HU	Hydrologic Unit
EB	Eastbound	I-5	Interstate 5
EFH	Essential Fish Habitat	I-15	Interstate 15
EIR	Environmental Impact Report	ITIP	Interregional Transportation Improvement Program
EIS	Environmental Impact Statement	ITMS	Integrated Traffic Management System
EMP	Environmental Mitigation Program	ISA	Initial Site Assessment
EPA	United States Environmental Protection Agency	ISC	Indirect Source Control
ESA	Environmentally Sensitive Area	ISTEA	Intermodal Surface Transportation Efficiency Act
F & E	Freeway and Expressway System		
FCIR	Farmland Conversion Impact Rating Form	JPA	Joint Powers Authority for San Dieguito River Valley Regional Open Space Park
FCWA	Federal Clean Water Act		
FE	Federal Endangered		
FEIS	Final Environmental Impact Statement		
FESA	Federal Endangered Species Act		



km	Kilometer(s)	NOD	Notice of Determination
kph	Kilometer(s) per hour	NOI	Notice of Intent
LCP	Local Coastal Plan	NOP	Notice of Preparation
LEDPA	Least Environmentally Damaging Practicable Alternative	NO _x	Nitrogen Oxides
Leq	Equivalent Sound Level	NPDES	National Pollutant Discharge Elimination System
Lmax	Maximum Level	NRCS	Natural Resource Conservation Service
LOS	Level of Service	NS	Not Surveyed
LPAB	Landmarks Preservation Advisory Board		
LUP	Land Use Plan		
		P	Pair
m	Meter(s)	PAMA	Pre-Approved Mitigation Area
m ²	Square meter(s) or meter(s)-squared	Pb	Lead
MA	mega annum; million years ago	PCI	per capita income
MEP	Maximum Extent Practicable	PDT	Project Development Team
MCB	Marine Corps Base	PHV	Peak Hour Volume
MCE	Maximum Credible Earthquake	PM	Post Mile
MHCP	Multiple Habitat Conservation Program	PM ₁₀	Particulate matter sized 10 microns and under
MHI	Median Household Income	PM _{2.5}	Particulate matter sized 2.5 microns and under
mi	Mile(s)	PPDG	Project Planning and Design Guide
MLD	Most Likely Descendant	ppm	Parts per million
MOU	Memorandum of Understanding	PRC	Public Resources Code
mph	Miles per hour	PSR	Project Study Report
MSA	Major Statistical Area	PWP/TREP	Public Works Plan / Transportation and Resource Enhancement Program
MSCP	Multiple Species Conservation Program		
MSL	Maintenance Service Level	RAP	Relocation Assistance Program
MTDB	Metropolitan Transit Development Board	RAQS	Regional Air Quality Strategy
MTS	Metropolitan Transit System	RAS	Regional Arterial System
		RCP	Regional Comprehensive Plan (for the San Diego Region)
NAAQS	National Ambient Air Quality Standards	RTIP	Regional Transportation Improvement Program
NAC	Noise Abatement Criteria	RTP	Regional Transportation Plan
NCCP	Natural Communities Conservation Planning	ROD	Record of Decision
NCTD	North County Transit District	RWQCB	Regional Water Quality Control Board
NEPA	National Environmental Policy Act		
NES	Natural Environment Study	SA	Study Area
NHS	National Highway System	SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users
NHPA	National Historic Preservation Act		
NMFS	National Marine Fisheries Service	SANDAG	San Diego Association of Governments
NO ₂	Nitrogen Dioxide	SDAB	San Diego Air Basin
NOA	Naturally Occurring Asbestos	SDAPCD	San Diego Air Pollution Control District
NOAA	National Oceanic and Atmospheric Administration	SDRP	San Dieguito River Park
		SCAG	Southern California Association of Governments



SCE	Southern California Edison	V/C	Demand Volume to Capacity Ratio
SDWDR	San Diego Water Discharge Requirements	VIA	Visual Impact Assessment
SD & IV	San Diego and Imperial Valley Railroad	VMT	Vehicle Miles Traveled
SDG&E	San Diego Gas and Electric	VOC	Volatile Organic Compounds
SDNCC	San Diego North Coast Corridor	vphpl	Vehicle per hour per lane
SDRVLC	San Dieguito River Valley Land Conservancy		
SDRWQCB	San Diego Regional Water Quality Control Board		
SE	State Endangered	WB	Westbound
SHOPP	State Highway Operation and Protection Program	WQF	Water Quality Flow
SHPO	State Historic Preservation Officer	WQV	Water Quality Volume
SIP	State Implementation Plan	WWTP	Wastewater Treatment Plan
SM	Single Male		
SO ₂	Sulfur Dioxide		
SONGS	San Onofre Nuclear Generating System		
SOV	Single Occupancy Vehicle		
SR-76	State Route 76		
SR-78	State Route 78		
SSC	State Species of Special Concern		
STIP	State Transportation Improvement Program		
SWMP	Storm Water Management Plan		
SWPPP	Storm Water Pollution Prevention Plan		
SWRCB	State Water Resources Control Board		
TASAS	Traffic Accident Surveillance and Analysis System		
TCE	Temporary Construction Easement		
TCM	Transportation Control Measure		
TCR	Transportation Concept Report		
TCRP	Governor's Traffic Congestion Relief Plan		
TCP	Traditional Cultural Property		
TDC	Targeted Design Constituents		
TDM	Transportation Demand Management		
TEA-21	Transportation Equity Act for the 21st Century		
TIP	Transportation Improvement Program		
TMDL	Total Maximum Daily Load		
TMP	Traffic Management Plan		
TSM	Transportation Systems Management		
U.S.	United States		
USC	United States Code		
USFWS	United States Fish and Wildlife Service		
USGS	United States Geological Survey		
USDOT	U.S. Department of Transportation		



Appendix G: CEQA Environmental Checklist

11-SD-5 **R28.5/R55.4** **235800**
 Dist.-Co.-Rte. P.M/P.M. E.A.

Supporting documentation of all CEQA checklist determinations is provided in Chapter 3 of this Environmental Impact Report/Environmental Impact Statement. Documentation of "No Impact" determinations is provided at the beginning of Chapter 3. Discussion of all impacts, avoidance, minimization, and/or compensation measures is under the appropriate topic headings in Chapter 3.

	Potentially Significant Impact	Less Than Significant with Mitigation	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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 AND FOREST 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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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 checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. 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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>
IX. 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"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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)?				
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>
X. 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 checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. 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"/>
XII. 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 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"/>
) 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"/>
XIII. 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 type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>
XIV. 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XV. 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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVII. 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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
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, substantially 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Appendix H: Nonstandard Features

Note: This list excludes the segments where we have DARs at Lusk on I-805, and at Voigt on I-5. All interchanges which belong to city of Encinitas will be assumed that the designs would stay the same as current designs.

10+4 with Barrier Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Genesee NB -G1M	491-497	Non standard Decision Sight Distance, non standard lengths 3 vertical curves	
Genesee NB -R1B	493	Non standard Decision Sight Distance	
Genesee NB- R1B	494-499	Non standard curve lengths (3 vertical curves) , non standard Sopping sight distance, Design Speed, Decision Sight Distance	
Genesee SB -G4B	492-498	Non standard Decision Sight Distance (2 vertical curves)	
Genesee SB -R2M	495-500	Non standard Decision Sight Distance	
Entire of the project		Multiple cross slopes for the mainlanes due to hydroplaning problems.	
Entire of the project		Pavement structural	
From Sorrento Valley to Del Mar Heights		Non-standard lane widths and shoulder widths(both sides- due to sign structures, ROW avoid impacts).	
From Sorrento Valley to Del Mar Heights		Non-standard cross slope in mainlanes because of keeping existing pavement	
Genesee	518-520	Non-standard outer separation	
Genesee	518-520	Non-standard stopping sight distance, median width, superelevation	
Genesee	518-520	Non-standard horizontal clearance to fixed object	
5/805 Merge		Non-standard lane drop (too short 2/3 WV)	
5/805 Merge		Non-standard decision sight distance (110mph)	
Carmel Valley SB on-ramp		Non-standard superelevation for the curve on the gore section. (does not match bridge)	
Carmel Valley SB on-ramp		Non-standard design speed after the gore	
Carmel Valley SB on-ramp		Non-standard design for CHP enforcement path	
Carmel Mountain/56		Non-standard interchange spacing	
Del Mar Heights	549-576	Non-standard lane widths and shoulder widths(both sides).	
Del Mar Heights	549-576	Non-standard horizontal clearance to fixed object	
Del Mar Heights R4 (WB to SB on-ramp)		Non-standard taper to make lane drop (20:1 < 30:1)	
Del Mar Heights R4 (WB to SB on-ramp)		Non-standard design speed after the gore (25 design < 50 MPH)	
Via De La Valle		Non-standard lane and shoulder width on SB direction.	
Via De La Valle R4 (EB to SB on-ramp)		Non-standard superelevation to match city street @ its termini	
Via De La Valle R5 (WB to SB on-ramp)		Non-standard design speed after the gore	
Manchester Ave.	621-640	Shoulder width, horizontal clearance, median width.	302.1, 309.1, 305.1
Manchester Ave.	621-640	Need to check for stopping sight distance and minimum distance (curb return to curb return) between ramp intersections and local road intersections (89m between the SB off-ramp/Manchester Ave intersection and Ocean Cove Dr./Manchester Ave. intersection; 30m between the NB on-ramp/Manchester Ave. intersection and the proposed Manchester Av./access road to DAR park-and-ride facility intersection).	201.3, 504.3
Manchester Ave.	621-640	Median planting to plant oleanders back in median along horizontal curve between Lomas Santa Fe and Manchester Ave.	902.1
Manchester Ave.	621-640	Nonstandard interchange spacing between Lomas Santa Fe Dr. and Manchester Ave. 1.4km	501.3
Manchester Ave. Ramps	621-640	Need to check vertical curve length, stopping sight distance, shoulder width, and horizontal clearance	204.4, 201.3, 302.1, 309.1
Birmingham Dr.	640-657	Shoulder width, horizontal clearance, interchange spacing between Birmingham Dr. and Santa Fe Dr.	302.1, 309.1, 501.3
Birmingham Dr. Ramps	640-657	Need to check vertical curve length, stopping sight, and sight distance	204.4, 201.3
Santa Fe Dr.	657-670	Shoulder width, horizontal clearance	302.1, 309.1
Santa Fe Dr.	657-670	Interchange spacing between Birmingham Dr. and Santa Fe Dr.; between Santa Fe Dr. and Encinitas Blvd.	501.3

10+4 with Barrier Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Santa Fe Dr.	657-670	Check for stopping sight distance and vertical curve length	201.3, 204.4
Santa Fe Dr. Ramps	657-670	Need to check vertical curve length and stopping sight distance	204.4, 201.3
Santa Fe Dr. Ramps	657-670	Probably distance between ramp intersections and local road intersections (Regal Road and Santa Fe Dr. NB on-ramp)	501.3
Requeza St.	671-673	Shoulder width (NB and SB HOV inside shoulder widths 1.5m)	302.1
Requeza St.	671-673	Horizontal clearance (NB and SB HOV inside shoulder adjacent to concrete barriers 1.5m)	309.1
Requeza St.	671-673	Check for stopping sight distance and vertical curve length	201.3, 204.4
Encinitas Blvd.	670-687	Shoulder width, horizontal clearance, interchange spacing between Santa Fe Dr. and Encinitas Blvd.	302.1, 309.1, 501.3
Encinitas Blvd.	670-687	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Encinitas Blvd.	670-687	Interchange distance between ramp intersections and local road intersections (Encinitas Blvd. NB on-ramp and Saxony Rd. Encinitas Blvd NB off-ramp and Calle Magdalena, Encinitas Blvd. SB off-ramp and driveway access to Petco shopping center, Encinitas Blvd SB on-ramp and driveway access to Radisson Inn hotel)	504.3
Encinitas Blvd. Ramps	670-687	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Encinitas Blvd. Ramps	670-687	Interchange distance between ramp intersections and local road intersections (Encinitas Blvd. NB on-ramp and Saxony Rd. Encinitas Blvd NB off-ramp and Calle Magdalena, Encinitas Blvd. SB off-ramp and driveway access to Petco shopping center, Encinitas Blvd SB on-ramp and driveway access to Radisson Inn hotel)	504.3
Leucadia Blvd.	687-708	Shoulder width, horizontal clearance	302.1, 309.1
Leucadia Blvd.	687-708	Check for stopping sight distance and vertical curve length	201.3, 204.4
Leucadia Blvd.	687-708	Probably distance between ramp intersections and local road intersections (Leucadia Blvd NB off-ramp and Clark Avenue; Leucadia NB on-ramp and Urania Ave; Leucadia Blvd SB off-ramp and Orpheus Ave; Leucadia Blvd SB on-ramp and Orpheus Ave.	504.3
Leucadia Blvd. Ramps	687-708	Shoulder width, horizontal clearance	302.1, 309.1
Leucadia Blvd. Ramps	687-708	Check for stopping sight distance and vertical curve length	201.3, 204.4
Leucadia Blvd. Ramps	687-708	Probably distance between ramp intersections and local road intersections (Leucadia Blvd NB off-ramp and Clark Avenue; Leucadia NB on-ramp and Urania Ave; Leucadia Blvd SB off-ramp and Orpheus Ave; Leucadia Blvd SB on-ramp and Orpheus Ave.	504.3
La Costa Ave.	708-731	Shoulder width, horizontal clearance	302.1, 309.1
La Costa Ave.	708-731	Check for stopping sight distance and vertical curve length	201.3, 204.4
La Costa Ave.	708-731	Check distance between ramp intersections and local road intersections (La Costa Ave NB off-ramp and Piraeus St.; La Costa Ave. NB on-ramp and driveway access to Park and Ride facility)	504.3
La Costa Ave. Ramps	708-731	Shoulder width	302.1
La Costa Ave. Ramps	708-731	Check vertical curve length and stopping sight distance	204.4, 201.3
La Costa Ave. Ramps	708-731	Check distance between ramp intersections and local road intersections (La Costa Ave NB off-ramp and Piraeus St.; La Costa Ave. NB on-ramp and driveway access to Park and Ride facility)	504.3
Cannon Rd.	775-798	Median width (< 6.6m)	305.1
Chinquapin Ave.	798-809	NB inside three general-purpose lanes 3.3m following the NB off ramp and through Tamarack Ave. OC	301.1
Chinquapin Ave.	798-809	NB HOV shoulder lane 2.4m	302.1
Chinquapin Ave.	798-809	Interchange spacing between Tamarack Ave and Carlsbad Village Dr. 1.35km	501.3
Chestnut Ave.	809-811	NB outside shoulder width 1.2m, NB HOV shoulder lane 2.4m	302.1, 302.1
Carlsbad Village Dr.	811-820	Interchange spacing between Tamarack Ave and Carlsbad Village Dr. 1.35km	501.3
Carlsbad Village Dr.	811-820	Interchange spacing between Carlsbad Village Dr. and Las Flores Dr. 0.911km	501.3
Las Flores Dr. Ramps	820-829	NB on-ramp grade 8.1% descending	504.2
Las Flores Dr. Ramps	820-829	SB off-ramp grade 8.6% ascending	504.2
I-5/SR-78 interchange	830-835	Interchange spacing between Las Flores Dr. and SR-78 Interchange 0.85km	504.3
I-5/SR-78 interchange	830-835	Distance between successive exits NB to WB and NB to EB 200m	504.3
Lomas Santa Fe	602-621	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4

10+4 with Barrier			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Lomas Santa Fe	602-621	Minimum distance (curb return to curb return) between ramp intersections and local road intersections (less than 125m or 165 m) (Lomas Santa Fe NB off-ramp and driveway access to Ross shopping center; Lomas Santa Fe NB on-ramp and Santa Helena; Lomas Santa Fe SB off-ramp Solana Hill Dr.; Lomas Santa Fe SB on-ramp and Solana Hill Dr.)	504.3
Lomas Santa Fe	602-621	Median planting to plant oleanders back in median along horizontal curve between Lomas Santa Fe and Manchester Ave.	902.1
Lomas Santa Fe	602-621	Nonstandard interchange spacing between Lomas Santa Fe Dr. and Manchester Ave. 1.4km	
SR-78	830-835	Interchange spacing between Las Flores Drive and SR-78 0.85Km	501.3
SR-78 Ramps	830-835	Distance between successive exits NB to WB and NB to EB 200m	504.3
SR-78 R1 (WB to NB on-ramp)		Nonstandard design speed on the curve due to ROW impact.	504.2
SR-78 R2 (NB to WB off-ramp)		Nonstandard geometric curve for the loop ramp(35 m)	
SR-78 R2 (NB to WB off-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
SR-78 R3 (NB to EB off-ramp)		Nonstandard connector configuration in the east side due to weaving length problem.	
SR-78 R4 (SB on-ramp)		Nonstandard connector configuration due to weaving length problem.	
SR-78 R4 (SB on-ramp)		Nonstandard design speed after the gore	504.2
SR-78 R4 (SB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
SR-78 R5 (SB off-ramp)		Nonstandard design speed after the gore	504.2
Cassidy St.	835-841	Nonstandard lane width, shoulder width, horizontal clearance, median width to keep Soto St. in place.	301.1, 302.1, 309.1, 305.1
Cassidy St.	835-841	Vertical curve length	204.4
Cassidy St.	835-841	Interchange spacing between SR-78 and Cassidy St.; between Cassidy St. and California St.	501.3
Cassidy Ramps	835-841	Check for stopping and decision sight distance standards.	201.3, 201.7
Cassidy Ramps	835-841	Check for vertical curve length	204.4
Cassidy R2 (SB on-ramp)		Nonstandard ramp configuration due to weaving length problem	
Cassidy R2 (SB on-ramp)		Nonstandard design speed after the gore	504.2
SD NB Sta 840+00 to 843+00		Nonstandard lane widths (3 - 3.3 m) & shoulders (1.2 m) due to ROW impact	301.1, 302.1
California St.	841-848	Shoulder width, horizontal clearance (as Soto St. shift to the east providing more room for freeway widening)	302.1, 309.1
California St.	841-848	Median width, vertical curve length, (between Cassidy St. and California St.)	305.1, 204.4
California St.	841-848	Interchange spacing (between California and Cassidy St. and between California St. and Oceanside Blvd.)	501.3
California St.	841-848	Contrast surface treatment	704.1
California St. Ramps	841-848	Check stopping sight distance and vertical curve length	201.3, 204.4
California NB on-ramp		Nonstandard design speed before the gore	504.2
Loma Alta Creek Bridge	849-850	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Oceanside Blvd.	848-859	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Oceanside Blvd. Ramps	848-859	Lane drop taper (at modified Oceanside Blvd. SB onramp)	504.3
Oceanside Blvd. Ramps	848-859	Shoulder widths	302.1
Oceanside Blvd. Ramps	848-859	Check vertical curve length, stopping sight distance and horizontal clearance	204.4, 201.3, 309.1
Oceanside R2 (NB off-ramp)		Nonstandard geometric curve for the loop ramp (37 m < 40 m)	
Oceanside R2 (NB off-ramp)		Nonstandard design speed after the gore	504.2
Oceanside R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)
Oceanside R3 (SB on-ramp)		Nonstandard taper to make lane drop	504.3
Oceanside R3 (SB on-ramp)		Nonstandard design speed after the gore	504.2
Oceanside DAR		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Brooks St.	859-861	Shoulder width, horizontal clearance, vertical curve length (check if any), and median width	302.1, 309.1, 204.4, 305.1
Mission Avenue	861-872	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4

10+4 with Barrier			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Mission Avenue	861-872	Median width, interchange spacing between I-5/Mission Ave. and I-5/SR-76 Interchanges	305.1, 501.3
Mission R1 (NB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
Mission R1 (NB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Mission R2 (NB off-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Mission R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)
Mission R4 (SB off-ramp)		Nonstandard design speed after the gore	504.2
Neptune Way/Eight St. Overcrossing	874-875	Nonstandard horizontal clearance	201.3
SR-76 R1 (NB on-ramp)		Nonstandard taper to make lane drop	504.3
SR-76 R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
SR-76 R2 (NB off-ramp)		Nonstandard superelevation	504.3(4)
SR-76 R2 (NB off-ramp)		Nonstandard design speed curves.	504.2
SD SB Sta 874+00 to 878+00		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Harbor R1 (NB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
Harbor R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
Distance between Harbor R3 and R2		Nonstandard distance between two off-ramps.	501.3
Harbor R3 (NB to EB off-ramp)		Nonstandard lane drop taper	504.3
Harbor R3 (NB to EB off-ramp)		Nonstandard superelevation	504.3(4)
Harbor R3 (NB to EB off-ramp)		Nonstandard deceleration lane	403.5
Harbor R4 (SB on-ramp)		Nonstandard taper to make lane drop	504.3
Entire of the project		Nonstandard shoulders in various locations where traffic sign posts will be installed.	302.1

10+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Genesee NB -G1M	491 497	Nonstandard Decision Sight Distance, Nonstandard lengths 3 vertical curves	
Genesee NB -R1B	493	Nonstandard Decision Sight Distance	
Genesee NB- R1B	494 499	Nonstandard curve lengths (3 vertical curves) , Nonstandard Sopping sight distance, Design Speed, Decision Sight Distance	
Genesee SB G4B	492 498	Nonstandard Decision Sight Distance (2 vertical curves)	
Genesee SB R2M	495 500	Nonstandard Decision Sight Distance	
Entire of the project		Multiple cross slopes for the mainlanes due to hydroplaning problems.	301.2
Entire of the project		Pavement structural	612.2
From Sorrento Valley to Del Mar Heights		Nonstandard lane widths and shoulder widths(both sides- due to sign structures, ROW avoid impacts).	301.1, 302.1
From Sorrento Valley to Del Mar Heights		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Genesee	518-520	Nonstandard outer separation	310.2
Genesee	518-520	Nonstandard stopping sight distance, median width, superelevation	201.3, 305.1, 504.3(4)
Genesee	518-520	Nonstandard horizontal clearance to fixed object	309.1
5/805 Merge		Nonstandard lane drop (too short 2/3 WV)	504.4
5/805 Merge		Nonstandard decision sight distance (110mph)	201.7
Carmel Valley SB on-ramp		Nonstandard superelevation for the curve on the gore section. (does not match bridge)	504.3(4)

10+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Carmel Valley SB on-ramp		Nonstandard design speed after the gore	504.2
Carmel Valley SB on-ramp		Nonstandard design for CHP enforcement path	
Carmel Mountain/56		Nonstandard interchange spacing	501.3
Del Mar Heights	549-576	Nonstandard lane widths and shoulder widths(both sides).	301.1, 302.1
Del Mar Heights	549-576	Nonstandard horizontal clearance to fixed object	309.1
Del Mar Heights R4 (WB to SB on-ramp)		Nonstandard taper to make lane drop (20:1 < 30:1)	504.3
Del Mar Heights R4 (WB to SB on-ramp)		Nonstandard design speed after the gore (25 design < 50 MPH)	504.2
Via De La Valle		Nonstandard lane and shoulder width on SB direction.	301.1, 302.1
Via De La Valle R4 (EB to SB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3
Via De La Valle R5 (WB to SB on-ramp)		Nonstandard design speed after the gore	504.2
Lomas Santa Fe	602-607+50	Nonstandard horizontal clearance to fixed objects	309.1
Lomas Santa Fe	602-621	Check for stopping sight distance	201.3
Lomas Santa Fe	602-621	Check for vertical curve length	204.4
Lomas Santa Fe	602-621	Minimum distance between ramp intersection and local road intersections	501.3
Lomas Santa Fe	602-621	Median planting to plant oleanders back to in median along horizontal curve between Lomas Santa Fe and Manchester Avenue	902.1
Lomas Santa Fe	602-621	Nonstandard interchange spacing between Lomas Santa Fe and Manchester Avenue	501.3
Lomas Santa Fe Ramps	602-621	Check vertical curve length, stopping sight distance, shoulder width and horizontal clearance	204.4, 201.3, 302.1, 309.1
Lomas Santa Fe Local Street	602-621	Minimum distance between ramp intersections and local road intersections	501.3
Lomas Santa Fe R2 (EB to NB on-ramp)		Nonstandard design speed after the gore	504.2
Manchester DAR		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Manchester R1 (NB on-ramp)		Nonstandard superelevation for the curve at the gore (controlled by bridge)	504.3(4)
Manchester R3 (SB on-ramp)		Nonstandard geometric curve for the loop ramp(35 m)	
Manchester R3 (SB on-ramp)		Nonstandard taper to make lane drop	206.3
View Point SB on-ramp		Nonstandard geometric design for ramp alignment	
View Point SB on-ramp		Nonstandard weaving length bet the on-ramp and Manchester off-ramp	504.7
Birmingham R1 (NB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3
Requeza St. Overcrossing	671-673	Shoulder width, horizontal clearance	302.1, 309.1
Requeza St. Overcrossing	671-673	Check for stopping sight distance and vertical curve length	201.3, 204.4
Encinitas R1 (NB on-ramp)		Nonstandard design speed before the gore vertical curve length	504.2, 204.4
Leucadia R1 (NB on-ramp)		Nonstandard design for CHP enforcement path (No CHP road)	
Leucadia R1 (NB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Leucadia R1 (NB on-ramp)		Nonstandard design speed after the gore	504.2
La Costa R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)
Poinsettia R1 (NB on-ramp)		4:1 slope	304.1
Poinsettia R3 (SB on-ramp)		4:1 slope	304.1
Poinsettia R4 (SB off-ramp)		4:1 slope	304.1
Palomar Airport Rd.	758-775	NB HOV shoulder width 2.4m	302.1
Palomar Airport Rd. Ramps	758-775	NB and SB HOV shoulder width 2.4m	302.1
Paloma R1 (NB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Paloma R4 (WB to SB on-ramp)		Nonstandard geometric curve for the ramp(1400 m instead of 1000 m)	
Paloma R4 (WB to SB on-ramp)		Nonstandard taper to make lane drop	504.3
Paloma R4 (WB to SB on-ramp)		Nonstandard superelevation for the curve at the gore	504.3(4)

10+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
SD SB Sta 769+60 to 779+80		Nonstandard lane widths (2 - 3.3 m) & inside shoulder(2.4 m) due to ROW impact	301.1, 302.1
Canon Rd.		Nonstandard inside shoulder (south of Canon)	302.1
Canon Rd. Ramps and DAR	775-796	Super DAR ramp < 12%	302.1
Cannon R3 (SB on-ramp)		No CHP enforcement path due to ROW impacts	
Cannon DAR		Nonstandard cross slope in mainlanes because of keeping existing pavement (<1.5%)	301.2
SD NB Sta 802+20 to 823+20		Nonstandard lane widths (3 - 3.3 m) & inside shoulder(2.4 m) due to ROW impact	301.1, 302.1
Chinquapin Avenue and Tamarack Avenue	798-809	NB inside general-purpose lanes 3.3m following the NB off ramp and through Tamarack Ave. OC	301.1
Chinquapin Avenue and Tamarack Avenue	798-809	NB HOV shoulder lane 2.4m	302.1
Chinquapin Avenue and Tamarack Avenue	798-809	Interchange spacing between Tamarack Ave. and Carlsbad Village Dr.	501.3
Agua Hedionda	792-798	Nonstandard slope 2:1	304.1
Tamarack R1 (NB on-ramp)		Nonstandard vertical clearance, stopping sight distance	309.2, 201.3
Tamarack R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
Tamarack R1 (NB on-ramp)		Nonstandard horizontal clearance to fixed object	309.1(2)
Chestnut Avenue	809-811	NB outside shoulder width 1.2, NB HOV shoulder lane 2.4m	302.1, 302.1
Carlsbad Village Dr.	809-811	NB inside general-purpose lanes 3.3m	301.1
Carlsbad Village Dr.	809-811	NB outside shoulder width 1.2 before NB off ramp	302.1
Carlsbad Village Dr.	809-811	Interchange spacing between Tamarack Ave. and Carlsbad Village Dr. 1.35Km	501.3
Carlsbad Village Dr.	809-811	Interchange spacing between Carlsbad Village Dr. and Las Flores Dr. 0.911Km	501.3
Carlsbad Village R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
Carlsbad Village R1 (NB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Carlsbad Village R3 (SB on-ramp)		Nonstandard horizontal clearance to ROW	309.1
Carlsbad Village R3 (SB on-ramp)		Nonstandard design speed after the gore	504.2
Las Flores Dr.	820-829	NB inside three general-purpose lanes 3.3m between NB off ramp and Las Flores OC	301.1
Las Flores Dr.	820-829	NB HOV shoulder lane 2.4m.	302.1
Las Flores Dr.	820-829	SB outside shoulder width after the SB onramp 2.4m	302.1
Las Flores R1 (NB on-ramp)		Nonstandard ramp configuration due to weaving length problem	
Las Flores R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
Las Flores R2 (NB off-ramp)		Nonstandard lateral clearance to wall	309.4
Las Flores R3 (SB on-ramp)		Nonstandard design speed after the gore (< 75MPH)	504.2
Las Flores R3 (SB on-ramp)		Nonstandard ramp configuration due to ROW impact.	
Las Flores R4 (SB off-ramp)		Nonstandard design speed after the gore	504.2
SR-78	830-835	Interchange spacing between Las Flores Drive and SR-78 0.85Km	501.3
SR-78 Ramps	830-835	Distance between successive exits NB to WB and NB to EB 200m	504.3
SR-78 R1 (WB to NB on-ramp)		Nonstandard design speed on the curve due to ROW impact.	504.2
SR-78 R2 (NB to WB off-ramp)		Nonstandard geometric curve for the loop ramp(35 m)	
SR-78 R2 (NB to WB off-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
SR-78 R3 (NB to EB off-ramp)		Nonstandard connector configuration in the east side due to weaving length problem.	
SR-78 R4 (SB on-ramp)		Nonstandard connector configuration due to weaving length problem.	
SR-78 R4 (SB on-ramp)		Nonstandard design speed after the gore	504.2
SR-78 R4 (SB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
SR-78 R5 (SB off-ramp)		Nonstandard design speed after the gore	504.2
Cassidy St.	835-841	Nonstandard lane width, shoulder width, horizontal clearance, median width to keep Soto St. in place.	301.1, 302.1, 309.1, 305.1
Cassidy St.	835-841	Vertical curve length	204.4

10+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Cassidy St.	835-841	Interchange spacing between SR-78 and Cassidy St.; between Cassidy St. and California St.	501.3
Cassidy Ramps	835-841	Check for stopping and decision sight distance standards.	201.3, 201.7
Cassidy Ramps	835-841	Check for vertical curve length	204.4
Cassidy R2 (SB on-ramp)		Nonstandard ramp configuration due to weaving length problem	
Cassidy R2 (SB on-ramp)		Nonstandard design speed after the gore	504.2
SD NB Sta 840+00 to 843+00		Nonstandard lane widths (3 - 3.3 m) & shoulders (1.2 m) due to ROW impact	301.1, 302.1
California St.	841-848	Shoulder width, horizontal clearance (as Soto St. shift to the east providing more room for freeway widening)	302.1, 309.1
California St.	841-848	Median width, vertical curve length, (between Cassidy St. and California St.)	305.1, 204.4
California St.	841-848	Interchange spacing (between California and Cassidy St. and between California St. and Oceanside Blvd.)	501.3
California St.	841-848	Contrast surface treatment	704.1
California St. Ramps	841-848	Check stopping sight distance and vertical curve length	201.3, 204.4
California NB on-ramp		Nonstandard design speed before the gore	504.2
Loma Alta Creek Bridge	849-850	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Oceanside Blvd.	848-859	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Oceanside Blvd. Ramps	848-859	Lane drop taper (at modified Oceanside Blvd. SB onramp)	504.3
Oceanside Blvd. Ramps	848-859	Shoulder widths	302.1
Oceanside Blvd. Ramps	848-859	Check vertical curve length, stopping sight distance and horizontal clearance	204.4, 201.3, 309.1
Oceanside R2 (NB off-ramp)		Nonstandard geometric curve for the loop ramp(37 m < 40 m)	
Oceanside R2 (NB off-ramp)		Nonstandard design speed after the gore	504.2
Oceanside R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)
Oceanside R3 (SB on-ramp)		Nonstandard taper to make lane drop	504.3
Oceanside R3 (SB on-ramp)		Nonstandard design speed after the gore	504.2
Oceanside DAR		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Brooks St.	859-861	Shoulder width, horizontal clearance, vertical curve length (check if any), and median width	302.1, 309.1, 204.4, 305.1
Mission Avenue	861-872	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Mission Avenue	861-872	Median width, interchange spacing between I-5/Mission Ave. and I-5/SR-76 Interchanges	305.1, 501.3
Mission R1 (NB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
Mission R1 (NB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Mission R2 (NB off-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Mission R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)
Mission R4 (SB off-ramp)		Nonstandard design speed after the gore	504.2
Neptune Way/Eight St. Overcrossing	874-875	Nonstandard horizontal clearance	201.3
SR-76 R1 (NB on-ramp)		Nonstandard taper to make lane drop	504.3
SR-76 R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
SR-76 R2 (NB off-ramp)		Nonstandard superelevation	504.3(4)
SR-76 R2 (NB off-ramp)		Nonstandard design speed curves.	504.2
SD SB Sta 874+00 to 878+00		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Harbor R1 (NB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
Harbor R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
Distance between Harbor R3 and R2		Nonstandard distance between two off-ramps.	501.3
Harbor R3 (NB to EB off-ramp)		Nonstandard lane drop taper	504.3
Harbor R3 (NB to EB off-ramp)		Nonstandard superelevation	504.3(4)
Harbor R3 (NB to EB off-ramp)		Nonstandard deceleration lane	403.5

10+4 with Buffer**Nonstandard Features/Design Exceptions**

LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Harbor R4 (SB on-ramp)		Nonstandard taper to make lane drop	504.3
Entire of the project		Nonstandard shoulders in various locations where traffic sign posts will be installed.	302.1

8+4 with Barrier**Nonstandard Features/Design Exceptions**

LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Genesee NB -G1M	491-497	Nonstandard Decision Sight Distance, Nonstandard lengths 3 vertical curves	
Genesee NB -R1B	493	Nonstandard Decision Sight Distance	
Genesee NB- R1B	494-499	Nonstandard curve lengths (3 vertical curves) , Nonstandard Sopping sight distance, Design Speed, Decision Sight Distance	
Genesee SB -G4B	492-498	Nonstandard Decision Sight Distance (2 vertical curves)	
Genesee SB -R2M	495-500	Nonstandard Decision Sight Distance	
Entire of the project		Multiple cross slopes for the mainlanes due to hydroplaning problems.	301.2
Entire of the project		Pavement structural	612.2
From Sorrento Valley to Del Mar Heights		Nonstandard lane widths and shoulder widths(both sides- due to sign structures, ROW avoid impacts).	301.1, 302.1
From Sorrento Valley to Del Mar Heights		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Genesee	518-520	Nonstandard outer separation	310.2
Genesee	518-520	Nonstandard stopping sight distance, median width, superelevation	201.3, 305.1, 504.3(4)
Genesee	518-520	Nonstandard horizontal clearance to fixed object	309.1
5/805 Merge		Nonstandard lane drop (too short 2/3 WV)	504.4
5/805 Merge		Nonstandard decision sight distance (110mph)	201.7
Carmel Valley SB on-ramp		Nonstandard superelevation for the curve on the gore section. (does not match bridge)	504.3(4)
Carmel Valley SB on-ramp		Nonstandard design speed after the gore	504.2
Carmel Valley SB on-ramp		Nonstandard design for CHP enforcement path	
Carmel Mountain/56		Nonstandard interchange spacing	501.3
Del Mar Heights	549-576	Nonstandard lane widths and shoulder widths(both sides).	301.1, 302.1
Del Mar Heights	549-576	Nonstandard horizontal clearance to fixed object	309.1
Del Mar Heights R4 (WB to SB on-ramp)		Nonstandard taper to make lane drop (20:1 < 30:1)	504.3
Del Mar Heights R4 (WB to SB on-ramp)		Nonstandard design speed after the gore (25 design < 50 MPH)	504.2
Via De La Valle		Nonstandard lane and shoulder width on SB direction.	301.1, 302.1
Via De La Valle R4 (EB to SB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3
Via De La Valle R5 (WB to SB on-ramp)		Nonstandard design speed after the gore	504.2
Lomas Santa Fe	602-621	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Lomas Santa Fe	602-621	Minimum distance (curb return to curb return) between ramp intersections and local road intersections (less than 125m or 165 m) (Lomas Santa Fe NB off-ramp and driveway access to Ross shopping center; Lomas Santa Fe NB on-ramp and Santa Helena; Lomas Santa Fe SB off-ramp Solana Hill Dr.; Lomas Santa Fe SB on-ramp and Solana Hill Dr.)	504.3
Lomas Santa Fe	602-621	Median planting to plant oleanders back in median along horizontal curve between Lomas Santa Fe and Manchester Ave.	902.1
Lomas Santa Fe	602-621	Nonstandard interchange spacing between Lomas Santa Fe Dr. and Manchester Ave. 1.4km	501.3
Lomas Santa Fe Ramps	602-621	Check stopping sight distance and vertical curve length, shoulder width, and horizontal clearance	201.3, 204.4, 302.1, 309.1
Lomas Santa Fe Ramps	602-621	Nonstandard shoulder width at spot locations of the modified Lomas Santa Fe NB and SB off-ramps	302.1

8+4 with Barrier Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Lomas Santa Fe Local Street	602-621	Minimum distance (curb return to curb return) between ramp intersections and local road intersections (less than 125m or 165 m) (Lomas Santa Fe NB off-ramp and driveway access to Ross shopping center; Lomas Santa Fe NB on-ramp and Santa Helena; Lomas Santa Fe SB off-ramp Solana Hill Dr.; Lomas Santa Fe SB on-ramp and Solana Hill Dr.)	504.3
Lomas Santa Fe Local Street	602-621	Median planting to plant oleanders back in median along horizontal curve between Lomas Santa Fe and Manchester Ave.	902.1
Lomas Santa Fe Local Street	602-621	Nonstandard interchange spacing between Lomas Santa Fe Dr. and Manchester Ave. 1.4km	501.3
Manchester Ave.	621-640	Shoulder width, horizontal clearance	302.1, 309.1
Manchester Ave.	621-640	Need to check for stopping sight distance and minimum distance (curb return to curb return) between ramp intersections and local road interactions (89m between the SB off-ramp/Manchester Ave. intersection and Ocean Cove Dr./Manchester Ave. intersection; 30m between the NB on-ramp/Manchester Ave intersection and the proposed Manchester Ave/access road to DAR park-and-ride facility intersection).	201.3, 504.3
Manchester Ave. Ramps	621-640	Need to check vertical curve length, stopping sight distance, shoulder width, and horizontal clearance.	204.4, 201.3, 302.1, 309.1
Birmingham Dr.	640-657	Shoulder width, horizontal clearance, interchange spacing between Birmingham Dr. and Santa Fe Dr.	302.1, 309.1, 501.3
Birmingham Dr.	640-657	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Birmingham Dr. Ramps	640-657	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
MacKinnon Ave.	654-656	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Santa Fe Dr	654-656	Shoulder width, horizontal clearance, interchange spacing between Birmingham Dr. and Santa Fe Dr.; between Santa Fe Dr. and Encinitas Blvd.	302.1, 309.1, 501.3
Santa Fe Dr	654-656	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Santa Fe Dr Ramps	654-656	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Santa Fe Dr Ramps	654-656	Distance between ramp intersections and local road intersections less than 125m or 165 m (Santa Fe Dr. NB on-ramp and Regal Rd.; Santa Fe Dr. DB off-ramp and driveway access to Scripps Memorial Hospital; Santa Fe Dr. SB on-ramp and driveway access to Vons shopping center)	504.3
Requeza St.	671-673	Shoulder width (NB and SB HOV inside shoulder widths = 1.5 m), horizontal clearance (NB and SB HOV inside shoulder adjacent to concrete barriers = 1.5m)	302.1, 309.1
Requeza St.	671-673	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Encinitas Blvd.	670-687	Shoulder width, horizontal clearance, interchange spacing between Santa Fe Dr. and Encinitas Blvd.	302.1, 309.1, 501.3
Encinitas Blvd.	670-687	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Encinitas Blvd.	670-687	Distance between ramp intersection and local road intersection (less than 125m or 165m) (Encinitas blvd. NB on-ramp and Saxony Rd.; Encinitas Blvd NB off-ramp and Calle Magdalena; Encinitas Blvd. SB off-ramp and driveway to Petco Shopping Center; Encinitas Blvd. SB on-ramp and drive access to Radisson Inn Hotel)	504.3
Encinitas Blvd. Ramps	670-687	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Encinitas Blvd. Ramps	670-687	Distance between ramp intersection and local road intersection (less than 125m or 165m) (Encinitas blvd. NB on-ramp and Saxony Rd.; Encinitas Blvd NB off-ramp and Calle Magdalena; Encinitas Blvd. SB off-ramp and driveway to Petco Shopping Center; Encinitas Blvd. SB on-ramp and drive access to Radisson Inn Hotel)	504.3
Leucadia Blvd.	687-708	Shoulder width, horizontal clearance	302.1, 309.1
Leucadia Blvd.	687-708	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Leucadia Blvd. Ramps	687-708	Shoulder width, horizontal clearance	302.1, 309.1
Leucadia Blvd. Ramps	687-708	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Leucadia Blvd. Ramps	687-708	Distance between ramp intersections and local road intersection (less than 125m or 165m) (Leucadia Blvd NB off-ramp and Clark Ave; Leucadia Blvd. NB on-ramp and Urania Ave; Leucadia Blvd. SB off-ramp and Orpheus Ave; Leucadia Blvd. SB on-ramp and Orpheus Ave.	504.3
La Costa Ave	708-731	Shoulder width, horizontal clearance	302.1, 309.1
La Costa Ave	708-731	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
La Costa Ave Ramps	708-731	Shoulder width.	302.1
La Costa Ave Ramps	708-731	Need to check vertical curve length and stopping sight distance.	204.4, 201.3

8+4 with Barrier			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
La Costa Ave Ramps	708-731	Distance between ramp intersection and local road intersection (less than 125m or 165m) (La Costa Ave NB off-ramp and Piraeus St.; La Costa Ave. NB on-ramp and driveway access to Park and Ride facility)	504.3
Palomar Airport Rd.	758-775	NB HOV shoulder width 2.4m	302.1
Canon Rd. Ramps and DAR	775-796	SB off ramp outside shoulder with 1.2m	302.1
Chinquapin Ave	798-809	NB inside three general-purpose lanes 3.3m following the NB off ramp and through Tamarack Ave. OC	301.1
Chinquapin Ave.	798-809	NB HOV shoulder lane 2.4m	302.1
Chinquapin Ave.	798-809	Interchange spacing between Tamarack Ave and Carlsbad Village Dr. 1.35km	501.3
Chestnut Ave.	809-811	NB outside shoulder width 1.2m, NB HOV shoulder lane 2.4m	302.1, 302.1
Carlsbad Village Dr.	811-820	NB inside three general-purpose lanes 3.3m. NB outside shoulder width before the NB off-ramp 1.2m.	301.1, 302.1
Carlsbad Village Dr.	811-820	Interchange spacing between Tamarack Ave and Carlsbad Village Dr. 1.35km	501.3
Carlsbad Village Dr.	811-820	Interchange spacing between Carlsbad Village Dr. and Las Flores Dr. (0.911km)	501.3
Las Flores Dr.	821-829	NB inside three general-purpose lanes 3.3m between NB off ramp and Las Flores OC	301.1
Las Flores Dr.	821-829	NB HOV shoulder lane 2.4m.	302.1
Las Flores Dr.	821-829	SB outside shoulder width after the SB onramp 2.4m	302.1
Las Flores Dr. Ramps	820-829	NB on-ramp grade 8.1% descending	504.2
Las Flores Dr. Ramps	820-829	SB off-ramp grade 8.6% ascending	504.2
I-5/SR-78 Interchange	830-835	Interchange spacing between Las Flores Dr. and SR-78 interchange 0.85km	501.3
I-5/SR-78 interchange	830-835	Distance between successive exits NB to WB and NB to EB 200m	504.3
SR-78	830-835	Interchange spacing between Las Flores Drive and SR-78 0.85Km	501.3
SR-78 Ramps	830-835	Distance between successive exits NB to WB and NB to EB 200m	504.3
SR-78 R1 (WB to NB on-ramp)		Nonstandard design speed on the curve due to ROW impact.	504.2
SR-78 R2 (NB to WB off-ramp)		Nonstandard geometric curve for the loop ramp(35 m)	
SR-78 R2 (NB to WB off-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
SR-78 R3 (NB to EB off-ramp)		Nonstandard connector configuration in the east side due to weaving length problem.	
SR-78 R4 (SB on-ramp)		Nonstandard connector configuration due to weaving length problem.	
SR-78 R4 (SB on-ramp)		Nonstandard design speed after the gore	504.2
SR-78 R4 (SB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
SR-78 R5 (SB off-ramp)		Nonstandard design speed after the gore	504.2
Cassidy St.	835-841	Nonstandard lane width, shoulder width, horizontal clearance, median width to keep Soto St. in place.	301.1, 302.1, 309.1, 305.1
Cassidy St.	835-841	Vertical curve length	204.4
Cassidy St.	835-841	Interchange spacing between SR-78 and Cassidy St.; between Cassidy St. and California St.	501.3
Cassidy Ramps	835-841	Check for stopping and decision sight distance standards.	201.3, 201.7
Cassidy Ramps	835-841	Check for vertical curve length	204.4
Cassidy R2 (SB on-ramp)		Nonstandard ramp configuration due to weaving length problem	
Cassidy R2 (SB on-ramp)		Nonstandard design speed after the gore	504.2
SD NB Sta 840+00 to 843+00		Nonstandard lane widths (3 - 3.3 m) & shoulders (1.2 m) due to ROW impact	301.1, 302.1
California St.	841-848	Shoulder width, horizontal clearance (as Soto St. shift to the east providing more room for freeway widening)	302.1, 309.1
California St.	841-848	Median width, vertical curve length, (between Cassidy St. and California St.)	305.1, 204.4
California St.	841-848	Interchange spacing (between California and Cassidy St. and between California St. and Oceanside Blvd.)	501.3
California St.	841-848	Contrast surface treatment	704.1
California St. Ramps	841-848	Check stopping sight distance and vertical curve length	201.3, 204.4
California NB on-ramp		Nonstandard design speed before the gore	504.2
Loma Alta Creek Bridge	849-850	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4

8+4 with Barrier			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Oceanside Blvd.	848-859	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Oceanside Blvd. Ramps	848-859	Lane drop taper (at modified Oceanside Blvd. SB onramp)	504.3
Oceanside Blvd. Ramps	848-859	Shoulder widths	302.1
Oceanside Blvd. Ramps	848-859	Check vertical curve length, stopping sight distance and horizontal clearance	204.4, 201.3, 309.1
Oceanside R2 (NB off-ramp)		Nonstandard geometric curve for the loop ramp(37 m < 40 m)	
Oceanside R2 (NB off-ramp)		Nonstandard design speed after the gore	504.2
Oceanside R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)
Oceanside R3 (SB on-ramp)		Nonstandard taper to make lane drop	504.3
Oceanside R3 (SB on-ramp)		Nonstandard design speed after the gore	504.2
Oceanside DAR		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Brooks St.	859-861	Shoulder width, horizontal clearance, vertical curve length (check if any), and median width	302.1, 309.1, 204.4, 305.1
Mission Avenue	861-872	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Mission Avenue	861-872	Median width, interchange spacing between I-5/Mission Ave. and I-5/SR-76 Interchanges	305.1, 501.3
Mission R1 (NB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
Mission R1 (NB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Mission R2 (NB off-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Mission R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)
Mission R4 (SB off-ramp)		Nonstandard design speed after the gore	504.2
Neptune Way/Eight St. Overcrossing	874-875	Nonstandard horizontal clearance	201.3
SR-76 R1 (NB on-ramp)		Nonstandard taper to make lane drop	504.3
SR-76 R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
SR-76 R2 (NB off-ramp)		Nonstandard superelevation	504.3(4)
SR-76 R2 (NB off-ramp)		Nonstandard design speed curves.	504.2
SD SB Sta 874+00 to 878+00		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Harbor R1 (NB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
Harbor R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
Distance between Harbor R3 and R2		Nonstandard distance between two off-ramps.	501.3
Harbor R3 (NB to EB off-ramp)		Nonstandard lane drop taper	504.3
Harbor R3 (NB to EB off-ramp)		Nonstandard superelevation	504.3(4)
Harbor R3 (NB to EB off-ramp)		Nonstandard deceleration lane	403.5
Harbor R4 (SB on-ramp)		Nonstandard taper to make lane drop	504.3
Entire of the project		Nonstandard shoulders in various locations where traffic sign posts will be installed.	302.1

8+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Genesee_NB -G1M	491 497	Nonstandard Decision Sight Distance, Nonstandard lengths 3 vertical curves	
Genesee_NB -R1B	493	Nonstandard Decision Sight Distance	

8+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Genesee_NB- R1B	494_499	Nonstandard curve lengths (3 vertical curves) , Nonstandard Sopping sight distance, Design Speed, Decision Sight Distance	
Genesee_SB_G4B	492_498	Nonstandard Decision Sight Distance (2 vertical curves)	
Genesee_SB_R2M	495_500	Nonstandard Decision Sight Distance	
Entire of the project		Multiple cross slopes for the mainlanes due to hydroplaning problems.	301.2
Entire of the project		Pavement structural	612.2
From Sorrento Valley to Del Mar Heights		Nonstandard lane widths and shoulder widths(both sides- due to sign structures, ROW avoid impacts).	301.1, 302.1
From Sorrento Valley to Del Mar Heights		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Genesee	518-520	Nonstandard outer separation	310.2
Genesee	518-520	Nonstandard stopping sight distance, median width, superelevation	201.3, 305.1, 504.3(4)
Genesee	518-520	Nonstandard horizontal clearance to fixed object	309.1
5/805 Merge		Nonstandard lane drop (too short 2/3 WV)	504.4
5/805 Merge		Nonstandard decision sight distance (110mph)	201.7
Carmel Valley SB on-ramp		Nonstandard superelevation for the curve on the gore section. (does not match bridge)	504.3(4)
Carmel Valley SB on-ramp		Nonstandard design speed after the gore	504.2
Carmel Valley SB on-ramp		Nonstandard design for CHP enforcement path	
Carmel Mountain/56		Nonstandard interchange spacing	501.3
Del Mar Heights	549-576	Nonstandard lane widths and shoulder widths(both sides).	301.1, 302.1
Del Mar Heights	549-576	Nonstandard horizontal clearance to fixed object	309.1
Del Mar Heights R4 (WB to SB on-ramp)		Nonstandard taper to make lane drop (20:1 < 30:1)	504.3
Del Mar Heights R4 (WB to SB on-ramp)		Nonstandard design speed after the gore (25 design < 50 MPH)	504.2
Via De La Valle		Nonstandard lane and shoulder width on SB direction.	301.1, 302.1
Via De La Valle R4 (EB to SB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3
Via De La Valle R5 (WB to SB on-ramp)		Nonstandard design speed after the gore	504.2
Lomas Santa Fe	602-621	Need to check for stopping sight distance and vertical curve length.	
Lomas Santa Fe	602-621	Minimum distance (curb return to curb return) between ramp intersections and local road intersections (less than 125m or 165 m) (Lomas Santa Fe NB off-ramp and driveway access to Ross shopping center; Lomas Santa Fe NB on-ramp and Santa Helena; Lomas Santa Fe SB off-ramp Solana Hill Dr.; Lomas Santa Fe SB on-ramp and Solana Hill Dr.)	504.3
Lomas Santa Fe	602-621	Median planting to plant oleanders back in median along horizontal curve between Lomas Santa Fe and Manchester Ave.	902.1
Lomas Santa Fe	602-621	Nonstandard interchange spacing between Lomas Santa Fe Dr. and Manchester Ave. 1.4km	501.3
Lomas Santa Fe Ramps	602-621	Check stopping sight distance and vertical curve length, shoulder width, and horizontal clearance	201.3, 204.4, 302.1, 309.1
Lomas Santa Fe Ramps	602-621	Nonstandard shoulder width at spot locations of the modified Lomas Santa Fe NB and SB off-ramps	302.1
Lomas Santa Fe Local Street	602-621	Minimum distance (curb return to curb return) between ramp intersections and local road intersections (less than 125m or 165 m) (Lomas Santa Fe NB off-ramp and driveway access to Ross shopping center; Lomas Santa Fe NB on-ramp and Santa Helena; Lomas Santa Fe SB off-ramp Solana Hill Dr.; Lomas Santa Fe SB on-ramp and Solana Hill Dr.)	504.3
Lomas Santa Fe Local Street	602-621	Median planting to plant oleanders back in median along horizontal curve between Lomas Santa Fe and Manchester Ave.	902.1
Lomas Santa Fe Local Street	602-621	Nonstandard interchange spacing between Lomas Santa Fe Dr. and Manchester Ave. 1.4km	501.3
Manchester Ave.	621-640	Shoulder width, horizontal clearance	302.1, 309.1
Manchester Ave.	621-640	Need to check for stopping sight distance and minimum distance (curb return to curb return) between ramp intersections and local road interactions (89m between the SB off-ramp/Manchester Ave. intersection and Ocean Cove Dr./Manchester Ave. intersection; 30m between the NB on-ramp/Manchester Ave intersection and the proposed Manchester Ave/access road to DAR park-and-ride facility intersection).	201.3, 504.3
Manchester Ave.	621-640	Median planting to plant oleanders back in median along horizontal curve between Lomas Santa Fe and Manchester Ave.	902.1

8+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Manchester Ave.	621-640	Nonstandard interchange spacing between Lomas Santa Fe Dr. and Manchester Ave. 1.4km	501.3
Manchester Ave. Ramps	621-640	Need to check vertical curve length, stopping sight distance, shoulder width, and horizontal clearance.	204.4, 201.3, 302.1, 309.1
Birmingham Dr.	640-657	Shoulder width, horizontal clearance, interchange spacing between Birmingham Dr. and Santa Fe Dr.	302.1, 309.1, 501.3
Birmingham Dr.	640-657	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Birmingham Dr. Ramps	640-657	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Birmingham Dr. Ramps	640-657	Distance between ramp intersections and local road intersections (Birmingham Dr. NB on-ramp and Villa Cardiff Dr; Birmingham Dr. SB off-ramp and MacKinnon Ave; Birmingham Dr. SB on-ramp and MacKinnon Ave.)	504.3
MacKinnon Ave.	654-656	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Santa Fe Dr	654-656	Shoulder width, horizontal clearance, interchange spacing between Birmingham Dr. and Santa Fe Dr.; between Santa Fe Dr. and Encinitas Blvd.	302.1, 309.1, 501.3
Santa Fe Dr	654-656	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Santa Fe Dr	654-656	Distance between ramp intersections and local road intersections less than 125m or 165 m (Santa Fe Dr. NB on-ramp and Regal Rd.; Santa Fe Dr. DB off-ramp and driveway access to Scripps Memorial Hospital; Santa Fe Dr. SB on-ramp and driveway access to Vons shopping center)	504.3
Santa Fe Dr Ramps	654-656	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Santa Fe Dr Ramps	654-656	Distance between ramp intersections and local road intersections less than 125m or 165 m (Santa Fe Dr. NB on-ramp and Regal Rd.; Santa Fe Dr. DB off-ramp and driveway access to Scripps Memorial Hospital; Santa Fe Dr. SB on-ramp and driveway access to Vons shopping center)	504.3
Requeza St.	671-673	Need check for stopping sight distance and vertical curve length	201.3, 204.4
Encinitas Blvd.	670-687	Shoulder width, horizontal clearance, interchange spacing between Santa Fe Dr. and Encinitas Blvd.	302.1, 309.1, 501.3
Encinitas Blvd.	670-687	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Encinitas Blvd.	670-687	Distance between ramp intersection and local road intersection (less than 125m or 165m) (Encinitas Blvd. NB on-ramp and Saxony Rd.; Encinitas Blvd NB off-ramp and Calle Magdalena; Encinitas Blvd. SB off-ramp and driveway to Petco Shopping Center; Encinitas Blvd. SB on-ramp and drive access to Radisson Inn Hotel)	504.3
Encinitas Blvd. Ramps	670-687	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
Encinitas Blvd. Ramps	670-687	Distance between ramp intersection and local road intersection (less than 125m or 165m) (Encinitas Blvd. NB on-ramp and Saxony Rd.; Encinitas Blvd NB off-ramp and Calle Magdalena; Encinitas Blvd. SB off-ramp and driveway to Petco Shopping Center; Encinitas Blvd. SB on-ramp and drive access to Radisson Inn Hotel)	504.3
Leucadia Blvd.	687-708	Shoulder width, horizontal clearance	302.1, 309.1
Leucadia Blvd.	687-708	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Leucadia Blvd.	687-708	Distance between ramp intersections and local road intersection (less than 125m or 165m) (Leucadia Blvd NB off-ramp and Clark Ave; Leucadia Blvd. NB on-ramp and Urania Ave; Leucadia Blvd. SB off-ramp and Orpheus Ave; Leucadia Blvd. SB on-ramp and Orpheus Ave.	504.3
Leucadia Blvd. Ramps	687-708	Shoulder width, horizontal clearance	302.1, 309.1
Leucadia Blvd. Ramps	687-708	Need to check for stopping sight distance and vertical curve length.	201.3, 204.4
Leucadia Blvd. Ramps	687-708	Distance between ramp intersections and local road intersection (less than 125m or 165m) (Leucadia Blvd NB off-ramp and Clark Ave; Leucadia Blvd. NB on-ramp and Urania Ave; Leucadia Blvd. SB off-ramp and Orpheus Ave; Leucadia Blvd. SB on-ramp and Orpheus Ave.	504.3
Leucadia Blvd. Local Streets	687-708	Distance between ramp intersections and local road intersection (less than 125m or 165m) (Leucadia Blvd NB off-ramp and Clark Ave; Leucadia Blvd. NB on-ramp and Urania Ave; Leucadia Blvd. SB off-ramp and Orpheus Ave; Leucadia Blvd. SB on-ramp and Orpheus Ave.	504.3
La Costa Ave	708-731	Shoulder width, horizontal clearance	302.1, 309.1
La Costa Ave	708-731	Need to check for stopping sight distance and vertical curve length	201.3, 204.4
La Costa Ave Ramps	708-731	Shoulder width.	302.1
La Costa Ave Ramps	708-731	Need to check vertical curve length and stopping sight distance.	204.4, 201.3

8+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
La Costa Ave Ramps	708-731	Distance between ramp intersection and local road intersection (less than 125m or 165m) (La Costa Ave NB off-ramp and Piraeus St.; La Costa Ave. NB on-ramp and driveway access to Park and Ride facility)	504.3
La Costa Ave Local Streets	708-731	Distance between ramp intersection and local road intersection (less than 125m or 165m) (La Costa Ave NB off-ramp and Piraeus St.; La Costa Ave. NB on-ramp and driveway access to Park and Ride facility)	504.3
La Costa Ave Local Streets	708-731	Distance between ramp intersections (La Costa Ave. NB off-ramp and SB on-ramp; La Costa Ave. NB on-ramp and SB off-ramp)	504.3
Chinquapin Ave	798-809	NB inside three general-purpose lanes 3.3m following the NB off ramp and through Tamarack Ave. OC	301.1
Chinquapin Ave.	798-809	NB HOV shoulder lane 2.4m	302.1
Chinquapin Ave.	798-809	Interchange spacing between Tamarack Ave and Carlsbad Village Dr. 1.35km	501.3
Carlsbad Village Dr.	811-820	NB inside three general-purpose lanes 3.3m. NB outside shoulder width before the NB off-ramp 1.2m.	301.1, 302.1
Carlsbad Village Dr.	811-820	Interchange spacing between Tamarack Ave and Carlsbad Village Dr. 1.35km	501.3
Carlsbad Village Dr.	811-820	Interchange spacing between Carlsbad Village Dr. and Las Flores Dr. (0.911km)	501.3
SR-78	830-835	Interchange spacing between Las Flores Drive and SR-78 0.85Km	501.3
SR-78 Ramps	830-835	Distance between successive exits NB to WB and NB to EB 200m	504.3
SR-78 R1 (WB to NB on-ramp)		Nonstandard design speed on the curve due to ROW impact.	504.2
SR-78 R2 (NB to WB off-ramp)		Nonstandard geometric curve for the loop ramp(35 m)	
SR-78 R2 (NB to WB off-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
SR-78 R3 (NB to EB off-ramp)		Nonstandard connector configuration in the east side due to weaving length problem.	
SR-78 R4 (SB on-ramp)		Nonstandard connector configuration due to weaving length problem.	
SR-78 R4 (SB on-ramp)		Nonstandard design speed after the gore	504.2
SR-78 R4 (SB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
SR-78 R5 (SB off-ramp)		Nonstandard design speed after the gore	504.2
Cassidy St.	835-841	Nonstandard lane width, shoulder width, horizontal clearance, median width to keep Soto St. in place.	301.1, 302.1, 309.1, 305.1
Cassidy St.	835-841	Vertical curve length	204.4
Cassidy St.	835-841	Interchange spacing between SR-78 and Cassidy St.; between Cassidy St. and California St.	501.3
Cassidy Ramps	835-841	Check for stopping and decision sight distance standards.	201.3, 201.7
Cassidy Ramps	835-841	Check for vertical curve length	204.4
Cassidy R2 (SB on-ramp)		Nonstandard ramp configuration due to weaving length problem	
Cassidy R2 (SB on-ramp)		Nonstandard design speed after the gore	504.2
SD NB Sta 840+00 to 843+00		Nonstandard lane widths (3 - 3.3 m) & shoulders (1.2 m) due to ROW impact	301.1, 302.1
California St.	841-848	Shoulder width, horizontal clearance (as Soto St. shift to the east providing more room for freeway widening)	302.1, 309.1
California St.	841-848	Median width, vertical curve length, (between Cassidy St. and California St.)	305.1, 204.4
California St.	841-848	Interchange spacing (between California and Cassidy St. and between California St. and Oceanside Blvd.)	501.3
California St.	841-848	Contrast surface treatment	704.1
California St. Ramps	841-848	Check stopping sight distance and vertical curve length	201.3, 204.4
California NB on-ramp		Nonstandard design speed before the gore	504.2
Loma Alta Creek Bridge	849-850	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Oceanside Blvd.	848-859	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Oceanside Blvd. Ramps	848-859	Lane drop taper (at modified Oceanside Blvd. SB onramp)	504.3
Oceanside Blvd. Ramps	848-859	Shoulder widths	302.1
Oceanside Blvd. Ramps	848-859	Check vertical curve length, stopping sight distance and horizontal clearance	204.4, 201.3, 309.1
Oceanside R2 (NB off-ramp)		Nonstandard geometric curve for the loop ramp (37 m < 40 m)	
Oceanside R2 (NB off-ramp)		Nonstandard design speed after the gore	504.2
Oceanside R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)

8+4 with Buffer			
Nonstandard Features/Design Exceptions			
LOCATIONS	STATION	DESCRIPTION	HDM INDEX
Oceanside R3 (SB on-ramp)		Nonstandard taper to make lane drop	504.3
Oceanside R3 (SB on-ramp)		Nonstandard design speed after the gore	504.2
Oceanside DAR		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Brooks St.	859-861	Shoulder width, horizontal clearance, vertical curve length (check if any), and median width	302.1, 309.1, 204.4, 305.1
Mission Avenue	861-872	Shoulder width, horizontal clearance, vertical curve length (check if any)	302.1, 309.1, 204.4
Mission Avenue	861-872	Median width, interchange spacing between I-5/Mission Ave. and I-5/SR-76 Interchanges	305.1, 501.3
Mission R1 (NB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
Mission R1 (NB on-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Mission R2 (NB off-ramp)		Nonstandard superelevation to match city street @ its termini	504.3(4)
Mission R3 (SB on-ramp)		Nonstandard superelevation	504.3(4)
Mission R4 (SB off-ramp)		Nonstandard design speed after the gore	504.2
Neptune Way/Eight St. Overcrossing	874-875	Nonstandard horizontal clearance	201.3
SR-76 R1 (NB on-ramp)		Nonstandard taper to make lane drop	504.3
SR-76 R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
SR-76 R2 (NB off-ramp)		Nonstandard superelevation	504.3(4)
SR-76 R2 (NB off-ramp)		Nonstandard design speed curves.	504.2
SD SB Sta 874+00 to 878+00		Nonstandard cross slope in mainlanes because of keeping existing pavement	301.2
Harbor R1 (NB on-ramp)		Nonstandard superelevation for the curve on the gore section.	504.3(4)
Harbor R1 (NB on-ramp)		Nonstandard design speed before the gore	504.2
Distance between Harbor R3 and R2		Nonstandard distance between two off-ramps.	501.3
Harbor R3 (NB to EB off-ramp)		Nonstandard lane drop taper	504.3
Harbor R3 (NB to EB off-ramp)		Nonstandard superelevation	504.3(4)
Harbor R3 (NB to EB off-ramp)		Nonstandard deceleration lane	403.5
Harbor R4 (SB on-ramp)		Nonstandard taper to make lane drop	504.3
Entire of the project		Nonstandard shoulders in various locations where traffic sign posts will be installed.	302.1