DOCKETED

Docket Number:	07-AFC-06C
Project Title:	Carlsbad Energy Center - Compliance
TN #:	204375-3
Document Title:	CalTrans FHWA I-5 Widening North Coast Corridor FEIS/FEIR Part 3 (3 of 8)
Description:	N/A
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Submitter Role:	Applicant Representative
Submission Date:	4/24/2015 4:16:55 PM
Docketed Date:	4/24/2015

Buena Vista Lagoon

The natural forms of Buena Vista Lagoon and ornamental freeway landscaping at the I-5 / SR-78 Interchange characterize this landscape unit (*Figures 3-7.32* and *3-7.33*). Hosp Grove Park and Saint Malo Beach are two culturally important features that are visible from the freeway and reinforce the historic beach community character of the area. Large swaths of aquatic reeds in the lagoon provide seasonal changes in color and character. Two large retail centers at the east end of the lagoon conflict with the natural character of the viewshed.

The open space and open water of Buena Vista Lagoon is a vivid image in the midst of an urban area. The lagoon is bordered on the north by the SR-78 freeway and the south by Jefferson Street, which serve as low-profile buffers to encroaching development. Freeway landscaping also screens views of development. Unity and intactness of the freeway viewshed are moderately high, as is the overall visual quality.

Figure 3-7.32: View of I-5 at Buena Vista Lagoon, looking northwest

Figure 3-7.33: View of I-5 at Buena Vista Lagoon, looking northeast

Loma Alta Creek

Mature freeway landscaping featuring large eucalyptus trees and median oleanders set the visual character of this landscape unit (*Figures 3-7.34* and *3-7.35*). These visual elements enable the freeway to appear as a suburban parkway. Mid-ground views to open space, a golf course, and distant views of the ocean reinforce viewshed character. Residential and commercial development in the area is small scale and also features mature landscaping. An exception to this is a large mobile home park set on thinly landscaped manufactured terraced slopes.

The freeway viewshed in this landscape unit is primarily defined by mature freeway landscaping featuring tall eucalyptus trees that delineate the skyline. Linear sightlines are expanded at the Oceanside Boulevard Interchange by distant views to the west, where an ocean view is available to southbound travelers. This view provides orientation and vividness, and the mature freeway landscaping gives the viewshed a high degree of unity and intactness. Intactness is lessened for southbound viewers, however, by the presence of the above-mentioned mobile home park and its encroaching signage. Overall visual quality is moderately high.

Figure 3-7.34: Mature freeway landscaping establishes the parkway character of the viewshed

Figure 3-7.35: Mature freeway landscaping establishes the parkway character of the viewshed

Oceanside Gateway

This unit has a similar parkway character as the previous unit, despite the fact that it contains perhaps the highest density residential community in the I-5 North Coast Corridor (*Figures 3-7.36* and *3-7.37*). The tall freeway trees, mature landscape, and depressed freeway section, screen most off-site views for freeway travelers.

The same type of freeway landscaping described in the previous unit also contributes to the visual quality of this viewshed. Views of soundwalls and urban development beyond the right-of-way reduce vividness, intactness, and unity to moderate levels.

Figure 3-7.36: Freeway landscaping provides a visual buffer and improves visual quality of the landscape unit

Figure 3-7.37: Freeway landscaping provides a visual buffer and improves visual quality of the landscape unit

San Luis Rey River

For freeway travelers from the north, this unit serves as the visual gateway to the San Diego metropolitan region (*Figures 3-7.38* and *3-7.39*). As discussed, two visual elements in the freeway landscape create the signature parkway character of the I-5 North Coast Corridor. Tall eucalyptus trees on each side of the freeway provide vertical relief to the horizontal expanse of concrete paving, and oleander shrubs in the median block views of oncoming traffic and reduce the visible portion of the roadway by half. Tall fan palms in the community combine with ocean views to reinforce a beach resort appearance to the landscape. These also serve as pattern elements to soften manufactured forms, and provide natural forms, colors, and textures, to the visual environment.

As the freeway spans the San Luis Rey River valley, views of the ocean to the west and river valley to the east provide a high level of vividness. A wide variety of roadside commercial development, including high rise resort hotels, reduces the unity and intactness of the viewshed to moderate levels. Overall visual quality is moderately high.

Figure 3-7.38: A view of I-5 from the San Luis Rey River Trail

Figure 3-7.39: Plentiful landscaping forms a visual gateway to the San Diego region, as viewed from southbound I-5

Existing Scenic Resources within the Project Setting

The I-5 corridor is eligible for official designation in the California Scenic Highway System and is also designated as a scenic view corridor by some of the cities it traverses.

A scenic resource may be an object, set of objects, or a whole landscape that has exceptional visual quality, character, uniqueness, cultural significance, or historical value. Since there is no comprehensive list of specific features that automatically qualify as scenic resources, a Caltrans District Landscape Architect (DLA) is responsible to research community values, conduct field reviews, perform site analysis, and synthesize the data gathered, to determine whether scenic resources exist within the project area.

The following visual elements of the *I-5 NCC Project* viewshed have been identified as Scenic Resources:

The Pacific Ocean

The I-5 freeway provides visual access to the ocean for hundreds of thousands of people each day. These views orient the viewer in the landscape and introduce visitors to the visual character of the region. Views such as these are rarely experienced while traveling on a major urban freeway and establish the corridor's unique visual identity.

Ocean views from the freeway occur at the following locations:

- Northbound lanes between Carmel Mountain Road and SR-56
- Northbound lanes between Del Mar Heights Road and San Dieguito River Bridge
- Southbound lanes between Via de la Valle and Lomas Santa Fe Drive
- Northbound lanes between Lomas Santa Fe Drive and Manchester Avenue
- Southbound lanes between Manchester Avenue and Birmingham Drive
- Vista Point adjacent to southbound lanes north of Manchester Avenue
- MacKinnon Avenue overcrossing
- All lanes at Encinitas Boulevard
- Southbound lanes between La Costa Avenue and Poinsettia Lane
- Southbound lanes at Oceanside Boulevard
- All lanes at the San Luis Rey River Bridge

Coastal Wetlands

The coastal lagoons in the project area are some of the last surviving wetlands of their kind in southern California. The freeway also traverses two rivers that flow throughout the year, which is an unusual visual experience for southern Californians. Not only are the wetlands a rare commodity, the expansive open spaces associated with them offer relief from views of urban development, and also serve as view corridors from freeway to foothills.

These scenic resources exist at the following locations:

- Los Peñasquitos Lagoon in San Diego
- San Dieguito River in San Diego
- San Elijo Lagoon in Encinitas
- Batiquitos Lagoon in Carlsbad
- Agua Hedionda Lagoon in Carlsbad
- Buena Vista Lagoon in Oceanside
- San Luis Rey River in Oceanside

Torrey Pines State Reserve

The vivid sight of native Torrey pines clinging to picturesque coastal bluffs at the headland of Los Peñasquitos Lagoon is considered to be one of the scenic treasures of the region. The Reserve is visible from the Sorrento Valley and Carmel Valley landscape units.

Coastal Bluffs

The bluffs are ancient marine terraces cut by the sea and are composed primarily of cream-colored Torrey sandstone capped by a denser layer of rust red Linda Vista Formation that contains protruding horizontal bands of cobblestones. These picturesque eroded cliffs are found near coastal beaches, lagoons, and rivers. The distinctive eroded appearance of the sandstone bluffs also appears in old road cuts, and to a lesser extent, on some freeway cut slopes. Eroded sandstone is particularly associated with the Torrey Pines, Del Mar, and Solana Beach communities.

Areas in which this scenic resource exists are:

- Torrey Pines State Reserve
- Southern slopes of the San Dieguito River Valley
- Native slopes of the San Elijo Valley
- Native slopes adjacent to the northbound freeway lanes between Manchester Avenue and Birmingham Drive

Agricultural Land

The strawberry fields situated along I-5 near Manchester Avenue in Encinitas and Cannon Road in Carlsbad are highly visible artifacts of historic land uses, are in visual harmony with adjacent lagoons, and provide relief from the visual patterns of urban development along the corridor. As development continues to displace agriculture in southern California, their uniqueness and value as a scenic resource increases in equal proportion.

Encinitas and Leucadia Hillside Neighborhoods

These neighborhoods exemplify Encinitas' unique historic identity as a center of exotic horticulture. The older homes in this area were built early in the twentieth century on large parcels of several acres that were utilized as avocado groves, exotic plant nurseries, or commercial greenhouse space. The homes were sited atop a coastal ridge that afforded views of the ocean to the west and mountains to the east. Most were designed in the romantic Spanish Colonial style and featured outdoor living areas surrounded by lush tropical landscaping.

Today, the visual character of the scene survives despite intense urban development that has occurred elsewhere along the coast. A few parcels have been subject to residential infill projects, but many of the original homes, large stands of tall trees, and some of the avocado groves, nurseries, and greenhouses remain. This is a viewshed that would not at first glance be considered scenic, yet it retains a high level of vividness due to the rarity of residential open space near the coast. Views of this resource are available from the freeway between Encinitas Boulevard and La Costa Avenue.

Carlsbad Village

Holiday Park, located in Carlsbad Village, is visible from the elevated northbound freeway lanes. The village that surrounds the park was developed in the first half of the twentieth century and is

what urban planners now call a traditional or livable community. This means that commercial and residential land uses coexist, streets are relatively narrow and shaded with large trees, parking lots and commercial signage are barely noticeable, and commercial buildings are in scale with nearby custom-built single-family homes. Freeway landscaping screens the sight of moving traffic from the community, and large trees enable it to be consistent with the Village's visual character. This scene forms a sharp contrast to the more contemporary and commonplace land use patterns and building types found in the Carlsbad Mesa landscape unit to the south.

Freeway Median Oleanders

As southbound travelers approach the City of Oceanside, they are introduced to San Diego's metropolitan region by freeway landscaping of a type not experienced as they passed through urban areas to the north. The route changes from a standard freeway to a green parkway, principally due to the presence of large, flowering oleander shrubs in the median. Oleanders reduce the scale of the freeway by half as they screen views of oncoming traffic. They provide cooling visual relief with their soft, green, natural appearance. They are a visual link to scenic areas adjacent to the freeway. Median oleanders are an I-5 freeway feature unique to San Diego and vividly communicate the region's distinctive landscape character. The oleanders extend from Harbor Drive Interchange in Oceanside to the San Dieguito River Bridge in San Diego, and again from Genesee Avenue Interchange in San Diego past the southerly project limit.

Existing Landmarks

Landmarks are prominent features in the landscape that provide orientation or identify a particular locality. In most cases, they possess some degree of cultural significance. Landmarks are not necessarily scenic resources because some can act as encroaching visual elements and reduce visual quality. The following are landmarks located within the project viewshed:

- Del Mar Racetrack and Fairgrounds – The Del Mar Racetrack and Fairgrounds, adjacent to the ocean, are visible from the freeway in the San Dieguito Valley and Solana Hills landscape units. For generations of San Diegans, this image brings to mind the slogan "where the surf meets the turf."

- Encina Power Station – The Encina Power Station's single concrete chimneystack is a Carlsbad landmark. Because of its location directly adjacent to the beach, it is visible from La Jolla to San Clemente. Freeway travelers can see the plant from Carlsbad Mesa, Agua Hedionda, and Carlsbad Village landscape units.

Please see *Figure 3-7.110* for the Scenic Resource Map.

Methods of Predicting Viewer Response

Viewer Response

Viewer response is composed of viewer sensitivity and viewer exposure.

Viewer Sensitivity

Viewer sensitivity is defined both as the viewers' concern for scenic quality and the viewers' response to change in the visual resources that constitute the view.

Local values and goals may confer visual significance on landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. Even when the existing appearance of a project site is uninspiring, a community may still object to projects that fall short of its visual goals. Analysts can learn about these special resources and community aspirations for visual quality through citizen participation procedures, as well as from local publications and planning documents.

Research has shown that viewers exhibit similar responses to the arrangement of visual elements in outdoor space, and that spatial qualities can positively or negatively affect their personal comfort and ability to function. For example, most people respond negatively to large expanses of undifferentiated groundplane and hard vertical spatial edges that obstruct views. In contrast, people respond positively to a varied groundplane, coherent spatial relationships that provide opportunities for discovery, and open views that include orientation features such as landmarks. This behavioral consistency enables the reliable prediction of viewer sensitivity to changes in the visual environment.

Viewer Exposure

Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of their view, the speed at which the viewer moves, and the position of the viewer.

Studies indicate that people are active receptors of visual information and seek understanding from experiencing their surroundings. Therefore, high viewer exposure heightens the importance of early consideration of urban design, public art, and architecture and their roles in managing the visual resource effects of a project.

Viewer Groups, Viewer Exposure, and Viewer Awareness

Freeway Travelers

There are approximately 250,000 freeway travelers per day in the project area, which is the primary northern gateway for visitors to the San Diego metropolitan area. Many local residents also commute to and from coastal north county every day and use a majority of the 27-mile project. During periods of free flow travel, the project can be traversed in approximately 25 minutes.

The I-5 North Coast Corridor links two of the nation's largest metropolitan regions and is the primary transportation gateway to San Diego from the north. As San Diego's "front door," it forms the first impression of the region's scenic character for millions of tourists each year.

Daily commuters may have an increased awareness of views from the road due to the amount of time spent on the facility each day. Those that experience congested traffic conditions and slower speeds tend to notice views beyond the freeway itself.

Tourists traveling to and from San Diego on I-5 would likely have a high awareness of the visual environment. Studies have shown that visitors' perceptions of a metropolitan region are formed to a great extent by the views they observe from the road.

Drivers traveling at normal freeway speeds will focus attention on long distance, non-peripheral views. Passengers have a heightened awareness of a wide range of views.

Community Residents

Hundreds of residents live near the freeway. Landscaping and/or berms now screen most residential views of the freeway. Some residents located at an elevation higher than the freeway have long duration mid-ground views of moving traffic. A number of these residents also have distant views of the ocean. Most residents located below freeway elevation view landscaped fill slopes. Some fill slopes also include small retaining walls.

Residents typically have a high concern about the effect of the project on views from their homes and its effect on the visual character of their community.

Recreational Area Users

The freeway is adjacent to five natural preserves, two open space parks, five community parks, three recreational areas, and one golf course. Hikers and equestrians have foreground to mid-ground views of the freeway facility for periods of less than an hour. Community park users have mid-ground views of the freeway for longer periods of time. Golfers have mid-ground to distant views of the facility for up to three hours.

Those that visit nature preserves and open space parks near the freeway may have a high concern about project appearance due to its potential to disrupt their experience of the natural environment. Community park users would have an acute awareness of the proposed project features due to the relative scale of park to freeway.

Commercial Employees and Patrons

A variety of commercial uses ranging from shopping centers to hotels are located near the freeway. Potentially, there are hundreds of viewers per day with short to moderate duration views of the facility. Commercial employees and patrons would likely have a moderate to low awareness of visual changes caused by the project.

Business Park Employees and Visitors

Office buildings located in North City West and Carlsbad would have direct, foreground to mid-ground views of the freeway. Employees working in these buildings would have moderate duration views of the facility. Office workers would likely have a low awareness of the freeway.

Local Street Users

Thousands of drivers using local streets each day have short-duration views of the freeway facility at interchanges. Pedestrians and bicyclists using the interchanges would have longer-duration views. There are residential frontage streets such as Orpheus Avenue in Encinitas that have direct views to the freeway. Community residents are the primary users of these streets and would have short-duration views of the proposed project. Some residents may have high frequency exposure to these views from local streets. Adjacent streets such as Avenida Encinas in Carlsbad serve commercial areas and would have direct foreground views of freeway traffic.

Frequent users of local streets near the freeway would have a high awareness of visual change caused by the project.

Public Facility Users

Thousands of students and faculty, healthcare facility patients and staff, city staff, and citizens have short- to long-duration views of the freeway. UCSD and Scripps Memorial Hospital would be adjacent to the proposed DAR at Voigt Drive. Oceanside High School is in close proximity to I-5, and hundreds of students are exposed to traffic entering and exiting the freeway at the Mission Avenue Interchange on a daily basis.

Public facility users would have a low to moderate awareness of the freeway. Awareness would be most acute for students who walk near or across the facility to attend classes.

Viewer Sensitivity

In an area as scenic as the I-5 North Coast Corridor, there are many visual resources that are important not only to local viewers, but also to residents of the region and visitors from around the world. Within the corridor viewshed, natural features such as the ocean, beaches, lagoons, sandstone bluffs, canyons, agricultural fields, and natural open space are particularly memorable because it is unusual for a traveler on an urban freeway in southern California to see such a quantity of scenic open space.

Also important to local viewers is the village-like character of the older seaside communities that border the freeway. This character can be viewed from the freeway as travelers pass through older neighborhoods such as Carlsbad Village, or the residential neighborhoods of Encinitas that are characterized by the presence of horticultural greenhouses and avocado groves. The historic suburban appearance that has been preserved in the older communities of the corridor is considered to be a scenic resource in itself.

The portion of I-5 within the project area is part of the California Scenic Highway System as a route eligible for official designation. Additions and deletions to the list of highways eligible for designation are made through legislative action. Because local agencies are required to complete a lengthy nomination process in order to nominate a route as an eligible scenic highway, it can be assumed that viewer sensitivity to visual changes to that route would be above average.

Caltrans has adopted policies relating to the protection of scenic corridors with Deputy Directive 31, and context sensitive solutions with Director's Policy 22, as a response to public sensitivity regarding the effects of highway projects on visual resources.

Caltrans Deputy Directive 31 states:

> Caltrans, in cooperation with affected communities, identifies impacts to scenic corridors as an integral part of its project planning and project development process, taking into account local perspectives, and is sensitive to the obstruction or degradation of any scenic view open to the public.

Caltrans Director's Policy 22 states:

> Caltrans uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.

The sensitivity of California citizens to changes in coastal resources was clearly expressed in 1972 with the passage of Proposition 20, the "Save Our Coast" initiative. The initiative created the California Coastal Commission (CCC), and in 1976, the Legislature adopted the California Coastal Act. The project area is located in the California Coastal Zone, which is under the jurisdiction of the CCC. The CCC works with local governments and other public agencies to protect public beach access, wetlands, wildlife, water quality, scenic vistas, and coastal tourism in accordance with the California Coastal Act. This document focuses on effects of the *I-5 NCC Project*. Further information on transportation projects within the coastal zone can be found in the PWP/TREP (Appendix R).

Regarding visual resources, Chapter 3, Article 6, Section 30251 of the Coastal Act states:

> The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.

Similar values are expressed in the planning documents and ordinances of local cities along the coast. The scenic qualities that give coastal communities their unique sense of place are highly valued by north coast residents and are perhaps best expressed in the following excerpts from the City of Del Mar General Plan:

> Unquestionably the strongest theme running through the Citizen's Report was the determination to maintain Del Mar as a village-like community of uncrowded, predominantly single-family residences. A closely related principal concern was the permanent protection of the outstanding natural features of Del Mar. Specifically, the citizens were concerned with preservation of Del Mar's two and one half miles of sand beach, its still largely undeveloped scenic sandstone bluffs, the open vistas and private gardens, the groves of native and exotic trees, and the presently degraded but restorable San Dieguito Lagoon.
>
> A broad-based concern for proper land use is especially important for Del Mar because of the community's regional significance as part of the coastal land of California. It should not be forgotten that the village qualities of sea-side communities like Del Mar are appreciated by people of all California and even of nearby states.

Specific goals and policies contained in the general plans of other cities in the corridor reflect the community values expressed above. For example, most cities have instituted building height restrictions in the coastal zone to preserve the existing village character of the seaside and protect visual access to the ocean. A summary of such goals and policies that pertain to the I-5 corridor follows below.

The Torrey Pines Community Plan recommends relocating overhead power lines adjacent to Sorrento Valley Road at Los Peñasquitos Lagoon underground. It also contains guidelines to ensure visual compatibility between natural open space features and nearby development. Building size, form, and color are to be subordinate to the natural environment. The plan also

recommends planting Torrey Pine trees in roadways and other landscaped areas. It requires the installation of landscaping to screen views of development from designated scenic roadways.

The City of Encinitas General Plan has designated I-5 at the San Elijo lagoon as a scenic view corridor. It identifies bluffs, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, trees, and views as significant natural features to be preserved. It has also identified the entire I-5 corridor within the City limits as a Scenic View Corridor. Encinitas has set a General Plan goal to maintain the sense of spaciousness within the I-5 corridor, and has a policy to encourage and preserve low-density residential zoning adjacent to I-5 and discourage development that would infringe upon scenic views and vistas within the I-5 corridor. It has a policy to encourage retention of buffer zones such as natural vegetation or earth barriers, bluffs, and canyons to protect areas adjacent to the freeway. It considers public use facilities such as linear parks, local streets, public parking, pedestrian and bicycle trails, and related facilities to be land uses compatible with the I-5 corridor. It encourages freeway median planting and other freeway landscaping.

The City of Carlsbad General Plan has designated the segment of I-5 within the City as a scenic corridor. It also identifies hillsides, ridges, valleys, canyons, beaches, lagoons, and lakes as visual resources. It considers passive parks, open space, and agriculture as land uses compatible with I-5. It discourages the use of walls in excess of 6 ft in height for noise attenuation.

Since the project area is within the California Coastal Zone, is eligible for the California Scenic Highway System, and has been designated by Encinitas and Carlsbad as a scenic view corridor, overall public sensitivity to visual changes caused by the proposed project could be considered high.

3.7.3 Environmental Consequences

Assessment Method

The process used in the VIA to evaluate potential visual impacts associated with the proposed project follows the federal guidance outlined in the Visual Impact Assessment for Highway Projects (FHWA, March 1981). This process includes the following steps:

1. Define the project setting and viewshed (see *Section 3.7.2)*
2. Identify key views for visual assessment
3. Analyze existing visual resources and the viewer response
4. Depict the visual appearance of project alternatives
5. Assess the visual impacts of project alternatives
6. Propose methods to avoid, minimize, and/or mitigate adverse visual impacts

Assess Change to Visual Character - Since visual character is descriptive and non-evaluative, change alone is assessed at this stage. The change likely to be caused by the project is assessed according to the visual attributes of objects (pattern elements) and the relationships between those objects (pattern character) in the visual environment before and after the project is constructed.

Assess Change to Visual Quality – The second step of the process is to compare the visual quality of the existing resources with projected visual quality after the project is constructed. Existing and proposed intactness, unity, and vividness are assessed and compared.

Predict Viewer Response – Viewer response to changes in the visual environment is predicted by using existing viewer exposure and viewer sensitivity values, which are assumed to remain constant before and after the project is implemented. The viewer response to project changes is the average of viewer exposure and viewer sensitivity to the project.

Determine Visual Impact – The resulting level of visual impact is determined by averaging the degree of resource change with the extent to which people are likely to be affected by the change (viewer response).

Definition of Visual Impact Levels

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

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

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

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

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

Assessing Project Alternatives

The 10+4 Buffer alternative was assessed in the VIA and the comparative impacts of other build alternatives have been interpolated. That project alternative was chosen because its footprint width is an approximate average of the other proposed build alternatives. The decision to interpolate the impacts of the other alternatives was made because the footprint width of all build alternatives is very similar (about 12-ft maximum difference in most locations). This is due to the inclusion of auxiliary lanes in the 8+4 alternatives, narrow inside shoulders in the 10+4 alternatives, and the use of eight mixed-use lanes in the northern portions of the 10+4 alternatives. Therefore, the difference in impact severity between build alternatives in most locations would be minor.

Since it is a project objective to minimize construction outside existing right-of-way limits, differences in visual effects would primarily consist of roadway views pertaining to pavement width, retaining wall height, and removal of oleanders in the median. Other project features that create visual effects such as soundwalls would essentially be the same for all build alternatives. In certain locations, the 10+4 Barrier alternative may require acquisition of additional right-of-way that may require additional assessment. This would be done on a case-by-case basis.

Analysis of Key Views

Because it is not feasible to analyze all the views in which the proposed project would be seen, it is necessary to select a number of representative key viewpoints that would most clearly display the visual effects of the project. Key views also represent the primary viewer groups that would potentially be affected by the project. *Figure 3-7.40* depicts the locations of 17 key views along the corridor.

Key view photo simulations depict primary design elements of the proposed project. Some visual features proposed as mitigation such as landscaping and enhanced structure design are being integrated into the proposed project features to minimize adverse visual impacts. Some of these features are depicted in the photo simulations for illustrative purposes. Additional mitigation measures to those depicted may be required in each location. Specific mitigation requirements would be determined during the design phase according to the implementation procedures contained in the visual mitigation section of this assessment. Mitigation measures shown outside Caltrans right-of-way such as trees planted along local streets or those that require the installation of non-standard equipment such as pedestrian bridge lights would be implemented only if the responsible local government is willing to maintain them in perpetuity.

All photo simulations are constructed using current design data that may change as the project is developed. Appurtenances (an accompanying part or feature of the freeway such as overhead signs, signals, and value pricing equipment) could cause additional impacts that may require additional assessment in the future.

Figure 3-7.40: Key View Map

Key View 1 – Voigt Drive DAR

Orientation

La Jolla Hills Landscape Unit in San Diego, southbound I-5 between Genesee Avenue and La Jolla Village Drive Interchanges, looking south to Voigt Drive overcrossing (*Figure 3-7.41*).

Proposed Project Features

Project features would include DAR structures, overcrossing widening, Voigt Drive widening and modifications, freeway improvements, retaining walls up to 46 ft in height, and loss of most existing freeway landscaping including median oleanders (*Figure 3-7.42*).

Change to Visual Quality/Character

Visual unity and intactness between the freeway and adjacent land uses would be reduced to low levels with the introduction of large walls, ramp structures, and widened local streets. This would occur despite the use of project features such as terrain-contoured retaining walls, planting pockets at freeway level, median landscaping where possible at DAR, enhanced bridge design, landscape buffer planting at the top of walls, and widened sidewalks and landscaped parkways on Voigt Drive. The resulting visual quality of the freeway would be low. The existing campus character and compatible suburban parkway character of the overcrossing area and the freeway would change to one resembling an urban core area due to the large structures that are proposed. This would contrast with the visual context of the landscape unit, and could be viewed as a negative change to the community.

Viewer Response

The freeway would serve over 200,000 vehicles per day. Voigt Drive would accommodate thousands of freeway users; UCSD students, faculty, and staff; and hospital users; per day. Duration of views would vary from less than a minute to several minutes. Viewer awareness and activity could be redirected toward the proposed freeway features. Viewer sensitivity could be high. Overall viewer response could be high.

Resulting Visual Impact

The change in visual quality would be from moderate to low. Visual character would undergo a high degree of change as it transitions from suburban campus/parkway to urban core. Viewer response could be high. The resulting visual impact would be high.

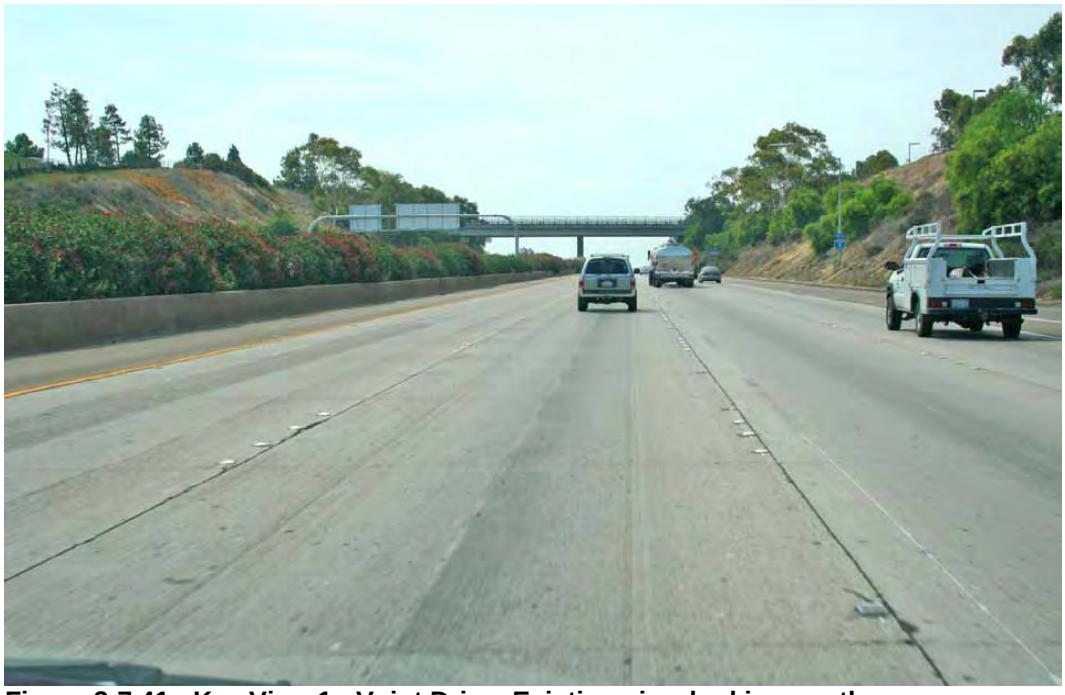

Figure 3-7.41: Key View 1 - Voigt Drive: Existing view looking south

Figure 3-7.42: Key View 1 - Voigt Drive: Proposed view looking south along DAR ramp

Key View 2 – I-5 at Del Mar Heights Road

Orientation

Del Mar Heights Landscape Unit in San Diego, northbound I-5 between Del Mar Heights Road and Via de la Valle Interchanges, looking north (*Figure 3-7.43*).

Proposed Project Features

A pair of large retaining walls is proposed in the existing cut slopes to accommodate freeway improvements. The wall on the northbound side would be about 3600 ft in length and 33 to 40 ft in height, with the majority of the wall being 30 to 33 ft in height. The corresponding southbound wall would be of similar size. These walls would be designed as "terrain-contoured walls" as a visual impact minimization feature (illustrated in the visual mitigation section) and would be typical of those proposed for similar large cut slopes in Solana Beach, Cardiff, Encinitas, and Carlsbad. They would be located at or near existing mid-slope benches so the upper portion of existing slopes and their vegetation could be preserved intact. In addition, they would have curved surfaces, sloped faces, integral earth-tone colors, and enhanced surface textures. They would be partially screened from freeway users by landscaped slopes at their bases. A safety barrier would be incorporated where the wall would be within the clear recovery zone. In this key view location, the freeway surface would increase to almost twice its existing width (*Figure 3-7.44*).

Change to Visual Quality/Character

The proposed walls would decrease the intactness and unity of the viewshed from moderate to low levels. Views of the preserved upper slopes and adjacent community would be obscured because the tops of the near-vertical retaining walls would block the line of sight for many freeway viewers. Vividness also would be reduced as the attention of the viewer is directed more toward foreground views of the widened freeway. Large forms would be built in both the horizontal and vertical planes and would be incompatible with the small-scale suburban character of the community. They would produce a marked increase in visual contrast between the freeway and its surroundings. The change to visual character would be high.

Viewer Response

The freeway would serve over 200,000 viewers per day with foreground views of the project. Hundreds of local street users on Del Mar Heights Road would have mid-ground views of the walls. Duration of views would vary from less than one minute to several minutes. Some local residents would be able to view the freeway from their rear yards. Viewer sensitivity to changes in the visual environment in the Torrey Pines and Del Mar communities could be high.

Resulting Visual Impact

The change to visual quality would be moderate. Change to visual character would be high. Viewer response would be moderately high. Overall visual impact would be moderately high.

Figure 3-7.43: Key View 2 - I-5 at Del Mar Heights Road: Existing view looking north

Figure 3-7.44: Key View 2 - I-5 at Del Mar Heights Road: Proposed view looking north

Key View 3 – Ida Avenue in Solana Beach

Orientation

Solana Hills Landscape Unit in Solana Beach at Ida Avenue south of Genevieve Street looking north (*Figure 3-7.45*).

Proposed Project Features

Freeway improvements would require a large retaining wall along Ida Avenue. The wall would be up to 30-ft tall and 1300-ft long. The circulated Draft EIR/EIS evaluated a solid 12-ft masonry soundwall on top of the retaining wall that would bring its total height up to 42 ft. That wall would block existing scenic coastal views from the freeway. Based on general comments received on loss of potential ocean views during public review of the Draft EIR/EIS and Supplemental Draft EIR/EIS, as well as coordination with the CCC, the masonry soundwall was assessed with a nine-ft transparent soundwall on a three-ft solid concrete barrier in an attempt to reduce coastal view impacts. A transparent soundwall at this location proved unsatisfactory. Views to the ocean and racetrack would be obscured by the soundwall posts and horizontal framing, reflections off translucent panel surfaces, and image distortion through the panels. The plexiglass panels incorporate wire safety mesh which changes the clear panel to be light gray, and the gray color would obscure the gray/blue color of the ocean. The viewer would interpret the ocean view as hazy sky. Also, the Ida Avenue view to the coast is at an angle. Transparent walls are best used where the view is straight on through the transparent panels (perpendicular) and where views are of long-duration. At freeway speeds, the viewer would perceive a series of translucent panels, posts and metal framing. Coastal views must be retained to comply with the Coastal Act. Therefore, the soundwall was assessed to be split with a gap where the blocked coastal view was identified. A three-ft concrete safety barrier would occur at the gap for coastal view. Therefore, the retaining wall and three-ft concrete safety barrier would result in a solid wall height of 33 ft at the highest point.

The soundwall and retaining wall surface would be battered and the walls and barrier would incorporate architectural treatment similar to that found in the Lomas Santa Fe Drive Interchange Improvement Project. A small landscaped slope would be located at the base of the wall on the residential side. Existing overhead utility lines would be relocated underground. In addition, street landscaping consistent with the Eden Gardens Master Streetscape Plan would be included as part of the freeway project (*Figure 3-7.46*).

Change to Visual Quality/Character

The proposed soundwall, retaining wall, and barrier would reduce visual unity, intactness, and vividness from existing moderate levels to low levels. Structures of that size are normally associated with urban core areas, and would form a severe contrast to the visual character of the neighborhood.

Viewer Response

Hundreds of residents and local street users would have foreground, mid-ground, and background views of the project. Unlike the solid soundwall identified in the Draft EIR/EIS, the gap in the soundwall would allow taller vehicles on the freeway to be visible. Durations of the views would range from minutes to hours. Viewer exposure would be moderate. Views from some homes on Ida Avenue are directed toward the freeway, so viewer awareness would be moderate to high. Viewer sensitivity would be moderately high. Overall viewer response would be moderately high for either the solid soundwall or the soundwall with the gap.

Resulting Visual Impact

Change to visual quality would be moderately high, change to visual character would be high, and viewer response to proposed changes would be moderately high. The visual impact would therefore be moderately high for either the solid soundwall or the soundwall with the gap.

Figure 3-7.45: Key View 3 - Ida Avenue: Existing view looking north

Figure 3-7.46: Key View 3 - Ida Avenue: Proposed view looking north

Note: Key View 3 is not updated. The proposed soundwall would be replaced by a split soundwall with a concrete safety barrier at the gap to preserve scenic views.

Key View 4 – I-5 at Ida Avenue

Orientation

Solana Beach Landscape Unit in Solana Beach, southbound I-5 south between Via de la Valle and Lomas Santa Fe Drive Interchanges, looking southwest (*Figure 3-7.47*).

Proposed Project Features

Freeway improvements would add three lanes to the west of the existing shoulder. The Draft EIR/EIS evaluated a solid soundwall 12 ft in height. As part of this Final EIR/EIS, this solid soundwall was split to include a gap to retain coastal views, per compliance with the Coastal Act. At the gap in the soundwall, a three-ft concrete safety barrier has been recommended at the edge of the proposed roadway. As described under Key View 3, based on general comments received on loss of potential ocean views during public review of the Draft EIR/EIS and Supplemental Draft EIR/EIS, as well as coordination with the CCC, the masonry soundwall was assessed with a nine-ft transparent soundwall on a three-ft solid concrete barrier to retain the coastal view from the freeway. A split soundwall with a gap to preserve a coastal view is now recommended at this location.

Change to Visual Quality/Character

The overhead utility lines would be buried. The proposed concrete safety barrier would preserve existing scenic views of the ocean and racetrack, and partially screen foreground views. The split soundwall with gap changes the result from high to moderately low level of change in visual quality and would retain public access to a high quality visual resource. The open character of the existing freeway would be preserved. The additional paving and concrete barrier would contribute to the freeway change to a large urban freeway. This would contrast with the existing visual character.

Viewer Response

More than 100,000 viewers per day, with short-duration views, would be affected by the proposed changes. Distant views of the ocean would be preserved by the gap in the soundwall. This would change the level of awareness from high to moderate by viewers to the proposed changes. Therefore, the change from a solid soundwall to the split soundwall with a gap would be moderately high to low for viewer response.

Resulting Visual Impact

Change to visual quality and character for the solid soundwall would be high, and for the soundwall with gap it would be moderately low. Viewer response to those changes could likely be moderately high for the solid soundwall and for the soundwall with gap it would be low. Therefore, the visual impact for the solid soundwall would be high and for the soundwall with gap it would be moderately low.

Figure 3-7.47: Key View 4 - I-5 at Ida Avenue: Existing view looking southwest

Figure 3-7.48: Key View 4 - I-5 at Ida Avenue: Proposed view looking southwest
Note: Key View 4 is not updated. A split soundwall with a gap to preserve a coastal view is now recommended at this location.

Key View 5 – I-5 at Manchester Avenue

Orientation

San Elijo Lagoon Landscape Unit in Encinitas, northbound I-5 at the San Elijo Lagoon Bridge, looking north (*Figure 3-7.49*).

Proposed Project Features

Following circulation of the Draft EIR/EIS, the proposed DAR was redesigned in consideration of the sensitive visual context of the area as a scenic gateway to Encinitas. It is currently proposed as a trenched access ramp and an undercrossing to maintain views of the surrounding hillsides, open spaces, and San Elijo Lagoon. A trenched DAR facility would be located just north of the interchange loop ramp. It would consist of entry and exit ramps descending into the median and meeting at an undercrossing structure below the northbound lanes. The median ramp would have retaining walls at each side that would reach a maximum height of 26 ft. Here the paved freeway footprint would be at its widest as additional DAR entry and exit lanes would be added to existing or proposed through lanes for each project alternative. Existing oleanders would be removed from the median. Large terrain-contour retaining walls would be terraced on each side of the freeway to replace existing cut slopes. The scenic bluffs located above the northbound slope would remain undisturbed. The DAR access road would go east from the freeway undercrossing to the proposed San Elijo Multi-use Facility located on existing agricultural fields behind the gas station. The access road would connect to Manchester Avenue east of the station. The multi-use facility would provide a bus platform and parking for 150 cars. It would be situated below the level of the existing ground plane to minimize its visibility (*Figure 3-7.50*).

Change to Visual Quality/Character

The bridges, walls, loss of trees, and parking lot proposed for this scenic area would cause a high degree of change to its visual quality and character. Intactness and unity levels would change from high to low, and vividness would be reduced to a moderate level. Visual character would change as incompatible built forms replace existing visual resources.

Viewer Response

Hundreds of thousands of freeway travelers and thousands of local street users would view the project each day. Hundreds of residents would have views to the project. Viewer response is high.

Resulting Visual Impact

Change to visual quality and character would be high. Viewer response is high. The visual impact would be high. The DAR redesign of a trenched ramp and undercrossing instead of elevated ramps and overcrossing would reduce the visual impact.

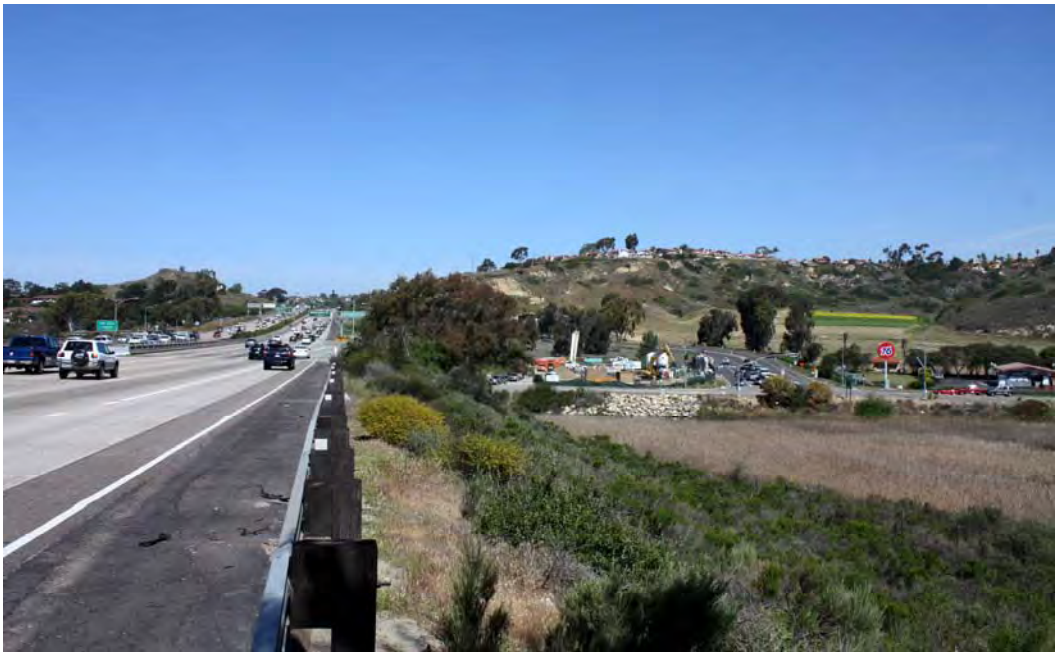

Figure 3-7.49: Key View 5 - I-5 at Manchester Avenue: Existing view looking north

Figure 3-7.50: Key View 5 - I-5 at Manchester Avenue: Proposed view looking north

Key View 6 – Devonshire Drive in Encinitas

Orientation

Encinitas Upland Landscape Unit in Encinitas, Devonshire Drive near Requeza Street, looking north (*Figure 3-7.51*).

Proposed Project Features

A soundwall 16 ft in height is proposed to be located at the freeway right-of-way. It would be approximately 950 ft in length. The wall would incorporate architectural detailing in addition to enhanced color and texture to reduce its apparent size and increase its compatibility with the surroundings. Street trees would also be planted in front of the wall if the City maintains them in perpetuity (*Figure 3-7.52*).

Change to Visual Quality/Character

The proposed wall would be an encroaching urban element due to its large size. It would replace the variable spatial edge of the neighborhood with a tall, vertical plane. Its height would be more than twice that allowed by local building codes for solid, freestanding walls in residential communities. In a small-scale community environment such as this, the wall would look singularly out of place, and reduce unity and intactness to moderately low levels.

Viewer Response

There are hundreds of local street users and residents who view this area each day. Most views are of short duration, but there would be a high awareness of the proposed visual changes. Residents would likely be sensitive to this change in their neighborhood.

Resulting Visual Impact

Change to visual character would be moderately high, change to visual quality would be moderate, and viewer response would be moderately high. The visual impact would be moderately high.

Figure 3-7.51: Key View 6 - Devonshire Drive in Encinitas: Existing view looking north

Figure 3-7.52: Key View 6 - Devonshire Drive in Encinitas: Proposed view looking north

Key View 7 – I-5 at Encinitas Boulevard

Orientation

Encinitas Upland Landscape Unit, in Encinitas, northbound I-5 / Encinitas Boulevard Interchange, looking north (*Figure 3-7.53*).

Proposed Project Features

The northbound side of the freeway would be widened to seven lanes, and a large retaining wall would replace the existing landscaped slope. The wall would be up to 40 ft in height near the northbound on-ramp, and be approximately 3500 ft in length. A second retaining/soundwall of similar height and length is proposed on the existing landscaped slope adjacent to the southbound on-ramp. Both would be terrain-contoured walls (described in the visual mitigation section), and for a portion of their length, small slopes adjacent to the freeway would provide landscape screening. A minimum five-ft planting pocket would be located between the wall and concrete safety barrier at the edge of the northbound shoulder where there is insufficient room for a slope. Proposed soundwalls would be placed at or near the tops of the retaining walls. A third soundwall located near the southbound off-ramp would be visible in the key view. Freeway improvements would also occur in the existing median, new concrete safety barriers would be constructed (including a safety barrier where the wall would be within the clear recovery zone), and existing oleanders would be preserved in place (*Figure 3-7.54*).

Change to Visual Quality/Character

Large manufactured objects would define the horizontal and vertical planes and would replace landscaping as the prominent visual element in the viewshed. The proposed retaining walls would likely be the largest built forms in the area. Visual unity would change from moderately high to moderately low. Intactness and vividness would be reduced to low levels. Visual character would change as manufactured forms replace existing natural components. The existing suburban parkway character of the freeway would become more urban.

Viewer Response

Hundreds of thousands of freeway users, local street users, and local residents would view the proposed project features in this viewshed. Duration of views would be several seconds to several hours. There would likely be a high awareness of the project features by a majority of viewers. Local residents may be highly sensitive to the proposed changes.

Resulting Visual Impact

The change to visual character would be high. Change to visual quality would be moderately high. Viewer response would be moderately high. The visual impact would be moderately high.

Figure 3-7.53: Key View 7 - I-5 at Encinitas Boulevard: Existing view looking north

Figure 3-7.54: Key View 7 - I-5 at Encinitas Boulevard: Proposed view looking north

Key View 8 – Union Street in Encinitas

Orientation

Leucadia Hills Landscape Unit in Encinitas, on Union Street west of I-5, looking east (*Figure 3-7.55*).

Proposed Project Features

A freeway pedestrian overcrossing (POC) at Union Street was recommended by the City of Encinitas to achieve the city's goal of enhancing pedestrian access across the freeway. It is proposed as an enhancement feature in the I-5 Corridor, and would be located on City right-of-way, if implemented. A small City-owned parcel in the key view foreground would become an informal city park. The POC would remain a bridge structure until it reaches well within the proposed park's eastern boundary. The POC and its associated walls and abutments would incorporate design features to keep their scale and mass to an absolute minimum. Usable park space would be created at the eastern terminus of the bridge by adding fill material. Freeway retaining walls and soundwalls would be located near the existing rights-of-way and would be visible from the park (*Figure 3-7.56*).

Change to Visual Quality/Character

The POC would add an urban design element to the viewshed and have a moderately high effect on the visual character of the neighborhood. Proposed walls at freeway edges would contribute to this effect. Visual unity and intactness would be reduced to moderately low levels due to the proposed park grading, freeway walls, and aerial structure. Vividness would change slightly assuming the POC appears as an attractive amenity as planned. Change to visual quality would be moderate.

Viewer Response

Hundreds of thousands of freeway viewers and hundreds of local residents would see the POC each day. Duration of views would vary from a few seconds for freeway viewers to several hours for adjacent residents. There would likely be a high awareness of the project features by both travelers and residents.

Resulting Visual Impact

Change to visual quality would be moderate. Change to visual character would be moderately high. Viewer response would be moderately high. The visual impact would be moderately high.

Figure 3-7.55: Key View 8 - Union Street in Encinitas: Existing view looking east toward I-5

Figure 3-7.56: Key View 8 - Union Street in Encinitas: Proposed view looking east toward I-5

Key View 9 - I-5 Near Union Street

Orientation

Leucadia Hills Landscape Unit in Encinitas, on southbound I-5 at Union Street looking south toward Encinitas Boulevard (*Figure 3-7.57*).

Proposed Project Features

Three lanes of widening would occur, and a proposed soundwall 0.75 mi in length and 16 ft in height would be located on the edge of shoulder. An articulated wall with a planting pocket behind a concrete safety barrier is one example that could be incorporated as a project feature to minimize visual impacts. Extensive groupings of mature trees would be permanently removed on side slopes to accommodate widening. Median widening would occur and existing oleanders would be preserved in place. Overhead utilities would be placed underground as part of improvement features proposed in the I-5 corridor (*Figure 3-7.58*). This area was selected for an additional view following public circulation of the Draft EIR/EIS and refinement of potential community enhancements (refer to *Figure 3-7.104,* below, which shows a potential pedestrian bridge crossing I-5 and connecting residential areas on the west and east sides of the freeway in this area*)*.

Change to Visual Quality/Character

The proposed soundwall would block desirable existing views and could result in a sense of enclosure, directing the traveler's attention to undesirable foreground views of the widened freeway. The articulated wall design and planting pocket would lessen the apparent height of the wall, but would not prevent existing views from being lost. The lost views would reduce vividness to a low level. Intactness and unity would also be reduced to low levels because the size of the new freeway and its vertical components visible on both sides would contrast with natural features of the surrounding landscape. The visual character of the freeway becomes more urbanized. Tree removal and the loss of visual connection to the community would result in a high degree of change to visual character.

Viewer Response

Local residents may be sensitive to the proposed changes.

Resulting Visual Impact

Change to visual quality and character would be high. Viewer response would be high. The visual impact would be high.

Figure 3-7.57: Key View 9 - I-5 Near Union Street: Existing view looking south

Figure 3-7.58: Key View 9 - I-5 Near Union Street: Proposed view looking south.
Note: Wall design shows an optional articulated layout. Architectural treatment could be added to be compatible with the Design Guidelines: I-5 NCC Project (Appendix L).

Key View 10 – Union Street in Encinitas

Orientation

Leucadia Hills Landscape Unit in Encinitas, on Union Street at the westerly I-5 right-of-way, looking southeast (*Figure 3-7.59*).

Proposed Project Features

A retaining wall 6 ft in height with a soundwall 16 ft in height would be constructed on or near the existing Caltrans right-of-way boundary. Due to topography, the top of the proposed soundwall would be 30 ft higher than the elevation of the adjacent residence. The new freeway shoulder would be located immediately behind the wall. Drainage features such as a concrete ditch or vegetated swale may be located at the base of the wall and be protected by a chain link fence. Paved access from Union Street for Caltrans maintenance personnel may also be required (*Figure 3-7.60*).

Change to Visual Quality/Character

The replacement of the existing landscaped freeway buffer with the proposed wall would result in a manufactured urban form that would visually dominate the neighborhood. The scale of the wall would approximate that of a three-story building and could result in a feeling of enclosure for adjacent residents. It could also increase shading, air circulation, and microclimate. It would severely contrast with the suburban setting and change the visual character of the neighborhood. Visual quality components would be reduced to low levels.

Viewer Response

Adjacent residents would have foreground and mid-ground views of the project for long durations.

Resulting Visual Impact

Change to visual quality would be moderately high. Change to visual character would be high. Viewer response would be moderately high. The visual impact would be moderately high.

Figure 3-7.59: Key View 10 - Union Street in Encinitas: Existing view looking southeast

Figure 3-7.60: Key View 10 - Union Street in Encinitas: Proposed view looking southeast

Key View 11 – Orpheus Avenue in Encinitas

Orientation

Leucadia Hills Landscape Unit in Encinitas, on Orpheus Avenue north of East Glaucus Street, looking north (*Figure 3-7.61*).

Proposed Project Features

The existing open channel would be enclosed and moved underground due to freeway improvements. In addition, an earthen berm would be placed at the edge of the freeway and be retained along Orpheus Avenue with a wall six to eight ft in height. The berm would be landscaped and trees would be planted along the street in informal groupings. The existing chain link fence would be removed and not replaced because the retaining wall would provide freeway access control. Curbs, gutters, sidewalks, or concrete drainage ditches, would not be placed in front of the wall (*Figure 3-7.62*).

Change to Visual Quality/Character

The proposed berm and retaining wall would screen views of the freeway from street level, but introduce another solid, manufactured structure to the viewshed. The height of the wall would be consistent in scale with other site features normally found in residential neighborhoods. Landscape planting in front of the wall and on the berm would soften the appearance of the wall's hard surfaces. These changes would have a moderate effect on the visual character of the street, and a low change to visual quality.

Viewer Response

Hundreds of local street users and residents would view the proposed project features each day. Most views would be of short duration, but there would be a high awareness of the proposed visual changes. Residents would likely be sensitive to this change in their neighborhood.

Resulting Visual Impact

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

Figure 3-7.61: Key View 11 - Orpheus Avenue in Encinitas: Existing view looking north

Figure 3-7.62: Key View 11 - Orpheus Avenue in Encinitas: Proposed view looking north

Key View 12 – I-5 at Carlsbad Village Drive

Orientation

Carlsbad Village Landscape Unit in Carlsbad, northbound I-5 between Tamarack Avenue and Carlsbad Village Drive, looking north (*Figure 3-7.63*).

Proposed Project Features

Freeway improvements would result in the permanent loss of all freeway plantings adjacent to the outside shoulder. A soundwall 12 to 16 ft in height has been recommended, and would be placed on top of a concrete safety barrier. A planting pocket between the barrier and wall would not be feasible due to space constraints. A vertical barrier design would be required in order to place architectural detailing on the soundwall. This condition would exist for the length of Carlsbad Village between the Tamarack Avenue overcrossing and Las Flores Drive overcrossing, with the exception of the area between gore points at Carlsbad Village Drive undercrossing (*Figure 3-7.64*).

Change to Visual Quality/Character

The proposed soundwall would block high quality views of Holiday Park and Carlsbad Village. The vividness of those views would be lost and attention would be redirected to foreground views of the freeway. A sense of enclosure and separation from the city would replace the open views and visual unity of the existing scene. The increased horizontal width of the freeway in combination with the hard edge of the plane created by the concrete barrier and soundwall would also change the visual character to one more urban.

Viewer Response

Hundreds of thousands of travelers use the freeway each day, and their views of the Village endure for approximately one minute. Viewers would have foreground and mid-ground views of the project. Viewer response would be moderately high.

Resulting Visual Impact

Change to visual quality and character would be high. Viewer response is moderately high. The visual impact would be high.

Figure 3-7.63: Key View 12 - I-5 at Carlsbad Village Drive: Existing view looking north

Figure 3-7.64: Key View 12 - I-5 at Carlsbad Village Drive: Proposed view looking north

Key View 13 and 13A – Holiday Park in Carlsbad

Orientation

Carlsbad Village Landscape Unit in Carlsbad at Holiday Park. View 13 is from Pio Pico Drive looking north. View 13A is from the children's playground in the park looking southwest (*Figures 3-7.65* and *3-7.67*).

Proposed Project Features

Freeway improvements would require Pio Pico Drive to be narrowed 10 ft in width. A retaining wall would extend the length of Pio Pico Drive from Tamarack Avenue to Carlsbad Village Drive, and be from 12 to 25 ft in height adjacent to the park. A soundwall 12 to 16 ft in height is recommended to be placed on the retaining wall for its entire length. Because of space constraints caused by the need to maintain minimum street standards on Pio Pico Drive, a recessed retaining wall supporting a cantilevered roadway would be required in order to provide a planted buffer between the freeway and street. The soundwall would only have minimal architectural detailing due to the space constraints (*Figures 3-7.66* and *3-7.68*).

Change to Visual Quality/Character

The proposed walls adjacent to Holiday Park would be as tall as a three-story building. Unlike a row of three-story buildings, the proposed wall surface would continue unbroken for thousands of feet. The combined walls would be the largest built form in the Village and would greatly increase the visual prominence of the freeway, while decreasing visual cohesion in the community. The walls would effectively screen all views of freeway traffic, but their massive appearance would create a severe contrast with the small-scale architecture of the community and natural character of the park. Visual unity and intactness would be reduced to low levels, and change to existing community character would be high.

Viewer Response

Hundreds of residents and park visitors would view the project for durations that would range from a few minutes to several hours per day. There would likely be a high awareness of the project for most viewers.

Resulting Visual Impact

Change to visual quality and character would be high. Viewer response to the change would be moderately high. The visual impact would be high.

Figure 3-7.65: Key View 13 - Holiday Park in Carlsbad: Existing view looking north

Figure 3-7.66: Key View 13 - Holiday Park in Carlsbad: Proposed view looking north

Figure 3-7.67: Key View 13A - Holiday Park in Carlsbad: Existing view looking southwest

Figure 3-7.68: Key View 13A - Holiday Park in Carlsbad: Proposed view looking southwest

Key View 14 – I-5 at Carlsbad Village Drive

Orientation

Carlsbad Village Landscape Unit in Carlsbad, southbound I-5 between Tamarack Avenue and Carlsbad Village Drive, looking south (*Figure 3-7.69*).

Proposed Project Features

Freeway improvements would result in the permanent loss of all freeway plantings adjacent to the outside shoulder. A soundwall 12 to 16 ft in height has been recommended to be placed on top of a concrete safety barrier at the edge of shoulder. A planting pocket between the barrier and wall would not be feasible due to space constraints. A vertical barrier design would be required in order to place architectural detailing on the soundwall. This condition would occur along the length of Carlsbad Village Drive between Tamarack Avenue overcrossing and Las Flores Drive overcrossing, with the exception of the area between gore points at Carlsbad Village Drive undercrossing, where the wall would be located at the shoulders of the on- and off-ramps (*Figure 3-7.70*).

Change to Visual Quality/Character

The proposed soundwall would block open distant views. The vividness of those views would be lost and attention would be redirected to foreground views of the freeway. A sense of enclosure and disorientation would occur, and isolation from the surrounding landscape would replace the open views and visual unity of the existing scene. Visual quality would be reduced to a low level. The increased horizontal width of the freeway, the loss of a soft, landscaped freeway edge, and its replacement with one that would be hard and unarticulated, would change the visual character from suburban to urban.

Viewer Response

Hundreds of thousands of travelers use the freeway each day, and their views last for approximately one minute. Viewers would have foreground and mid-ground views of the project. Viewer response would be moderately high.

Resulting Visual Impact

Change to visual quality and character would be high. Viewer response would be moderately high. The visual impact would be high.

Figure 3-7.69: Key View 14 - I-5 at Carlsbad Village Drive: Existing view looking north

Figure 3-7.70: Key View 14 - I-5 at Carlsbad Village Drive: Proposed view looking north

Key View 15 – Pine Street in Carlsbad

Orientation

Carlsbad Village Landscape Unit in Carlsbad, adjacent to southbound I-5 near Pine Street, looking north (*Figure 3-7.71*).

Proposed Project Features

Freeway improvements would require a retaining wall of approximately 20 ft in height in this area. The proposed wall would be located approximately 6 ft closer to the apartment buildings than the existing wall, placing it 16 ft from the nearest residence. A soundwall of 12 to 16 ft would be placed on top of the retaining wall. The combined walls would be 32 to 36 ft in height and their length would extend to the limits of the viewshed. Existing freeway landscaping would be permanently removed (*Figure 3-7.72*).

Change to Visual Quality/Character

Visual unity and intactness would be reduced to low levels, while vividness would remain low. The combined height of the proposed walls would be about 12 ft higher than the two-story apartment buildings, and they would be near enough to living areas to produce a sense of enclosure. The retaining wall would be about 3000 ft in length, and the soundwall would be about 4200-ft long. The combined walls would be a dominant visual element in the Village, greatly increasing the visual prominence of the freeway and decreasing visual cohesion in the community. Large built forms such as these are normally associated with central urban core areas, and would change the visual character of the area accordingly. For adjacent residents, the walls could present an unwelcome source of reflected light and heat in the afternoons due to their close proximity. The project would cause a high degree of change to visual character.

Viewer Response

Hundreds of adjacent residents would view the project for hours at a time. They could have a high awareness of proposed changes to the existing visual environment.

Resulting Visual Impact

Change to visual quality would be low. Change to visual character would be high. Viewer response to those changes would be high. The visual impact would be moderately high.

Figure 3-7.71: Key View 15 - Pine Street in Carlsbad: Existing view adjacent to (west of) I-5

Figure 3-7.72: Key View 15 - Pine Street in Carlsbad: Proposed view adjacent to (west of) I-5

Key View 16 – I-5 at Oceanside Boulevard

The Key View 16 analysis has been deleted following circulation of the Draft EIR/EIS because the proposed Oceanside Blvd DAR has been deleted from the project. The removal of the large-scale DAR built forms would lower the visual impact and reduce the project footprint. As a result, although the visual impact would remain high at this key view location, it would not vary substantially from other interchanges in the North Coast Corridor without DARs and does not qualify as a key view.

Key View 17 – Mission Avenue Interchange

Orientation

Oceanside Gateway Landscape Unit in Oceanside, Mission Avenue at I-5, looking west (*Figure 3-7.73*).

Proposed Project Features

The interchange would be reconfigured to eliminate the two existing free-flow freeway ramps located on the south side of Mission Avenue. This would enable the creation of a continuous sidewalk crossing the freeway. The Mission Avenue overcrossing would be reconstructed and widened to include wider sidewalks. The proposed width for the southerly sidewalk is 15 ft to accommodate large numbers of students from Oceanside High School that now cross the facility on a daily basis. Pedestrian-scaled streetscape features such as street lights, street trees, and benches would also be provided (*Figure 3-7.74*).

This key view is representative of pedestrian and bicyclist improvements that would occur on interchanges, undercrossings, and overcrossings throughout the corridor.

Change to Visual Quality/Character

The project would improve visual unity and intactness by providing greater visual continuity and balance in the streetscape, allowing for greater ease of use and sense of security for non-motorized viewers, and increasing the prominence of natural forms and positive aesthetics. Vividness would also be improved as attractive visual elements are incorporated in the streetscape. Visual character would change slightly, but remain urban.

Viewer Response

Thousands of drivers, pedestrians, and bicyclists would view the project for several minutes each day. They would have a high awareness of the project. The public would likely view the change as positive.

Resulting Visual Impact

The visual quality would improve. Change to visual character would likely be seen as positive, and viewer response would be high. The project would enhance the viewshed and have no adverse visual impact.

Figure 3-7.73: Key View 17 - I-5 at Mission Avenue: Existing view looking west

Figure 3-7.74: Key View 17 - I-5 at Mission Avenue: Proposed view looking west

Other Representative Views

Following circulation of the Draft EIR/EIS, a number of additional photosimulations were prepared. Additional views were also prepared in response to public comment, which depict retaining walls adjacent to lagoon and I-5, westerly ocean views, or specific design elements such as bike lanes, trails, etc. These simulations provide the reader with helpful detail as to project design, and are presented below.

The following existing and proposed views (*Figures 3-7.75* through *3-7.78*) depict the level to which retaining walls adjacent to Agua Hedionda and Batiquitos Lagoons would change existing views. As depicted in *Figures 3-7.76* and *3-7.78*, the retaining walls introduce substantial new built elements. New hardscape may also be visible off the highway, as shown in the Batiquitos Lagoon simulation, where the NC Bike Trail (shown with pedestrian and bike users) is visible west between I-5 and the retaining wall. Removal of non-native species, including both shrubs and trees between I-5 and the lagoons, as well as slope modification and retaining walls, would open up views from the lagoon to southbound travelers on I-5. Lagoon views would be visible to the traveler for a slightly longer period of time than under existing conditions. These views provide additional examples of project features for which additional clarification was requested by Draft EIR/EIS reviewers.

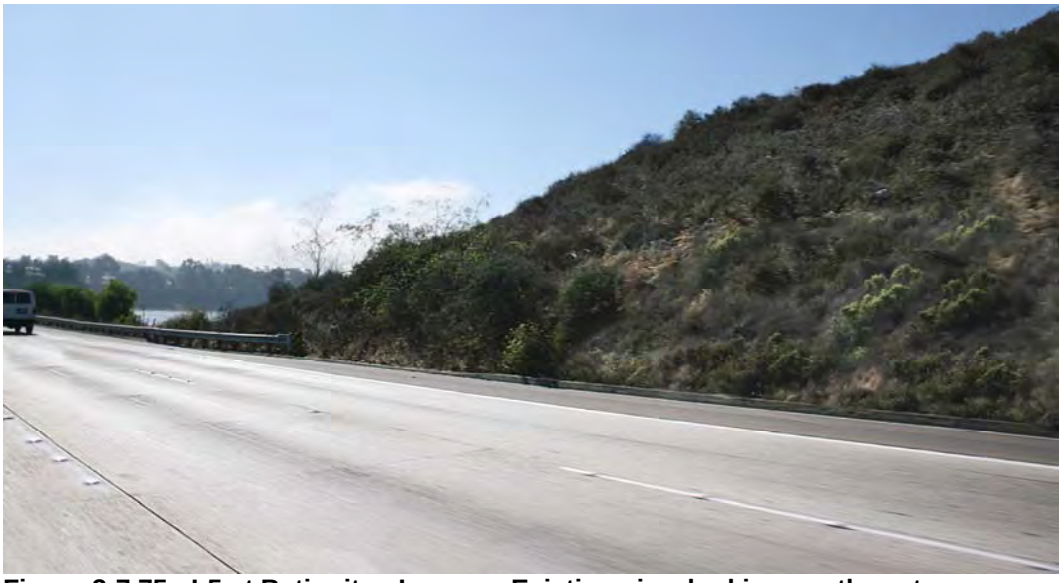

Figure 3-7.75: I-5 at Batiquitos Lagoon: Existing view looking southwest

Figure 3-7.76: I-5 at Batiquitos Lagoon: Proposed view looking southwest with landscaping and retaining wall

Figure 3-7.77: I-5 at Agua Hedionda Lagoon: Existing view looking south

Figure 3-7.78: I-5 at Agua Hedionda Lagoon: Proposed view looking south with landscaping and retaining wall

While I-5 pavement would be expanded, scenic views to the west along the lagoon crossings would appear identical, as demonstrated in *Figures 3-7.79* through *3-7.82* at Buena Vista Lagoon and along the San Dieguito River. The project would not affect the dominant scenic elements of this resource, which are the river, marsh areas, and vast open scenic views compared with the impacts of the existing I-5 facility. As shown in *Figures 3-7.80* and *3-7.82,* modifications to low crash barriers would also result in slightly more open views to lagoon for travelers where the current barrier interrupts westerly views.

Figure 3-7.79: I-5 at Buena Vista Lagoon: Existing view looking east

Figure 3-7.80: I-5 at Buena Vista Lagoon: Proposed view looking east with modified crash barrier

Figure 3-7.81: I-5 at San Dieguito River: Existing view looking southwest

Figure 3-7.82: I-5 at San Dieguito River: Proposed view looking southwest with modified crash barrier

A number of photosimulations were prepared that depict views to I-5 from viewpoints off the highway (*Figures 3-7.83* through *3-7.94*). These generally reflect trail locations from which the I-5 bridges can be seen. The simulations demonstrate the proposed bridge crossing, changes to bridge support features, locations where the NC Bike Trail might also be visible where it is suspended from the bridge, etc.

In *Figure 3-7.83*, the viewer can see the trail at San Dieguito, as well as its connection to the NC Bike Trail, which is on the east side of the bridge in this location. A retaining wall south of the bridge would be installed to allow for trail connection encroachment into off-highway native habitat. Tinted concrete would match natural soil color in this area to a greater extent than the existing facility. Retention of the existing bridge supports and the minimal vertical expanse of the NC Bike Trail result in the bridge generally looking similar to existing conditions (*Figure 3-7.84*).

Figure 3-7.83: Along the San Dieguito Trail: Existing view looking west

Figure 3-7.84: Along the San Dieguito Trail: Proposed view looking west with modified bridge and trail connection

Figures 3-7.85 and *3-7.86* depict the view from east of San Elijo Lagoon, looking northwesterly. New bridge supports are clearly visible in *Figure 3-7.86*, and the improved path on the south edge of the lagoon can be seen. The slightly wider I-5 is also visible, although visually outweighed by the water and vegetation between the viewer and the bridge. Manchester Avenue continues to cross under the bridge. The bridge widening would not change the visible elements of the view west of I-5.

Figure 3-7.85: South side of San Elijo Lagoon: Existing view looking northwest

Figure 3-7.86: South side of San Elijo Lagoon: Proposed view looking northwest with modified bridge and path

The representative simulations of the Batiquitos Lagoon crossing are taken from Navigator Circle and from the East Trail along the lagoon. From the elevated viewpoint of Navigator Circle, the view to the east is panoramic; consisting of the lagoon on both sides of I-5, I-5, and the hills in the distance (*Figure 3-7.87*). In project built conditions, the retaining wall installed to allow the trail, as well as the trail, can be seen on the west side of I-5 north of the crossing (*Figure 3-7.88*). The change in bridge supports can be seen (8 larger versus 12 smaller supports). Existing riprap would remain in place. From the trail on the east side of the lagoon, the difference in bridge supports is again visible (*Figures 3-7.89* and *3-7.90*). Riprap has been removed from this side of the bridge and native planting is visible on the slopes. The longer extent of the bridge is visible. The viewer's focus on lagoon elements from this viewpoint (vegetation, water, etc.) and the low profile of the bridge would minimize perceived change.

Figure 3-7.87: From Navigator Circle: Existing view looking east across Batiquitos Lagoon

Figure 3-7.88: From Navigator Circle: Proposed view looking east across Batiquitos Lagoon with modified bridge, retaining walls, and trail

Figure 3-7.89: North side of Batiquitos Lagoon: Existing view from East Trail looking southwest

Figure 3-7.90: North side of Batiquitos Lagoon: Proposed view from East Trail looking southwest with modified bridge and landscaping

Changes to the Bridge at Agua Hedionda are shown on *Figures 3-7.91* through *3-7.94*. In *Figure 3-7.92*, the changed bridge supports would be visible, and would provide a slightly more "open" feel under the bridge. Removal of trees at the lagoon crossing would remove existing greenery, but would provide more sky view. Riprap at the north and south extents of the bridge would remain. From the Agua Hedionda East Trail as shown in *Figures 3-7.92* and *3-7.93,* primary view elements are water in the foreground, backed by I-5 in the mid-ground, with tall trees on the hilltop in the background. The stack at the Encina Power Plant in Carlsbad is notable. The NC Bike Trail would be visible on the east side of I-5.

Figure 3-7.91: At Agua Hedionda Lagoon from YMCA: Existing view looking west

Figure 3-7.92: At Agua Hedionda Lagoon from YMCA: Proposed view looking west with modified bridge and landscaping

Figure 3-7.93: Agua Hedionda Lagoon: Existing view looking southwest from the East Trail

Figure 3-7.94: Agua Hedionda Lagoon: Proposed view looking southwest from the East Trail with modified bridge, trail, and landscaping

Existing visual conditions are shown on *Figure 3-7.95*, and changed conditions at the Buena Vista Lagoon crossing are depicted on *Figure 3-7.96*. Taken from the south side of the lagoon east of I-5, vegetation largely obscures the bridge supports. Darker coloration would add a slightly more visually consistent aspect to the crossing, as it is more similar to soil color in the area.

Figure 3-7.95: East of I-5 at Buena Vista Lagoon: Existing view looking west

Figure 3-7.96: East of I-5 at Buena Vista Lagoon: Proposed view looking west with modified bridge

Several simulations demonstrate visual changes along I-5. *Figures 3-7.97* through *3-7.104* variously depict retaining walls and increased pavement width. *Figures 3-7.98* through *3-7.102* show these features at Del Mar Heights Road, north of Vista Point, and at California Street. At California Street, sound barriers are also depicted at top of slope.

Figure 3-7.97: Looking north along I-5: Existing view north of Del Mar Heights Road

Figure 3-7.98: Looking north along I-5: Proposed view north of Del Mar Heights Road with retaining wall and wider roadway

Figure 3-7.99: Looking southeast on I-5: Existing view north of Vista Point

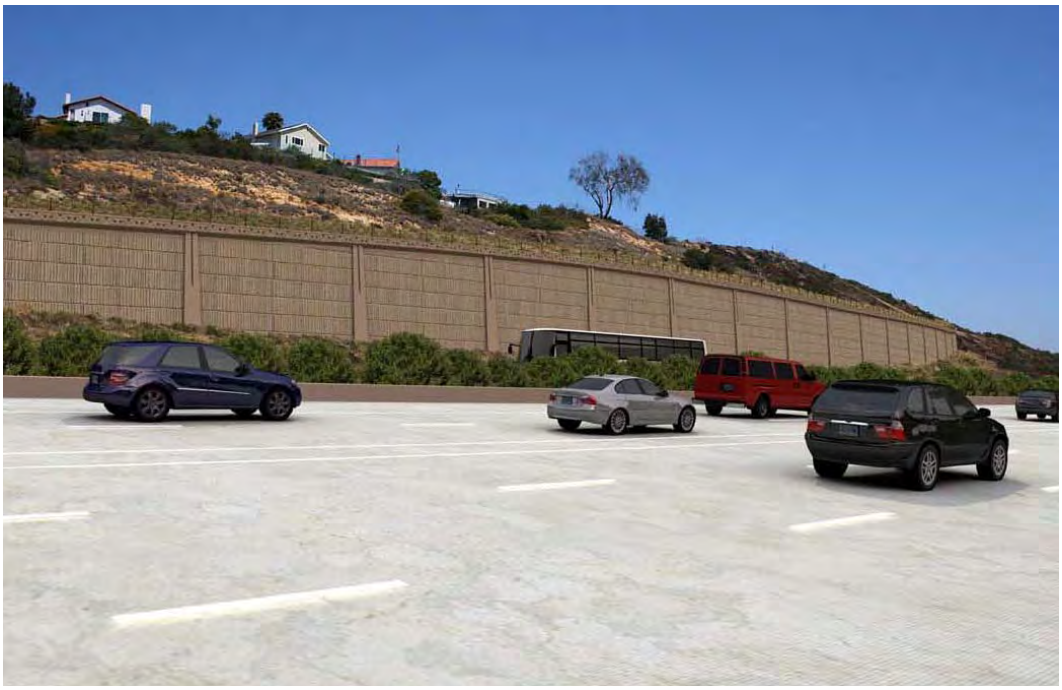

Figure 3-7.100: Looking southeast on I-5: Proposed view north of Vista Point with retaining wall

Figure 3-7.101: California Street overpass: Existing view looking northeast at I-5

Figure 3-7.102: California Street overpass: Proposed view looking northeast at I-5 with retaining walls, soundwalls, and modified landscaping

Figure 3-7.103 shows the existing visual condition near Union Street. *Figure 3-7.104* shows potential soundwalls and the Union Street pedestrian overpass as it would be seen from I-5. The overpass would be low profile, with a single support in the highway median. Safety fencing on top of the overpass would be visible to viewers in close proximity to the overcrossing, as shown in the simulation, but would fade with distance. Median planting would continue to provide a visual barrier of green in the center of the highway.

Figure 3-7.103: Looking southeast along I-5: Existing view near Union Street

Figure 3-7.104: Looking southeast along I-5: Proposed view near Union Street with sound barriers and pedestrian overpass

Several other simulations provide views to additional specific project elements. *Figures 3-7.105* and *3-7.106* depict the Old Sorrento Valley Road Bicycle/Pedestrian Enhanced Trail proposed as a potential community enhancement. The existing vacated road would be improved with striping, a bioswale, an improved non-hardscape walking area, and intermittent seating in order to improve non-motorized transportation in this area.

Figure 3-7.105: Old Sorrento Valley Road Bicycle/Pedestrian Enhanced Trail: Existing view looking east

Figure 3-7.106: Old Sorrento Valley Road Bicycle/Pedestrian Enhanced Trail: Proposed view looking east with enhanced trail

Figure 3-7.107 depicts the existing I-5 Vista Point location. A new Vista Point with a more expansive view would replace the existing Vista Point just north of this site, and would allow motorists to pull off the freeway to safely view scenery or park and relax. The facility would include parking and other pedestrian facilities that are accessible to all persons (*Figure 3-7.108*).

Figure 3-7.107: From I-5: Existing view looking over Vista Point to ocean

Figure 3-7.108: From I-5: Proposed view looking over Vista Point to ocean with parking area

Figures 3-7.109 and *3-7.110* show changes at the San Luis Rey River for westbound drivers on SR-76. The SR-76 overpass would become more visible, as would development west of I-5, due to vegetation removal of at least one mature tree. This would be balanced by elimination of the ramp, a built element which is currently visible between the viewer and I-5 on the south side of the river.

Figure 3-7.109: From SR-76: Existing view looking west along San Luis Rey River to I-5

Figure 3-7.110: From SR-76: Proposed view looking west along San Luis Rey River to I-5 with bridge widening, removal of tree and ramp

Figure 3-7.111 depicts the existing scenic resources within the project setting.

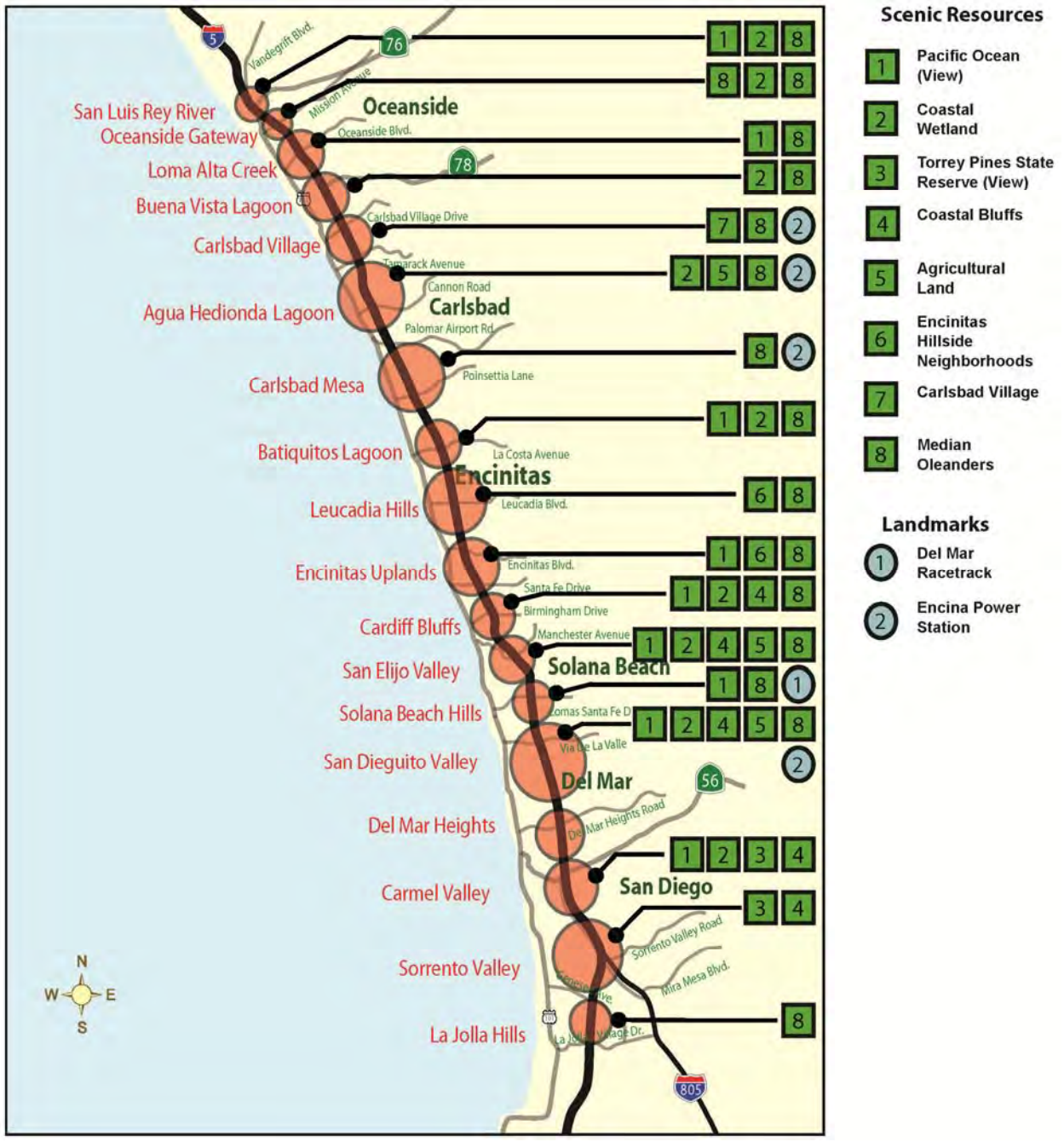

Figure 3-7.111: Scenic Resource Map

Summary of Visual Impacts

The visual effects of the project can be summarized in that the natural character of the I-5 corridor would become noticeably more urban, and scenic resources now available to the traveling public would become less accessible. The high degree of visual change caused by the project would remain despite the implementation of measures proposed in this assessment. Conclusions stated in the key view analyses and impact summary apply to the four build alternatives. Under the No Build alternative, the proposed improvements to I-5 would not occur. However, a number of interchange/operations/adjacent projects would move forward independently from the *I-5 NCC Project* as described in *Chapter 2*.

Impacts to Viewers on the Freeway

Loss of Existing Views and Creation of a "Tunnel Effect"

Views from the freeway would be diminished in quantity and quality by the introduction of walls, structures, and appurtenances (overhead signs, traffic sensors, video cameras, etc.). Visual access to scenic views would be obstructed by soundwalls in several locations, isolating travelers from scenic resources. The loss of open views that provide variety, interest, and orientation to the traveler (such as Leucadia Hills [Key View 9] and Carlsbad Village [Key Views 12 and 14]) would change the visual character of I-5. In addition, the sense of enclosure created by the walls would be similar to the travel experience one now encounters in large urban areas to the north, thereby diminishing the region's unique visual identity.

Visual impacts related to utility relocations would be minor, and in some areas would improve as some utilities would be relocated within bridge structures or underground. Other utilities remaining above-ground would be moved up to approximately 65 ft away from existing locations, and would have little impact on visual quality as existing views would, for the most part, remain unchanged.

Expansive Paving with Large Walls and Structures

Each build alternative would increase pavement, appearing to double the width of the existing freeway. This would occur for the most part within the existing right-of-way envelope, proportionally displacing landscaped roadside areas and adding large retaining walls that would enable the new roadway to cut through and cover existing topography. The walls depicted in Key Views 2 and 7 are typical of those that would be placed in cut sections facing the freeway. Key Views 3 and 15 contain walls that would be typical of those placed in fill sections facing communities. These types of large, urban freeway components would contrast with the visual character of adjacent scenic areas and beach communities. The contrast between proposed urban and existing natural features would be most noticeable at the Manchester Avenue DAR (Key View 5) where the DAR and San Elijo Multi-use Facility would impact agricultural fields.

Loss of Existing Freeway Landscape

Roadside areas for landscaping would be severely reduced and the exclusive use of native plants for freeway landscape replacement would be required by regulatory agencies and is proposed in project Design Guidelines: I-5 NCC Project in many locations. Also, due to limited roadside maintenance funds, the use of drought-tolerant planting that naturalizes with temporary irrigation has become necessary. These three factors would cause a substantial change to visual character and an adverse effect on the visual quality of the North Coast Corridor. Reduced areas for landscaping would shift the freeway's visual balance from landscaping to hard

surfaces, and its character from suburban to urban. The prominence of tall trees in the freeway landscape would be reduced. This would be caused by space limitations as well as the limitations of San Diego's coastal native tree palette. Torrey Pines are the most suitable San Diego native for freeway planting because of their drought tolerance and relatively fast growth rate. Other natives such as sycamores or willows are riparian species that lack the drought tolerance required to survive freeway slope conditions. Others, such as oaks, are very slow growing, and would appear as shrubs for many years. None would grow tall enough to provide vertical balance for the freeway's expansive horizontal plane provided by existing ornamental trees.

Changeable Message Boards and Congestion Pricing Signage

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

Impacts to Viewers in Adjacent Communities

Community Proximity Impacts

Views of the freeway would be affected at right-of-way edges where the project would bring the freeway in closer proximity to community viewers. Existing landscaped buffers would be substantially reduced in size or removed altogether and replaced with retaining walls and/or soundwalls. This condition would have a particularly noticeable effect for residents whose homes are located adjacent to the freeway at elevations near to or below the level of the road. From their rear yards, residents would have foreground views of features such as concrete retaining walls, soundwalls, and drainage ditches. Paved maintenance roads, bioswales, and chain link fencing would also be present in the foreground.

In some cases, such as the ones shown in Key Views 10 and 15, large walls would be in close proximity to residents, affecting light access and air circulation.

Community Entry Impacts

At freeway interchanges, overcrossing and undercrossing structures, and some local streets, would be enlarged and create an increased urban visual character. In particular, the visual experience of pedestrians and bicyclists would diminish as the balance of available circulation space would shift further from the pedestrian realm to the vehicular. At some interchanges, these impacts could be avoided or minimized by eliminating existing non-stop right turns to or from freeway ramps, and providing wide sidewalks, street trees, and other pedestrian amenities. Other interchanges, such as Mission Avenue in Oceanside (Key View 17), may be reconfigured to provide high volume pedestrian routes with uninterrupted access across the freeway.

At some freeway interchanges, the project may include new visual elements that would be incompatible with existing visual character. Existing ornamental freeway landscaping would be reduced or could be replaced by native species. Storm water detention basins as described in the project features section would be located at many interchange loop ramps. Many of their standard features such as maintenance vehicle roads, rock riprap slopes, concrete headwalls, standpipes, and chain-link fencing, could potentially be non-compatible visual elements in many community entry points, and further reduce available landscape area.

The proposed roundabout at the Birmingham Drive Interchange in the City of Encinitas would constitute an improvement to existing visual quality. Roundabouts create a more balanced visual environment between the street and community by requiring less vehicular circulation space, slowing vehicular speeds, allowing shorter street crossing distances for pedestrians, and providing a central island that can be landscaped as an attractive community entry feature.

Loss of Existing Median Oleanders

DARs would remove median oleanders at Voigt Drive and Manchester Avenue.

Impacts to Views of Scenic Resources

Views to scenic resources from some private residences located at an elevation higher than the freeway would be obstructed by proposed soundwalls (please refer to *Section 3.15, Noise*). Transparent panels could be incorporated in the soundwalls to avoid view impacts should residents agree to maintenance. The use of transparent panels in soundwalls adjacent to freeway lanes would not necessarily preserve existing scenic views due to a reduction in transparency caused by surface reflectivity, soiled or scratched surfaces, image distortion, substantial support latticework, and current Caltrans maintenance practices. For these and other reasons listed in the VIA, soundwalls with transparent material would not be considered as a viable method to avoid or mitigate the loss of scenic views from the freeway.

Below is a list of locations in which a permanent loss of a view to an existing scenic resource would occur. *Figure 3-7.112* summarily depicts the visual impacts to scenic resources along the project corridor.

Loss of Views to the Pacific Ocean

Between Via de la Valle and Lomas Santa Fe Drive, southbound freeway travelers have a view of the ocean and the Del Mar Racetrack and Fairgrounds. This view would have been completely obscured by a soundwall 10 to 12 ft in height proposed at the edge of freeway shoulder. The solid soundwall is no longer recommended and a divided soundwall, with a gap to maintain the coastal view, is now proposed. The prior soundwall impact is depicted and assessed under Key View 4 (*Figures 3-7.47* and *3-7.48*).

Loss of Views to Encinitas Hillside Neighborhood

Freeway travelers in both directions would lose existing views to the hillside neighborhood west of the freeway between Encinitas Boulevard and Leucadia Boulevard. The impact is depicted and assessed under Key View 9.

Loss of Views to Agricultural Fields

Direct impacts to agricultural fields would occur at the Manchester Avenue DAR and San Elijo Multi-use Facility location. A transit center with access road, parking for 150 cars, and bus platform is proposed as part of the multi-use facility. Agricultural fields north of the facility would continue to be visible.

Loss of Views to Carlsbad Village

Existing views of Carlsbad Village and Holiday Park would be obscured by a soundwall 12 ft in height placed at the edge of freeway shoulder. The impact is depicted and assessed under Key View 12.

Loss of Oleanders

Median oleanders would be permanently removed at the following DAR locations; Voigt Drive and Manchester Avenue. Existing median oleanders would be preserved wherever possible, since freeway improvements could disturb the roots of the plants. This retention provides for consistency with the existing visual environment.

Impacts of Project Alternatives

As stated previously, differences in freeway width between the proposed build alternatives would be relatively minor in most locations, and proposed freeway features expected to affect visual resources such as soundwalls would be the same or similar. The exception would be median oleander removal in curved portions of both barrier alternatives. All build alternatives would result in highly adverse change to existing visual character and quality.

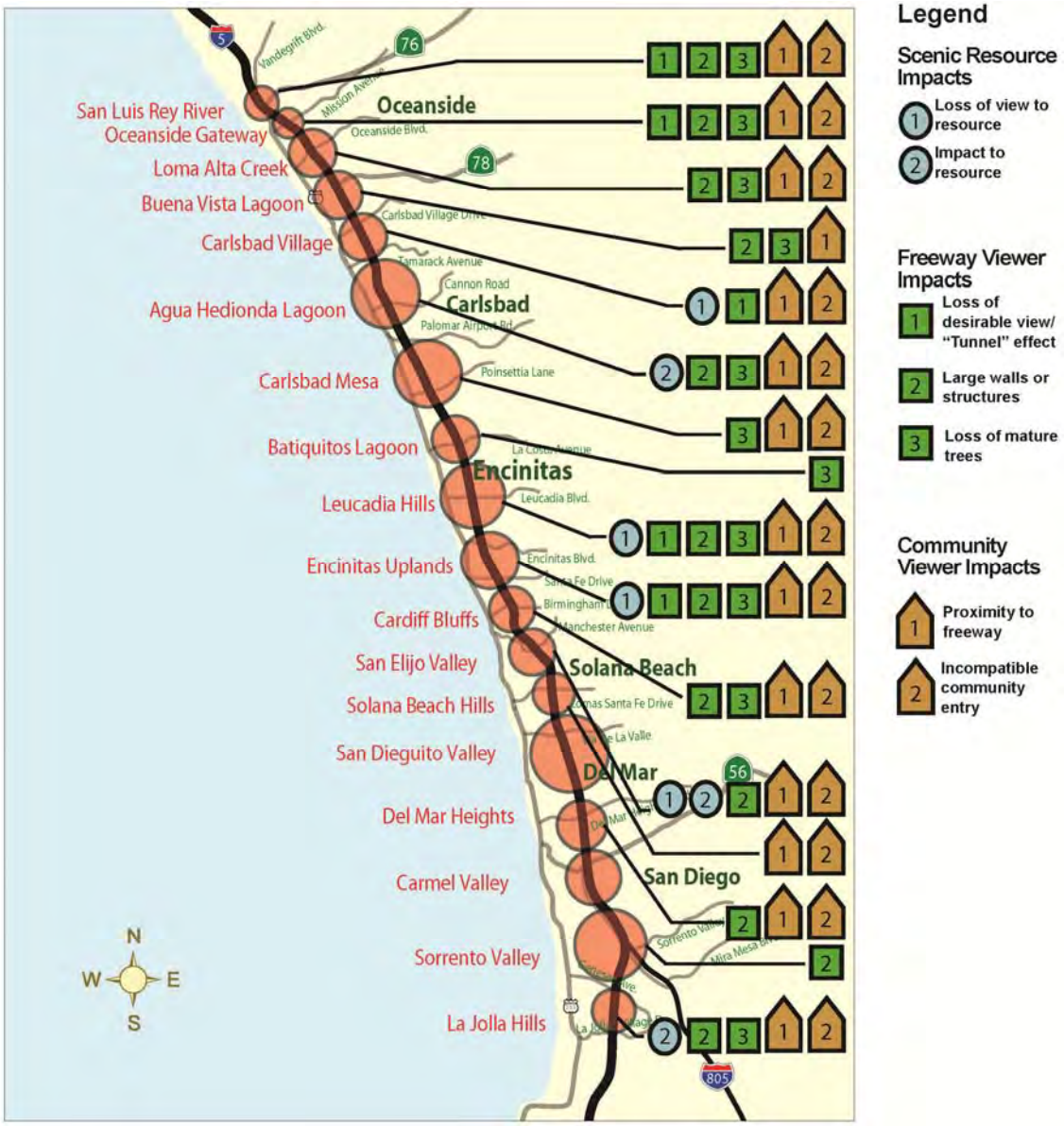

Figure 3-7.112: Visual Impact Summary Map

3.7.4 Avoidance, Minimization, and/or Mitigation Measures

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

Visual mitigation for project impacts addressed in the previous section would consist of adhering to the following design requirements in consultation with the District 11 DLA. The requirements are arranged by project feature and include required options in order of effectiveness. One or more of these options would be implemented on applicable project features wherever they occur.

In addition, the Design Guidelines: I-5 NCC Project were developed under the direction of the DLA. The guidelines supplement the mitigation requirements found in this assessment. They contain detailed architectural and landscape mitigation guidance that reflects comments from the project development team and comments received during public outreach meetings with interested community groups, city staff members, regulatory agencies, and the general public. The guidelines include a requirement that all landscaped areas have underground automatic sprinkler systems.

Effective implementation of the following mitigation measures would require a multi-disciplinary design approach as required by NEPA and Caltrans Policy and Procedures Manual. Since the project has not yet been designed, specific visual mitigation measures cannot be proposed at this time. Instead, the general design requirements and guidelines contained in this document and the Design Guidelines: I-5 NCC Project have guided the design of specific project features and areas according to the process described in the following paragraph. Mitigation measures shown in photo simulations are generic and illustrative. Alternative mitigation measures may be necessary in each viewshed as project designs are developed and mitigation design guidelines are applied.

During project design and construction, it would be the responsibility of the DLA to analyze the visual effects of specific project features, synthesize applicable mitigation measures from this document and the Design Guidelines: I-5 NCC Project, apply those requirements to actual design features in specific locations, and submit proposals to the project design team. The team and DLA would then develop design solutions considered to be reasonable visible mitigation solutions that achieve team consensus, and can in turn be implemented. The DLA also would provide technical assistance during construction and perform mitigation monitoring of all visual mitigation requirements.

Caltrans would consult with the property owners and/or officials with jurisdiction over recreational areas during project design for potential aesthetic options, as applicable. During the design process, shareholder interaction will continue, guidelines will become more and more specific, locally oriented design details will be added, and a design palette of specific features and products will be developed.

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

Implementation of the measures in this section would partially mitigate adverse effects of the project for all build alternatives. The requirements are arranged by project feature and include options in order of effectiveness from most to least effective. The overall visual impact of each mitigated build alternative would remain high.

Soundwalls

Landscaped Noise Berms

Noise barriers should consist of landscaped berms wherever possible. Landscaped berms are the preferred visual mitigation for soundwall and are most visually compatible with most land uses adjacent to the freeway.

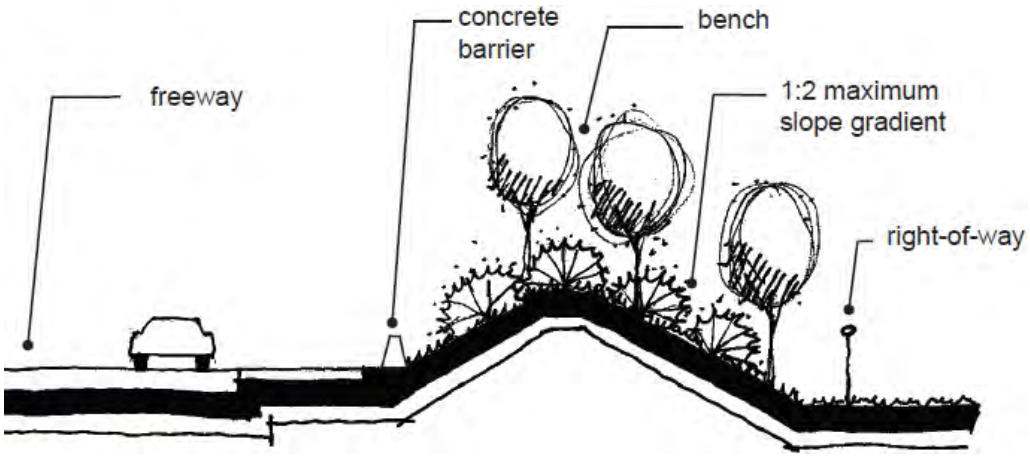

Figure 3-7.113: Berm in fill section

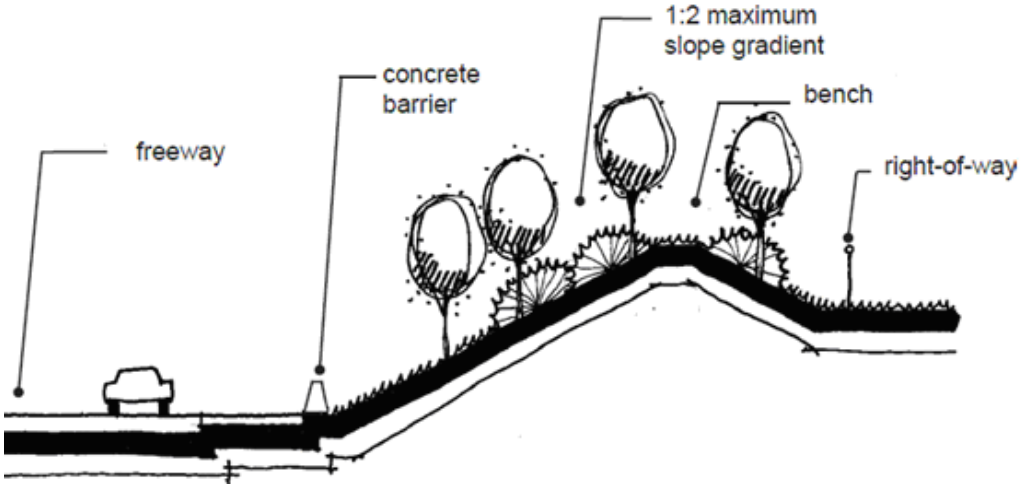

Figure 3-7.114: Berm in cut section

Noise Berm/Retaining Wall Combinations

In areas too narrow for a berm, a retaining wall may be used to avoid constructing a soundwall on top of the berm. This may result in a barrier with a lower profile than a noise berm/wall combination due to the berm's superior sound attenuation qualities.

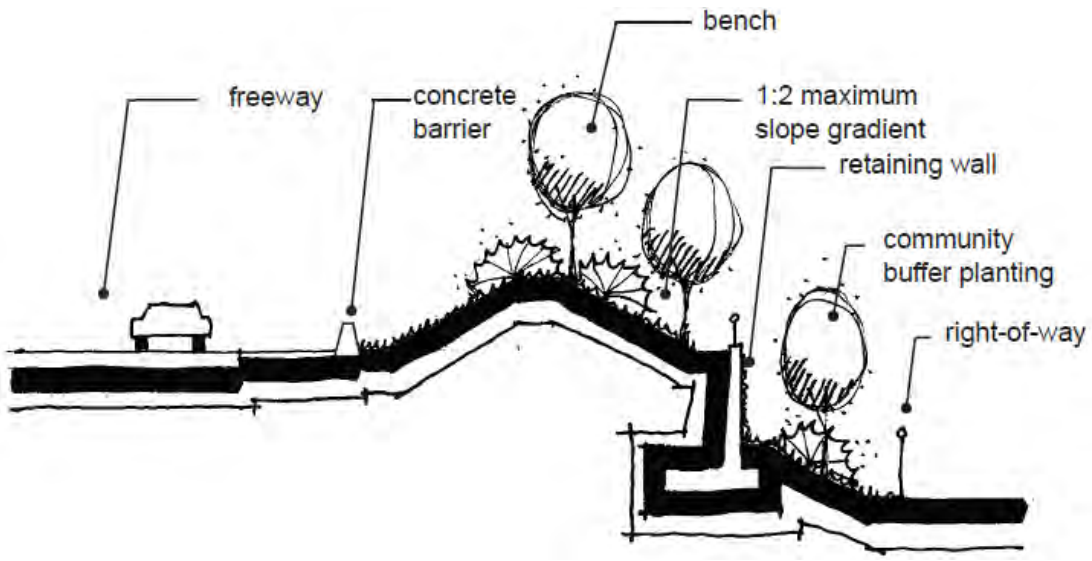

Figure 3-7.115: Noise berm/retaining wall section

This barrier configuration is preferable in situations where a tall retaining wall at the toe of slope would create a visual impact to an adjacent property. To be effective, this option should incorporate a berm with a 1:2 slope (vertical/horizontal) on the freeway side that is a minimum of six-ft high. This size berm should allow enough space to provide screening shrubs in front of the wall.

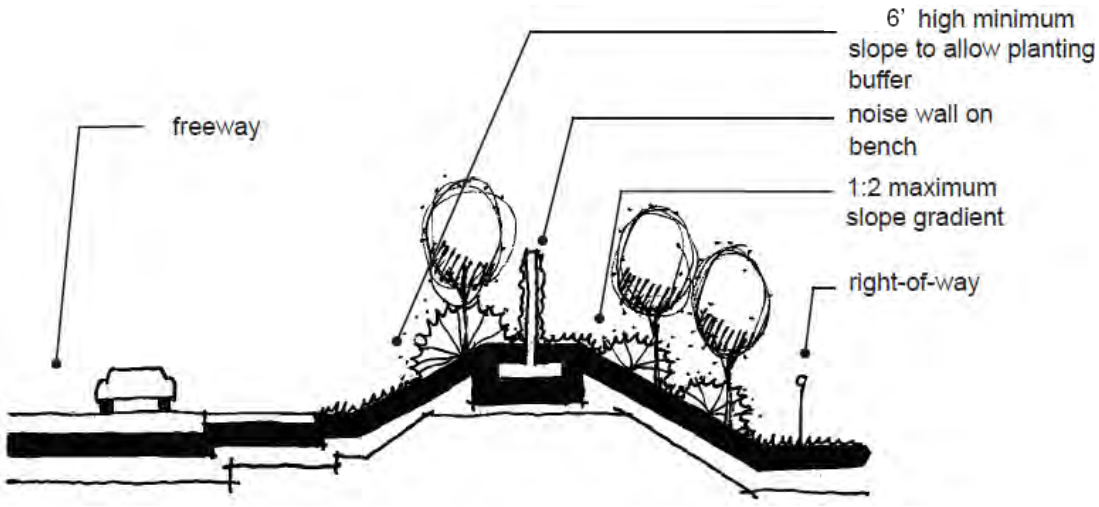

Figure 3-7.116: Noise berm/soundwall combination section

Soundwall Landscape Buffers

Where berms are entirely infeasible, soundwalls should incorporate planting on both sides. In some cases, retaining walls and/or a concrete barrier at the edge of shoulder may be needed to provide the required planting space.

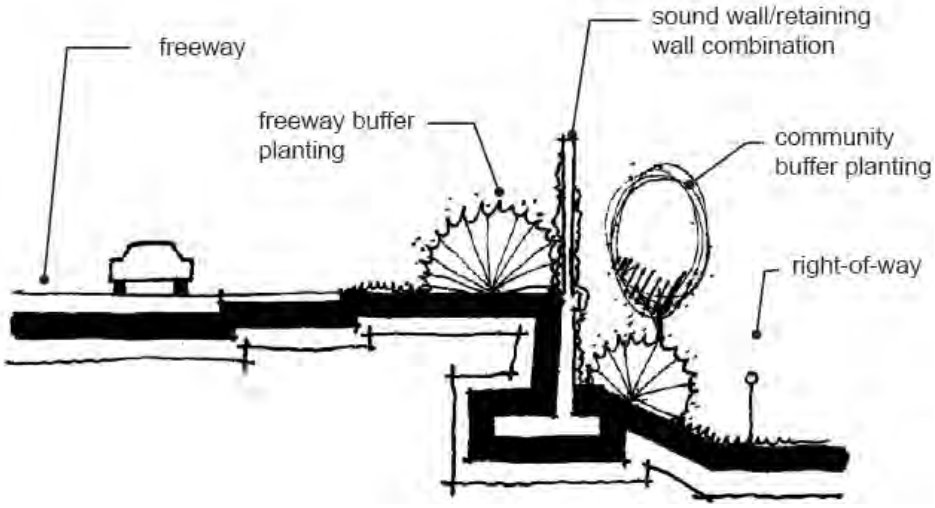

Figure 3-7.117: Soundwall buffer planting section

Soundwall Articulated Layout/Varied Profile

The use of setbacks and return sections in wall layouts reduces the monotonous visual effect of a single wall surface and helps reduces its apparent scale. This design option can be used with a varied top of wall profile to further increase visual interest.

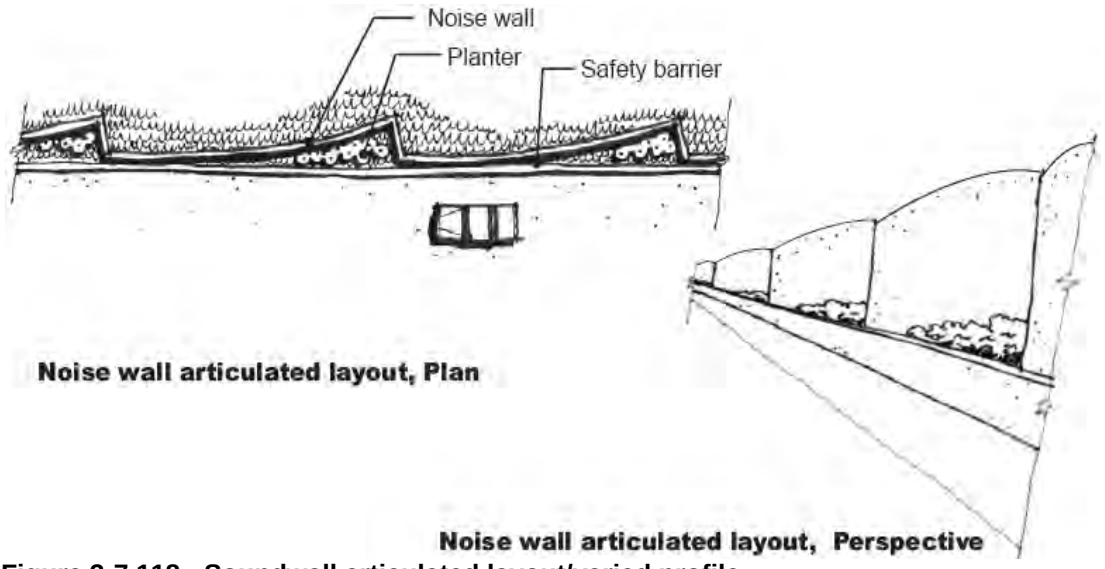

Figure 3-7.118: Soundwall articulated layout/varied profile

Soundwall Planting Pockets

Where right-of-way is too narrow to employ the configurations listed above, a minimum five-foot-wide planting area should be provided between the back of the barrier and the face of the soundwall.

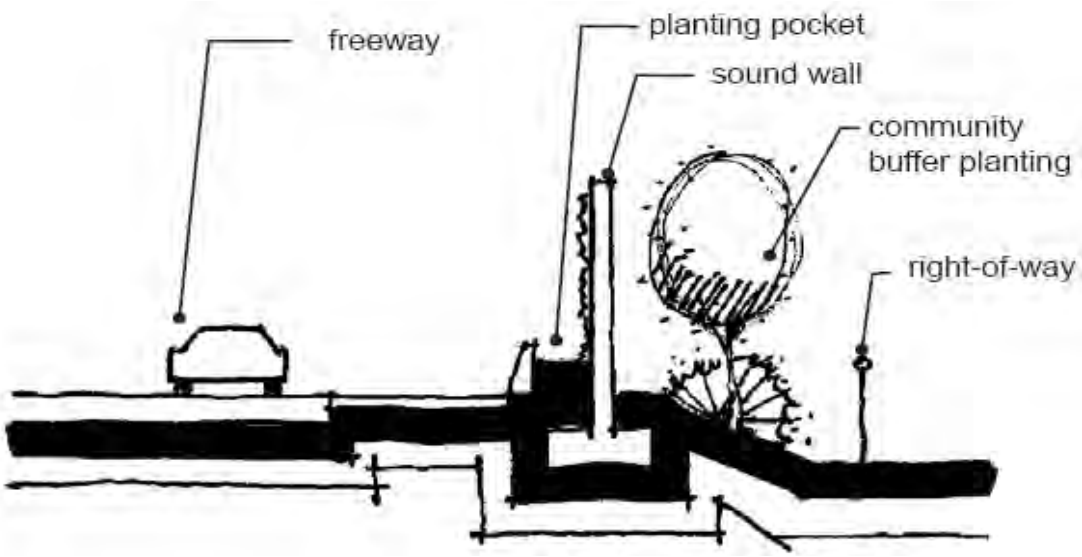

Figure 3-7.119: Soundwall planting pocket section

Soundwall/Barrier Setback

In areas too narrow to place a planting pocket, the soundwall would be recessed behind the barrier at a sufficient distance to allow architectural features to be included on the face of the soundwall. A soundwall on top of a concrete barrier would be avoided if at all possible.

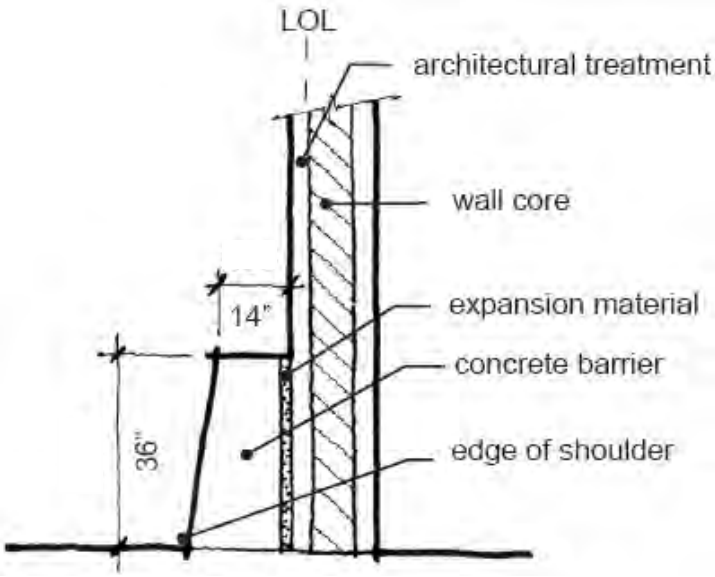

Figure 3-7.120: Soundwall setback section

Vertical Concrete Safety Barriers

In areas where space for architectural detailing does not exist, vertical concrete safety barriers would be considered. Vertical barriers add 12 in of additional width in which architectural elements such as pilasters and wall caps can be included.

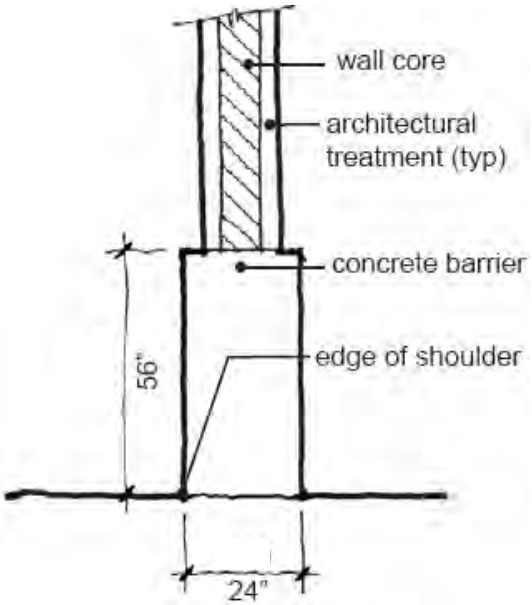

Figure 3-7.121: Vertical concrete safety barrier section

Transparent Soundwalls on Private Property

In situations where noise receptors are located above the elevation of the freeway, transparent 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. Locating walls at higher elevations nearer receptors substantially reduces the height of walls to achieve "line of sight" noise reductions.

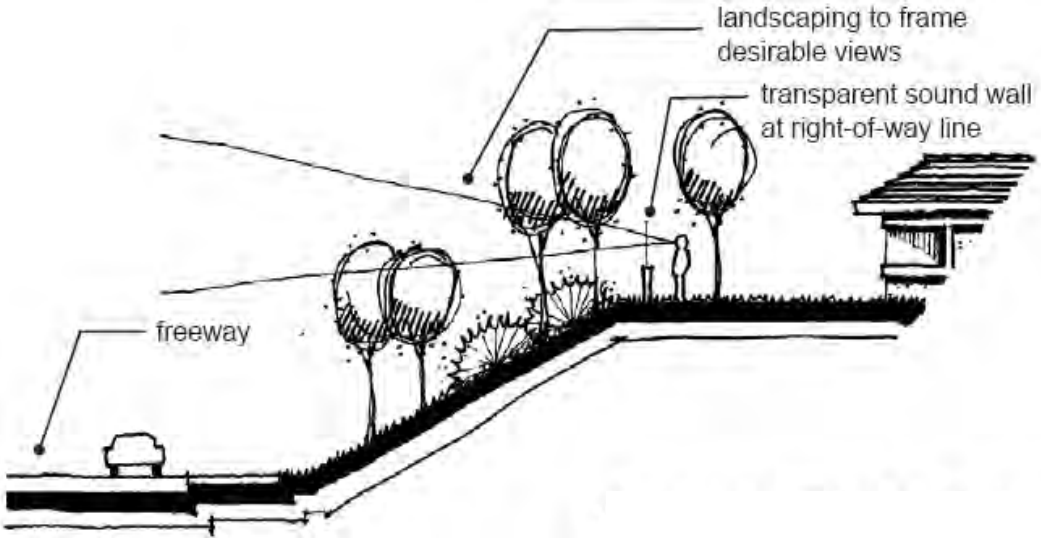

Figure 3-7.122: Transparent soundwall section

Translucent materials can 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.

Architectural Detailing

Soundwalls would be designed to be visually compatible with the surrounding community. 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 would also be used where appropriate.

Retaining Walls

Terrain Contoured Retaining Walls

Retaining walls that follow the contours of the topography and maintain a constant elevation at the top of wall would be used where appropriate. Wall layouts and profiles would be composed of long radius curves, with no tangents or points of intersection. Wall faces would be battered at a 1:6 maximum horizontal/vertical ratio. Walls should be located at mid-slope. This type of wall is visually compatible with surrounding terrain and provides room at the base for a slope that contains landscape screening.

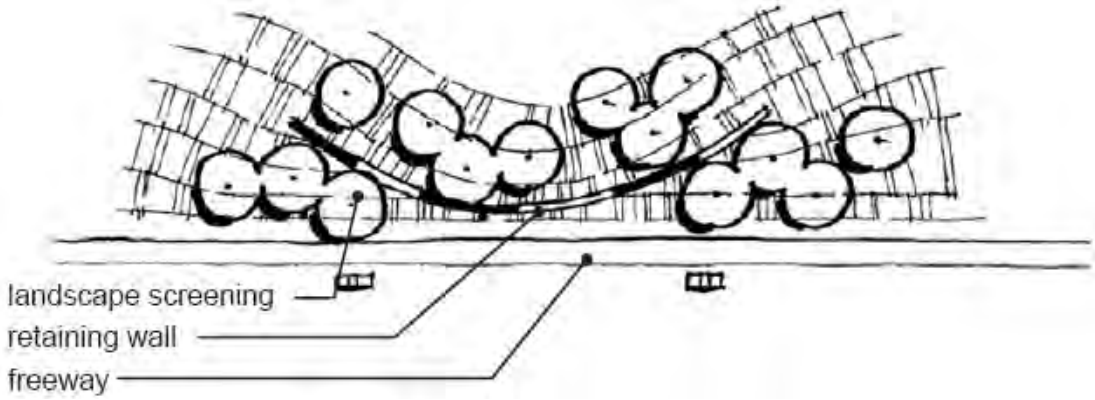

Figure 3-7.123: Terrain-contoured wall in cut section (Plan View)

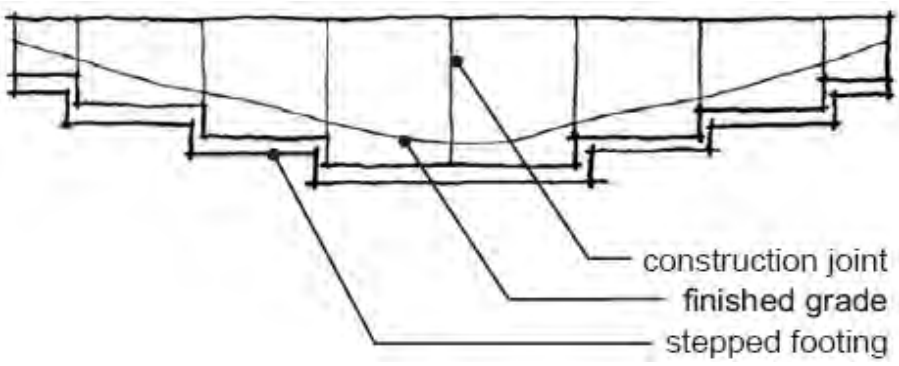

Figure 3-7.124: Terrain-contoured wall in cut section (Elevation View)

Terraced Retaining Walls

Where site conditions are favorable, retaining walls over 19.7 ft in height would be divided into separate structures sufficiently offset from one another to create a planting area between the two.

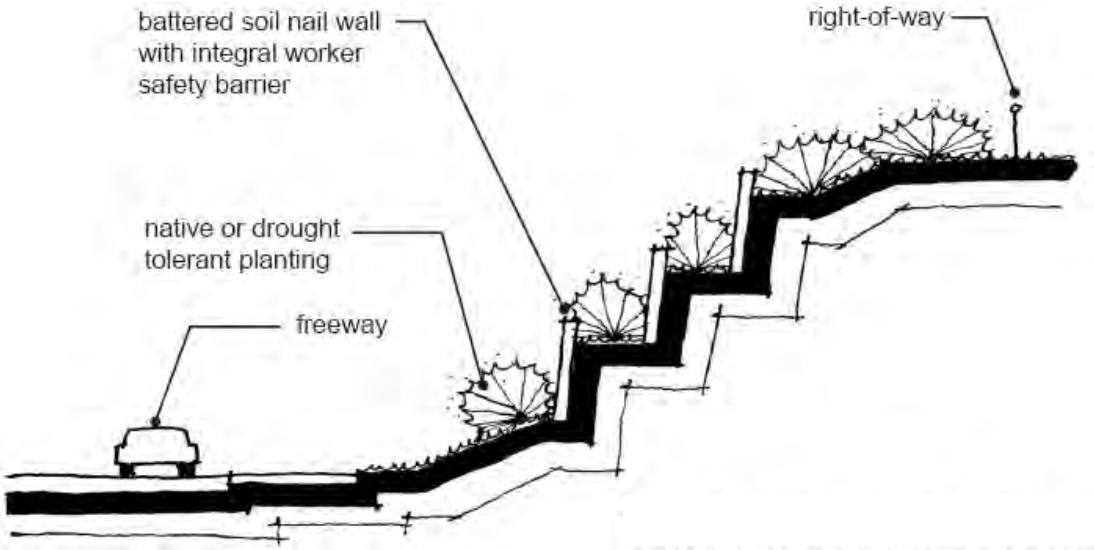

Figure 3-7.125: Terraced retaining walls section

Mid-Slope Retaining Walls in Cut Sections

Retaining walls would be located at mid slope wherever possible in cut sections to provide a buffer area for landscape screening between the wall and the freeway.

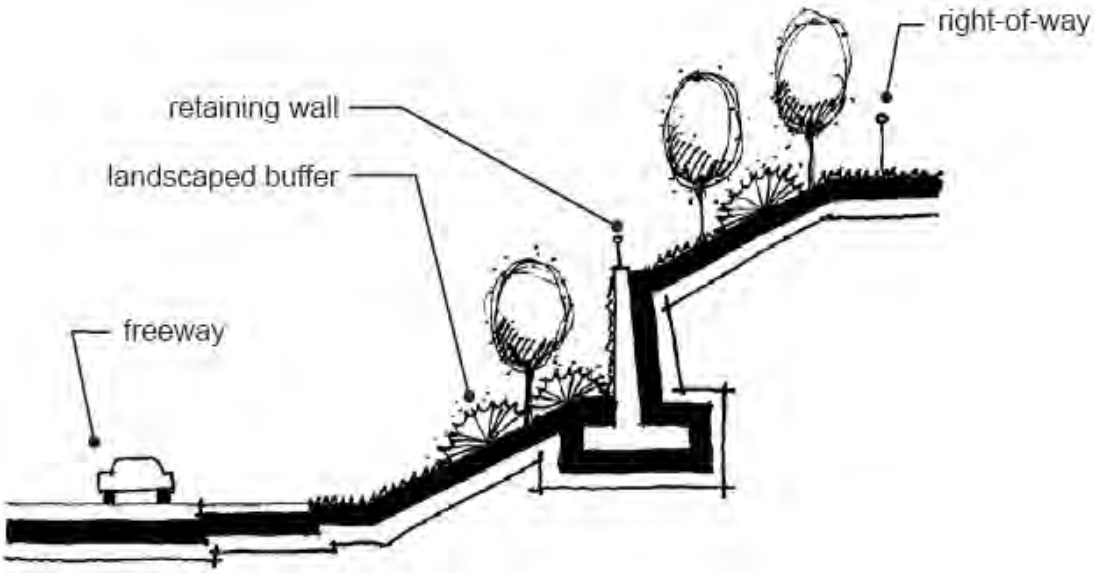

Figure 3-7.126: Mid-slope retaining wall section

Top-of-Slope Retaining Walls in Fill Sections

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

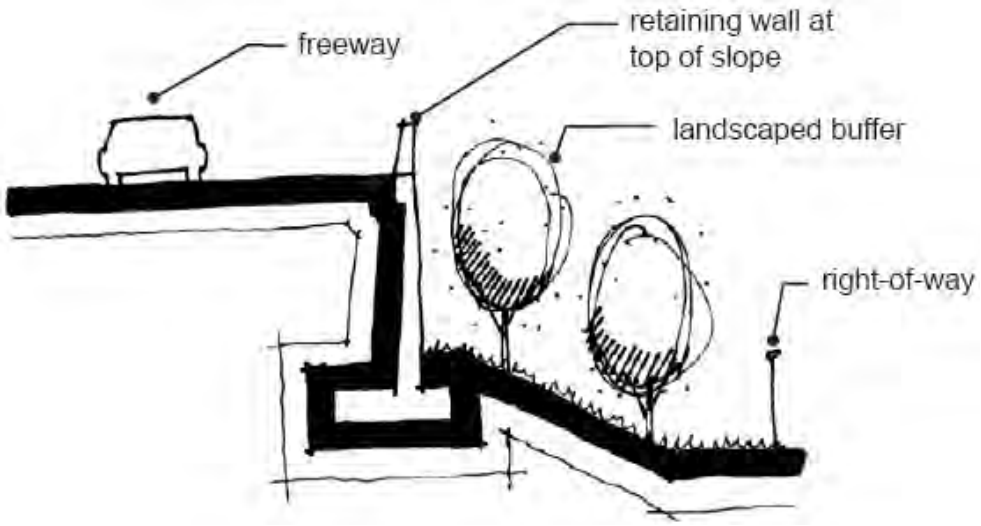

Figure 3-7.127: Top-of-slope retaining wall section

Viaduct Retaining Walls

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.

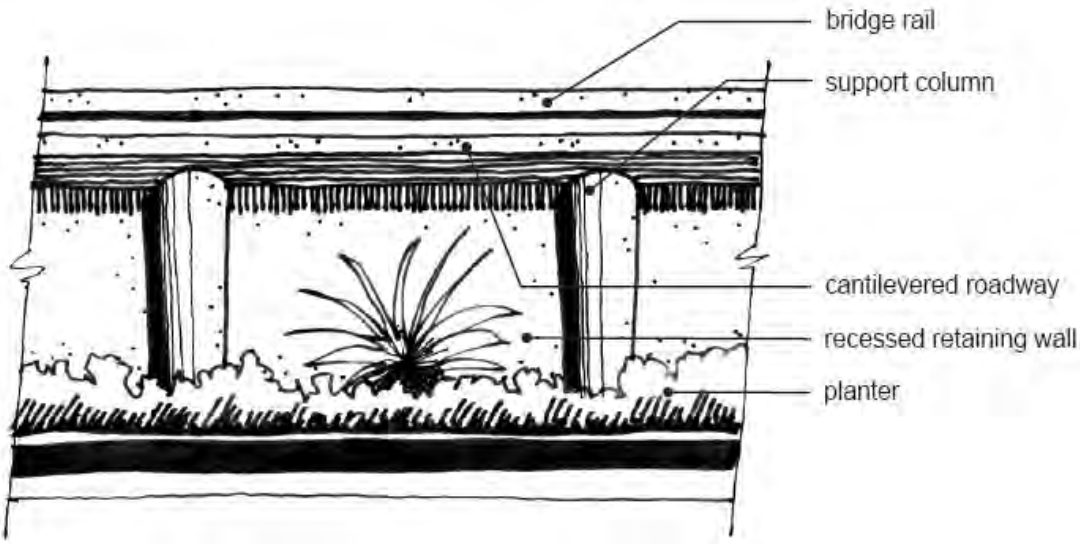

Figure 3-7.128: Viaduct retaining wall (Elevation View)

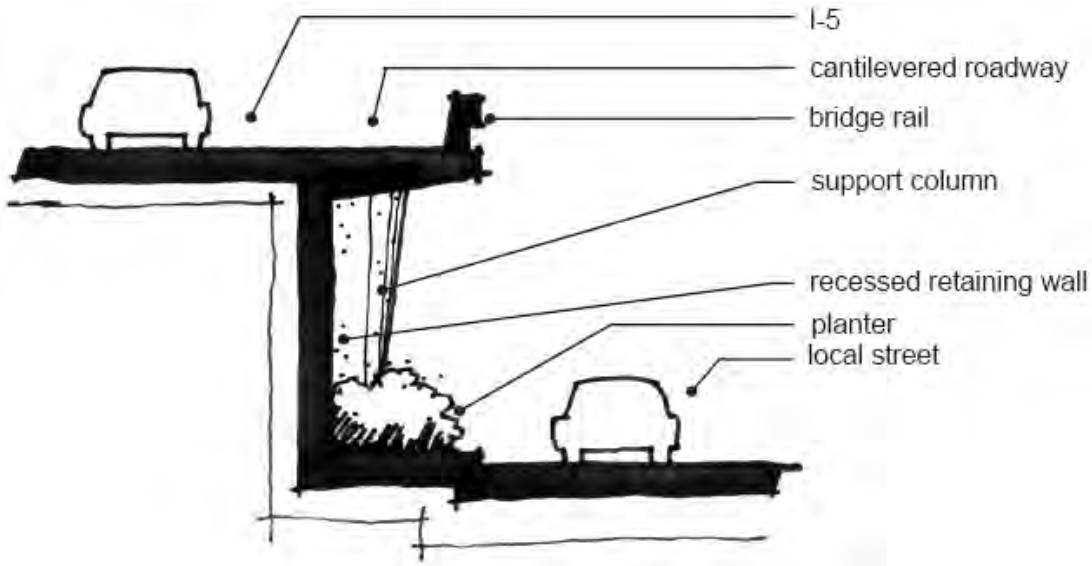

Figure 3-7.129: Viaduct retaining wall (Section View)

Retaining Wall/Barrier Planting Pockets

In areas where retaining walls must be placed close to the traveled way, space should be reserved between the wall and the safety barrier to include a five-ft-wide planting pocket.

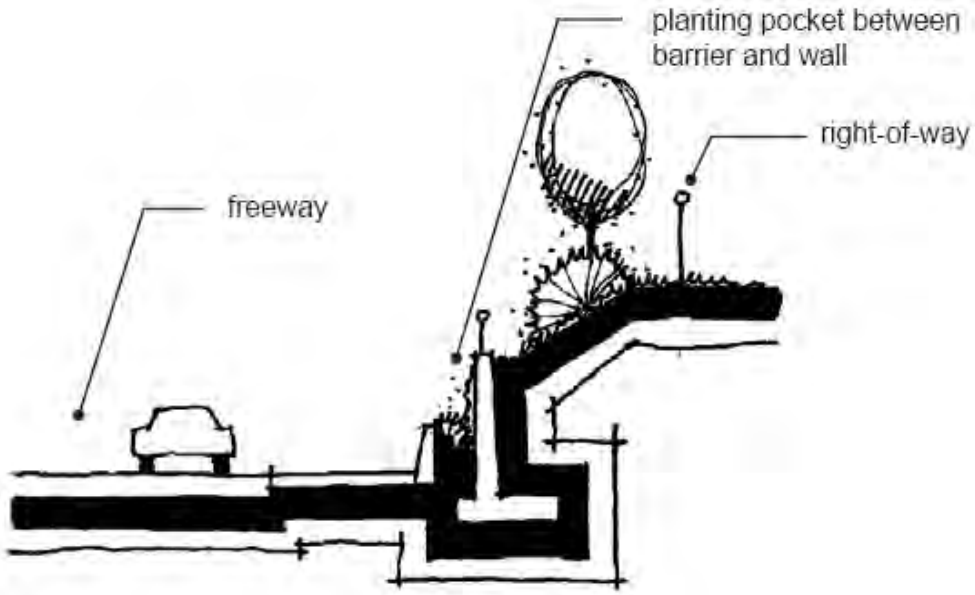

Figure 3-7.130: Retaining wall/planting pocket section

Retaining Wall/Barrier Setbacks

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.

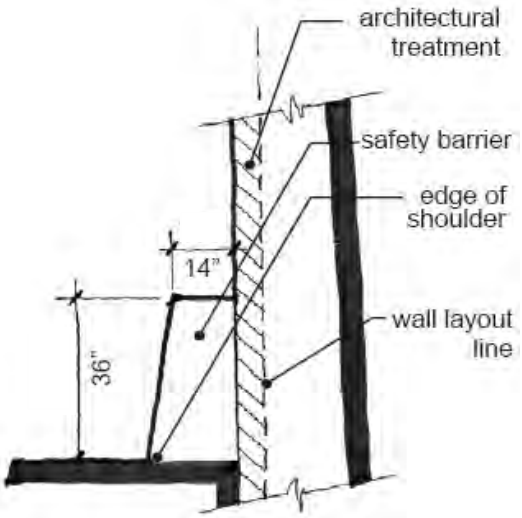

Figure 3-7.131: Barrier setback section

Vertical Concrete Safety Barriers

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

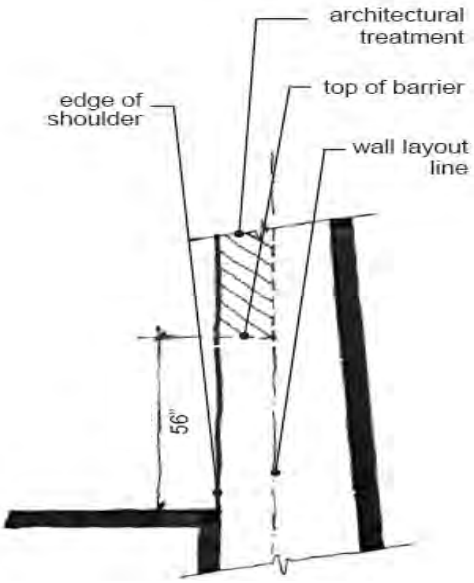

Figure 3-7.132: Vertical concrete safety barrier section

Battered Wall Faces

Wall faces would be battered at a 1:6 maximum 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 traffic.

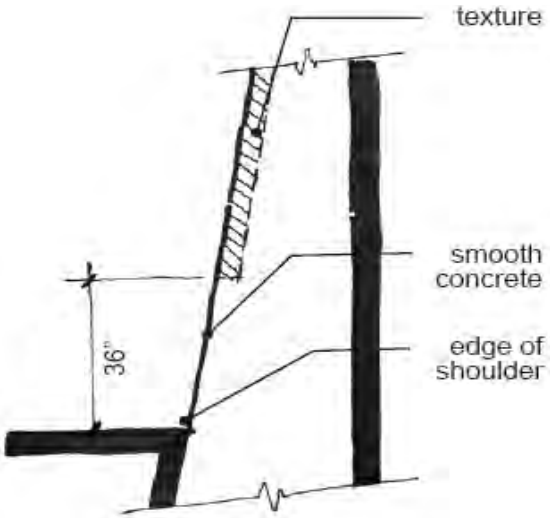

Figure 3-7.133: Battered wall face section

Enhanced Safety Railings

Alternatives to standard cable rail barrier would be used to complement enhanced wall designs. Options could include integral solid concrete parapets or alternative metal materials. Design details are contained in the Design Guidelines: I-5 NCC Project.

Architectural Surface Treatment

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. Design details are contained in the Design Guidelines I-5 NCC Project.

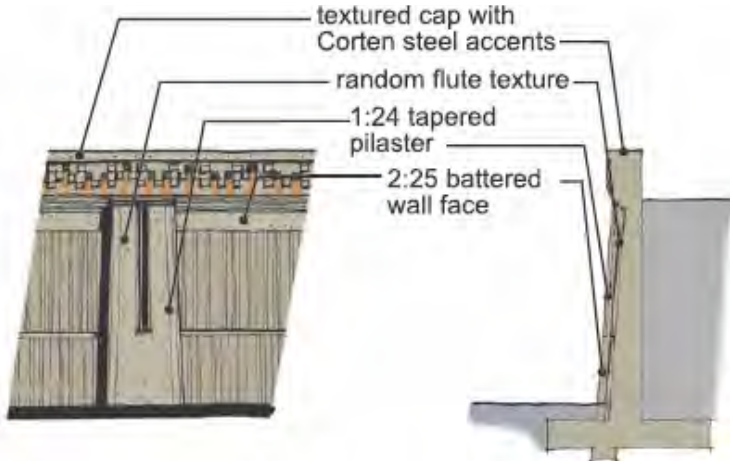

Figure 3-7.134: Southbound/northbound cut wall, elevation and section

Mechanically Stabilized Earth Walls

Great care should be taken when considering the use of mechanically stabilized earth (MSE) walls due to their design constraints. Placement of landscaped slopes, soundwalls, barriers, drainage conveyances, and other roadway features can require special design. MSE walls would have custom-designed panels that include integral color and enhanced surface texture and a minimum four-in reveal on each panel.

Figure 3-7.135: An MSE wall with a four-in pattern reveal

Low Profile and See-Through Safety Barriers

Low profile (e.g., Caltrans Type 60S) or see-through (e.g., Caltrans Type 80) safety barriers would be used if at all possible in areas where standard height barriers would diminish views of scenic resources from the freeway.

Overcrossing, Undercrossing, Bridge, and DAR Structures

Bridge type selection and all other structure design would be consistent with these mitigation measures and the design themes contained in the Design Guidelines: I-5 NCC Project. Some mitigation features may be new or non-standard and require approvals or design exceptions.

Freeway Overcrossings

Abutments would be short seat abutments placed at the top of slopes wherever possible. 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.

At each overcrossing, bridge abutments would be of the same type to produce a symmetrical appearance. Where overcrossing structures are replaced, high cantilever abutments would be used in lieu of secondary tie-back walls. 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 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.

Figure 3-7.136: An example of a short seat abutment

Figure 3-7.137: Secondary walls such as this reduce visual unity and should be avoided

Sidewalks would be provided on both sides of each overcrossing. They would have a 6-ft minimum width on a two-lane structure with a curb-to-curb width of 32 ft or less. On wider streets, both sidewalks would be a minimum of 10 ft in width. Sidewalk widths would be selected based on SANDAG regional guidelines (Planning and Designing for Pedestrians, June 2002) and local pedestrian design guidelines. Sidewalks may receive score patterns, surface texture, and in some cases integral color.

Low-profile barrier separations between pedestrian and vehicular traffic, wherever possible, 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 10 ft in width.

Pedestrian lighting, enhanced fencing and railings, and other urban amenities would be provided on each overcrossing. Local agency streetscape design guidelines would be continued within Caltrans right-of-way at each overcrossing and interchange. 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.

Bicycle shoulders, lanes, or paths would be provided on both sides of each overcrossing, when possible. A minimum shoulder width of four ft should be provided for Class III facilities.

Figure 3-7.138: A wider sidewalk would enable these pedestrians to walk side by side

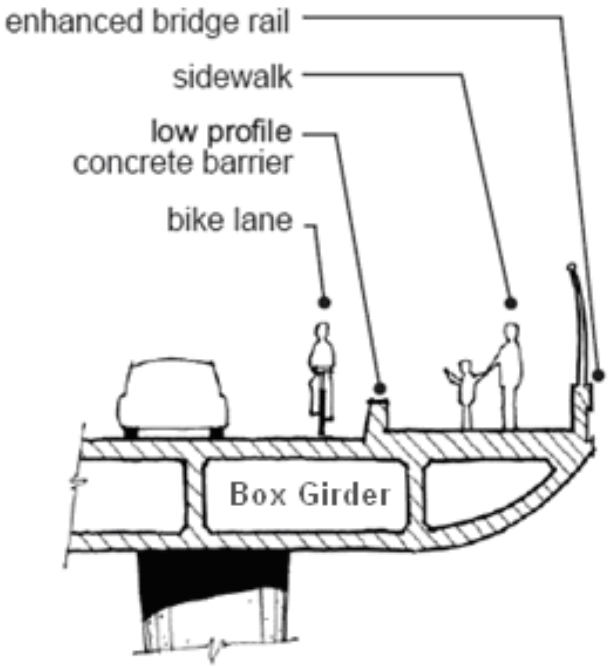

Figure 3-7.139: Sidewalk barrier separation section

Figure 3-7.140: An example of pedestrian amenities on the I-15 / El Cajon Boulevard overcrossing

Freeway Undercrossings

Bridge abutments would be of the same type on all four quadrants to give widened undercrossings a symmetrical appearance.

Bridge widening would be done using box girder construction wherever possible. Girders would be similar in appearance on both sides of the bridge to produce a symmetrical appearance.

In locations where street widening occurs, tie-back walls would be terrain-contoured walls, and receive architectural features consistent with those required for retaining walls and with community values and goals.

Pedestrian sidewalks 10 ft in width (minimum) would be provided at undercrossings on both sides of the street wherever possible. In all cases, existing sidewalk configurations on local streets would be continued across Caltrans right-of-way.

Bicycle shoulders, lanes, or paths would be provided at each undercrossing. The type of facility would consider regional and local planning goals. A minimum shoulder width of four ft would be provided for Class III facilities.

Enhanced pedestrian lighting including bridge soffit lighting would be provided at each undercrossing.

Slope paving at undercrossings would be enhanced with deeply textured facing materials such as scored veneer block or natural rock to add visual interest and deter graffiti.

Figure 3-7.141: Encinitas Boulevard undercrossing pedestrian and bicycle access could be improved

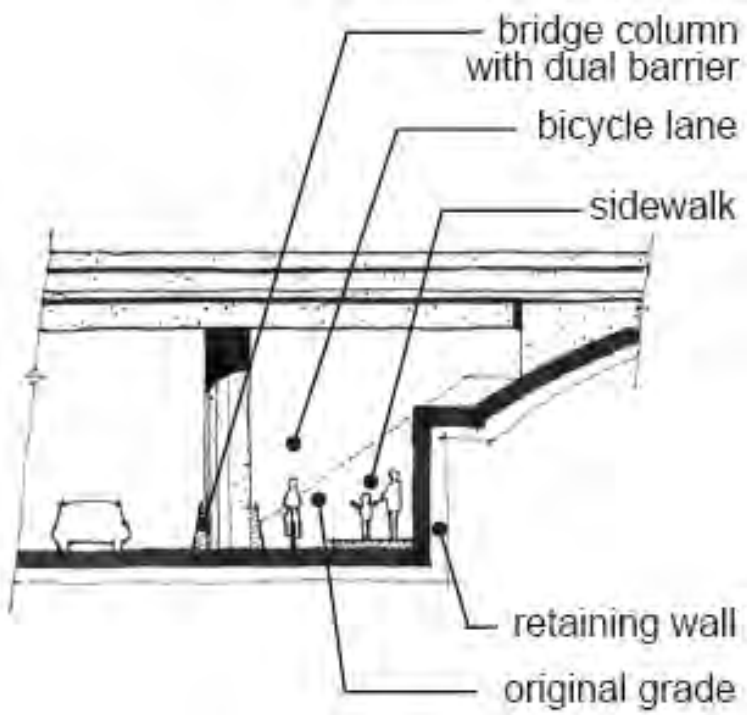

Figure 3-7.142: Pedestrian sidewalks and bicycle lanes section at undercrossing

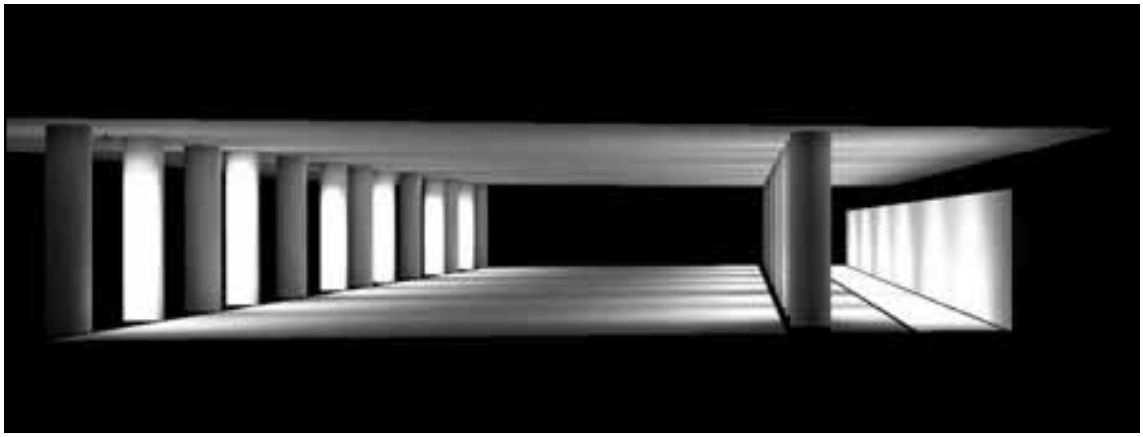

Figure 3-7.143: A lighting concept for Lomas Santa Fe Drive undercrossing integrates function and aesthetics

Bridges

Mitigation measures listed above 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 would be used on freeway bridges with views to ocean, rivers, lagoons, or other scenic resources, unless noise abatement is necessary.

Figure 3-7.144: Type 80 bridge rail

Pedestrian Overcrossings

Pedestrian overcrossings would be a minimum of 15 ft in width.

Pedestrian lighting, enhanced fencing, railings, architectural features, and other urban amenities would be provided on each pedestrian overcrossing. Existing streetscape elements and design themes would be continued within Caltrans right-of-way.

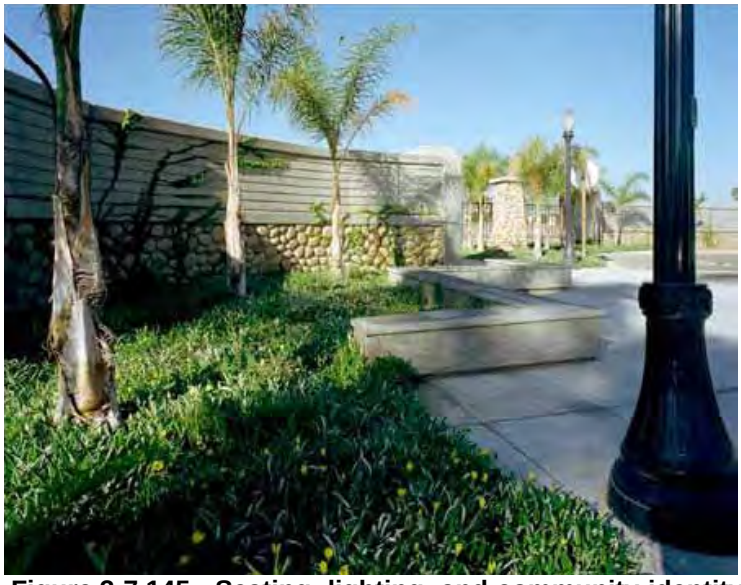

Figure 3-7.145: Seating, lighting, and community identity elements enhance this pedestrian overcrossing entry

DAR Structures

DAR retaining walls would have a 15-ft maximum height, allowing approximately 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 15 ft in width on each side. Bridge barriers, fences, and sidewalks would 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 would be provided if Caltrans policy 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. The type of facility would consider regional and local planning goals. A minimum shoulder width of four ft would be provided for Class III facilities.

Pedestrian lighting, enhanced fencing and railings, and other urban amenities would be provided on each DAR local street overcrossing and be consistent with local values and goals. Existing streetscape elements and design themes would be continued within Caltrans right-of-way at each DAR overcrossing. Local streetscape guidelines would be followed. Enhancements or enhancement features such as decorative lighting and street furniture would be incorporated if local agencies accept permanent maintenance responsibility. 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.

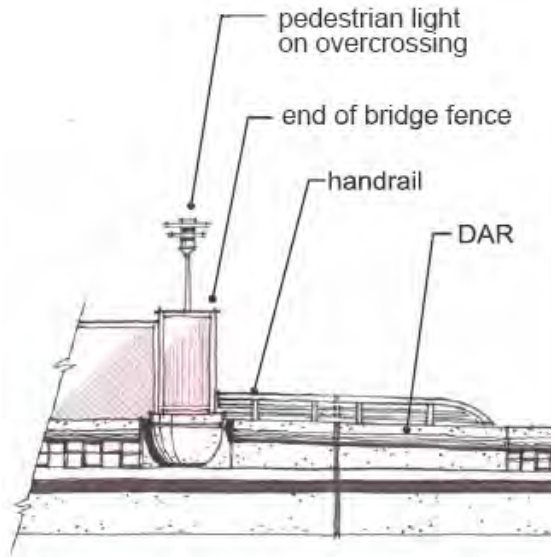

Figure 3-7.146: DAR (Elevation View)

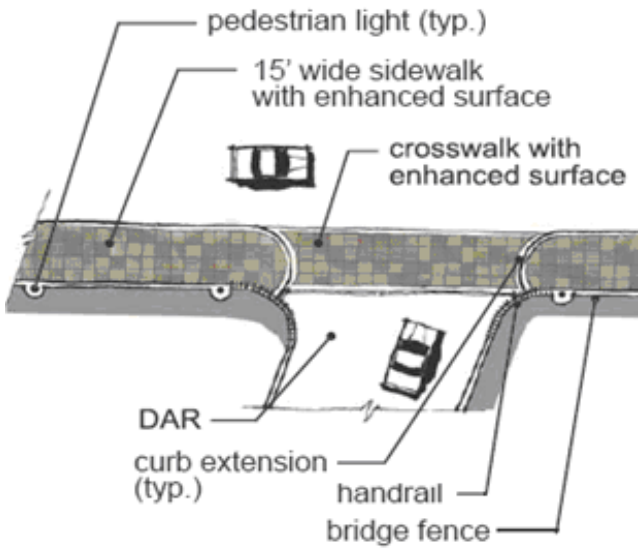

Figure 3-7.147: DAR (Plan View)

Freeway Interchanges

Interchanges are locations in which the large-scale, high-speed, high-volume, restricted-access realm of the automobile intersects the human-scale, multimodal, multi-use world of the community and street. The goal of the following mitigation measures is to preserve community character and continuity across the proposed freeway facility by creating a distinct visual and functional realm for pedestrians and bicyclists, providing landscape features that contribute to community goals, and designing freeway features and appurtenances that harmonize with the character of the community and street.

Interchange Configuration

Continuity of street and pedestrian facilities would 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 would also be considered to create a more balanced relationship between interchange and community by decreasing required roadway width.

Pedestrian Facilities

Establishment of a continuous pedestrian realm on both sides of local streets as they pass through the interchange would 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 would 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 would also be included as appropriate. Specific guidelines and/or specific interchange streetscape plans were developed as part of the Design Guidelines: I-5 NCC Project.

Figure 3-7.148: A sidewalk along an I-15 freeway off-ramp becomes a pedestrian realm with the inclusion of human-scale street amenities

Figure 3-7.149: Pedestrians walking in the realm of the automobile

Bicycle Facilities

Bicycle facilities would be preserved or upgraded to conform to the San Diego Regional Bike Plan, applicable local standards, and General Plan circulation element goals.

Landscaping

Interchange landscaping would reflect the visual character and goals of its locality. Enhanced interchange landscaping would be considered in cases where the responsible local agency would provide maintenance in perpetuity. Entry features would be included as transitional visual elements into local communities where appropriate. Traditional decorative entry signage with text would not be used. Specific interchange landscape themes were developed as part of the Design Guidelines: I-5 NCC Project.

Storm Water Treatment Facilities

Detention basins located at freeway interchanges or in areas of high visibility would incorporate the following design features. Basins would be located at least 10 ft from clear recovery areas wherever possible to allow landscape screening to be installed. Basins would appear to be natural landscape features such as dry streambeds or riparian pools. They would be shaped in an informal, curvilinear manner, incorporate slope rounding, variable gradients, and be similar to the surrounding topography to de-emphasize a defined outer edge. Maintenance access drives would be located in unobtrusive areas away from local streets and should consist of inert materials or herbaceous groundcover that is visually compatible with the surrounding landscape. All visible concrete structures and surfaces would be of special design and adhere to the Design Guidelines: I-5 NCC Project. Rock slope protection would consist of aesthetically pleasing whole material of various sizes. Standpipes and other vertical appurtenances would be placed in unobtrusive locations and be painted an unobtrusive color. Where possible, bioswales would be located in non-obtrusive areas, be designed to appear as natural features, and incorporate applicable mitigation measures listed above for detention basins.

Street Appurtenances

The use of Caltrans standard freeway appurtenances on local streets would 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 are addressed in the Design Guidelines: I-5 NCC Project. The use of access control fencing at interchanges would be minimized and located in unobtrusive locations when its use is necessary. Electrical control cabinets and other utility boxes would be located in unobtrusive locations away from sidewalks wherever possible. Raised medians would 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.

Manchester Avenue Transit Center

Site amenities for transit users would 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 10 ft in width would be provided along the west side of the transit center access road from the bus platform to Manchester Avenue. It would be located six ft from the back of curb to create a landscaped parkway.

Freeway Landscape

Corridor Landscaping

The Design Guidelines: I-5 NCC Project contain a landscape concept plan for the project. In general, freeway landscaping would utilize California native plants. The landscape design would be consistent with the character of adjacent community landscape. In communities that are characterized by ornamental landscaping, freeway landscaping would include native plants with an ornamental appearance in an enhanced design. Trees, shrubs and groundcover would be installed. In less-developed areas of the corridor, drought-tolerant native trees and shrubs would be planted in an informal design. Areas adjacent to native habitat would receive native plantings and hydroseed. Landscape plantings adjacent to habitat would be designed in consultation with the District Biologist. Landscaped areas would be irrigated with an underground automatic system. Reclaimed water would be used wherever possible. A thorough weed abatement/exotic removal program would be implemented prior to hydroseeding or planting and continue through plant establishment.

Freeway Planters

Since the project would result in the loss of a majority of existing landscaped roadside areas, steps would 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 two ft between barrier and wall, and six ft between median or separator barriers. Where possible, safety barriers at the edge of shoulder would facilitate tree and shrub planting in roadside areas that are too narrow to allow standard clear recovery area planting setbacks to be used.

Median Oleander Preservation and Replacement Planting

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 new oleanders planted from five-gallon 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 containers. Existing weeds and volunteer plants within the median would be removed. 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.

Local Frontage Roads

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.

Manufactured Slopes

Slopes would be graded 1:2 or flatter (vertical/horizontal) to support planting and irrigation. Steeper slopes may be possible if they are serrated and contain benches wide enough to accept plants from #15 containers. Grading would utilize techniques such as slope rounding, slope sculpting, and variable gradients to approximate the appearance of natural topography.

Lighting, Signage, and Miscellaneous Freeway Appurtenances

Signage, lighting, and miscellaneous freeway feature mitigation designs are detailed in the Design Guidelines: I-5 NCC Project.

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

Freeway lighting and signage would conform to the Design Guidelines: I-5 NCC Project. The Guidelines include directing lighting away from sensitive habitats and reducing glare.

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

Electrical and signal equipment at ramp termini would 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 3/8 in.

Narrow landscape areas beyond the gore would be paved for worker safety. Paving would incorporate a tan color and rough surface texture consistent with corridor design themes. Concrete vegetation control would be a tan color.

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.

Access Control Fencing

Access control fencing would 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.

Where possible, retaining walls and soundwalls near right-of-way boundaries would be designed in such a way that access control fencing would not be needed. The "dead" spaces that occur between walls and fences would be avoided if at all possible.

Drainage and Water Quality Facilities

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.

Bioswales and linear drainage ditches would be designed to appear as natural features and incorporate applicable mitigation measures listed above for detention basins.

Concrete drainage devices located in areas of high visibility would be located, designed, and colored to be unobtrusive in appearance.

Soft surface or segmented hard surface plantable alternatives to concrete ditches and rock slope protection would be utilized in all project areas visible to the public, where possible.

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.

Excess Real Estate Parcels

Real estate parcels in whole or in portion that are purchased for freeway improvements 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.

Overhead Utility Relocation

Existing overhead utilities that are located near the freeway and requiring relocation due to freeway widening would be relocated underground where possible.

3.8 Cultural Resources

This section of the environmental document discloses the project's effects, or impacts, on cultural resources, how those impacts were determined, and whether and how impacts can be avoided, minimized, or mitigated. Not all information about cultural resources can be fully disclosed to the public. The location of archaeological sites is exempt from disclosure to the public by law, to protect sites from looters.

The 8+4 Buffer alternative has been refined since the Draft EIR/EIS was publically circulated in 2010. This alternative was presented as the locally preferred alternative (LPA) in the August 2012 Supplemental Draft EIR/EIS, and has now been identified as the Preferred Alternative. The refined 8+4 Buffer alternative has the least amount of impact of any build alternative and also meets purpose and need.

3.8.1 Regulatory Setting

"Cultural Resources" as used in this document refers to all "built environment" resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966 (NHPA), as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places (NRHP).

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both State and local, with FHWA involvement. The PA implements the Advisory Council's regulations, 36 CFR 800, streamlining the Section 106 process and assigning certain responsibilities to Caltrans.

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties. See Appendix A for specific information regarding Section 4(f).

Historical resources are considered under CEQA, as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources (CRHR). PRC Section 5024 requires State agencies to identify and protect state-owned resources that meet NRHP listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require State agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks.

3.8.2 Affected Environment

Cultural resource reports prepared for the project to date:

Historic Property Survey Reports (HPSR):

- [Original] HPSR (March 2007)
- First Supplemental HPSR (May 2008)
- Second Supplemental HPSR (May 2008)
- Supplemental HPSR (April 2009)
- Third Supplemental HPSR (July 2009)
- Fourth Supplemental HPSR (April 2010)
- Fifth Supplemental HPSR (March 2013)
- Sixth Supplemental HPSR (March 2013)

Technical Studies:

- [Original] Archaeological Survey Report (ASR) (2002)
- Supplemental ASR (December 2006)
- Second Supplemental ASR (July 2008)
- Third Supplemental ASR (July 2008)
- Fourth Supplemental ASR (March 2013)
- Archaeological Evaluation Reports (June 2004, December 2006)
- Extended Phase 1 Testing Report for CA-SDI-6882 (February 2005)
- Extended Phase 1 Testing Report for CA-SDI-6134 (February 2005)
- Phase I Geomorphic Assessment for Buried Archaeological Resources (May 2005)

Historic Resource Evaluation Reports (HRER) for historic structures:

- [Original] HRER (July 2005)
- First Addendum HRER (August 2006)

The project Area of Potential Effects (APE) for cultural resources was developed in consultation among the Project Archaeologist, Project Manager, and Project Engineers, with continuous input from Design and other Environmental functional units. The initial APE map was signed on December 20, 2006. The APE was established as the limits of future right-of-way for the roadway work; but it also considered other impacts related to soundwall locations outside the right-of-way, biological mitigation sites, and construction and utility easements. Additional biological mitigation site locales that might be subject to disturbance during implementation of biological mitigation were identified in 2008 through 2012, with respective APEs signed in 2008, 2009, and 2010, and incorporated into the current final APE in 2013.

The studies listed above served to identify and evaluate cultural resources located within the project APE. They include: archaeological and historic architecture field surveys to identify cultural resources; archaeological test excavations designed to determine the nature and significance of the sites within the APE; a geomorphic study to determine the potential for buried soils and cultural deposits to occur within the APE; data recovery plans for two sites that were initially anticipated to be adversely impacted by the proposed build alternatives; and an ESA action plan designed to prevent impacts to cultural resources located adjacent to, but outside, project construction activities. Also developed prior to circulation of the Draft EIR/EIS were a draft and unsigned Memorandum of Agreement (MOA) regarding treatment of potentially impacted

resources (detailed in the Cultural Resources Treatment Plan, an appendix to the MOA), and an initial Finding of Effect (FOE) document, additionally described below. The data recovery plans, MOA, and initial FOE are no longer valid for the current project as refinement of the build alternatives has resulted in avoidance of sites originally anticipated to be impacted. The process of site identification and cultural resources planning is described in the remainder of this section.

Numerous archival sources were used to assist in the identification of resources within the APE, including the California Historical Resources Information System (CHRIS) repository at San Diego State University, local historical societies, Native American tribes and individuals, historical maps and photographs, and discussions with long-time area residents.

The 2007 HPSR and accompanying technical studies were sent to the SHPO on March 16, 2007, to: (1) document Native American consultation efforts; (2) identify cultural resources within the project APE; (3) seek its concurrence on NRHP/CRHR eligibility determinations; (4) identify then-anticipated project effects to eligible resources; and (5) propose methods to resolve adverse effects to those eligible resources.

Per PA Stipulation VIII.C.5, Caltrans requested concurrence on the following conclusions of eligibility:

- 10 archaeological sites were identified as not eligible for the NRHP/CRHR: CA-SDI-4553, CA-SDI-6831, CA-SDI-7296, CA-SDI-12120, CA-SDI-13484, CA-SDI-15678, CA-SDI-15679, CA-SDI-15680, CA-SDI-15685, and CA-SDI-17673

- 48 architectural properties over 50 years old were identified as not eligible for the NRHP

- Four archaeological sites were identified as eligible for the NRHP/CRHR: CA-SDI-603, CA-SDI-628, CA-SDI-12670, and CA-SDI-17928

- Three architectural resources were identified as eligible for the NRHP/CRHR: 767 Orpheus Avenue, 636 Leucadia Boulevard, and 510-514 La Costa Avenue

In accordance with PA Stipulation VIII.C.3, seven archaeological sites were considered eligible for the NRHP/CRHR for the purposes of the current undertaking only, including:

- CA-SDI-10965, CA-SDI-16637, CA-SDI-16638H, CA-SDI-16639, CA-SDI-17672, CA-SDI-17907H, and CA-SDI-17960 along I-5

The SHPO requested a 30-day extension for document review on April 29, 2007, but no subsequent letter of concurrence was received.

On July 2, 2007, Caltrans notified the SHPO in accordance with PA Stipulation VIII.C.5.a of its intent to move forward with the resolution of impacts to affected historic properties. This action preceded project refinement occurring in 2012, and assumed that two eligible archaeological sites would be adversely affected during construction of recommended project soundwalls. On December 4, 2007, an FOE Package was sent to FHWA, SHPO, the Advisory Council on Historic Preservation, and the following interested parties: Steve Banegas, Spokesman for the Kumeyaay Cultural Repatriation Committee (KCRC); the Weston family; Carmen Lucas, Kumeyaay Elder; and Mel Vernon, Luiseño Educator. On December 27, 2007, FHWA concurred with the FOE and wrote a letter to the SHPO to begin the consultation effort pursuant to Stipulation XI.A of the PA. On March 17, 2008, the SHPO responded by letter to FHWA and

copied Caltrans that the SHPO agreed that the treatment of historic properties in the FOE was reasonable (*Figure 5-5.6)*.

In accordance with PA Stipulation VIII.C.3, six additional sites considered eligible for the NRHP/CRHR were located during post-2007 surveys of biological mitigation sites, including:

- CA-SDI-209, CA-SDI-607, CA-SDI-762, CA-SDI-6849, CA-SDI-7296, and CA-SDI-18917

A secondary request for concurrence on treatment of historic properties was submitted to the SHPO on April 14, 2010. That submittal addressed five supplemental HPSRs developed for proposed project-related biological mitigation sites (the First, Second, Third, Batiquitos, and Fourth Supplemental HPSRs) submitted pursuant to the PA and containing a Notification of No Adverse Effect Findings. On May 12, 2010, the SHPO responded to Caltrans via email and copied FHWA regarding concurrence that the standard conditions and project-established ESAs would suitably protect the sites (*Figure 5-5.7)*.

In the Fifth Supplemental HPSR (2013), Caltrans changed the CA-SDI-7296 effect finding from No Adverse Effect with Standard Conditions-ESA to No Historic Properties Affected. The site had been determined ineligible to the NRHP in the HPSR (2007), but was made an ESA in the Second Supplemental HPSR (2008) based on an error of fact. Pursuant to Stipulation II of the PA, this site by definition is not a historic property since it was determined ineligible to the NRHP. The Finding of No Adverse Effect with Standard Conditions-ESA designation at CA-SDI-7296 warranted re-evaluation, per Stipulation VIII.C.4, since the original justification was based on an error of fact.

The Sixth Supplemental HPSR (2013) documented the APE adjustments and the effect finding revision for the project as a whole. This report unified the entire project under a single APE, updating the original APE (2007) by adding the Biological Mitigation Projects (2008 to 2010) and new areas shaped by project redesign (2013), but removing site CA-SDI-17928 and built environment resource 510 to 514 La Costa Avenue from this undertaking that were avoided through project redesign.

Based on project redesign and the documentation in the Fifth and Sixth Supplemental HPSRs, Caltrans prepared a final FOE package in July 2013 that documented the effect finding change for the project as a whole to No Adverse Effect, pursuant to Stipulation X.B.i.a. As previously determined, this undertaking would not cause an adverse effect to the built environment historic property located at 767 Orpheus Avenue, since the sliver takes required for this project would not affect any of the qualities that make this property significant. The 2013 FOE reiterates the argument presented in 2007 FOE regarding the 767 Orpheus Avenue property. All other resources within the APE are protected by Environmentally Sensitive Area designations. As previously determined and pursuant to Stipulation X.B.2.a(ii), Caltrans is assuming that the following archaeological sites are eligible for the purposes of this undertaking only: CA-SDI-209, CA-SDI-603, CA-SDI-607, CA-SDI-628, CA-SDI-762, CA-SDI-6849, CA-SDI-10965, CA-SDI-12670, CA-SDI-16637, CA-SDI-16638H, CA-SDI-16639, CA-SDI-17672, CA-SDI-17907H, CA-SDI-17960, and CA-SDI-18917. Environmentally Sensitive Area (ESA) designations would be delineated at and around these sites and the 2013 ESA Action Plan (which updated the 2007 ESA Action Plan submitted to FHWA and SHPO on December 4, 2007 and approved by SHPO on March 17, 2008) would be enacted to ensure that the project will avoid these resources. Caltrans will now avoid all known adverse effects to historic properties (properties that were previously impacted and adversely affected are now avoided). As such, the 2007 draft