

# Memorandum

To: CHAIR AND COMMISSIONERS  
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: December 14-15, 2011

Reference No.: 2.2c.(9)  
Action Item

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Subject: **APPROVAL OF PROJECT FOR FUTURE CONSIDERATION OF FUNDING**

## **RECOMMENDATION:**

The California Department of Transportation (Department) recommends that the California Transportation Commission (Commission), as a responsible agency, approve the attached Resolutions E-11-87.

## **ISSUE:**

### **01-SD-805, PM 4.4/15.8** **RESOLUTION E-11-77**

The attached resolution proposes to approve for consideration of funding the following project for which a Final Environmental Impact Report (FEIR) has been completed:

- Route 805 in San Diego County. Roadway improvements including construction of High Occupancy Vehicle lanes on a portion of SR 805 in the cities of San Diego, Chula Vista, and National City. (PPNO 0730A)

This project in San Diego County will construct High Occupancy Vehicle lanes on Interstate 805 in the cities of San Diego, Chula Vista, National City, and portions of the unincorporated County. This is a two-phase project. Phase One is fully funded at \$200,000,000, and consists of the following: PPNOs 0730A and 0730B (EAs 2T180X and 2T181), which are programmed in the Corridor Mobility Improvement Account and include local funds; and EAs 2T182 and 2T183, which are fully funded with federal and local funds. Phase Two will consist of approximately seven projects that are not yet programmed. The total estimated cost for the two-phase project is \$1,390,000,000 for capital and support. Construction of Phase One is estimated to begin in Fiscal Year 2011-12. The scope for Phase One, as described for the preferred alternative, is consistent with the project scope programmed in the CMIA baseline agreement.

A copy of the FEIR has been provided to Commission staff. Resources that may be impacted by the project include; aesthetics, biological resources, water quality and stormwater runoff, and traffic. Potential impacts associated with the project can all be mitigated to below significance through proposed mitigation measures. As a result, a Final Environmental Impact Report was prepared for the project.

Attachments

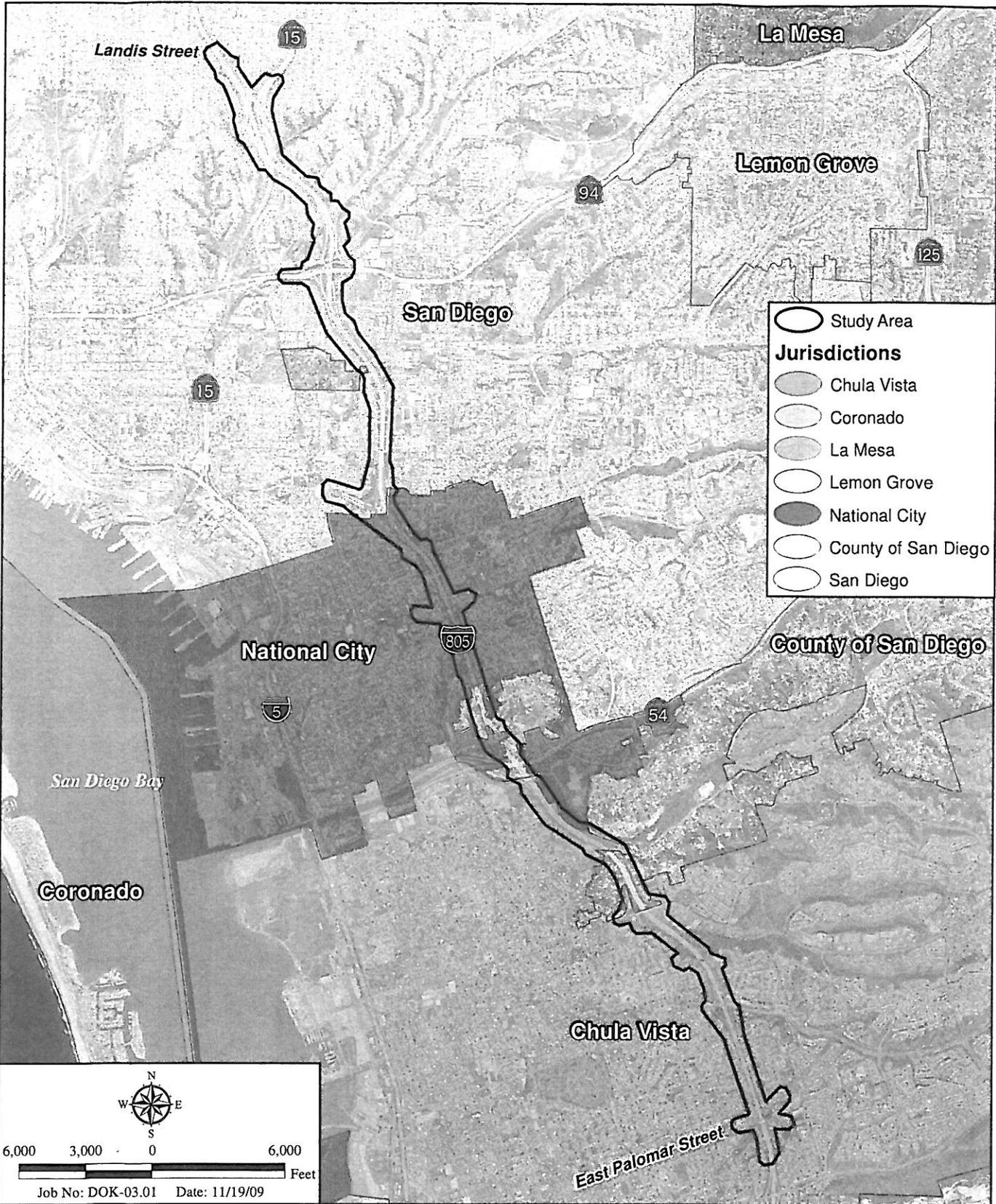
## **CALIFORNIA TRANSPORTATION COMMISSION**

### **Resolution for Future Consideration of Funding**

**11-SD-805, PM 4.4/15.8**

**Resolution E-11-87**

- 1.1** **WHEREAS**, the California Department of Transportation (Department) has completed an Environmental Impact Report pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines for the following project:
- Route 805 in San Diego County. Roadway improvements including construction of High Occupancy Vehicle lanes on a portion of SR 805 in the cities of San Diego, Chula Vista, and National City. (PPNO 0730A)
- 1.2** **WHEREAS**, the Department has certified that the Environmental Impact Report has been completed pursuant to CEQA and the State CEQA Guidelines for its implementation; and
- 1.3** **WHEREAS**, the California Transportation Commission, as a responsible agency, has considered the information contained in the Environmental Impact Report; and
- 1.4** **WHEREAS**, Findings were made pursuant to the State CEQA Guidelines.
- 2.1** **NOW, THEREFORE, BE IT RESOLVED** that the California Transportation Commission does hereby support approval of the above referenced project to allow for consideration of funding.



# Project Vicinity Map

I-805 MANAGED LANES SOUTH PROJECT

Figure 1-2

## FINDINGS

### CALIFORNIA DEPARTMENT OF TRANSPORTATION FINDINGS FOR THE INTERSTATE 805 MANAGED LANES SOUTH PROJECT IN SAN DIEGO COUNTY, CALIFORNIA DISTRICT 11 – SD – 805, PM 4.4/15.8

The following information is presented to comply with State California Environmental Quality Act (CEQA) Guidelines (Title 14 California Code of Regulations, Chapter 3, Section 15901) and the Department of Transportation and California Transportation Commission Environmental Regulations (Title 21, California Code of Regulations, Chapter 11, Section 1501). Reference is made to the Final Environmental Impact Report/Environmental Assessment (EIR/EA) for the Project, which is the basic source for the information.

The following effects have been identified in the Final EIR/EA as resulting from the Project. Effects found not to be significant have not been included.

#### **Traffic/Transportation/Pedestrian and Bicycle Facilities**

##### Adverse Environmental Effects:

The Project would degrade the level of service (LOS) to E or F in the general purpose lanes of five freeway segments along State Route (SR) 94 and one freeway segment along Interstate 805 (I-805) in the 2015 and 2030 build conditions. These freeway segments include:

##### Westbound SR 94 (AM peak period)

- Euclid Avenue northbound (NB) off-ramp to Euclid Avenue southbound (SB) on-ramp (2015)
- I-805 NB on-ramp to Home Avenue on-ramp (2030)
- SR 15 SB off-ramp to SR 15 SB on-ramp (2015)
- SR 15 SB on-ramp to 32<sup>nd</sup> Street off-ramp (2015 and 2030)
- 32<sup>nd</sup> Street off-ramp to 32<sup>nd</sup> Street on-ramp (2015 and 2030)
- 32<sup>nd</sup> Street on-ramp to 28<sup>th</sup> Street off-ramp (2015 and 2030)
- 28<sup>th</sup> Street off-ramp to 28<sup>th</sup> Street on-ramp (2030)

##### NB I-805 (AM peak period)

- East H Street off-ramp to East H Street eastbound on-ramp (2030)

Due to the new freeway access point created by the Direct Access Ramp (DAR) at East Palomar Street, some traffic trips would be diverted from their original routes to East Palomar Street. Additionally, the new transit stations and park-and-ride lots also would divert trips to East H Street and East Plaza Boulevard. The diversion of trips created by the DAR, transit stations, and park-and-ride lots would result in the degradation of LOS at the following 6 intersections during the AM peak period and 10 during the PM peak period:

- Orange Avenue/Brandywine Avenue (AM and PM peak periods)
- East Palomar Street/Melrose Street (AM and PM peak periods)
- East Palomar Street/Monserate Avenue (AM and PM peak periods)
- East Palomar Street/Oleander Avenue (AM and PM peak periods)
- East Palomar Street/Medical Center Drive (PM peak period)
- East Palomar Street/Paseo Ladera Street (PM peak period)
- East H Street/I-805 SB on- and off-ramps (PM peak period)
- Sweetwater Road/Euclid Avenue (PM peak period)
- Sweetwater Road/I-805 NB on-ramp (AM peak period)
- East Plaza Boulevard/Palm Avenue (PM peak period)
- East Plaza Boulevard/Grove Street (PM peak period)
- Home Avenue/I-805 SB off-ramp (PM peak period)

During Project construction, some freeway segments may be closed in one direction in the nighttime. In addition, it may be necessary to temporarily close some of the entrance and exit ramps at interchanges within the Project area. Temporary detours may be required along some roadway segments as well.

Findings:

Changes or alterations have been required in, or incorporated into, the Project, which avoid or substantially lessen the significant environmental effects as identified in the Final EIR/EA.

Statement of Facts:

A comprehensive traffic management plan (TMP) will be developed for the Project following selection of the preferred alternative, but prior to the start of construction. The objective of a TMP is to maintain the safe movement of vehicles through the construction zone, as well as to provide the highest level of traffic flow and access during construction periods. The Project TMP will be implemented prior to, and throughout the construction period. Elements within the Project TMP will include the following:

- A public awareness program will notify the public about the Project and its potential effects through brochures, press releases, advertising, public meetings, construction bulletins, and Caltrans (District 11) website (<http://www.dot.dot.ca.gov/dist11/>).
- Motorist information strategies will include changeable message signs, ground-mounted signs, and the use of web cameras. These strategies will provide current road conditions and will enable motorists to make informed decisions about their own travel plans and options available for alternative routes.
- Incident management elements will include the Construction Zone Enhanced Enforcement Program (COZEPP), the Freeway Service Patrol (FSP), and the Traffic Management Team (TMT). Implementation of these elements will identify incidents that occur within the construction area and provide corrective action in a timely manner.

COZEEP provides the California Highway Patrol assistance and surveillance within construction areas, which can allow enforcement of speed limits and provide emergency response support within the work zones.

The FSP provides towing service and assistance to motorists during vehicles breakdowns.

The TMT will be involved in the planning and coordinating of major lane or freeway closures and can help evaluate signs for detours and provide advance warning to motorists in case of an accident or non-recurring congestion.

- Demand management techniques intended to reduce traffic volumes within the construction zones, including promoting variable work hours to vary peak travel times, installing temporary ramp meters and/or modifying existing ramp meters to control the volumes entering the freeway within the construction zones.

Ramp meters will be installed on all entrance ramps, which will allow for the control of volumes entering the freeway.

Affected intersections and roadways will be signalized and/or re-striped, as required.

## **Visual Aesthetics**

### Adverse Environmental Effects:

The Project would introduce dominant, contrasting elements that will cause major changes to the composition of the visual environment. The urbanized character of the I-805 South corridor would become noticeably more urbanized with the introduction of new dominant visual elements, and existing open views from the freeway would be severely diminished. Doubling the paved width of the freeway, adding nearly twelve miles of retaining walls and over 13 miles of noise walls, and removing the majority of existing freeway landscaping would be the primary causes of the impacts.

### Findings:

Changes or alterations have been required in, or incorporated into, the Project, which avoid or substantially lessen the significant environmental effects as identified in the Final EIR/EA.

### Statement of Facts:

Visual mitigation for adverse impacts would consist of adhering to the following design guidelines in consultation with the District 11 Landscape Architect (DLA). The guidelines are arranged by Project feature and include options in order of effectiveness. One or more of these options are to be implemented on applicable Project features wherever they occur.

During Project design and construction, it will be the responsibility of the DLA to analyze the visual effects of specific Project features, synthesize applicable mitigation from this document, apply those requirements to actual freeway feature designs in specific

locations, and assist the design team in determining reasonable visual mitigation solutions. The DLA also will perform mitigation monitoring of all visual mitigation requirements.

To attain the visual goals, and reduce the visual impact, the mitigation design includes the following specific elements and recommendations:

#### *Noise Barriers*

- *Landscaped Noise Berms.* Noise barriers will consist of landscaped berms wherever possible.
- *Noise Berm/Retaining Wall Combinations.* In areas where the right-of-way (R/W) is too narrow to accommodate a berm, a retaining wall will be used to avoid constructing a sound wall on top of the berm.
- *Noise Berm/Wall Combinations.* A combination of noise wall and berm 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, the noise wall and berm combination will incorporate a berm with a 2:1 slope on the freeway side that is a minimum of 6 feet in height to allow enough space to provide screening shrubs in front of the wall.
- *Noise Wall Landscape Buffers.* In cases where berms are entirely infeasible, sound walls will 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.
- *Noise Wall Articulated Layout/Varied Profile.* Another option where berms are infeasible includes construction of a noise wall with an articulated layout and/or varied profile to reduce the monotonous visual effect of a single wall surface and help reduce its apparent scale.
- *Noise Wall Planting Pockets.* Where R/W is too narrow to employ the configurations listed above, a minimum three-foot-wide planting pocket will be provided between the back of the barrier and the face of wall.
- *Noise Wall/Barrier Setbacks.* In areas too narrow to place a planting pocket, noise walls will be recessed behind the face of the barrier at a sufficient distance to allow architectural features to be included on the face of the noise wall. Placing a noise wall directly on top of a concrete barrier will be avoided if at all possible. In areas where space for architectural detailing does not exist, vertical concrete safety barriers will be considered.
- *Vertical Concrete Safety Barriers.* In areas where space for architectural detailing does not exist, vertical concrete safety barriers will be considered. Vertical barriers add 12 inches of additional width in which architectural elements, such as pilasters and wall caps, will be included.

- *Transparent Noise Walls on or Near Private Property.* Where noise receptors are located above the elevation of the freeway, transparent noise walls located at the top of slope on the R/W line or on private property will be used if the benefited property owner agrees to maintain wall surfaces. Locating walls at higher elevations near the receptors substantially reduces the height of walls to achieve “line-of-sight” noise reductions.
- *Translucent Noise Wall Panels on Caltrans Property.* Translucent materials will be placed on top of noise walls to reduce their apparent height and create a greater sense of openness. Translucent materials will be placed above areas of potential vehicle impact, out of easy reach, and will consist of vandal-resistant materials.
- *Architectural Detailing.* Noise walls will be designed to be visually compatible with the surrounding community. Architectural detailing, such as pilasters, wall caps, interesting block patterns, and offset wall layouts, will be used to add visual interest and reduce the apparent height of the walls. Poured-in-place integrally colored concrete construction techniques will be encouraged where visual consistency with retaining walls is desired. Enhanced surface materials also will be used where appropriate to meet community design goals.

#### *Retaining Walls*

- *Terrain-contoured Retaining Walls in Cut Sections.* Retaining walls that follow the contours of the topography and maintain a constant (less than 5-percent slope) elevation at the top of wall will be used where appropriate. Wall layouts and profiles will be composed of long radius curves, with no tangents or points of intersection. Walls will be located at mid-slope.
- *Mid-slope Retaining walls in Cut Sections.* Retaining walls will be located at mid-slope wherever possible in cut sections to provide a buffer area for landscape screening between the wall and the freeway. Tie back and soil nail walls will be used where appropriate to preserve existing mature trees.
- *Top-of-slope Retaining Walls in Fill Sections.* Retaining walls will 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.
- *Retaining Wall/Barrier Planting Pockets.* In areas where retaining walls must be placed close to the traveled way, space will be reserved between the wall and the safety barrier to include a three-foot wide planting pocket.
- *Retaining Wall/Barrier Setback.* In areas too narrow to place a planting pocket, the retaining wall will be recessed behind the face of the barrier at sufficient distance to allow architectural features to be included on the face of the retaining wall.
- *Vertical Concrete Safety Barriers.* In areas where space for architectural detailing does not exist, vertical concrete safety barriers will be considered. Vertical barriers add 12 inches of additional width in which architectural elements, such as mechanically stabilized earth wall panel relief, pilasters, and wall caps, will be included.

- *Architectural Surface Treatment.* Architectural features, textures, and integral concrete colors will be used to mitigate the appearance of retaining wall surfaces. Retaining walls will 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 will also be used where appropriate to be consistent with community design goals.
- *Mechanically Stabilized Earth (MSE) Walls.* MSE walls will have custom designed panels that include integral color, enhanced surface texture, and a minimum four-inch pattern reveal on each panel.

### *Freeway Overcrossings*

- Abutments will be short-seat abutments placed at the top of slopes wherever possible. The visual mass of abutments will be minimized as much as possible. High-cantilever abutments will be used in locations where space does not exist for short-seat abutments at the top of a slope.
- At each overcrossing, bridge abutments will be of the same type to produce a symmetrical appearance. Where overcrossing structures are replaced, high-cantilever abutments will be used in lieu of secondary tie back walls. Temporary tie back walls will be terrain-contoured walls, and receive architectural features consistent with permanent walls in the viewshed. Temporary tie-back walls will be removed when overcrossing structures are reconstructed.
- In locations where retaining walls must be incorporated into abutments, they will be designed as terrain contoured walls if possible, and be located away from the edge of shoulder to allow space for a planted buffer at their base.
- Slope paving will be enhanced with integral concrete color, texture, and deeply textured facing materials such as veneer block or natural rock.
- Bridge signage will be designed to visually integrate with bridge architecture. Concrete sign pedestals will be consistent in appearance with bridge design themes.
- Sidewalks will be provided on both sides of each reconstructed or modified overcrossing. They will have a minimum 8-foot width on a 2-lane structure with a curb-to-curb width of 32 feet or less. On wider streets, both sidewalks will be a minimum of 12 feet in width. Wider sidewalk widths will be selected based on SANDAG regional guidelines (*Planning and Designing for Pedestrians*; 2002) and local pedestrian design guidelines. All sidewalks will receive score patterns, surface texture, and in some cases, integral color.
- Low-profile barrier separations between pedestrian and vehicular traffic will 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 will be a minimum of 10 feet in width.

- Pedestrian lighting, enhanced fencing and railings, and other urban amenities will be provided on each overcrossing. Appropriate local agency streetscape design themes will be included within the freeway R/W at each overcrossing and interchange. Container trees located on structures also will be provided in locations where the responsible local agency has requested them and agreed to maintain them in perpetuity.

#### *Pedestrian Overcrossings*

- Pedestrian overcrossings will be a minimum of 15 feet in width. Pedestrian lighting, enhanced fencing, railings, architectural features, and other urban amenities will be provided on each pedestrian overcrossing and be consistent with local values and goals. Existing streetscape elements and design themes will be continued within the freeway R/W.

#### *Bicycle Facilities on Overcrossings*

- Bicycle shoulders, lanes, or paths will be provided on both sides of each overcrossing. The type of facility provided will be based on regional and local planning goals. A minimum shoulder width of four feet will be provided for Class III facilities.

#### *Undercrossing Structures*

- Bridge abutments and wing walls will be of the same type on all four quadrants to give widened undercrossings a symmetrical appearance.
- Bridge widening will be done using cast-in-place box girder construction wherever possible. Girders will be similar in appearance on both sides of the bridge to produce a symmetrical appearance.
- In locations where street widening occurs, tie-back walls will be terrain-contoured walls, and receive architectural features consistent with those required for retaining walls and with community values and goals.
- Slope paving at undercrossings will be enhanced with deeply textured facing materials, such as scored veneer block or natural rock, to add visual interest and deter graffiti.

#### *Pedestrian Facilities on Undercrossing*

- Minimum 10-foot-wide pedestrian sidewalks will be provided at undercrossings on both sides of the street wherever possible. In all cases, existing sidewalk configurations on local streets will be continued across the freeway R/W as a minimum project feature.
- Enhanced pedestrian lighting including bridge soffit lighting will be provided at each widened undercrossing.

### *Bicycle Facilities on Undercrossing*

- Bicycle shoulders, lanes, or paths will be provided at each undercrossing. The type of facility provided will be based on regional and local planning goals. A minimum shoulder width of four feet will be provided for Class III facilities.

### *Direct Access Ramp*

- DAR retaining walls will have a maximum 15-foot height allowing approximately 10 feet of minimum vertical clearance under the connecting ramp structure.
- Pedestrian and bicycle traffic on an existing overcrossing that is modified to a DAR overcrossing will be routed to a separate pedestrian overcrossing structure in the immediate vicinity, if possible.
- On DAR overcrossings where pedestrians are present, sidewalks will be 15 feet in width on each side. Bridge barriers, fences, and sidewalks will 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 will be provided if bridge rail enhancements are not allowed otherwise.
- Bicycle shoulders, lanes, or paths will be provided on both sides of the DAR overcrossing open to non-vehicular traffic. The type of facility provided will be based on regional and local planning goals. A minimum shoulder width of four feet will be provided for Class III facilities.
- Pedestrian lighting, enhanced fencing and railings, and other urban amenities will be provided on the DAR local street overcrossing and be consistent with local values and goals. Applicable existing streetscape elements and design themes will be included within the freeway R/W at the DAR overcrossing, and local streetscape guidelines will be followed where possible. Container trees located on structures also will be provided in locations where the responsible local agency has requested them and agreed to maintain them in perpetuity.

### *Pedestrian Facilities at Freeway Interchanges*

- Establishment of a continuous pedestrian realm on both sides of local streets as they pass through the interchange will 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 will conform to SANDAG Pedestrian Design Guidelines and any applicable local streetscape design standards and guidelines. Urban design features, such as benches, bollards, directional signage, and trash receptacles, also will be included as appropriate.

### *Bicycle Facilities at Freeway Interchanges*

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

### *Interchange Landscaping*

- Interchange landscaping will reflect the visual character and goals of its locality. Enhanced interchange landscaping will be considered in cases where the responsible local agency will provide maintenance in perpetuity. Entry features will be included as transitional visual elements into local communities where appropriate. Traditional decorative entry signage with text will not be used.

### *Street Appurtenances at Freeway Interchanges*

- The use of Caltrans standard freeway appurtenances on local streets will be avoided or minimized wherever possible by the use of functional alternatives that are more consistent with community design standards. 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 will be considered. The use of access control fencing at interchanges will be minimized and it will be located in unobtrusive locations when its use is necessary. It will be of non-standard design and composed of enhanced materials where appropriate. Electrical control cabinets and other utility boxes will be located in unobtrusive locations away from sidewalks wherever possible. Raised medians will 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.

### *East Palomar Street Transit Center and Park-and-Ride*

- Excess portions of real estate parcels required for street widening along East Palomar Street from Pecan Place to Oleander Avenue will be considered for improvement as a series of mini-parks tied together by a wide pedestrian promenade/bikeway and enhanced East Palomar Street streetscape.
- The promenade/bikeway will begin at Pecan Place, continue across the freeway overcrossing structure, bisect the proposed transit center parking lots, cross Oleander Avenue, and terminate at Greg Rogers Park. Sidewalk and streetscape improvements also will be included east of the transit center on East Palomar Street to Oleander Avenue and Rogers Park. The promenade will be a minimum of 12 feet wide and be offset from the street by a landscaped parkway wherever possible. Bike lanes will be included on the street where appropriate.
- Streetscape features will include enhanced sidewalk and crosswalk paving, large street trees, full landscaping, and raised medians with enhanced paved surfaces and tree planting wherever possible. These features will be included on the freeway overcrossing structure to provide continuity and connectivity.

- Site amenities for transit users will be provided such as covered bus shelters, pedestrian lighting, benches, litter receptacles, tree grates, bollards, and bicycle racks.
- Solid screen walls with landscaped planting buffers of at least six feet in width will be placed at the perimeter of parking lots to buffer adjacent residential properties. Screen walls will be a maximum of six feet in height (as measured from residential building pads) and include architectural features, textures, and colors that will be compatible with the residential character of the site. Landscaping in parking lots consistent with local standards for commercial development will be provided.

#### *In-line Transit Stations*

- Streetscape improvements will be provided to facilitate and encourage pedestrian movement between the transit center parking lots and the stations. Mitigation goals and design guidelines for freeway interchanges contained above will be implemented in these areas. Streetscape features will include enhanced sidewalks a minimum of eight feet in width, crosswalk and slope paving, large street trees, full landscaping, and raised medians with enhanced paved surfaces and tree planting wherever possible. Other site amenities for transit users will be provided such as covered bus shelters, pedestrian lighting, benches, litter receptacles, tree grates, bollards, and bicycle racks. Landscaping in parking lots consistent with local standards for commercial development will be provided.

#### *Freeway Landscaping*

- Freeway landscaping will be consistent with the character of adjacent community landscape. In communities that are characterized by ornamental landscaping, freeway landscaping that includes drought tolerant ornamental trees, shrubs, and groundcover will be installed. In less developed areas along the freeway, landscaping with drought tolerant ornamental and native trees and shrubs will be planted. Areas adjacent to native habitat will receive native landscaping. Native landscaping will be designed in consultation with the District Biologist. All landscaped areas will receive fully automatic below-grade irrigation systems.

#### *Freeway Planters*

- Since the Project will result in the loss of a majority of existing landscaped roadside areas, extraordinary steps will be taken to create new areas for mitigation replacement planting within the freeway facility at the edge of shoulder or between barriers and walls wherever the available width allows. Minimum widths for planting are two feet between barrier and wall, and six feet between median or separator barriers. Safety barriers at the edge of shoulder will facilitate tree and shrub planting in roadside areas that are too narrow to allow standard clear recovery area planting setbacks to be used.

### *Local Frontage Roads*

- In locations where freeway widening brings traffic into close proximity to parallel local streets, landscape buffers will be created between the freeway and street wherever possible. Buffers will 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. Installation of this mitigation measure is contingent on local agency approval and commitment to maintain the streetscape buffer in perpetuity.

### *Manufactured Slopes*

- Slopes will be graded 2:1 or flatter to support planting and irrigation. Grading will utilize techniques such as slope rounding, slope sculpting, and variable gradients to approximate the appearance of natural topography.

### *Overhead Utility Relocation*

- Existing overhead utilities that are located near the freeway and require relocation due to freeway widening will be considered for relocation underground if doing so will improve visual quality.

### *Lighting, Signage, and Miscellaneous Freeway Appurtenances*

- Lighting and signage pedestals on structures will occur at pilasters or be incorporated in other architectural features. Concrete lighting and signage pedestals will be designed in such a way that vertical barrier transitions are not required. Electrical and signal equipment at ramp termini will be placed in visually unobtrusive locations.
- Signage with movable elements or self illuminated features, such as changeable message signs, will be excluded from viewsheds containing scenic resources if at all possible. The District Landscape Architect will assist in the placement of all such signage.

### *Access Control Fencing*

- Access control fencing will be placed in visually unobtrusive locations of interchanges and bridges. It will be of special design and consist of enhanced materials where appropriate and where the responsible local agency agrees to maintain it in perpetuity.
- Retaining walls and sound walls near R/W boundaries will be designed in such a way that access control fencing will not be needed. The "dead" spaces that occur between walls and fences will be avoided if at all possible.

### *Drainage and Water Quality Facilities*

- Basins will be located at least 10 feet from free recovery areas wherever possible to allow landscape screening to be installed. Basins will appear to be natural landscape features such as dry streambeds or riparian pools. They will be shaped in an informal, curvilinear manner. Basin slope grading will incorporate slope rounding, variable gradients, and be similar to the surrounding topography to deemphasize a defined outer edge. Maintenance access drives will be located in unobtrusive areas away from local streets and will consist of inert materials or herbaceous groundcover that is visually compatible with the surrounding landscape. Chain-link perimeter fencing will not be used if at all possible. All visible concrete structures and surfaces will be of special design and adhere to the corridor design guidelines. Rock slope protection will consist of aesthetically pleasing whole material of various sizes. Standpipes and other vertical appurtenances will be placed in unobtrusive locations and be painted an unobtrusive color.
- Bioswales and linear drainage ditches will be designed to appear as natural features. They will be designed as dual use facilities such as recreational trails or maintenance access roads wherever possible.
- Concrete interceptor ditches will not be placed at the toe of slopes adjacent to residential property if at all possible, nor immediately adjacent to sidewalks or pedestrian use areas. Alternatives such as subterranean drainage placed below finish grade or a planted geo-reinforced drainage surface will be used.
- Linear drainage paths or bioswales will be designed for dual use as maintenance vehicle access facilities where appropriate.
- Concrete drainage devices located in non-landscaped areas will be colored to match the surrounding soil.
- Soft surface alternatives to concrete ditches and rock slope protection, such as plantable matrices, will be utilized wherever possible.
- The use of pervious concrete for storm water pollution prevention will be considered to avoid adverse visual impacts. Project features, such as interceptor ditches, inlet aprons, gutters, maintenance access roads, maintenance vehicle pullouts, and parking lots, may consist of pervious concrete and perhaps serve a dual purpose.