2.1.7 Visual and Aesthetics

This section summarizes the results of the Visual Impact Assessment completed in February 2006 and revised in September 2008 to incorporate the Rehabilitation Alternative. The Visual and Aesthetics Analysis evaluated the potential effects to visual resources resulting from the construction and operation of the proposed project.

2.1.7.1 Regulatory Setting

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

CEQA: CEQA establishes that it is the policy of the State to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities." [CA PRC Section 21001(b)].

California Coastal Act of 1976: Consistent with the California Coastal Act of 1976, the Port has a CCC-certified PMP that addresses environmental, recreational, and other concerns of the Port and surrounding regions (PMP discussion below).

State of California Scenic Highways Program: California's Scenic Highways Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways (Streets and Highways Code, Section 260 *et seq.*). A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

A scenic corridor is the land generally adjacent to and visible from the roadway. A scenic corridor is identified using a motorist's cone of vision. A reasonable boundary is selected when the view extends to the distant horizon.

The nearest official state-designated scenic highway is located approximately 31 mi (49 km) northeast of the Port, at SR 91 east of SR 55 in Anaheim. SR 1, also known as PCH, is classified as "eligible" for state scenic designation and is approximately 5.4 mi (8.7 km) east of the Port. Because it is not officially designated, it does not warrant any special attention.

City of Long Beach: The City of Long Beach Municipal Code (21.42.032) specifies that "the landscape requirements for Industrial Zoned (IP) properties shall be those established in the Master Landscape Plan for the Port. The Port Planning Bureau shall review and approve all landscape plans for projects located in the IP zone." All property in the study area is zoned IP.

General Plan: The project study area land uses are designated by the City of Long Beach General Plan (LBGP). The Long Beach Harbor area falls within Land Use District Number 12. This District includes existing freeways, the Port, and the Long Beach Airport. The LBGP indicates that the water and land use designations within the harbor area are separately formulated and adopted in the PMP, as amended. The LBGP indicates that the responsibilities for planning within legal boundaries of the harbor lie with the Board of Harbor Commissioners.

PMP: The PMP Public Access, Visual Quality, and Recreational/Tourist Element "concentrates on Queensway Bay," which is a buffer between the highly industrialized inner port complex and the waterfront recreation activities of the Port and City of Long Beach. The visual resources goals noted in this element include:

- Provide landscaping between recreational facilities and port industries
- Minimize disruptive views
- Improve appearance of Harbor lands at and along major vehicular approaches

According to the PMP, the most sensitive views within the PMP planning area include:

- Predominant structures visible to the east from downtown Long Beach and along ocean bluffs;
- Ground-level views along the boundary of Queensway Bay; and
- Ground-level views along Harbor Scenic Drive from the SB lanes south of Anaheim Street.

The Board of Harbor Commissioners pays particular attention to color, form, texture, and scale during the review of proposed projects.

2.1.7.2 Affected Environment – Project Study Area

Local Project Visual Setting

The Gerald Desmond Bridge was constructed in 1966 and was seismically upgraded in 1995. The existing bridge consists of a tied-arch truss structure with a 409.5-ft (124.8-m) suspended span (Parsons-HNTB, 2002b). The trusses form vertical sides to the bridge, connected to one another by transverse beams, and by stringers and other members that support the deck. The main span is a through truss design, where there are struts and top lateral bracing above the sides of the two trusses. One drives "through" the trusses; hence, it is called a through truss bridge type (Caltrans, 1990). The existing vertical clearance of the main span is 156 ft (47.5 m) above MHWL (i.e., 4.6 ft [1.4 m]).

The proposed project site consists mostly of port and industrial development and is located in a predominantly flat area at the Port. The eastern portion of the Gerald Desmond Bridge crosses Pier D, the main span of the bridge crosses the Back Channel, and the western portion of the bridge bisects Piers S and T. Various Port operations (e.g., container terminal operations, lumber and oil storage, metal recycling) on Piers D, E, and T are located south of the existing bridge. The port and industrial property is developed with light blue metal shed buildings, gray cranes and oil storage tanks, and burgundy cargo containers that tend to dominate the skylines. Other less-predominant features include landscaping and trees that are sparsely planted throughout the Port. The Gerald Desmond Bridge approach structure and the main-span metal truss are painted a dull, light blue color.

The cranes, shipping containers, and large metal storage sheds tend to dominate the Port's skyline, and they are generally between 50 ft and 100 ft (15 m and 30 m) high. They tend to tower above their surrounding environment and overshadow open space and other smaller features (e.g., port vehicles and smaller building structures). Immediately north of the Gerald Desmond Bridge on the WB approach are the LBGS (NRG Energy, Inc.), the SCE high-voltage transmission lines that cross the Cerritos Channel, and the Pacific Pipeline System, LLC, tank farm.

The LBGS site consists of a rectangular-shaped building with four large circular smoke stacks above the building that stand approximately 150 ft (45 m) high and transmission towers that cross the Cerritos Channel. This power plant, along with the transmission towers, was formerly operated by SCE, and they were determined to be eligible for listing in the NRHP (see Section 2.1.8 [Cultural Resources]). The transmission towers emanating from the old power plant are approximately 200 ft (61 m) high, and the vertical clearance afforded by the transmission lines is currently 153 ft (46.6 m) above the channel, which is 3 ft (1-m) less than the existing Gerald Desmond Bridge clearance of 156 ft (47.5 m). The Pacific Pipeline System, LLC, property is located to the west of the LBGS, and it has two large oil storage tanks adjacent to the Gerald Desmond Bridge that are approximately 40 ft (12 m) high. There are four smaller oil storage tanks that are behind these large ones; however, they are not visible from the bridge because the two large oil storage tanks tower over the smaller ones.

In summary, the large-scale industrial development that surrounds the proposed project is typical of development within the Port. The project site is mostly paved and barren, as there is no vegetation located on or around the bridge approach structure and main-span areas.

Regional Project Visual Setting

The proposed project is located in a heavily urbanized portion of southern California. The immediate vicinity of the project is characterized by Port-related industrial uses. The topography of the study area is flat and has been extensively modified through port and roadway development over the last 80 years. Nearly all of the vegetation are exotic species that have been purposely introduced (i.e., landscaping) or inadvertently introduced (i.e., weedy species).

The Ocean Boulevard roadway corridor, which would contain the proposed replacement bridge, interchange, and roadway improvements, consists of open space and urban landscape units. The Gerald Desmond Bridge spans the Back Channel connecting the Port's Inner Harbor and Middle Harbor. At the east end of the roadway corridor, Ocean Boulevard crosses the Los Angeles River into downtown Long Beach and connects to SR 710 to the north. The west end of the corridor connects to the Terminal Island Freeway (SR 47 and SR 103) to the north. The corridor continues west as SR 47 through the POLA and crosses the Vincent Thomas Bridge to connect to the Harbor Freeway (I-110) in San Pedro. The Outer Harbor and the Pacific Ocean are located to the south.

The port and industrial development that makes up most of the study area is characterized by the large open areas of the port container handling

and bulk handling infrastructure. Larger structures near the corridor are the Tidelands Oil Production Company warehouse (1370 W. Broadway) and the LBGS power plant building north of Ocean Boulevard along the west approach to the Gerald Desmond Bridge. A large area at the western end of the corridor is vacant or partially vacant, and undergoing redevelopment as the Pier S container terminal.

Distant views are provided from the existing Gerald Desmond Bridge and approach roadways. In the WB direction, the Palos Verdes Hills provide a backdrop to POLA, San Pedro, and the Vincent Thomas suspension bridge. The dominant visual elements in the EB direction are the buildings of downtown Long Beach and a backdrop of nearer hills, such as the Puente Hills.

Viewershed and Viewer Sensitivity

The study area for the proposed project visual impact analysis is called the viewshed. The viewshed is all of the areas where physical changes associated with the proposed alternatives can be seen, and it is influenced by the existing topography, vegetation, and structures. Several viewshed areas have been evaluated for the quality of view and number of affected viewers.

The sensitivity of different types of viewers varies depending upon their activity, their awareness of the surrounding environment, and their familiarity with the environment. From most to least sensitive, viewer types are residents, passive recreation, business owners, active recreation, workers, shoppers/business, regular motorists, and occasional motorists. The following describes the comparative sensitivity of the various types of viewers in decreasing order of sensitivity.

Residents

The nearest notable residential area with a view towards the project is north of PCH (SR 1) and west of Santa Fe Avenue. It is 2 or more miles (3 or more kilometers) away from the Gerald Desmond Bridge. Due to the flat topography and the north-south and east-west street grid, other Long Beach residential areas do not have views of the project area. Residential areas on east-facing hillsides of San Pedro and the communities of Palos Verdes Hills have distant (i.e., 4 mi [6.4 km] and more) views towards the Gerald Desmond Bridge.

Passive Recreation

The lower Los Angeles River has park and trail areas in the project vicinity. Transportation corridors and port/industrial facilities block views from the west side of the river toward the project. The Gerald Desmond Bridge, approach roads, and roadway structures at the SR 710/Ocean Boulevard interchange are visible from recreational trails on the east side of the river.

Business Owners

Office towers in downtown Long Beach have views of the Gerald Desmond Bridge, approximately 1.5 mi (2.4 km) to the west. Within the Port, the bridge is generally visible where the views are not blocked by other structures. The bridge dominates the views along Pier D Street near the Back Channel.

Active Recreation

Active recreational opportunities in the project vicinity include public fishing areas along Harbor Scenic Drive and adjacent to Pier J; however, this area faces away from the bridge towards the east and southeast directions. Other active recreational opportunities include fishing piers and pedestrian/ skating paths along the east side of the Los Angeles River; the boat launch at the South Shore Launch Ramp; the Long Beach Downtown Marina, also on the east side of the river; and recreational sailboats in the harbor area located southeast of the bridge. Views toward the bridge from the recreation areas east of the river are limited by the visual barriers of elevated roadways and port structures, and stacked cargo containers. There are clear views toward the bridge and connecting roadways from the active recreation areas along the east side of the river.

Workers

Most work places in the study area that are appropriately oriented have views of the project. This includes wharf workers located within any of the piers at the Port with a view of the bridge. Downtown Long Beach office towers with west-facing windows also have project views.

Shoppers and Businesses

People in the port area on business activity will have views of the Gerald Desmond Bridge. The bridge is also visible from the industrial/ manufacturing area north of the port waterways and south of SR 1.

Regular Motorists

Ocean Boulevard carries approximately 55,000 vpd over the Gerald Desmond Bridge. SR 710, approaching Ocean Boulevard, carries approximately 70,000 vpd, and SR 47 brings approximately 50,000 vpd to and from the west and up to 20,000 vpd to and from the north via the Terminal Island

Freeway. The west and north approaches via SR 47 provide the clearest views of the Gerald Desmond Bridge. The bridge is also clearly visible from the SR 103 section of the Terminal Island Freeway, which is approximately 1-mi (1.6 km) north of the bridge.

Occasional Motorists

Occasional motorists are typically nonresident tourists. The major tourist attraction in the bridge vicinity is the Queen Mary, which is approximately 2 mi (3.2 km) southeast of the Gerald Desmond Bridge. The shops and restaurants on the southwest portion of downtown Long Beach near Ocean Boulevard and Shoreline Drive are also tourist attractions. Most tourists are assumed to approach from the north via SR 710 or from the northeast via the Queensway Bridge from downtown Long Beach. They would have views of the bridge to the west and northwest.

Methodology for Evaluating Visual Quality at Key Viewpoints

This visual impact assessment was prepared consistent with the methodologies set forth in the Port's Methodology for Visual Impact Assessment (POLB, 2005c) and FHWA's Visual Impact Assessment for Highway Projects (FHWA, 1988). The following discussion summarizes the requirements of these methodologies.

Port Methodology

Describe the proposed project site:

- Is the site predominantly flat, sloped in a particular direction, or undulating?
- What is the site elevation range of the project site (above mean sea level)?
- What are the vertical elements already on the project site (cranes, construction equipment, etc.)?
- Describe the way the project site fits into the overall Port environment.

Identify sensitive viewers and the views they experience:

- From which nearby locations can the project site be seen?
  - Create a viewshed map indicating likely locations from which the project site could be visible. Identify the different uses and features (elevated roadways and bridges, parks and open space areas, commercial areas, recreational boating facilities, etc.).
  - On a clear day, take photos toward the project site. On the photos, use arrows to identify the project site location (even if it is obscured by intermediate features), as well as one or two landmarks (bridges, other Port facilities, local features, etc.). On the viewshed map, record the direction that the photo was taken.
- Record the distance between the viewer and the project site, and the direction of the view.
  - Measure the distance in miles or feet as appropriate, and record the direction from the view to the project site (north, south-east, etc.).
- What viewer types can see the project site from each location?
  - Commuters, residents, recreational users, business owners, etc.
- What is the perceived and designated importance of the view and the location from which the view was taken?
  - Viewer expectation is what the viewer anticipates should be in the location, based on the setting. For most Port projects within the confines of the existing developed Port areas, the viewer would anticipate an industrialized setting.
  - Determine whether a feature is designated as important. Analyze whether the proposed project would be visible from that location and, if so, identify the view as a preliminary key view to carry forward for analysis.
- What are the dominant elements of each view?
  - Describe each location and the existing view from that location in terms of the features in the foreground (within 0.5-mi [0.8-km]), middle ground (0.5- to 1-mi [0.8- to 1.6 km]) and background (more than 1-mi [1.6 km]).
  - Describe each existing view in terms of the following, as applicable:
    - **Line** – the dominant lines in terms of vertical, horizontal, diagonal, etc., and the sharpness or softness of corners.
    - **Color** – the value (lightness or darkness), degree of reflectivity (shiny or dull) and hue (red, green, yellow, etc.) of the color.

- **Form** – the visual mass or bulk (square, cylindrical). Describe the dominant shape of features viewed from the key view.
- **Texture** – describe the surface coarseness or smoothness.

— Describe the relationship between the elements within each existing view.

- **Dominance:** Which element do you notice first?
- **Scale:** Which elements are larger or smaller?
- **Diversity:** Are the elements in the view similar to each other or different?
- **Continuity:** Do the dominant elements continue throughout the scene, or are they scattered or irregularly placed?

- For how long would each existing view be experienced?
  - For passing motorists, if the view is oblique and would require the motorist to turn their head more than 45 degrees in either direction, the view would be fleeting or not readily apparent. By comparison, a residential view would be a more constant and enduring image.
- What would be visible at night?
  - Nighttime site visits to a selection of the key observation points may assist in determining the features that can be seen from a given area.

FHWA Methodology

The viewshed is divided into landscape units, which are areas of distinct, but not necessarily homogenous, visual character. The primary landscape units are the Urban Landscape Unit and the Open Landscape Unit. These are described in further detail below under Viewshed and Key Viewpoints. Typical views, called key viewpoints, are selected from each type of these landscape units to represent different types of views or landscape units (see Exhibit 2.1.7-1). The motorists' view is represented by an additional viewpoint called the "View from the Freeway."

The existing visual quality of the viewpoints was judged by three criteria: vividness, intactness, and unity:

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

Intactness is the visual integrity of the visual environment and its freedom from encroaching elements.

Unity is the visual coherence and compositional harmony of the landscape when considered as a whole.

Urban Landscape Unit

This landscape unit is characterized by buildings of generally two types: multi-story office or apartment buildings; and very large, one- to two-story buildings such as offices, warehouses, or factories. Large areas of open space, consisting of landscaping, undeveloped land, or more commonly, parking lots, often separate the buildings. Despite the landscaping, these areas are dominated by hard surfaces, including the buildings themselves and the surrounding paved areas. Views within the Urban Landscape Unit are often extensive, especially from the upper floors of tall buildings.

An assessment was made to determine if the Gerald Desmond Bridge is visible from the San Pedro area. Various potential viewpoints along Harbor Boulevard (i.e., Harbor Boulevard to the Vincent Thomas Bridge on-ramp) and Beacon Street (i.e., Beacon Street to Palos Verdes) were surveyed to determine if the Gerald Desmond Bridge was visible from these viewpoints. Harbor Boulevard was chosen due to its close proximity to the Los Angeles Harbor, and Beacon Street was chosen due to its higher elevation and better vantage point of the Los Angeles Harbor. In addition, a survey was conducted on the 10th floor of the Sheraton Los Angeles Harbor Hotel located between 6th Street and Palos Verdes to determine if the Gerald Desmond Bridge is visible from this viewpoint. The surveys concluded that the Gerald Desmond Bridge was not visible anywhere within these locations. The gantry cranes, cargo ships, and oil storage tanks located within the POLA and the Vincent Thomas Bridge in the foreground obstructed any potential views of the Gerald Desmond Bridge.

The only bridge structure that was visible from this area, other than the Vincent Thomas Bridge, was the vertical abutments of the Schuyler Heim Bridge, which is located northeast of the Vincent Thomas Bridge.

Urban Landscape Unit – Viewpoint 1: Viewpoint 1 (Exhibit 2.1.7-2) is the Urban Landscape Unit

viewpoint from the Port Administration Building (925 Harbor Plaza), which is located approximately 1-mi (1.6 km) southeast of the Gerald Desmond Bridge. Office buildings on the western edge of downtown Long Beach are visible from this viewpoint. The foreground of this view is dominated by paved-access roadways, containers, trailer storage and staging areas, and administrative buildings. The middle ground is dominated by the California United Terminals at Pier E and gray tanks. The Gerald Desmond Bridge is in the background of this view, where other large port/industrial structures – in particular, the cargo container gantry cranes – compete for the viewer's attention. Development is located adjacent to the piers and roads. The buildings and cargo containers are mostly rectangular shaped and appear to be continuous in the foreground and background, which adds to the horizontal line of the view. Located in the background are tall cranes, transmission towers, refineries, and the existing Gerald Desmond Bridge, which are all of various shapes and heights.

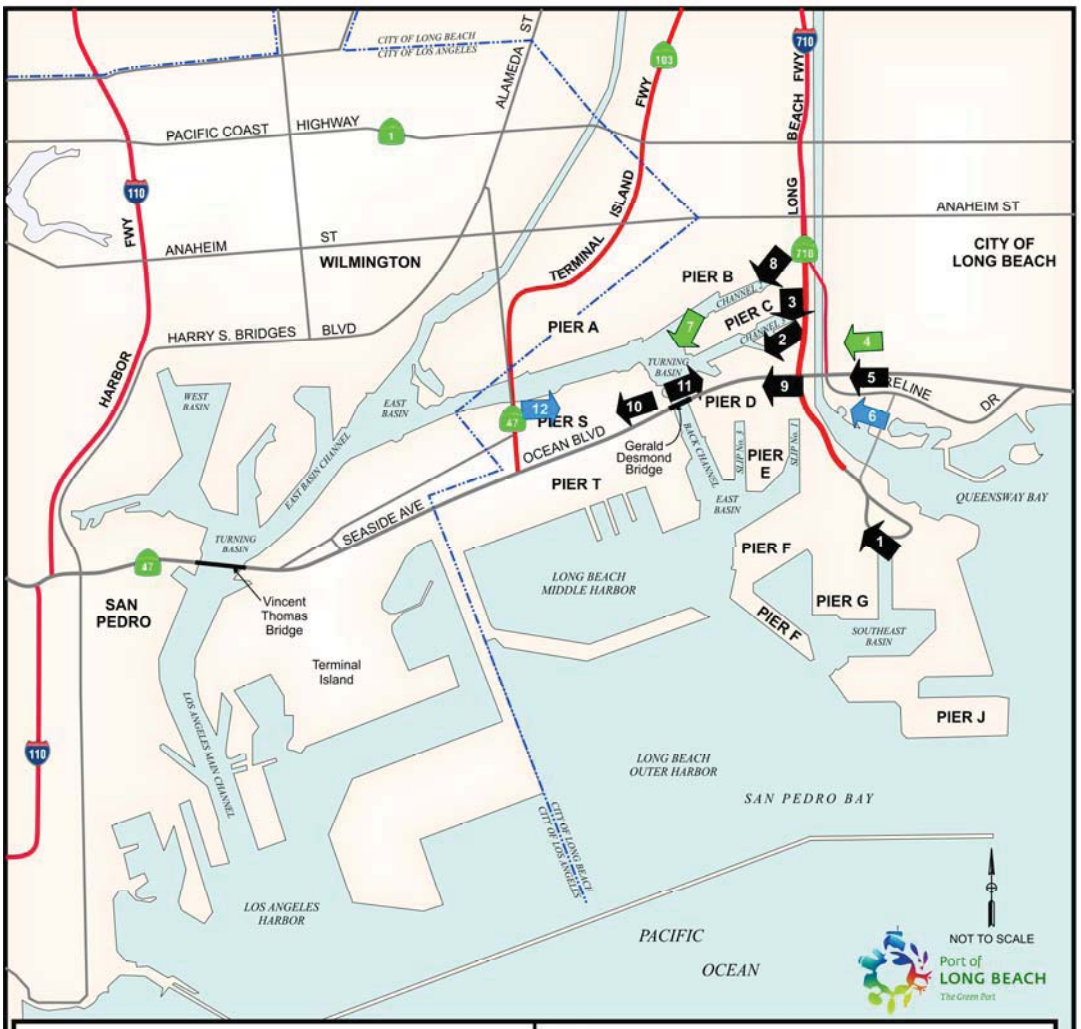
The dominant features in the background present a sense of continuity with their vertical height. Prevalent colors, such as the light blue metal shed building (Coke Shed) to the left (northwest), the gray paved-access roads and cranes in the background view, and the burgundy cargo containers, tend to dominate the skylines from this viewpoint. Because the photo was taken at a higher elevation from the Port's Administration Building, the features tend to appear relatively smooth in texture, particularly the light blue roof of the metal shed building west of the Port's Administration Building. Generally, the viewpoint does not change from this perspective because the viewers are looking at the bridge from a stationary location. The vividness is rated as moderate, as the gantry cranes and cargo containers from this viewpoint are common features. Its intactness and unity are rated as low, with the presence of scattered Port-related uses, including roadways, large oil storage tanks, and cargo containers.

Urban Landscape Unit – Viewpoint 2: Viewpoint 2 (Exhibit 2.1.7-3) is the view looking west along Pier D Street from in front of the G-P Gypsum Corporation offices. The bridge approach roadway is approximately 650 ft (198 m) southwest of this viewpoint. The viewers from this location tend to be office workers, motorists, and the Port's maintenance workers.

The foreground view is dominated by G-P Gypsum Corporation buildings that are representative of the scale of one- and two-story buildings that are interspersed along this street, which is one of the older areas of the Port. The Gerald Desmond Bridge main span is in the middle ground view. The main span is approximately 0.5-mi (0.8-km) away from the G-P Gypsum Corporation offices. The background view consists of power poles adjacent to the Gerald Desmond Bridge and its north bridge span approach. The dominant sight lines from this viewpoint tend to be vertical power line poles along Pier D Street. The semi-glossy yellow G-P Gypsum Corporation office buildings, which are located northeast of the bridge, appear brighter than the other elements. Other than the landscaping consisting of trees and groundcover that are adjacent to Pier D Street on the fill slope to the left of the picture (i.e., southwest), the predominant shape of the features from this view are vertical transmission lines. The office buildings, parking lot, and road in the foreground appear to have a smooth texture. Viewers looking at the elements from a moving vehicle on Pier D Street would experience a difference in the dominance and scale of the features, as they are either moving towards or away from the Gerald Desmond Bridge, whereas the office and Port's maintenance workers would not experience a change in the perspective because they are looking at the bridge from a stationary location. The vividness is rated as moderate due to the presence of the vertical electrical lines and the elevated landscape fill slope from this viewpoint; however, the landscaping of the fill slope along the south edge of the street adds a degree of unity. Its intactness and unity are rated as low, with the Pier D Street roadway separating the features from this view, which consists of the bridge to the south and additional electrical lines adjacent to the roadway to the north.

Urban Landscape Unit – Viewpoint 3: Viewpoint 3 (Exhibit 2.1.7-4) is a view looking south on Pico Avenue north of the Pier D Street intersection. The viewer types from this location are generally truckers, motorists, and workers of the businesses in this area with a south-facing view.

The foreground view consists of the SR 710 SB to Ocean Boulevard ramp, Port Petroleum Company, AERA Energy Tank, and trees adjacent to the east side of Pico Avenue, which are visible on the left side (i.e., southeast) of the picture. The SR 710 ramp has an approximate vertical height of 18 ft (5.4 m) above Pico Avenue, making it the dominant element in the foreground. The ramp crosses Pico Avenue approximately 900 ft (274 m)



View 1 (2.1.7-2): View Northwest from Port Administration Building

View 2 (2.1.7-3): View to the West on Pier D Street

View 3 (2.1.7-4): View to the South on Pico Avenue North of Pier D Street

View 4 (2.1.7-5): View to the West downtown at the Long Beach Hilton
View 4a (2.1.7-18): Day Simulation of Proposed Project
View 4b (2.1.7-19): Night Time Simulation of Proposed Project

View 5 (2.1.7-6): View to the Northwest from Golden Shore Marine Reserve

View 6 (2.1.7-7): Existing View to the Northwest from Golden Shore Marine Reserve
View 6a (2.1.7-2): Day Simulation of Proposed Project

View 7 (2.1.7-8): Existing View to the South from Pier C
View 7a (2.1.7-16): Day Simulation of Proposed Project
View 7b (2.1.7-17): Night Time Simulation of Proposed Project

View 8 (2.1.7-9): View to the Southwest from Route 710 at Pier C Street

View 9 (2.1.7-10): View to the West on Pico Avenue On-Ramp to Ocean Boulevard

View 10 (2.1.7-11): View to the West from Existing Gerald Desmond Bridge

View 11 (2.1.7-12): View to the East from Existing Gerald Desmond Bridge

View 12 (2.1.7-13): Existing View to the East from SR-47 North of Ocean Boulevard
View 12a (2.1.7-15): Day Simulation of Proposed Project

LEGEND

- Existing View
- Existing View and Daytime Simulation
- Existing View, Day Simulation and Night Simulation

EXHIBIT 2.1.7-1

Key Viewpoint Locations in the Vicinity of the Gerald Desmond Bridge Replacement Project

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Exhibit 2.1.7-2
Viewpoint 1 – View to the Northwest from the Port Administration Building

Exhibit 2.1.7-3
Viewpoint 2 – View to the West on Pier D Street

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Exhibit 2.1.7-4
Viewpoint 3 – View to the South on Pico Avenue North of Pier D Street

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beyond the intersection. The middle ground view consists of the Gerald Desmond Bridge, which is visible on the far right (i.e., southwest). Other than the gantry cranes, the background views are not generally visible because the surrounding foreground features, such as the SR 710 ramp, Port Petroleum Company building, trees, and truck scale, dominate the view from this location. The dominant sight lines from this viewpoint tend to be horizontal along the SR 710 ramp and the Pico Avenue roadway. The transmission lines form a vertical mass on the east and west sides of this view. This viewpoint appears to be mostly light brown and gray, as the unpaved dirt parcels adjacent to the road and at the truck scale are the dominating features in the foreground. Because the paved road (i.e., Pico Avenue) and adjacent dirt parcels are in the foreground, the texture appears to be relatively smooth. The passing motorists or truckers driving toward or away from Pier D Street on Pico Avenue would experience a change in the dominance, scale, and diversity of the view because they are in a moving vehicle and would likely have to turn their head more than 45 degrees in either direction, which would cause the view to be oblique. With the exception of the moving vehicles on Pico Avenue and the SR 710 ramp, viewers in this area with a south-facing view would not experience a change in the features. This viewpoint is rated low for vividness, intactness, and unity, as the Pico Avenue and Pier D Street roadways and the large vacant shoulder area located to the northwest corner of Pico Avenue and Pier D Street tend to be the dominating horizontal features of this view.

Urban Landscape Unit – Viewpoint 4: Viewpoint 4 (Exhibit 2.1.7-5) is a view looking to the west from downtown at the Long Beach Hilton, approximately 1-mi (1.6 km) east of the Gerald Desmond Bridge. The Long Beach Hilton is located at the northeast quadrant of Ocean Boulevard and Shoreline Drive. This area of downtown Long Beach generally has high-rise office towers. The viewers from this area consist of office workers, hotel guests, and tourists with a west-facing view.

The foreground view consists of the Ocean Boulevard and Shoreline Drive intersection, which is visible in the center of the picture. The Ocean Boulevard on-ramp to SR 710, via the Gerald Desmond Bridge, is visible to the center, approximately 0.25-mi (0.4-km) from this foreground view. Also prevalent in the foreground are mature trees that provide canopy to the sides of the adjacent office buildings and the vertical street light poles on Ocean Boulevard and Shoreline Drive. These trees shield a full view of the bridge. The middle ground and background features from this viewpoint consist of the Ocean Boulevard WB ramp to the Gerald Desmond Bridge and the main-span approach of the bridge; however, viewers generally see the more-dominating gray paved roads, the green canopy trees, and patches of grass adjacent to the roads that are in the foreground. The paved roads and massive buildings give them a relatively smooth texture, while the canopy of the mature trees adds a slightly more coarse texture. The passing motorists driving towards or away from Ocean Boulevard would experience a change in the dominance, scale, and diversity of the view because they are in a moving vehicle and would likely have to turn their head more than 45 degrees in either direction, which would cause the view to be oblique; however, hotel guests, tourists, and office workers with a west-facing view would have a more constant and enduring image of the bridge and the surrounding elements. This viewpoint is rated low for vividness, intactness, and unity, as the Ocean Boulevard and Shoreline Drive roadways and the trees in the foreground tend to be the dominating features of this view. These dominating features are scattered throughout this view; however, the National Bank office building located southwest of this view adds a degree of unity.

Open Landscape Unit

The Open Landscape Unit includes the Los Angeles River, the Back Channel, and the public open space along the Los Angeles River on the east side of the project study area. The Gerald Desmond Bridge crosses over the Back Channel area, which also includes Pier C northeast of the project site. The open space area includes City of Long Beach public parks, aquarium, and marina. It is characterized by large areas with limited amounts of hardscape or buildings. Viewpoints 5 and 6 represent the key viewpoint for the Open Landscape Unit that is along the Los Angeles River at the Golden Shore Marine Reserve (Exhibits 2.1.7-6 and 2.1.7-7). This viewpoint is typical of the view from open space areas along the east side of the river that are accessible to the public, located approximately 1-mi (1.6 km) away from the Gerald Desmond Bridge.

Open Landscape Units – Viewpoints 5 and 6: Viewpoints 5 and 6 (Exhibits 2.1.7-6 and 2.1.7-7) are views to the northwest and north from Golden Shore Marine Reserve, respectively. This area is approximately 1-mi (1.6 km) from the Gerald

Desmond Bridge. The viewers from this location are generally visitors at the Golden Shore Marine Reserve, residents at the Golden Shore RV Resort, and office workers at the California State University and College Headquarters.

The gantry cranes, transmission towers, and other industrial features in the background of the photo are common elements from this viewpoint. With the exception of the arch truss on the main span of the Gerald Desmond Bridge, the other elements from this viewpoint are vertical elements that protrude into the skyline. The immediate vicinity of this area generally has more landscaping than the Port. The dominant elements from these viewpoints are the transmission towers and cranes located towards the north side of Viewpoints 5 and 6 (Exhibits 2.1.7-6 and 2.1.7-7).

The foreground view along the Los Angeles River at the Golden Shore Marine Reserve consists of the river, Harbor Scenic Way Drive, and the California United Terminals at Pier E. The middle ground view consists of the Gerald Desmond Bridge and transmission towers. These viewpoints have more vivid colors compared to the other viewpoints throughout the Port. There are patches of landscaping to the north side of Viewpoint 6 (Exhibit 2.1.7-7) towards the RV Resort and within the Golden Shore Marine Reserve. The berms in the foreground appear as a brown coarse texture and are composed of large boulders. Also prevalent in the foreground are the white RVs parked at the RV Resort to the right of the photo (i.e., northwest). Visitors at the Golden Shore Marine Reserve, residents at the Golden Shore RV Resort, and office workers at the California State University and College Headquarters would have a constant and enduring view of the Gerald Desmond Bridge. These viewpoints rate high for vividness. Its intactness is moderate due to encroachment of the visual elements of the Golden Shore RV Resort (101 Golden Shore Avenue). South of this viewpoint, intactness of views toward the river is high. The unity of these viewpoints is high, with the water shoreline and shoreline trail providing a unifying element. The overall visual quality at the Open Landscape Viewpoint is rated as high.

Water approach views from the south may also be considered as within the Open Landscape Unit. Public roadway access south of the bridge ends in the central portion of Pier J, southwest of the bridge. Views of the bridge from the public roadway are obscured by Port facilities and stacked cargo containers. There are unobscured views of the Gerald Desmond Bridge from the south in the Outer and Inner Harbors.

Open Landscape Unit – Viewpoint 7: Viewpoint 7 (Exhibit 2.1.7-8) is a view looking to the south from Pier C, located northeast of the Gerald Desmond Bridge. This key viewpoint represents the Open Landscape Unit that is on the southeast portion of the Back Channel along Pier C. This viewpoint is typical of the view from the open space areas at Pier C, which are accessible to Port workers. Port workers facing south at Pier C would have a view of the Gerald Desmond Bridge in the foreground.

The foreground view from this location consists of container ships near the Back Channel, the Connolly Pacific Company facilities and cranes at Pier D, the Gerald Desmond Bridge, and the LBGS. The Gerald Desmond Bridge is a dominating feature from this viewpoint, located at approximately 0.25-mi (0.4-km) from the wharf of Pier C to the WB approach of the bridge. The arch truss design of the main span tends to be a dominating feature of the bridge, as most elements in this view are either horizontal or vertical masses. The LBGS, located adjacent to the bridge at the WB direction, is the next most visible element on the right side (northwest) of the picture. The rectangular building, along with the circular smoke stacks, competes for the viewer's attention because they are the most massive objects located in the northwest limits of the Gerald Desmond Bridge from this viewpoint. The middle ground view consists of the transmission towers located to the far right (i.e., northwest of the bridge). These transmission towers appear closer than their actual distance of approximately 1-mi (1.6 km) because they are approximately 200 ft (61 m) high. The transmission towers are the tallest elements from this viewpoint. The background view consists of cranes and containers at Pier T. The elements from this viewpoint tend to blend in with the blue sky and water. The light brown color of the LBGS is the main color that stands out from the physical features of this view. The Port workers looking south from the Pier C wharf would have a constant and enduring image of the new bridge and the surrounding elements. This viewpoint is rated moderate for vividness, intactness, and unity. The close proximity of the Gerald Desmond Bridge structure and the LBGS tends to create added unity and intactness, and these features also create striking and distinctive horizontal and vertical patterns.

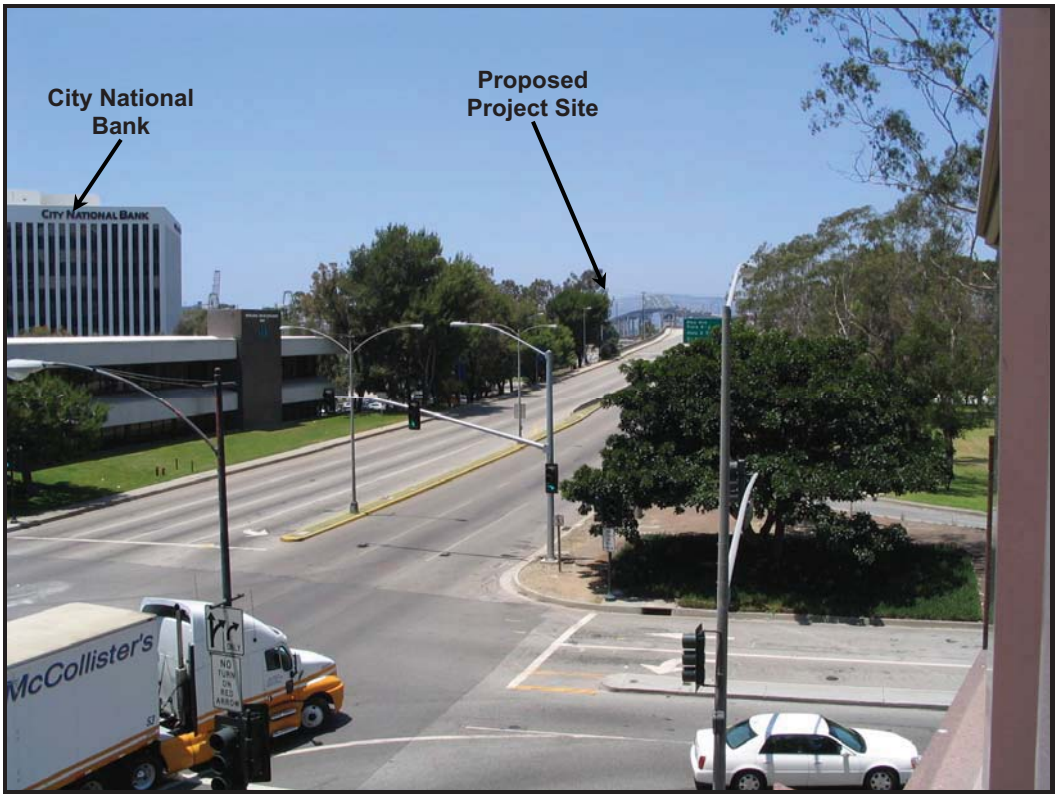

Exhibit 2.1.7-5
Viewpoint 4 – Existing View to the West from Downtown at the Long Beach Hilton Hotel Pool Area

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Exhibit 2.1.7-6
Viewpoint 5 – View to the Northwest from Golden Shore Marine Reserve

Exhibit 2.1.7-7
Viewpoint 6 – Existing View to the Northwest and North
from Golden Shore Marine Reserve

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Exhibit 2.1.7-8
Viewpoint 7 – Existing View to the South from the Pier C Wharf

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Views from Area Freeways and Ocean Boulevard

The greatest number of viewers in the viewshed is the passing motorists and truckers on the freeway system. These viewers generally have a moderate to low sensitivity to the visual environment due to their concentration on driving and their focus on their destinations.

SR 710 from the North and Ocean Boulevard from the East – Viewpoints 8 and 9: Viewpoints 8 and 9 (Exhibits 2.1.7-9 and 2.1.7-10) have no or limited views of the Gerald Desmond Bridge from SB SR 710 south of I-405 due to the screening along the west side of the freeway by vegetation, soundwalls, and industrial development. Views southwest to the bridge begin to open up as the Port is entered south of Anaheim Street. In this area, the bridge is well to the west of the SB freeway. Viewpoint 8 (Exhibit 2.1.7-9), a photograph taken on SB SR 710 at Pier C Street 0.75-mi (1.2 km) from the bridge, is representative of views toward the bridge from the southernmost section of SR 710. As the driver approaches the Ocean Boulevard interchange, roadway structures obstruct bridge views.

The viewer types from this viewpoint are passing motorists and truckers on SR 710. The foreground view consists of Long Beach Sportfishing at Queen's Wharf and the Back Channel. The middle ground view is the Gerald Desmond Bridge. The background view is generally not visible from this vantage point, as it is obstructed by the bridge approaches and the buildings in the foreground. The power lines and the white roof of the large building (Long Beach Sportfishing at Queen's Wharf) in the foreground tend to be dominating elements. The square masses of the industrial and commercial buildings in the foreground tend to be repetitive in this view. The passing motorists and truckers from this viewpoint would have a view that is fleeting and oblique, as they are driving either away from or towards the Gerald Desmond Bridge. Vividness is low. Numerous large roadway structures are coming in and out of the driver's and passenger's fields of view. Intactness and unity are low. There are numerous driving decision points and no dominant unifying features until vehicles enter the immediate vicinity of the Gerald Desmond Bridge approach west of Pico Avenue.

Viewpoint 9 (Exhibit 2.1.7-10) is the view from the Pico Avenue on-ramp to WB Ocean Boulevard. The viewer type is passing motorists and truckers. The viewers' expectation from this viewpoint is that of a road that is ascending towards the main span of the bridge.

The foreground view of the bridge and approaches is unobstructed and directly ahead. The bridge and approaches obstruct the middle ground and background views from this ascending Pico Avenue on-ramp viewpoint. The color from this viewpoint tends to be monochromatic, as the road, bridge approach, main span, surrounding buildings, and the light and transmission poles are different shades of gray. Because this area is approximately 0.5-mi (0.8-km) from the main span truss and at an ascending approach, the main span of the bridge appears to be the most dominating element. The other dominant elements in this view are the road, the vertical light poles and transmission lines, and the other vehicles that are in the line of sight. Other than the arch truss of the main span of the bridge, the visual mass tends to be square as the motorists and truckers approach the buildings and other vehicles to the right. The passing motorists and truckers from this viewpoint would have a view that is fleeting and oblique, as they are driving either away from or towards the Gerald Desmond Bridge. Vividness increases to moderate as the Gerald Desmond Bridge is approached. Intactness also increases to moderate, as there are fewer encroaching visual elements west of Pico Avenue. Unity is low to moderate. Outside of the roadway envelope, there is low cohesion of visual elements.

Gerald Desmond Bridge WB – Viewpoint 10: Viewpoint 10 (Exhibit 2.1.7-11) is representative of the view from the WB lanes of the bridge on the downgrade. Passing motorists and truckers are the viewer types. The massive cranes, oil storage tanks, transmission towers, and the SERRF, which is a rectangular building with a smoke stack to the north and northwest, are dominating elements.

The brown oil storage tanks and unpaved brown dirt parcels are the prevailing color from this viewpoint. From the foreground viewpoint of passenger vehicle occupants, the railing on the outside barrier obscures the view perpendicular to the roadway. The oil storage tanks next to the LBGS property are visible adjacent to the railings on the north side of the bridge. Behind the oil storage tanks are two massive SCE transmission towers that cross the Cerritos Channel. Looking in the direction of travel, the hills of the Palos Verdes Peninsula are visible in the background view, while port and industrial facilities occupy the foreground. A portion of the Vincent Thomas Bridge is visible to the far northwest in the

background of the picture. The open area in the middle ground is the former Pier S oil production site, which the Port has proposed converting into a marine cargo terminal. Also visible in the middle ground is the vertical mass support towers for the Schuyler Heim Bridge. The passing motorists and truckers from this viewpoint would have a view that is fleeting and oblique, as they are driving either away from or towards the Gerald Desmond Bridge and other objects that are within the line of sight. This viewpoint is rated low-moderate for vividness and low for intactness and unity. There are no shoulders on either side of the bridge that would allow motorists to stop and view the surrounding environment, and the viewing angle of the elements described above require the motorist to turn their head; therefore, the ability of the viewer to perceive the striking and distinctive patterns of the features in this viewpoint becomes more difficult. The intactness and unity are low, as the large areas of vacant land and the scattered vertical masses dominate this view.

Gerald Desmond Bridge EB – Viewpoint 11: Viewpoint 11 (Exhibit 2.1.7-12) is a view from the EB Gerald Desmond Bridge approaching the SR 710/ Pico Avenue interchange. Passing motorists and truckers are the viewer type. The rectangular taller buildings of downtown Long Beach are in the background south of the roadway alignment. At the time that this photograph was taken, temporary construction barriers and visual screening of the work area obscured the view alongside the roadway.

The permanent traffic barrier and bridge railing also obscure the view to the side, but to a lesser degree. For the driver, the need to keep attention on traffic conditions, particularly through the interchange, limits the opportunity to observe the view from this location. Further east on the roadway, the interchange ramps to and from SR 710 are the dominant visual elements. The passing motorists and truckers from this viewpoint would have a view that is fleeting and oblique, as they are driving either away from or towards the Gerald Desmond Bridge and other features, such as the office buildings that are within the line of sight. Vividness is low to moderate. Numerous large roadway structures are coming in and out of the motorist's field of view. Although the downtown Long Beach high-rise buildings add unity, the permanent traffic barrier and the fencing to the south of the roadway block the viewer's ability to see the elements. The downtown Long Beach high-rise buildings, which increase in intactness and unity as one drives towards them, generally provide low visual integrity (i.e., intactness) and coherence (i.e., unity) due to the distance from the Gerald Desmond Bridge.

Terminal Island Freeway (SR 47) SB – Viewpoint 12: Viewpoint 12 (Exhibit 2.1.7-13) shows the view to the southwest near the Terminal Island Freeway intersection with Ocean Boulevard. Passing motorists and truckers are the viewers from this viewpoint. The existing Gerald Desmond Bridge and its west approach are visible beyond the Pier S redevelopment area.

The middle ground view consists of the unpaved lot that is the property of the Long Beach Harbor Department and the LBGS in the background. The other distinct elements in this view are the light brown LBGS exhaust stacks to the north of the bridge, SCE transmission lines crossing the Cerritos Channel to the north, power line poles scattered throughout the view, and the large fuel storage tanks north of the power plant. The passing motorists and truckers on SR 47 have a fleeting and oblique view, as they are driving either away from or towards the Gerald Desmond Bridge and other objects that are within the line of sight. This viewpoint is rated low for vividness, intactness, and unity. One would have to turn at an approximate 90-degree angle towards the Gerald Desmond Bridge and other features adjacent to it while driving on SR 47 to see this view, which makes the visual quality of this viewpoint less distinctive and memorable. It is important to note that there are no shoulders or areas where one would be able to stop and have a stationary view of the bridge from this viewpoint.

2.1.7.3 Environmental Consequences

Evaluation Criteria

The proposed project would have a significant impact if it were to result in any of the following:

- Result in a high degree of contrast to sensitive viewers compared to the existing condition of surrounding areas;
- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing character or quality of the site and its surroundings;
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area;
- Obstruct or impair important views from a public roadway or scenic vista;

Exhibit 2.1.7-9
Viewpoint 8 – View to the Southwest from SR 710 at Pier C Street

Exhibit 2.1.7-10
Viewpoint 9 – View to the West on Pico Avenue On-Ramp to Ocean Boulevard

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Exhibit 2.1.7-11
Viewpoint 10 – View to the West from the Gerald Desmond Bridge

Exhibit 2.1.7-12
Viewpoint 11 – View to the East from the Gerald Desmond Bridge

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Exhibit 2.1.7-13
Viewpoint 12 – Existing View to the East from SR 47 North of Ocean Boulevard

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- Result in substantial modification to natural topography through grading or retaining walls, or;
- Result in substantial removal of natural vegetation.

The Port's Methodology for Visual Impact Assessment (POLB, 2005c) and FHWA's Visual Impact Assessment for highway projects (FHWA, 1988) provide guidance to help gauge the potential effects of the project from different viewpoints. For instance, this analysis characterizes the importance of each viewpoint, determining whether it is of frequent use and describing who the users are from each viewpoint, and characterizing whether the existing and the new bridge would be consistent with the surrounding environment.

No Action Alternative

There would be no effects on visual resources under the No Action Alternative.

Construction and Demolition Impacts

North-side Alignment Alternative

During construction and demolition, heavy construction equipment and machinery would be present in the project area. Cranes would be the only equipment that may be visible from the viewpoints previously discussed. All equipment used in construction and demolition of the project would have a minor, temporary effect on views and would be removed upon completion of the project.

South-side Alignment Alternative

Effects during construction and demolition under the South-side Alignment Alternative would be the same as those described under the North-side Alignment Alternative.

Rehabilitation Alternative

During construction, heavy construction equipment and machinery would be present in the project area. Cranes would be the only equipment that may be visible from the viewpoints previously discussed. All equipment used in construction and demolition of the project would have a minor, temporary effect on views and would be removed upon completion of the project.

Operational Impacts

North-side Alignment Alternative

Analysis of Viewshed Effects: A Viewshed Effects Analysis was completed to determine if either the Gerald Desmond Bridge or the replacement bridge would be visible from the San Pedro area. It was concluded that the existing bridge is not visible from any of the viewpoints surveyed. It was also concluded that the replacement bridge would not be visible from the San Pedro Area, because large structures, such as transmission towers, container cranes, and cargo ships, in the foreground of the POLA are above the height of elements that would otherwise be visible in the middle ground and background. Although the two mast towers of the new bridge are higher than the current bridge main span, foreground elements of the POLA would remain at higher elevations.

The North-side Alignment Alternative would alter the existing view of the project area from the City of Long Beach recreation areas along the east bank of the Los Angeles River. This area is located approximately 1-mi (1.6 km) east of the Gerald Desmond Bridge. The higher and longer new bridge structure would be more visible than the existing structure and approach roadways. The new bridge would be viewed against a backdrop of large structures, such as power transmission towers and container cranes. The contemporary design of the bridge, which incorporates the support cables, would be compatible with the existing industrial development.

Viewpoint 6a (Exhibit 2.1.7-14) is a daytime computer simulation of the North-side Alignment Alternative from Viewpoint 6 (Exhibit 2.1.7-7) near the east bank of the Los Angeles River and from the public trail along the river. Viewers from this location are generally visitors at the Golden Shore Marine Reserve, residents at the Golden Shore RV Resort, and office workers at the California State University and College Headquarters.

The new bridge towers would appear similar in height and size to the closer downtown Long Beach buildings near the river. The new bridge would be viewed against the foreground of the river and landscape of the western shore. Compared to the existing view, the replacement bridge would be a stronger visual element against the gantry cranes and power transmission and lighting towers in the port. The bridge towers in the background would increase the vividness of this view. The diversity and continuity of this view would appear similar to the existing bridge, as the two mast towers and the support cables of the new bridge main span would be designed in a manner that forms two contemporary triangular-shaped elements that would be above the height of the horizon. These features would be compatible with the built environment because existing cranes and transmission lines are at similar heights. The proposed bridge would be of a modern architectural design that utilizes colors,

materials, and forms that are compatible with the existing industrial development. Visitors at the Golden Shore Marine Reserve, residents at the Golden Shore RV Resort, and office workers at the California State University and College Headquarters would have a constant and enduring view of the new bridge. There would be a positive effect in this scenic vista. The proposed bridge replacement would not block public views. In fact, the vertical masses of the new bridge would be compatible with the existing vertical cranes in the skyline, thereby enhancing the view. This viewpoint is rated high for vividness. Its intactness is moderate due to encroachment of the visual elements of the Golden Shore RV Resort. South of this viewpoint, intactness of views toward the river is high. The unity of these viewpoints is high, with the shoreline and trail providing a unifying element.

The North-side Alignment Alternative would not damage scenic resources. Vegetation removal would be restricted to landscaping plantings in the Ocean Boulevard/SR 710/Pico Avenue interchange areas. The North-side Alignment Alternative would not substantially degrade the existing visual character or quality of the site and its surroundings from SR 47 north of Ocean Boulevard.

Viewpoint 12a (Exhibit 2.1.7-15) is a daytime computer simulation of the new bridge, west approach, and reconstructed Terminal Island interchange from the Terminal Island Freeway north of its intersection with Ocean Boulevard. Passing motorists and truckers are the viewers from this viewpoint. The existing condition from this viewpoint is shown in Viewpoint 12 (Exhibit 2.1.7-13) and is approximately 1-mi (1.6 km) from the Gerald Desmond Bridge.

From this viewpoint, the new bridge, with higher roadways than the existing bridge, and the two towers, along with the support cable, would be more visually prominent than the existing structure. The Terminal Island interchange would be closer to the Terminal Island Freeway and also more prominent from this viewpoint than the existing structure. Compared to the existing view, the new bridge would be a stronger visual element against the smoke stacks of the LBGS, the transmission towers, and the gantry cranes. The two mast towers and the support cables on the new bridge main span would be designed in a manner that forms two contemporary triangular-shaped elements that are architecturally compatible with the vertical smoke stacks of the LBGS, the vertical transmission towers, and the gantry cranes. The towers and diagonal support cables would provide a sense of diversity to the environment, along with the oil storage tanks. The passing motorists and truckers on SR 47 would have a fleeting and oblique view, as they are driving either away from or towards the new bridge and other features that are within the line of sight; however, the viewer would have a longer view of the more massive triangular-shaped towers of the bridge as they are driving either towards or away from the new bridge. The vividness and intactness of this view would increase, and the contemporary design of the new bridge would be aesthetically compatible with the elements in the surrounding environment. The new bridge would not block any public views.

The North-side Alignment Alternative would alter the existing view of the project area from the Pier C area north of the Gerald Desmond Bridge, which is located approximately 0.5-mi (0.8-km) away. This viewpoint is typical of the view from the open space areas at Pier C, which are accessible to south-facing Port workers. Currently, the existing Gerald Desmond Bridge is a dominating feature when facing south at the Pier C wharf. The current bridge span and main span are visible in the foreground during the day. The existing bridge is viewed against a backdrop of large structures, such as the LBGS, transmission towers, cargo ships, and container cranes. The new bridge would be a more-dominating feature from this viewpoint during the daytime because the new bridge would be higher than the old bridge (approximately 50 ft [15 m] higher), and the two mast triangular-shaped towers, along with the support cabling, would be the main features of the bridge.

Viewpoint 7a (Exhibit 2.1.7-16) is a daytime computer simulation of the North-side Alignment Alternative from Viewpoint 7 (Exhibit 2.1.7-8) at the Pier C wharf north of the Gerald Desmond Bridge. The new bridge towers and support cabling would appear larger in height and size than the old Gerald Desmond Bridge.

The bridge would be viewed against the background of the Port's cranes and cargo containers on Pier T to the southwest. The new bridge would also be viewed against a backdrop of large structures, such as the LBGS, transmission towers, cargo ships, and container cranes. Compared to the existing daytime view, the new bridge would be a stronger visual element against the cargo ships, gantry cranes, and transmission towers in the POLA. Although the new bridge appears more massive from this viewpoint, the Port workers looking south from the

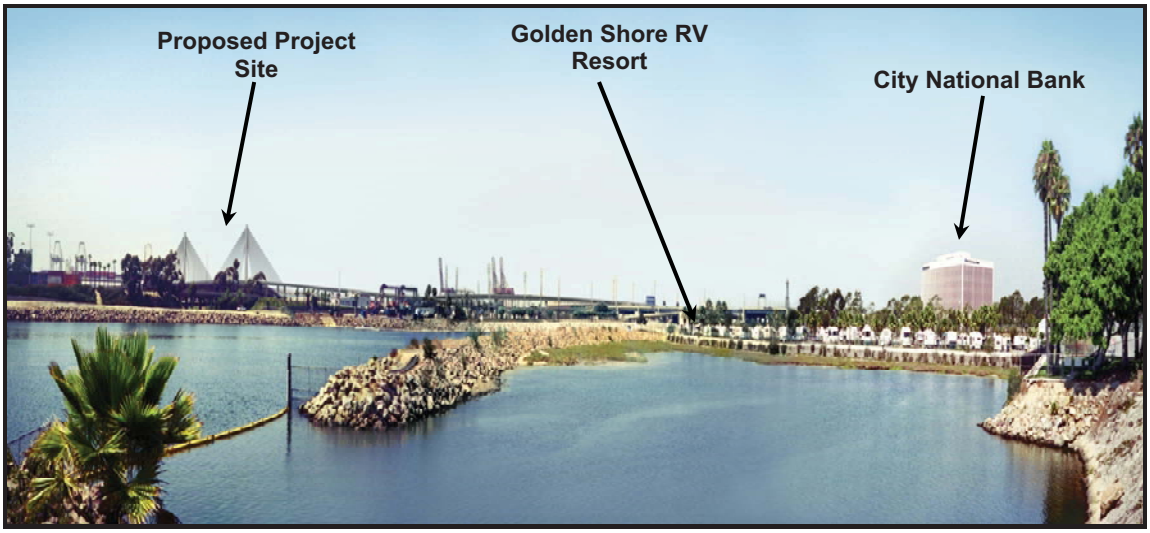

Exhibit 2.1.7-14
Viewpoint 6A – Daytime Simulation of the Proposed Project
(View to Northwest and North from Golden Shore Marine Reserve)

Exhibit 2.1.7-15
Viewpoint 12A– Daytime Simulation of the Proposed Project
(View to the East from SR 47 North of Ocean Boulevard)

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Exhibit 2.1.7-16
Viewpoint 7A – Daytime Simulation of the Proposed Project
(View to the South from the Pier C Wharf)

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Pier C wharf would only experience a slight change when comparing the existing bridge with the new bridge during the day, in terms of the dominance, scale, diversity, and continuity of the view. The vertical towers of the new bridge would appear to be more consistent than the existing arch truss bridge against the vertical smoke stacks and transmission towers in its surroundings. The vertical mast towers of the new bridge are consistent with the surrounding transmission towers and smoke stacks of the LBGS. The bridge towers and supporting cables in the foreground would increase the vividness of this view. There would be a positive effect in this scenic vista. The North-side Alignment Alternative would not damage scenic resources or block views.

Viewpoint 7b (Exhibit 2.1.7-17) is a nighttime computer simulation of the North-side Alignment Alternative from Viewpoint 7 (Exhibit 2.1.7-8) at the Pier C wharf north of the Gerald Desmond Bridge. The new bridge towers and support cabling would appear larger in height and size than the old Gerald Desmond Bridge. This simulation can also be compared to Viewpoint 7a (Exhibit 2.1.7-16), which is a daytime simulation of the same view.

The bridge is viewed against the background of the lighting in Pier T to the southwest. The new bridge would also be viewed against a backdrop of large structures, such as the LBGS, transmission towers, cargo ships, and container cranes. These features would be visible from this viewpoint at night; however, because they do not have their own source of lighting, their visibility tends to fade as one moves further away from the area. Compared to the existing nighttime view, the new bridge would be a stronger visual element against the cargo ships, gantry cranes, and power transmission and lighting sources in the POLA. Although the new bridge appears more massive from this viewpoint, the Port workers looking south from the Pier C wharf would experience a positive change when comparing the existing bridge with the new bridge during the night in terms of the dominance, scale, or diversity of the view. The new bridge would be an aesthetically pleasing architectural structure that would attract the attention of the viewers. The bridge towers in the foreground would increase the vividness of this view. There would be a positive effect in this scenic vista. The North-side Alignment Alternative would not damage scenic resources or block views.

The North-side Alignment Alternative would alter the existing view of the project area from the downtown Long Beach area along Ocean Boulevard east of the Los Angeles River. This area is located approximately 0.5-mi (0.8-km) away from the Gerald Desmond Bridge.

Viewpoint 4a (Exhibit 2.1.7-18) is a daytime computer simulation of the North-side Alignment Alternative from Viewpoint 4 (Exhibit 2.1.7-15) from the Long Beach Hilton, east of the Los Angeles River. The new bridge towers would appear slightly larger in height and size than the existing bridge.

The bridge would be viewed against the foreground of the vertical light poles and tall trees that provide canopies to the adjacent buildings. These trees are the more-dominating features because they are in the foreground. The new bridge would be viewed against a backdrop of the San Pedro hills. The vertical mast towers and support cables of the bridge would increase the vividness of this view. There would be a positive effect in this scenic vista. Compared with the existing view, the new bridge would be a stronger visual element against the elements in the foreground. The two vertical masts of the new Gerald Desmond Bridge towers, along with the support cables, would create continuity with the existing light poles that are in the foreground. The new bridge would be an aesthetically pleasing architectural structure that would attract the attention of the viewers. The passing motorists driving towards or away from Ocean Boulevard would experience a change in the dominance and scale of the view because they would be moving and would likely have to turn their head more than 45 degrees in either direction, which would cause the view to be oblique. In contrast, hotel guests with a west-facing view would have a constant and enduring image of the bridge and the surrounding elements. This daytime viewpoint is rated moderate for vividness, intactness, and unity. The new bridge would not block any public views.

Viewpoint 4b (Exhibit 2.1.7-19) is a nighttime computer simulation of the North-side Alignment Alternative from Viewpoint 4 (Exhibit 2.1.7-15) from the Long Beach Hilton, east of the Los Angeles River. This view can also be compared to Viewpoint 4a (Exhibit 2.1.7-18), which is the daytime version of the same view and simulation. The new bridge towers would appear larger in height and size than the existing bridge.

The bridge is viewed against the foreground of the light poles and tall trees that provide canopies to the adjacent buildings. These trees would obscure a full view of the new bridge. The new bridge would be viewed against a backdrop of scattered lights radiating from the western portion of the

bridge. The bridge's mast towers would increase the vividness of this view. There would a positive effect in this scenic vista. Compared with the existing view, the new bridge would be a slightly stronger visual element against the elements in the foreground; however, the two vertical masts of the new towers, along with the support cables, would blend in with the existing light poles that are in the foreground. The passing motorists driving towards or away from Ocean Boulevard would experience a change in the dominance and scale of the view because they would be moving and would likely have to turn their head more than 45 degrees in either direction, which would cause the view to be oblique; however, hotel guests with a west-facing view would have a more constant and enduring image of the bridge and the surrounding elements. This viewpoint is rated low for vividness, intactness, and unity. The new bridge would not block any public views.

Analysis of Light and Glare Effects: Potential light and glare effects resulting from the proposed project are important visual effects that need to be considered. Light effects are those associated with artificial light sources, either from the elimination of existing sources or the creation of new sources. Light effects can include localized effects from single light sources, such as street lamps. Regional light effects occur from changes in the darkness of areas. Poor lighting, or a lack thereof, can also be a factor that affects motorists' safety when traveling on a roadway. Poor lighting can hamper a motorist's sight distance. Glare effects can result from direct glare from motor vehicle headlights shining into the opposite direction lanes or bridge light poles that shine into light-sensitive areas.

The North-side Alignment Alternative would realign freeway and interchange roadways and roadway lighting. The realigned roadways would not contribute to additional sources of light and glare that are in close proximity to light-sensitive properties. Light-sensitive receptors are residents and tourists who would have a direct view of the bridge. Adjacent properties are transportation ROWs and port and industrial facilities that have their own lighting sources. The North-side Alignment Alternative would not create a new source of light or glare that would adversely affect day or nighttime views in the area.

The proposed project would incorporate a context-sensitive design approach in developing the aesthetic lighting plan for the new bridge. The new bridge would be designed in a manner that uses lighting that focuses inward on the bridge to highlight its modern architectural design. The lighting would focus on the support cables of the mast towers and the mast towers, as well as the approach structure. One goal of these design measures would be to minimize potential light and glare effects to the sensitive receptors located east of the project. As discussed earlier, the Gerald Desmond Bridge is located in an area that is primarily made up of port and industrial uses. Most of the viewers in the immediate vicinity (less than 1-mi [1.6 km]) of the bridge during nightfall consist of Port workers, who are not considered sensitive viewers.

In July 2005, the Ports adopted an OffPeak program managed by PierPASS, Inc. This program shifts truck traffic to the Ports during off-peak hours at night and Saturday to relieve congestion in and around the Ports. With implementation of the OffPeak program, more workers are at the Port during night hours, leading to more lighting in and around the Ports; therefore, it is anticipated that there would be more lighting in and around the Ports during nighttime with implementation of the OffPeak program.

Potential sensitive viewers are located at the western portions of downtown Long Beach near Shoreline Drive and Ocean Boulevard, which consist of tourists and visitors to the nearby shops and restaurants. The view of the new bridge in this area would not be anticipated to change drastically from today's view. The new bridge would be obscured by more immediate features, such as high-rise buildings, light poles, and mature trees in the foreground of the downtown Long Beach area. In addition, there would be analysis to determine if the lighting design would have any potential spillover effects on the surrounding communities.

The process of selecting the type of lights to be incorporated into the design would also strive to enhance the nighttime view of the bridge and minimize glare to light-sensitive communities in the vicinity of the bridge. It can be concluded that the proposed landmark bridge design would provide a new source of visual interest and enhance the overall landscape in comparison to the existing, less prominent and deteriorated structure. There are no adverse effects on visual resources resulting from the proposed project. The proposed project would have a beneficial effect, as the new bridge would be considered a gateway into the Port.

Table 2.1.7-1 is a summary of the effects that the proposed project would have on visual resources in the project area.

Exhibit 2.1.7-17
Viewpoint 7B – Nighttime Simulation of the Proposed Project
(View to the South from the Pier C Wharf)

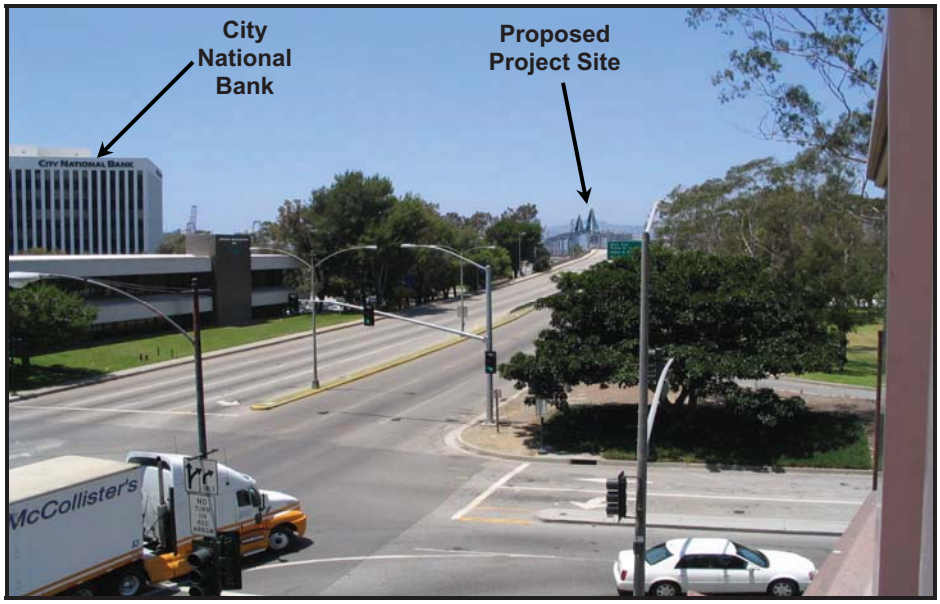

Exhibit 2.1.7-18
Viewpoint 4A – Daytime Simulation of the Proposed Project
(View to the West from Downtown at the Long Beach Hilton)

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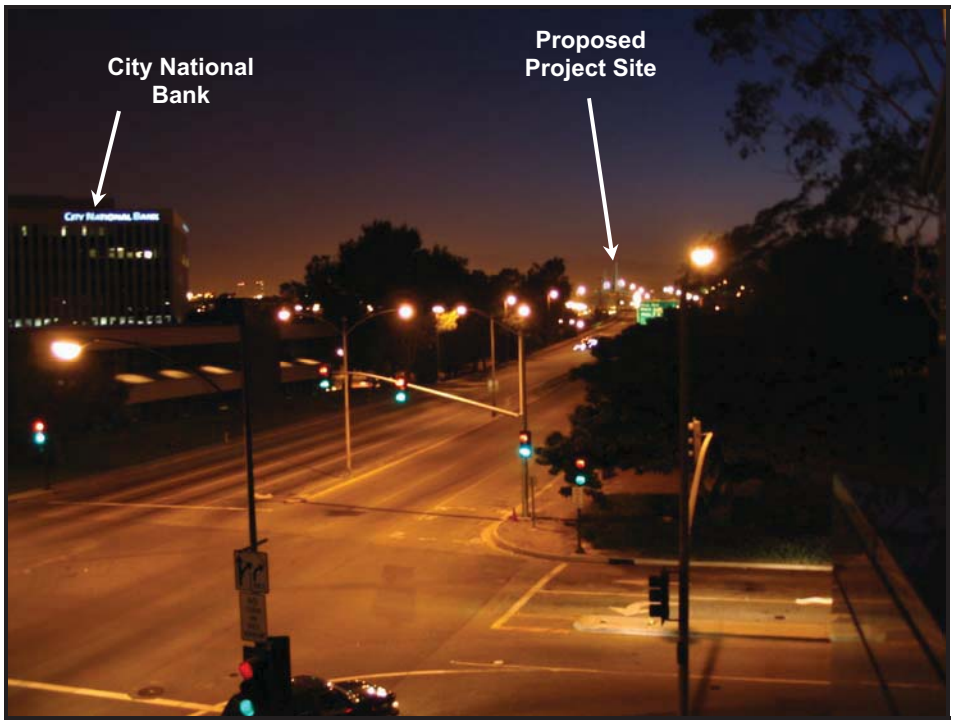

Exhibit 2.1.7-19
Viewpoint 4B – Nighttime Simulation of the Proposed Project
(View to the West from Downtown at the Long Beach Hilton)

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Table 2.1.7-1
Summary of Effects upon Visual Resources – North- and South-side Alignment Alternatives

Viewer types affected
Passing motorists, truckers, office workers, Port workers, workers at local businesses with views of the project site, hotel guests, and tourists.
Degree of visual contrast compared to the existing condition
The new bridge would not provide a drastic contrast compared to the existing condition. The new bridge would be: • a higher and longer structure • more visible than the existing structure and approach roadways • similar in height and size to the closer downtown Long Beach buildings near the river • a stronger visual element against the gantry cranes, and power transmission and lighting towers in the Port • of a modern architectural design that utilizes colors, materials, and forms that are compatible with the existing industrial development
Perceived and designated importance of the view to and from the new bridge
The proposed project would have a beneficial effect; the new bridge would be considered the gateway into the Port.
Effects on important views and scenic vistas
The new bridge would alter the existing view of the project area from the City of Long Beach recreation areas along the east bank of the Los Angeles River. This alteration in view would have a positive effect in this scenic vista. The bridge towers and cables in the background would increase the vividness of this view.
Effects to visual character or quality of site and surroundings
The proposed project is located in a heavily urbanized portion of southern California. The immediate vicinity of the project is characterized by Port-related industrial uses.
Consistency of new bridge with surrounding environment
The new bridge would be similar in height and size to the closer downtown Long Beach buildings near the river. The vertical mass of the new bridge would be compatible with the existing vertical cranes in the skyline, thereby enhancing the view. The two mast towers of the new bridge are higher than the current bridge main span, but they are similar in height and size to the closer downtown Long Beach buildings near the river.
New source of substantial light or glare affecting day or nighttime views?
The realigned roadways would not contribute to additional sources of light and glare that are in close proximity to light-sensitive properties.
Substantial modifications to natural topography?
No.
Substantial removal of natural vegetation?
No.
Effects upon views of predominant structures visible to the east from downtown Long Beach and along ocean bluffs
From this angle, the new bridge would provide a positive effect in this scenic vista. The new bridge would appear slightly larger in height and size than the existing bridge; the two vertical masts of the new bridge towers, along with the support cables, would create continuity with the existing light poles that are in the foreground. The new bridge would be an aesthetically pleasing architectural structure that would attract the attention of the viewers.
Effects upon ground-level views along the boundary of Queensway Bay
The new bridge towers would appear similar in height and size to the closer downtown Long Beach buildings near the river.
Effects upon ground-level views along Harbor Scenic Drive from SB lanes south of Anaheim Street
The new bridge would appear slightly larger in size from this viewpoint.
Consistency with Coastal Zone Requirements of the CCC
Consistent. The PMP, which includes replacement of the Gerald Desmond Bridge, has been approved and certified by the CCC to be consistent with Coastal Zone regulations.

South-side Alignment Alternative

From the viewpoints analyzed, the South-side Alignment Alternative would not appear substantially different from the North-side Alignment Alternative. Several visual simulations were prepared for the North-side Alignment Alternative (as discussed above); the South-side Alignment Alternative would render very similar views.

Viewpoint 6 (Exhibit 2.1.7-7) shows the view from the Golden Shore Marine Reserve, in which the South-side Alignment Alternative appears almost identical to the simulated North-side Alignment Alternative (Viewpoint 6a [Exhibit 2.1.7-14]). When compared with the North-side Alignment, the South-side Alignment Alternative would move the new bridge slightly closer to the viewer. This shift would be almost unnoticeable at this viewing distance.

Viewpoint 12 (Exhibit 2.1.7-13) shows the west approach and reconstructed Terminal Island interchange from the Terminal Island Freeway north of its intersection with Ocean Boulevard. The simulation of the North-side Alignment Alternative (Viewpoint 12a [Exhibit 2.1.7-15]) is very similar to what the South-side Alignment Alternative would look like to viewers from this same viewpoint. The South-side Alignment Alternative would shift the new bridge slightly to the right (south) of where the simulation in Exhibit 2.1.7.15 appears. This shift would place the new bridge further away from the LBGS, but it would not block any new structures.

Viewpoint 7 (Exhibit 2.1.7-8) shows a viewpoint at the Pier C wharf north of the Gerald Desmond Bridge. The North-side Alignment Alternative simulation from this angle (Viewpoint 7a [Exhibit 2.1.7-16]) shows that the new bridge towers and support cabling would appear larger in height and size than the old Gerald Desmond Bridge. The South-side Alignment Alternative would appear the same from this viewpoint. Because this view is of the north side of the bridge, the South-side Alternative would shift the new bridge south, making the new bridge appear slightly shorter then the simulation of the North-side Alignment Alternative from this view. This perceived change in height would probably not be noticeable to viewers from this viewpoint.

Viewpoint 4 (Exhibit 2.1.7-5) is a view from the Long Beach Hilton, east of the Los Angeles River. Viewpoint 4a (Exhibit 2.1.7-18) shows a simulation of the North-side Alignment Alternative. Under this alternative, the new bridge towers would appear slightly larger in height and size than the existing bridge. The South-side Alignment Alternative would have a very similar effect on views from this angle. The towers would appear the same height as they do in Exhibit 2.1.7-18 (simulation of the North-side Alignment Alternative), but the South-side Alignment would shift the bridge slightly left (south) of the simulated bridge pictured in the exhibit. This would be a minor visual difference at this viewing distance, and would most likely not be visible to viewers and not interfere with any public views.

Like the North-side Alignment Alternative, the South-side Alignment Alternative would not damage scenic resources or substantially degrade the existing visual character or quality of the site and its surroundings, and the vividness and intactness of affected views would increase. Similar to the North-side Alignment Alternative, the South-side Alignment Alternative would not create a new source of light or glare that would adversely affect day or nighttime views in the area, and it would enhance the overall visual landscape in comparison to the existing bridge.

Rehabilitation Alternative

The bridge would appear identical to the existing Gerald Desmond Bridge under the Rehabilitation Alternative. The Rehabilitation Alternative would seismically upgrade the existing bridge so that it would meet current safety and seismic standards, but it would not visibly change the bridge structure; therefore, it would have no effect on current views.

No Action Alternative

The No Action Alternative would not affect scenic vistas or damage scenic resources. It would not substantially degrade the existing visual character or quality of the site and its surroundings. Nor would it create a new source of light or glare that would adversely affect day or nighttime views in the area.

2.1.7.4 Avoidance, Minimization and/or Mitigation Measures

No measures required.