Section 2.1

Human Environment

CHAPTER 2
AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

Chapter 2 evaluates potential effects on environmental resources resulting from the proposed construction, demolition, and operation of the Gerald Desmond Bridge Replacement, Rehabilitation, and No Action Alternatives. Presented for each environmental topic analysis are the following subject areas:

- Affected Environment
- Environmental Consequences
- Avoidance, Minimization and/or Mitigation Measures

When the project effects on the environment are found to be potentially adverse, pursuant to NEPA, then avoidance, minimization, and/or mitigation measures are identified. A Minimization/ Mitigation Monitoring Program is provided in Appendix H. Unavoidable adverse effects of the project are discussed if the residual effects after avoidance and minimization would still be considered adverse. Environmental analyses presented in this chapter are primarily based on a series of technical studies prepared for environmental topics of concern for the project, including:

- Air Quality Technical Study[3] (Parsons, 2009)
- Draft Project Study Report (Parsons-HNTB, 2002a)
- Historic Properties Survey Report (Parsons, 2003f)
- Initial Site Assessment (Diaz Yourman & Associates, 2008)
- Natural Environment Study (Parsons, 2009)
- Noise Technical Study (Parsons, 2009)
- Traffic Analysis Report (Iteris, 2009)
- Visual Impact Assessment (Parsons-HNTB, 2008)
- Water Resources (Parsons, 2009)

During the preparation of this revised Draft EIR/EA, several technical studies that were prepared for the June 2004 Draft EIR/EA were updated to reflect changes to the existing environment, addition of the tolling alternative and associated expanded study area, addition of the Rehabilitation Alternative, and the Port's new environmental protocols. The technical studies that were updated consist of Air Quality, Traffic Analysis, Natural Environment Study, Noise, Water Resources, and Visual Impact Assessment.

The above technical studies are incorporated by reference into this EIR/EA document, and they are available for review at the Port office (contact Ms. Stacey Crouch at 562-590-4160) and Parsons office (contact Mr. Jeffery Bingham at 949-233-8912).

As part of the scoping and environmental analysis conducted for the proposed project, the following environmental issues were considered, but no potential for adverse effects was identified. Consequently, there is no further discussion in this document regarding the following issues:

- Wild and Scenic Rivers: There are no wild and scenic rivers within the project study area. No impacts to wild and scenic rivers would result from the proposed project.
- Farmlands/Timber/Agricultural Resources: The proposed project is not located on existing farmland or on land within the immediate vicinity of agricultural operations; therefore, the project would not have the potential to affect any farmlands or other agricultural operations. No impacts to agricultural resources would result from the proposed project.
- Paleontology: The land on which the project would be built roughly coincides with the former shoreline; thus, it would be unlikely to contain fossils. Furthermore, the area is heavily subsided and over the past 100 years has been covered by up to 30 ft (9 m) of imported structural fill and stabilizing materials, and it has been redeveloped several times as the Port has grown and modernized. Accordingly, it is highly unlikely that impacts to paleontological resources would result from the proposed project.

[3] This and all "Parsons" references are referring to Parsons-HNTB joint venture.

2.1 HUMAN ENVIRONMENT

2.1.1 Land Use, Recreation, and Coastal Zone

Within this section, land use effects are evaluated based on consistency with local and regional plans, as well as compatibility with existing and planned development and land uses.

2.1.1.1 Regulatory Setting

City of Long Beach General Plan

Land use within the project study area, as discussed in Chapter 1, is designated by the City of Long Beach General Plan. The Long Beach Harbor area falls within General Plan Land Use District Number 12. This district includes existing freeways, the Port, and the Long Beach Airport. The General Plan indicates that the water and land use designations within the harbor area are separately formulated and adopted by due process known as the Specific Plan of the Long Beach Harbor (also known as the PMP, as amended). The General Plan indicates that the responsibilities for planning within legal boundaries of the harbor lie with the Board of Harbor Commissioners.

Port Master Plan

The PMP has nine designated land uses and four designated water uses consisting of:

- Primary Port facilities
- Hazardous cargo facilities
- Port-related industries and facilities
- Ancillary Port facilities
- Commercial recreational facilities
- Federal use
- Oil and gas production
- Utilities
- Non-Port-related areas
- Anchorage area
- Maneuvering areas
- Navigable corridors
- Recreational/sportfishing

The PMP Land Use Element has six goals for developing policies involving future Port development and expansion. The goals are also shaped by the influences of the California Coastal Act, legislative grants of the Tide and Submerged Lands, City of Long Beach Charter, Municipal Code, and the City of Long Beach General Plan (POLB, 1999). The land use goals noted in this element include:

Goal 1: Consolidate similar and compatible land and water areas.

Goal 2: Encourage maximum use of facilities.

Goal 3: Improve internal circulation involving roadways and rail.

Goal 4: Provide for the safe cargo handling and movement of vessels within the Port.

Goal 5: Develop land for primary Port facilities and Port-related uses.

Goal 6: Protect, maintain, and enhance the overall quality of the coastal development.

The Land Use Element also provides a summary of long-range plans for cargo facility and infrastructure requirements to the year 2020. The long-range plans are informational discussions that would not be considered by the California Coastal Commission (CCC) as a submission for certification (POLB, 1999).

Coastal Zone Management Act

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

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

Uses of land and water within the Ports have been outlined in the PMP (POLB, 1999). The first PMP was prepared to conform with the California Coastal Act of 1976, and it was finalized in June 1978. Thereafter, the PMP has been amended several times. The latest amended PMP was approved by the Board of Harbor Commissioners in 1999.

2.1.1.2 Affected Environment

The Gerald Desmond Bridge is located within the Port in an area zoned Port-related Industrial (IP, see Exhibit 2.1.1-1). The Port owns most of this land; however, there are several relatively small privately owned and operated landholdings located in the Inner Harbor area and northernmost sections of the Port (see Exhibit 2.1.1.-2). The Gerald Desmond Bridge crosses the Back Channel and generally runs east-west dividing Pier D into two separate sections. The Gerald Desmond Bridge encroaches upon approximately 92 acres (37 ha) of three different Planning Districts in the Long Beach Harbor (see Exhibit 2.1.1-3). These include the Northeast Harbor Planning District, the Terminal Island Planning District, and the Middle Harbor Planning District (POLB, 1999).

The Northeast Planning District is the oldest part of the Long Beach Harbor and contains privately owned land – Pier C and a portion of Pier S. Permitted land uses include primary port facilities; port-related industries and facilities that do not require access to berthing facilities or water frontage; hazardous cargo facilities; ancillary port facilities; oil production uses; navigable corridors; utilities; and non-port-related uses.

The Terminal Island Planning District consists of property that was originally occupied by the U.S. Naval Complex. With the closure of the naval facilities in 1997, the Port currently has title to or a lease for most of the former Naval Complex property. Most of this land has been rededicated to be part of the Pier T complex. The Terminal Planning District also includes Pier S. Permitted land uses within the District include primary port facilities; port-related industries and facilities that do not require access to berthing facilities or water frontage; hazardous cargo facilities; ancillary port facilities; oil production uses; navigable corridors; utilities, including the LBGS; and federal uses, such as the Navy Fuel Depot on the Pier T Mole.

The Middle Harbor Planning District is bound on the north by the Gerald Desmond Bridge and Ocean Boulevard. This Planning District includes Piers D, E, and a portion of F. Permitted land uses include primary port facilities; port-related industries and facilities that do not require access to berthing facilities or water frontage; ancillary port facilities; oil production uses; and utilities.

Parks and Recreation Facilities

San Pedro Bay supports recreational uses such as marinas, sportfishing facilities, and other public access areas (Exhibit 2.1.1-4). Most public and commercial recreational opportunities are located by design within the Queensway Bay Planning District. The District acts as a buffer between the higher-industrialized inner port complex and the waterfront recreation activities of the Port and City of Long Beach (POLB, 1999).

Recreational amenities within the area include the Long Beach Marina, Queen Mary, Queensway Bay, Golden Shore RV Resort, public fishing access on the eastern side of Pier J, and Long Beach Sportfishing on Berth 55. None of these recreational facilities and attractions or any parks, recreational hiking, or biking trails are located within the immediate project vicinity.

Recreational boating is the major water-related recreational activity within Long Beach Harbor. The City's three marinas include more than 5,800 slips for boats between 18 and 80 ft (5.5 and 24 m) long, and they have an overall 20.6 percent slip vacancy rate.

Several recreational boating organizations, including yacht clubs, sponsor boating activities within Long Beach Harbor and San Pedro Bay. Private boats provide fishing and scuba diving opportunities year-round throughout San Pedro Bay. Queen's Wharf Sportfishing, located at the terminus of Channel 3, is a major sportfishing landing in the Long Beach area. Several major tour boat companies based in San Pedro Bay operate cruises to Santa Catalina Island and conduct harbor tours. No public boat ramps or dockside facilities are located within the immediate vicinity of the proposed project site or along the Back Channel; however, boats chartered from Long Beach Sportfishing pass under the Gerald Desmond Bridge several times a day.

Section 4(f) Resources: Public park and recreational resources may be eligible for special consideration under Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303. Section 4(f) declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Resource criteria for special consideration under Section 4(f) require that the resource is a public park, recreation, wildlife and waterfowl refuge, or historic site.

No public parks, recreation, or wildlife and waterfowl refuges were identified within the proposed project footprint.

2.1.1.3 Environmental Consequences

Evaluation Criteria

An adverse effect upon land use would occur if the project:

- Introduces an activity that would be inconsistent with existing zoning regulation
- Results in activities conflicting with existing surrounding uses
- Is incompatible with nearby conforming areas, as determined by intensity, degradation of circulation through delay, inhibiting access, or nuisance activities
- Results in uses that jeopardize public safety
- Is inconsistent with the PMP

An adverse effect on recreation would occur if the project would:

- Be in conflict with the land use plan and policy outlined in the PMP and the California Coastal Act of 1976
- Be in conflict with any applicable habitat conservation plan or natural community conservation plan
- Permanently impair or indirectly affect parks or access to and from a park, recreational area, or wildlife/water fowl refuge

No Action Alternative

Under the No Action Alternative, the Gerald Desmond Bridge would continue in use in its existing condition. No construction activities would occur under this alternative, and there would be no changes to the existing land uses, or coastal zone access/resources along the footprint of the Gerald Desmond Bridge or recreational opportunities within the San Pedro Bay. The existing bridge footprint covers approximately 92 acres (37 ha).

Construction and Demolition Impacts

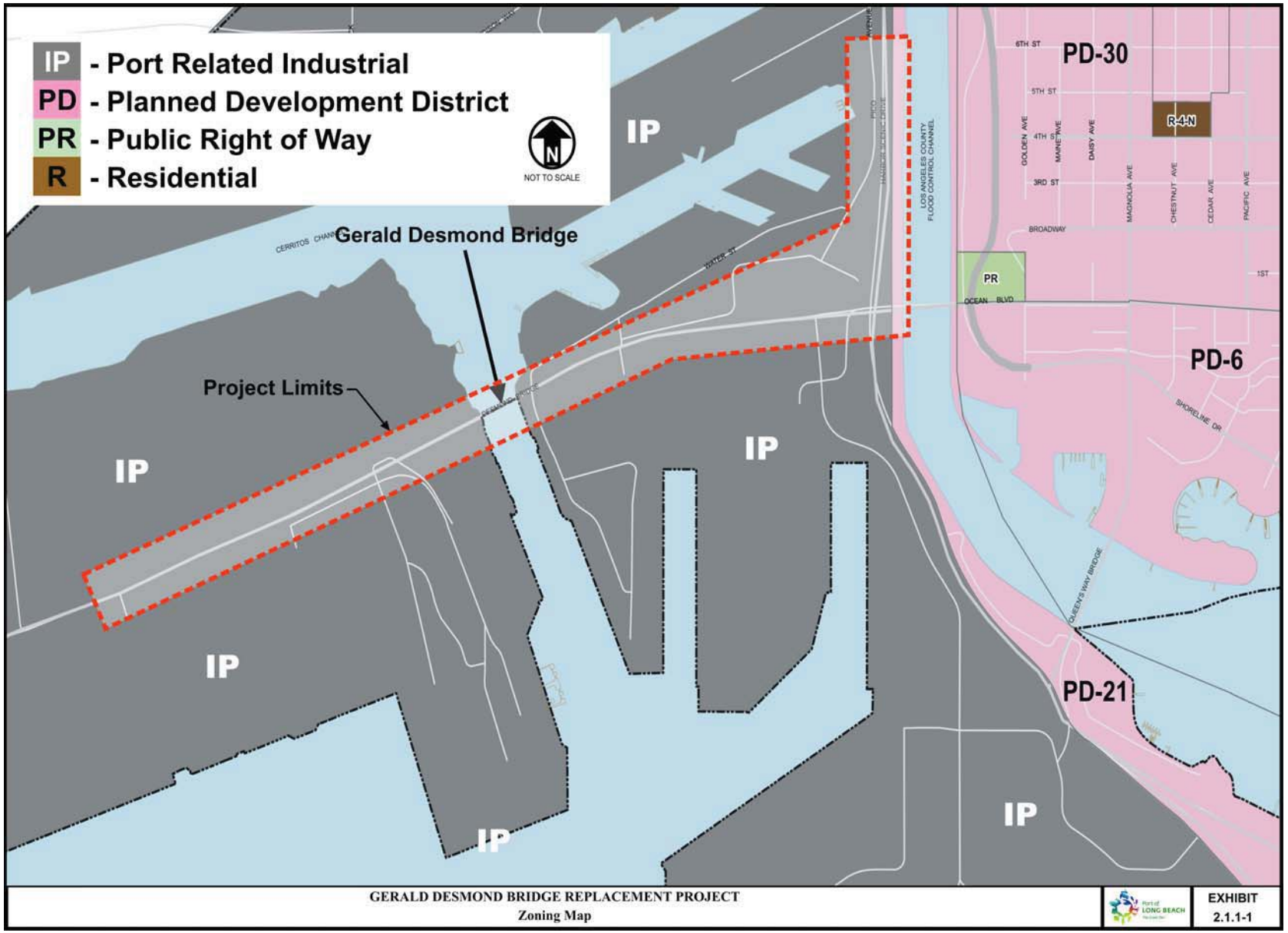
North-side Alignment Alternative

Compatibility with Existing Land Use and Recreation: Impacts associated with construction and demolition activities would be considered temporary, being confined to the construction phase. The proposed project would be constructed, as discussed in Chapter 1, in six phases over a period of approximately 62 months (including demolition of the existing Gerald Desmond Bridge). Construction of the new bridge would take approximately 48 months. Full demolition of the existing bridge would begin upon completion of the new bridge. Demolition of the Gerald Desmond Bridge and structures would take an additional 15 months. The footprint of the proposed bridge and roadways would be approximately 124 acres (50 ha).

The North-side Alignment Alternative would be located within and adjacent to an existing transportation corridor. Excavation, grading, pile-driving, and other activities related to construction of roadway and bridge structures would result in temporary direct and indirect land use effects. Large areas within the construction footprint would be required exclusively for construction and would result in restricted, reduced, or modified land use. Facilities adjacent to the construction footprint would experience site-specific disruptions to land use, primarily related to construction traffic, site access modifications/disruptions, and increases in ambient noise and air pollutants (see Sections 2.2.5 [Air Quality] and 2.2.6 [Noise]). The entire alignment proposed under this alternative would be constructed within an existing industrial area zoned for Port-related industries (see Exhibit 2.1.1-1). Potential effects on facility operations within the project area are discussed in Section 2.1.3.2 (Relocations). The construction/demolition effects on land use would be short-term and/or intermittent and limited to daytime hours. Thus, construction and demolition land use effects would not be considered adverse.

No park or recreation facilities would be used for construction staging or material laydown. The parks and recreation facilities located within 0.5-mi of project area include Cesar Chavez Park, located 0.5-mi (0.8-km) east of the project area, Queen's Wharf Sportfishing, Golden Shore Ramp Relocation Site, Golden Shore RV Resort, and Queen's Landing (see Exhibit 2.1.1-4). Potential construction effects on these areas would be temporary and would not likely affect recreational enjoyment of these areas. Thus, construction and demolition effects on recreational land use would not be considered adverse.

The North-side Alignment Alternative would not result in new or incompatible land uses. The alignment would pass through existing ROWs and industrial areas. No residential neighborhoods are located within the project area. The nearest residential areas are located more than 0.5-mi (0.8-km) from the proposed project area. Residential areas are located to the east of the Los Angles River and to the north of Anaheim Street. Construction and demolition activities would be conducted in accordance with typical measures to minimize effects on adjacent facilities


IP - Port Related Industrial
PD - Planned Development District
PR - Public Right of Way
R - Residential
NOT TO SCALE
Gerald Desmond Bridge
Project Limits
IP
PD-30
R-4-N
PR
PD-6
PD-21
6TH ST
5TH ST
4TH ST
3RD ST
BROADWAY
OCEAN BLVD
1ST
GOLDEN AVE
MAINE AVE
DAISY AVE
MAGNOLIA AVE
CHESTNUT AVE
CEDAR AVE
PACIFIC AVE
SHORELINE DR
LOS ANGELES COUNTY FLOOD CONTROL CHANNEL
GERALD DESMOND BRIDGE REPLACEMENT PROJECT
Zoning Map
EXHIBIT
2.1.1-1

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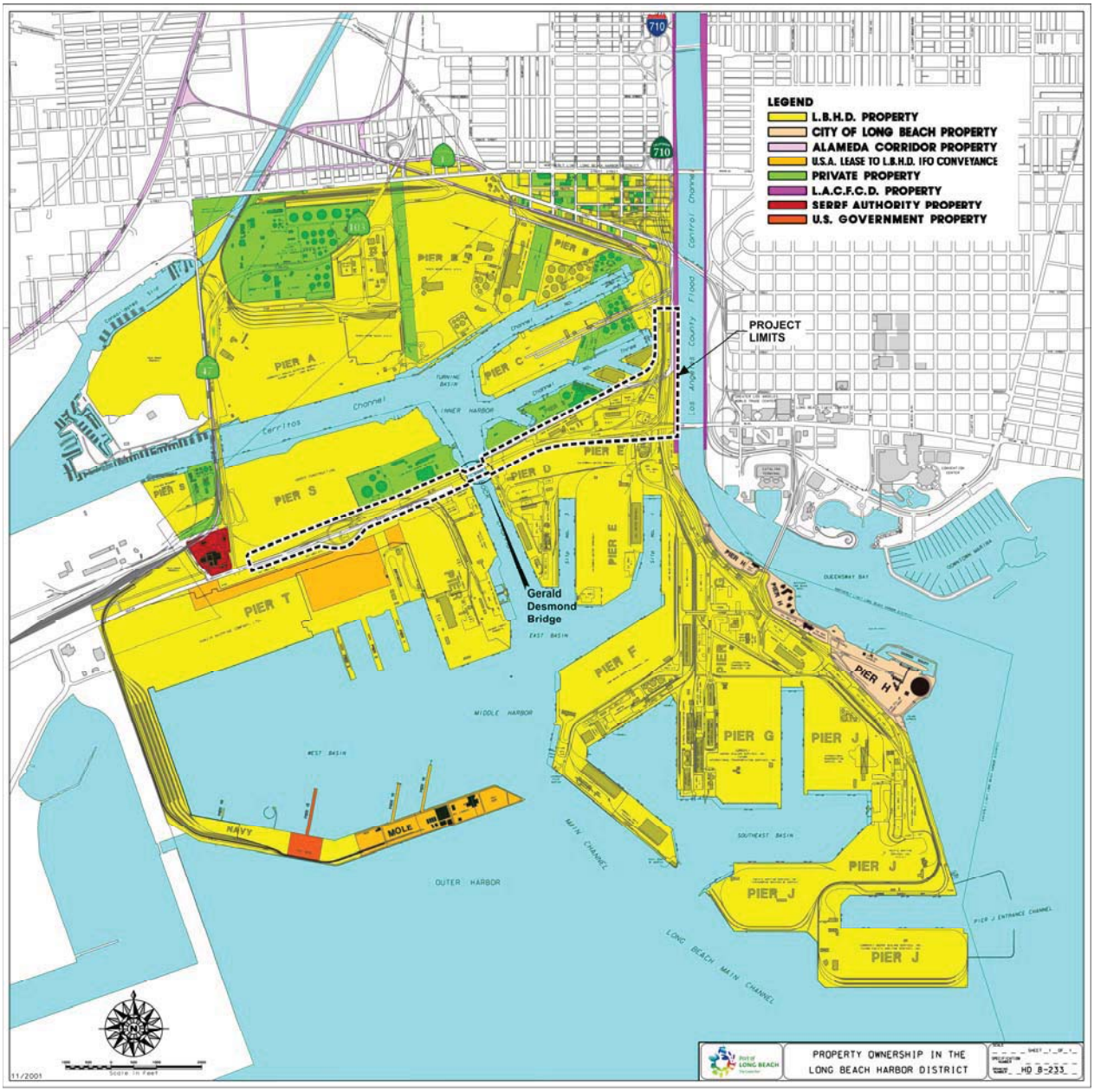

EXHIBIT 2.1.1-2
Property Ownership Map

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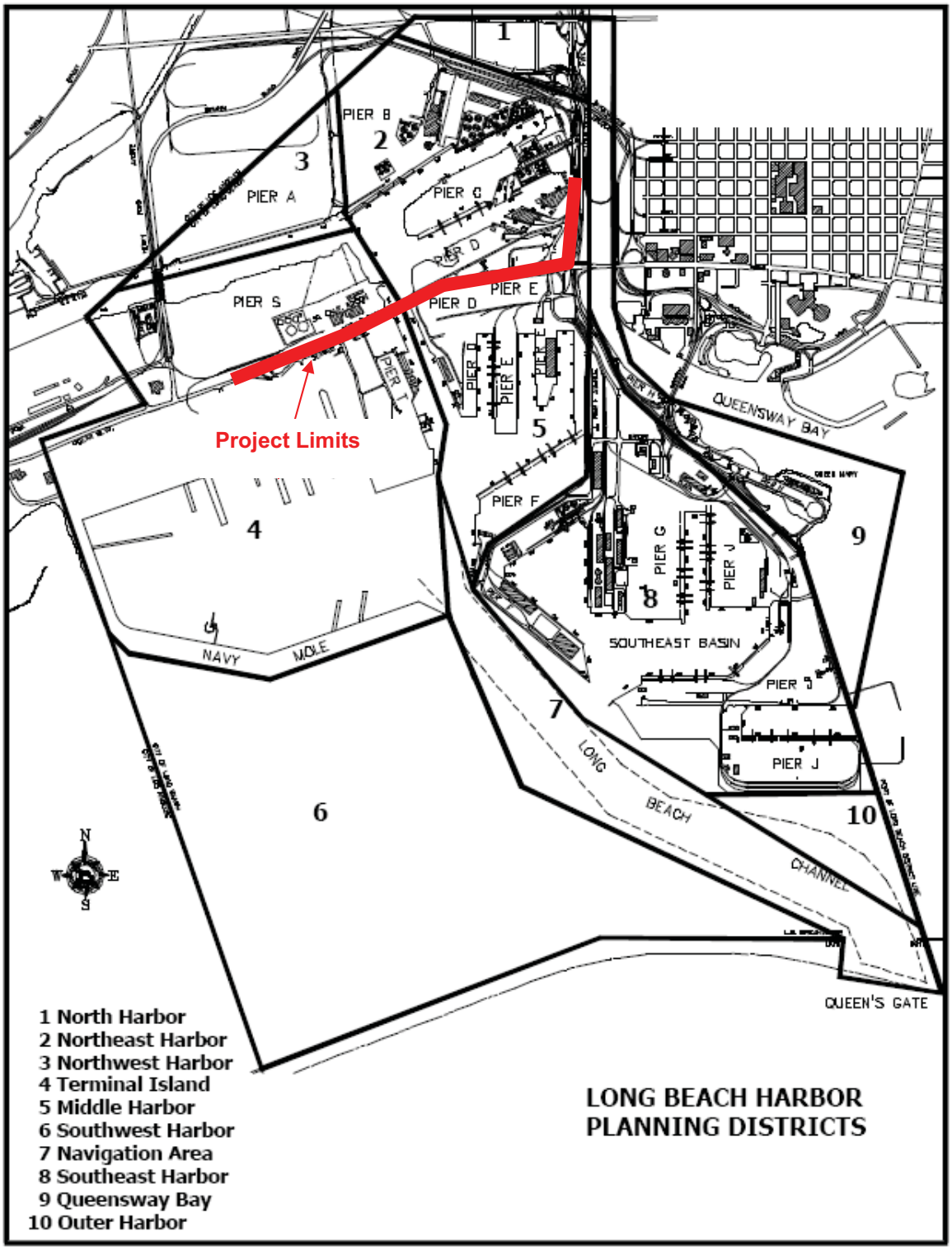

Exhibit 2.1.1-3
Port of Long Beach Harbor Planning Districts

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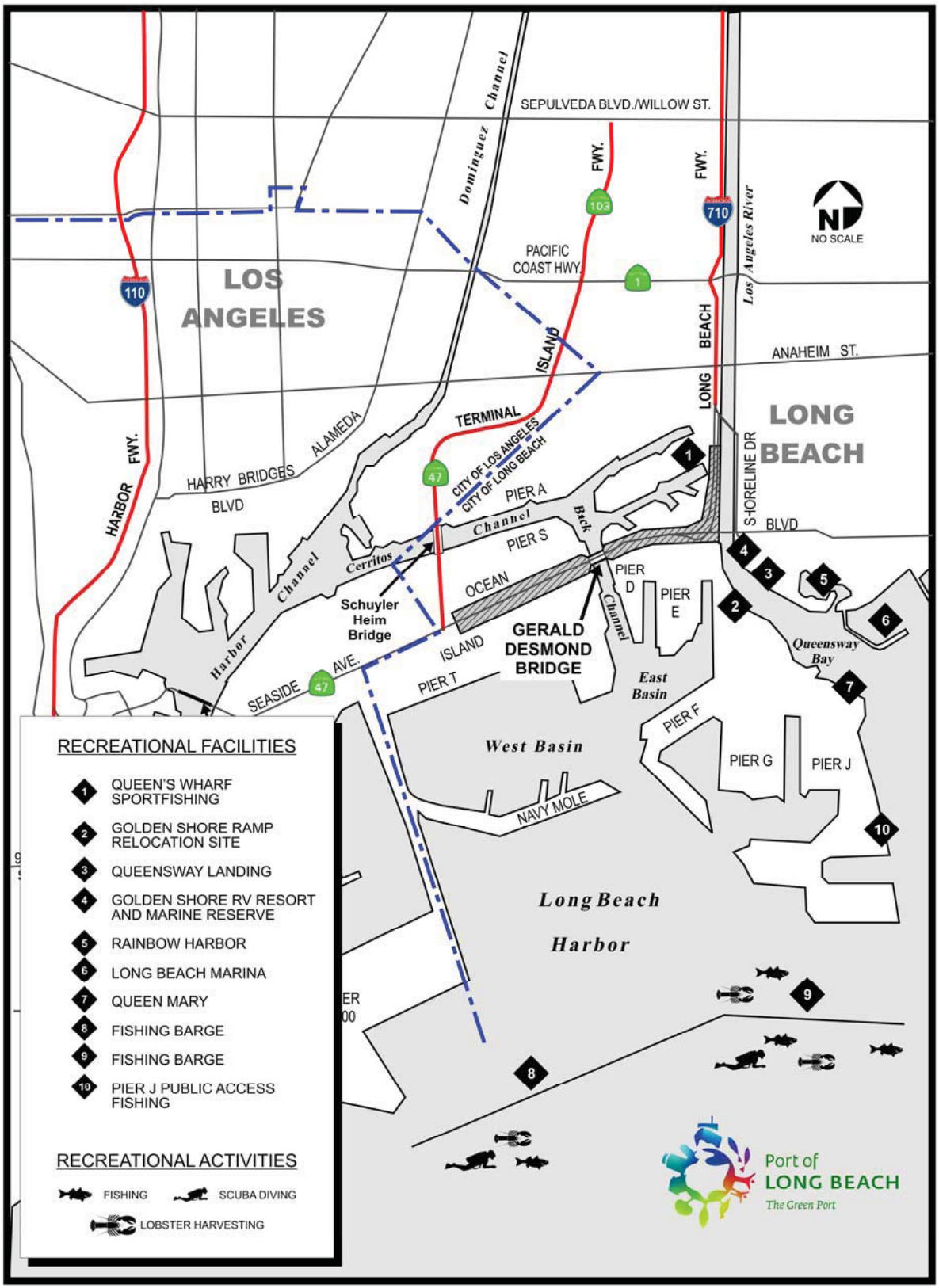

Exhibit 2.1.1-4
Recreational Areas and Facilities
in the Vicinity of the Gerald Desmond Bridge Replacement Project

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and the surrounding communities during the construction and demolition phases; therefore, no adverse effects to land use are expected. Applicable construction and demolition minimization measures are discussed in more detail in Sections 2.1.2 through 2.4.4.

Consistency with Plans and Policies: The North-side Alignment Alternative is consistent with local land use plans, policies, and guidelines. Construction activities associated with this alternative would not materially conflict with any plans, policies, or guidelines.

Coastal Zone: Construction of the North-side Alignment Alternative would not prevent public or commercial access to Terminal Island. Traffic would be maintained on the existing bridge during construction and then would be transferred to the new bridge during demolition of the Gerald Desmond Bridge. Demolition of the existing bridge would occur after opening of the new bridge, allowing Ocean Boulevard to remain open to through traffic at all times. Therefore, no limitation on access to recreational resources within the harbor area would result; however, some travelers would experience periodic traffic slowdowns on major roadways within the project area due to construction material hauling and heavy equipment transportation. Potential traffic impacts and avoidance and minimization measures are discussed in Sections 2.1.5 (Traffic and Circulation) and 2.2.4 (Public Health and Safety).

Recreational users and businesses would be notified in advance of construction and demolition activities over the Back Channel. Delays or restrictions occurring during construction and demolition would be temporary and would not adversely affect recreational traffic or access within the Back Channel or Port. Demolition and construction effects of this alternative would have no effect on coastal zone public access or resources.

Additionally, demolition of the Gerald Desmond Bridge would eliminate the existing pedestrian sidewalk, and the proposed bridge would not be designed to accommodate pedestrians. Removal of pedestrian access at this location would have minimal effects on access to Terminal Island. Removal of pedestrian access is discussed in detail in Section 2.1.5 (Traffic and Circulation).

South-side Alignment Alternative

The South-side Alignment is located on the south-side of the Gerald Desmond Bridge. The footprint of the proposed bridge and roadways would be approximately 117 acres (47 ha).

Although this alternative would have different effects than the North-side Alignment Alternative on the operations of individual facilities within the Port, the construction and demolition effects on land use within the project would be very similar. The South-side Alignment Alternative would not adversely affect land use planning compatibility/ consistency or recreation/coastal zone access or resources. See Section 2.1.3.2 (Relocations) for analysis of construction and demolition effects on existing facilities and operations.

Rehabilitation Alternative

The Rehabilitation Alternative would be constructed as discussed in Chapter 1. All construction land use effects would occur within and adjacent to the existing footprint of the Gerald Desmond Bridge. Construction activities would result in temporary direct and indirect land use effects adjacent to the existing columns, pile and bent caps, and abutments. Areas within the construction footprint and access to these areas may be required exclusively for construction and would result in a restricted, reduced, or modified land use during retrofit activities. In addition, facilities adjacent to the construction footprint could experience site-specific disruptions to land use, primarily related to construction traffic and site access modifications/disruptions. The construction effects on land use would be short term and/or intermittent. Most of the retrofit activities would occur during daytime hours; however, extensive work during bridge deck replacement activities would occur from 7:00 p.m. to 7:00 a.m. Construction land use effects would not be considered adverse.

No park or recreation facilities would be used for construction staging or material lay-down. The scope of the Rehabilitation Alternative, in regard to ground disturbance and construction equipment, would be considered minimal when compared to the scope of the bridge replacement alternatives. Potential effects of this alternative on parks and/or recreational enjoyment would also be considered minimal. Thus, construction effects on recreational land use would not be considered adverse.

The Rehabilitation Alternative would seismically upgrade an existing transportation facility. This alternative would not affect coastal zone access or resources or result in new or incompatible land uses. Construction activities for this alternative would be conducted in accordance with typical measures to minimize effects during the construction period; therefore, no adverse effects on land use would occur.

Operational Impacts

North-side Alignment Alternative

Compatibility with Planned Land Use and Recreation: Operation of the North-side Alignment Alternative would result in the conversion of approximately 0.7-acre (0.3-ha) of privately held Port-related industrial land to public/transportation use. Privately owned facilities affected include Pacific Pipelines, LLC; LBGS; SCE; Connolly Pacific; and Pacific Energy Resources. Potential effects on these properties could include loss of land due to acquisition, modified access due to bridge footings and easements, and relocation/ replacement of utilities and/or facilities. The current estimate for effects on private facilities is $2.0 million (see Section 2.1.3.2 [Relocations] for further discussion).

Anticipated ROW requirements for this alternative would not have a substantial effect on facility operations and would not result in permanent land use conflicts. The proposed bridge would be consistent with designated land use within the Port. It would be an industrial-type transportation use located in an area where all surrounding land uses are designated Port-related Industrial. The operation of the bridge would be consistent with the six long-range planning goals and objectives for future port development and expansion, as stated in the PMP and as listed in the Application Summary Report in Chapter 8 of this document. The implementing objective is to promote efficient vehicular and vessel circulation and access to Terminal Island and within the Port. The new bridge would not adversely affect future land use planning or require Plan amendments for proposed minor changes in existing land use. During operation, areas within the former footprint of the Gerald Desmond Bridge and, where appropriate, beneath the new bridge, would be available for Port-related industrial uses. The North-side Alignment Alternative utilizes more support columns instead of fill, potentially resulting in a net increase of 4 acres (1.6 ha) of area that would be available for future Port-related industrial use. Most of this increase is associated with removal of fill during demolition of existing abutments and approach roadways. The new bridge would also result in a long-term, safe connection between Long Beach and Terminal Island even after an extreme seismic event; therefore, no adverse effects associated with the operation of the North-side Alignment Alternative are anticipated.

This alternative would not require acquisition of any nearby park or recreation land use areas. Consequently, no direct effects to the surrounding parks and recreational facilities are expected. The project would not induce more population to reside in the Harbor District area; thus, it would not result in an increased use of existing recreational facilities within the area. The proposed project would not attract more tourists to visit the harbor than planned for by the City of Long Beach and the Port. Operation of the proposed project would have no effect on parks or recreational land uses.

This alternative would not increase population and employment in the project area. Therefore, it would not contribute to increased demand for new or expanded parks, recreational areas, or wildlife/waterfowl refuges; however, any potential increase in jobs would be temporary (related to construction) and come from throughout the region. Associated increases in permanent local residents would be considered minimal and would not likely result in new and expanded park/recreation services or facilities. Additionally, the North-side Alignment Alternative is intended to accommodate the anticipated growth in regional commuter and Port-related truck traffic. Local agencies are assumed to have already considered potential regional and Port-related growth in their capital facilities planning (see Section 2.1.2 [Growth]). No adverse effects related to the negligible indirect operational land use effects of this alternative are anticipated.

Consistency with Plans and Policies: The North-side Alignment Alternative is consistent with land use plans and policies applicable to the study area. Although the project is not specifically identified in many of the plans or policies, all of them identify general transportation and circulation issues in the area, particularly with respect to port-related transportation. This alternative would result in improved regional and local access to and from the port, as well as regional traffic in general, and it is consistent with local plans and policies (see Section 2.1.2 [Growth]). This alternative would not directly conflict with applicable plans and policies; therefore, it would not result in an adverse effect. The Long Beach General Plan states that the responsibilities for planning within legal boundaries of the harbor lie with the Board of Harbor Commissioners. Uses of land and water within the Port have been outlined in the PMP (POLB, 1999).

Operation of the North-side Alignment Alternative would not have an adverse effect on coastal zone management, the Long Beach General Plan, or its specific plan for the port as discussed within the PMP. Operation of the proposed project is

consistent with these plans and would not adversely affect current or future planning.

Coastal Zone: Operation of the North-side Alignment Alternative would not affect public access within the coastal zone. The Port areas within the coastal zone are utilized by heavy industry, and many of the areas are restricted to public access. Additionally, this alternative would improve safety for current and future vessels within the Back Channel. Operation of the North-side Alignment Alternative would improve access to existing industrial facilities located within the coastal zone. The alternative would not attract more tourists to visit the harbor than planned for by the City of Long Beach and the Port. Operation of the proposed project would have no effect on public coastal zone access or resources.

The North-side Alignment Alternative is consistent with the California Coastal Act, which states that all port-related developments shall be located, designed, and constructed so as to minimize substantial adverse environmental impacts; minimize potential traffic conflicts between vessels; give highest priority to the use of existing land space within harbors for port purposes including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities; provide for other beneficial uses consistent with the public trust including, but not limited to, recreation and wildlife habitat uses, to the extent feasible; and encourage rail service to port areas and multi-company use of facilities.

South-side Alignment Alternative

Operation of the South-side Alignment Alternative would require reconfiguration of operations at both the California United Terminals (Piers D/E) and TTI (Pier T) facilities. Estimates to reconfigure these terminals to accommodate the South-side Alignment Alternative are approximately $10 million at each terminal. With demolition of the existing bridge, the South-side Alignment Alternative would not result in a loss of leasable Port acreage in the Middle Harbor area; however, it would permanently reduce the area available for container terminal operations within the TTI terminal and leasable Port acreage by approximately 2.4 acres (1-ha). The estimated present value of lost Port lease revenue would be $7.0 million over a typical 20-year lease (see Section 2.1.3.2 [Relocations] for further discussion).

Anticipated ROW requirements for this alternative would not have a substantial effect on facility operations and would not result in permanent land use conflicts. The proposed bridge would be consistent with designated land use within the Port. It would be an industrial-type transportation use located in an area where all surrounding land uses are designated Port-related Industrial. The operation of the bridge would be consistent with the six long-range planning goals and objectives for future port development and expansion, as stated in the PMP and as listed in the Application Summary Report in Chapter 8 of this document. The implementing objective is to promote efficient vehicular and vessel circulation and access to Terminal Island and within the Port. Although the South-side Alignment Alternative would permanently affect 2.4 acres (1-ha) of existing container terminal, the loss is along the edge of the terminal and would not affect long-range Port development plans. The new bridge would not adversely affect future land use planning or require Plan amendments for proposed minor changes in existing land use.

During operation, areas within the former footprint of the Gerald Desmond Bridge and, where appropriate, beneath the new bridge, would be available for Port-related industrial uses. The South-side Alignment also utilizes more support columns instead of fill, and it would also potentially result in a net increase of 4 acres (1.6 ha) of area that would be available for future Port-related industrial use. Most of this increase is associated with removal of fill during demolition of existing abutments and approach roadways. The new bridge would also result in a long-term, safe connection between Long Beach and Terminal Island even after an extreme seismic event.

Operational effects of the South-side Alignment Alternative on recreation/coastal zone access or resources would be the same as discussed under the North-side Alignment Alternative. The South-side Alignment Alternative would not result in adverse effects on land use planning compatibility/ consistency or recreation/coastal zone access or resources.

Rehabilitation Alternative

Operation of the Rehabilitation Alternative would not result in any changes from the existing land use within the project area. Operation of this alternative would have no effect on existing or future land use planning, compatibility, or consistency on recreation or coastal zone access or resources.

2.1.1.4 Avoidance, Minimization and/or Mitigation Measures

No measures are required.