3.11

MARINE TRANSPORTATION

3.11.1 Introduction

This section describes existing marine transportation within the Port of Los Angeles (Port) and the West Basin, and potential impacts on marine transportation safety associated with the proposed Project.

Proposed construction activities associated with dredging, development of Berth 147, installation of wharf seismic improvements at Berths 136-139 and 145-146, and filling the Northwest Slip would result in less than significant impacts on marine transport under CEQA and NEPA. Proposed Project operations would not substantially increase vessel traffic within the Port and precautionary areas; therefore, impacts would be less than significant under CEQA and NEPA. Additionally, the proposed Project would have long-term beneficial impacts on marine transportation as berths would be deepened and existing wharf infrastructure would be upgraded to accommodate modern container ships.

3.11.2 Environmental Setting

The Port is located in San Pedro Bay. The Bay is protected from the open Pacific Ocean by the San Pedro, Middle, and Long Beach breakwaters (Figure 1-1). The openings between these breakwaters, known as Angels Gate and Queens Gate, provide entry to the Ports of Los Angeles and Long Beach, respectively. Vessel traffic channels have been established in the Harbor and numerous aids to navigation have been developed.

Numerous vessels including fishing boats, pleasure vessels, passenger-carrying vessels, tankers, auto carriers, container vessels, dry bulk carriers, and barges call or reside in the Port. Commercial vessels follow vessel traffic lanes established by the U.S. Coast Guard (USCG) when approaching and leaving the Harbor. Designated traffic lanes converge at the “Precautionary Area” (Figure 3.11-1).
Figure 3.11-1. Vessel Navigation Safety Areas at Port of Los Angeles and Port of Long Beach
3.11.2.1 Vessel Transportation Safety

Vessel traffic levels are highly regulated by the USCG Captain of the Port (COTP) and the Marine Exchange of Southern California via the Vessel Traffic Service (VTS) to ensure the total number of vessels transiting the Port does not exceed the design capacity of the federal channel limits. Mariners are required to report their position prior to transiting through the Port to the COTP and the VTS; the VTS monitors the positions of all inbound/outbound vessels within the Precautionary Area and the approach corridor traffic lanes (Figure 3.11-1). In the event of scheduling conflicts and/or vessel occupancy within the Port is operating at capacity, vessels are required to anchor at the anchorages outside the breakwater until mariners receive COTP authorization to initiate transit into the Port.

Several measures are in place to ensure the safety of vessel navigation in the harbor area. Restricted navigation areas and routes have been designated to ensure safe vessel navigation, and are regulated by various agencies and organizations to ensure navigational safety; these are described below.

**Marine Exchange of Southern California.** The Marine Exchange is a voluntary, non-profit organization affiliated with the Los Angeles Chamber of Commerce. This voluntary service is designated to enhance navigation safety in the Precautionary Area and harbor area of the Ports. The service consists of a coordinating office, specific reporting points, and very high frequency-frequency modulation (VHF-FM) radio communications used with participating vessels. Vessel traffic channels and numerous aids to navigation (i.e., operating rules and regulations) have been established in the Port. The Marine Exchange also operates the Physical Oceanographic Real Time System (PORTS) as a service to organizations making operational decisions based on oceanographic and meteorological conditions in the vicinity of the Port. The PORTS collects and disseminates accurate “real time” information on tides, visibility, winds, currents, and sea swell to maritime users to assist in the safe and efficient transit of vessels in the Port area.

**Vessel Traffic Service (VTS).** VTS is operated by the Marine Exchange and the USCG, to monitor traffic with shore-based radar within both the main approach and departure lanes, including the Precautionary Area, as well as internal movement within harbor areas. The VTS uses radar, radio, and visual inputs to collect “real time” vessel traffic information and broadcast traffic advisories to assist mariners. In addition, vessels are required to report their positions and destinations to the VTS at certain times and locations, and may also request information about traffic they could encounter in the Precautionary Area. Furthermore, the VTS implements the COTP’s uniform procedures including advanced notification to vessel operators, vessel traffic managers, and Port Pilots identifying the location of dredges, derrick barges, and any associated operational procedures and/or restrictions (i.e., one-way traffic) ensure safe transit of vessels operating within and to and from the proposed Project area. In addition, a communication system links the following key operational centers: USCG COTP, VTS, Los Angeles Pilot Station, Long Beach Pilot Station, and Port of Long Beach Security. This system is used to exchange vessel movement information and safety notices between the various organizations.
Traffic Separation Schemes (TSS). A TSS is an internationally recognized vessel routing designation, which separates opposing flows of vessel traffic into lanes, including a zone between lanes where traffic is to be avoided. TSSs have been designated to help direct offshore vessel traffic along portions of the California coastline, such as the Santa Barbara Channel. Vessels are not required to use any designated TSS, but failure to use one, if available, would be a major factor for determining liability in the event of a collision. TSS designations are proposed by the USCG, but must be approved by the International Maritime Organization (IMO), which is part of the United Nations.

Safety Fairways. Offshore waters in high traffic areas are designated as safety fairways, which mean that placement of surface structures, such as oil platforms, is prohibited to ensure safer navigation. USACE is prohibited from issuing permits for surface structures (e.g., oil platforms) within safety fairways, which are frequently located between a port and the entry into a TSS.

Precautionary and Regulated Navigation Areas. A Precautionary Area is designated in congested areas near the POLA/POLB harbor entrances to set speed limits or to establish other safety precautions for ships entering or departing the Harbor. A regulated navigation area (RNA) is defined as a water area within a defined boundary for which federal regulations for vessels navigating within this area have been established under CFR 33 Part 165, Subsection 165.1109. In the case of the Los Angeles/Long Beach Harbor, RNA boundaries match the designated Precautionary Area. CFR 33, Part 165, Subsection 165.1152, identifies portions of the Precautionary Area as RNA.

The Precautionary Area for POLA/POLB is defined by a line that extends south from Point Fermin approximately seven nautical miles, then due east approximately seven nautical miles, then northeast for approximately three nautical miles, and then back northwest (see Figure 3.11-1). Ships are required to cruise at speeds of 12 knots or less upon entering the Precautionary Area. A minimum vessel separation of 0.25 nm is also required in the Precautionary Area. The Marine Exchange of Southern California monitors vessel traffic within the Precautionary Area.

Pilotage. Use of a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways is required for all vessels of foreign registry, and for U.S. vessels that do not have a federally licensed pilot on board (some U.S.-flag vessels have a trained and licensed pilot onboard; those vessels are not required to use a Port Pilot while navigating through the Port). Los Angeles Harbor Pilots provide pilotage to the Ports and receive special training that is regulated by the Harbor Safety Committee. Pilots typically board the vessels at the Angel’s Gate entrance, and then direct the vessels to their destinations. Pilots normally leave the vessels after docking, and re-board the vessels to pilot them back to sea or to other destinations within the Port. In addition, radar systems are also operated by Los Angeles Harbor Pilots to monitor vessel traffic within the harbor area. This information is available to all vessels upon request. The pilot service also manages the use of anchorages under an agreement with the USCG.

The Port also enforces numerous federal navigation regulations (i.e., Port tariffs) within Los Angeles Harbor. Specifically, larger commercial vessels (i.e., greater
than 300 gross tons) are required to use a federally-licensed pilot when navigating inside the breakwater. In most circumstances, vessels employ the services of a federally-licensed local pilot from the Los Angeles Harbor Pilots. In instances where a local pilot is not used, masters must have a local federal pilot license and receive approval by the USCG COTP prior to entering or departing the Port. The Port Tariffs also require vessels to notify the affected pilot station(s) in situations when a pilot is not needed before entering, leaving, shifting, or moving between the Ports.

**Tug Escort/Assist for Tank Vessels.** “Tug Escort” refers to the stationing of tugs in proximity of a vessel as it transits into port to provide immediate assistance should a steering or propulsion failure develop. “Tug Assist” refers to the positioning of tugs alongside a vessel and applying force to assist in making turns, reducing speed, providing propulsion, and docking. Commercial container vessels, as well as most of the ocean-going vessels, are required to have tug assistance within the POLA/POLB harbors (Harbor Safety Committee 2004). However, some vessels have internal “tugs” (typically bow and stern thrusters) that allow the vessel to propel without engaging the main engines, and can accomplish maneuvers with the same precision as a tug-assisted vessel. These ships are not required to have external tug assistance. There would not be any vessels using internal tugs associated with the proposed Project.

**Physical Oceanographic Real Time System (PORTS).** In partnership with NOAA, National Ocean Service (NOS), California Office of Spill Prevention and Response (OSPR), USGS, and some businesses operating in the Ports, the Marine Exchange operates PORTS as a service to those making operational decisions based on oceanographic and meteorological conditions in the vicinity of the Ports. PORTS is a system of environmental sensors and supporting telemetry equipment that gathers and disseminates accurate “real time” information on tides, visibility, winds, currents, and sea swell to maritime users to assist in the safe and efficient transit of vessels in the port area. Locally, PORTS is designed to provide crucial information in real-time to mariners, oil spill response teams, managers of coastal resources, and others about POLA and POLB water levels, currents, salinity, and winds.

The instruments that collect the information are deployed at strategic locations within the Ports to provide data at critical locations, and to allow “now-casting” and forecasting using a mathematical model of the Harbor’s oceanographic processes. Data from the sensors are fed into a central collection point; raw data from the sensors are integrated and synthesized into information and analysis products, including graphical displays of PORTS data.

The Port of Los Angeles and Port of Long Beach Harbor Safety Plan (HSP) contains additional operating procedures for vessels operating in the Port vicinity. The vessel operating procedures stipulated in the HSP are considered Good Marine Practice; some procedures are federal, state, or local regulations, while other guidelines are non-regulatory “Standards of Care.” Port tariffs also contain requirements for marine vessel activity within the Port’s jurisdiction.

### 3.11.2.2 Navigational Hazards

Port Pilots can easily identify fixed navigational hazards in the ports, including breakwaters protecting the outer harbor, anchorage areas, and various wharfs and
landmasses which comprise the harbor complex. These hazards are both easily
visibly by radar and are currently illuminated. Four bridges cross the navigation
channels of both ports. All bridges have restricted vertical clearances, and two have
restricted horizontal clearances as well.

Vessels that are waiting to enter the harbor and moor at a berth can anchor at the
anchorages outside and inside the breakwaters. Vessels do not require tug assistance
to anchor outside the breakwater. POLA currently does not have any available
anchorages inside the breakwater. For safety reasons, VTS will not assign an
anchorage in the first row of sites closest to the breakwater to vessels exceeding 656
feet (200m) in length.

Vessels are required by law to report failures of navigational equipment, propulsion,
steering, or other vital systems to the USCG via the COTP office or the COTP
representative at VTS as soon as possible. According to the VTS, approximately 1 in
100 vessels calling at the Ports of Los Angeles and Long Beach experiences a
mechanical failure during their inbound or outbound transit.

Vessel Accidents. Although marine safety is thoroughly regulated and managed,
accidents can occur during marine navigation. Marine vessel accidents include
vessel collisions (between two moving vessels), “allisions” (between a moving vessel
and a stationary object, including another vessel), and vessel groundings. The
number of vessel allisions, collisions, and groundings (ACGs) in POLA and POLB
has remained fairly constant between 1996 and 2003 (Table 3.11-1). Between 1996
and 2003 there were, on average, seven ACG incidents per year (U.S. Naval
Academy 1999). While there is no reliable data on the level of recreational boating
incidents in the ports over this time period, the level of commercial traffic transits has
remained fairly constant (± 2 percent). During this time, there has also been a large
amount of construction and channel deepening within the ports. Each of these
accidents was subject to USCG marine casualty investigation, and the subsequent
actions taken were targeted at preventing future occurrences.

<table>
<thead>
<tr>
<th>Year</th>
<th>Allisions</th>
<th>Collisions</th>
<th>Groundings</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>1997</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>1998</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>1999</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>2000</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2001</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>2003</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Harbor Safety Committee 2004; U.S. Naval Academy 1999
Note: These commercial vessel accidents meet a reportable level defined in 46 CFR 4.05, but do not include
commercial fishing vessel or recreational boating incidents.
According to the USCG vessels accidents database, the POLA/POLB Harbor area has one of the lowest accident rates among all U.S. ports, with a 0.0038 percent probability of a vessel experiencing an ACG during a single transit, as compared to the average 0.025 percent vessel ACG probability for all U.S. ports (U.S. Naval Academy 1999).

Near Misses. The POLA/POLB Harbor Safety Committee defines “near miss” as:

\[A \text{ reportable ‘Near Miss’ is an incident in which a pilot, master or other person in charge of navigating a vessel, successfully takes action of a ‘non-routine nature’ to avoid a collision with another vessel, structure, or aid to navigation, or grounding of the vessel, or damage to the environment.}\]

The most practical and readily available near miss data can be obtained from VTS reported, which are available from the LAHD.

Close Quarters. To avoid vessels passing too close together, the VTS documents, reports, and takes action on “close quarters” situations. VTS close quarters situations are described as vessels passing an object or another vessel closer than 0.25 nautical miles (nm) or 500 yards. These incidents usually occur within the traffic Precautionary Area. No reliable data are available for close quarter incidents outside the VTS area. Normal actions taken in response to close quarters situations include: initiating informal USCG investigation; sending Letters of Concern to owners and/or operators; having the involved vessel Master(s) visit VTS and review the incident; and USCG enforcement boardings. A six-year history of the number of “close quarters” situations is presented in Table 3.11-2. Given the relatively steady amount of commercial transits over the past five years, a decreasing trend in close quarters incidents is discernable (Harbor Safety Committee 2004).

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Close Quarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>9</td>
</tr>
<tr>
<td>1999</td>
<td>5</td>
</tr>
<tr>
<td>2000</td>
<td>1</td>
</tr>
<tr>
<td>2001</td>
<td>2</td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
</tr>
<tr>
<td>2003</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3.11-2. Number of VTS-recorded “Close Quarters” Incidents, 1998-2003

Source: Harbor Safety Committee 2004

3.11.2.3 Factors Affecting Vessel Traffic Safety

This section summarizes environmental conditions that could impact vessel safety in the POLA area.
3.11 Marine Transportation

**Fog.** Fog is a well-known weather condition in southern California. Harbor area fog occurs most frequently in April and from September through January, when visibility over the bay is below 0.5 mile (0.8 km) for 7 to 10 days per month. Fog at POLA is mostly a land (radiation) type fog that drifts offshore and worsens in the late night and early morning. Smoke from nearby industrial areas often adds to its thickness and persistence. Along the shore, fog drops visibility to less than 0.5 mile (0.8 km) on three to eight days per month from August through April, and is generally at its worst in December (Harbor Safety Committee 2004).

**Winds.** Wind conditions vary widely, particularly in fall and winter. Winds can be strongest during the period when the Santa Ana winds (prevailing winds from the northeast occurring from October through March) blow. The Santa Ana winds, though infrequent, may be violent. A Santa Ana condition occurs when a strong high-pressure system resides over the plateau region of Nevada and Utah and generates a Northeasterly to Easterly flow over Southern California. Aside from weather forecasts, one gets little warning of a Santa Ana’s onset: good visibility and unusually low humidity often prevail for some hours before it arrives. Shortly before arriving on the coast, the Santa Ana may appear as an approaching dark-brown dust cloud. This positive indication often provides a 10 to 30 minute warning. The Santa Ana wind may come at any time of day and can be reinforced by an early morning land breeze or weakened by an afternoon sea breeze (Harbor Safety Committee 2004).

Winter storms produce strong winds over San Pedro Bay, particularly southwesterly through westerly winds. Winds of 17 knots or greater occur about 1 to 2 percent of the time from November through May. Southwesterly through westerly winds begin to prevail in the spring and last into early fall (Harbor Safety Committee 2004).

**Tides.** The mean range of tide is 3.8 ft (1.2 m) for the POLA. The diurnal range is about 5.4 ft (1.6 m) and a range of 9 ft (2.7 m) may occur at maximum tide.

**Currents.** The tidal currents follow the axis of the channels and rarely exceed one knot. The POLA/POLB Harbor area is subject to seiche (i.e., seismically induced water waves that surge back and forth in an enclosed basin as a result of earthquakes) and surge, with the most persistent and conspicuous oscillation having about a one-hour period. Near Reservation Point, the prominent hourly surge causes velocity variations as great as one knot. These variations often overcome the lesser tidal current, so that the current ebbs and flows at half-hour intervals. The more-restricted channel usually causes the surge through the Back Channel to reach a greater velocity at the east end of Terminal Island, rather than west of Reservation Point. In the Back Channel, hourly variation may be 1.5 knots or more. At times the hourly surge, together with shorter, irregular oscillations, causes a very rapid change in water height and current direction/velocity, which may endanger vessels moored at the piers (Harbor Safety Committee 2004).

USACE ship navigation studies indicate that within the POLA channels, current magnitudes are essentially a negligible 1/3 knot or less. Maximum current velocity in the Angel’s Gate area is less than one knot. These current magnitudes, determined during a simulation study, indicate depth-averaged values over three layers. According to Jacobsen Pilot Service, the Long Beach Queen’s Gate has deeper water than Angel’s...
Gate and has more open waterways just inside the breakwater. The pilots have never experienced a current greater than one knot in this area (Harbor Safety Committee 2004).

**Water Depths.** USACE maintains the Federal Channels in the POLA and POLB. Table 3.11-3 lists water depths in the LA Harbor. Some of the channels have been dredged deeper than the required Proposed Project depth by POLA, and are maintained by POLA.

<table>
<thead>
<tr>
<th>Channel/Basin</th>
<th>Depth – MLLW ft (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Channel</td>
<td>-45 (-13.7)</td>
</tr>
<tr>
<td>Turning Basin</td>
<td>-45 (-13.7)</td>
</tr>
<tr>
<td>West Basin</td>
<td>-45 (-13.7)</td>
</tr>
<tr>
<td>East Basin</td>
<td>-45 (-13.7)</td>
</tr>
<tr>
<td>North Channel (Pier 300/400)</td>
<td>-53 (-16.2)</td>
</tr>
<tr>
<td>North Turning Basin</td>
<td>-81 (-24.7)</td>
</tr>
<tr>
<td>Approach and Entrance Channels</td>
<td>-81 (-24.7)</td>
</tr>
</tbody>
</table>

*Source: Harbor Safety Committee 2004*

### 3.11.2.4 Vessel Traffic

A total of 2,660 vessels called at the Port in 2003, and vessel traffic to the Port has remained relatively constant over the past few years (Table 3.11-4). The increase in cargo volumes in recent years has been accommodated primarily by larger vessels, rather than additional vessels.

<table>
<thead>
<tr>
<th>Year</th>
<th>Vessel Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2,660</td>
</tr>
<tr>
<td>2002</td>
<td>2,526</td>
</tr>
<tr>
<td>2001</td>
<td>2,899</td>
</tr>
<tr>
<td>2000</td>
<td>3,060</td>
</tr>
<tr>
<td>1999</td>
<td>2,630</td>
</tr>
<tr>
<td>1998</td>
<td>2,569</td>
</tr>
<tr>
<td>1997</td>
<td>2,786</td>
</tr>
</tbody>
</table>

*Source: LAHD 2004*

Commercial vessel traffic in the West Basin consists mostly of container shipping, with fewer tankers and other marine traffic. Approximately 6 vessels transit the West Basin per day to support TraPac container terminal operations at Berths 136-147, Yang Ming
container terminal operations at Berth 121, Kinder Morgan liquid bulk operations at Berths 118-120, and China Shipping container terminal operations at Berth 100).

The previously approved Los Angeles Harbor Channel Deepening Project (USACE and LAHD 2000) would consist of deepening the main navigational channels and connected basins from the existing -45' mean lower low water (MLLW) to -53' MLLW. The Channel Deepening Project would occur within the Port’s existing federal channel limits (Main Channel, the West Basin, East Basin, and Cerritos Channel) and five berthing areas (Berths 121-131, 136-139, 206-209, 212-221, and 226-236) to accommodate modern container ships.

The existing depth for connected harbor basins (Turning Basin, the West Basin and East Basin) is -45' MLLW; the permitted depth for these basins is -53' MLLW. The channel bank clearances are defined as the clearances between moving vessels and vessels berthed alongside the Los Angeles Main Channel and the East Basin Channel.

### 3.11.3 Applicable Regulations

Many laws and regulations are in place to regulate marine terminals, vessels calling at marine terminals, and emergency response/contingency planning. Responsibilities for enforcing or executing these laws and regulations are governed by various federal and local agencies, as described below.

#### Federal Agencies

A number of federal laws regulate marine terminals and vessels. In general, these laws address design and construction standards, operational standards, and spill prevention and cleanup. Regulations to implement these laws are contained primarily in Titles 33 (Navigation and Navigable Waters), 40 (Protection of Environment), and 46 (Shipping) of the Code of Federal Regulations (CFR).

Since 1789, the federal government has authorized navigation channel improvement projects; the General Survey Act of 1824 established USACE’s role as the agency responsible for the navigation system. Since then, ports have worked in partnership with USACE to maintain waterside access to port facilities.

#### U.S. Coast Guard (USCG)

The USCG, through Title 33 (Navigation and Navigable Waters) and Title 46 (Shipping) of the CFR, is the federal agency responsible for vessel inspection, marine terminal operations safety, coordination of federal responses to marine emergencies, enforcement of marine pollution statutes, marine safety (navigation aids), and operation of the National Response Center (NRC) for spill response. Current USCG regulations require a federally licensed pilot aboard every tanker vessel mooring and unmooring at offshore marine terminals. At the request of the USCG, the Los Angeles Pilots and Jacobsen Pilots have agreed to ensure continual service of a licensed pilot for vessels moving between POLA and POLB outside the breakwater.
3.11 Marine Transportation

Department of Defense (DoD)

DoD, through USACE, is responsible for reviewing all aspects of a project and/or spill response activities that could affect navigation. USACE has specialized equipment and personnel for maintaining navigation channels, removing navigation obstructions, and accomplishing structural repairs. The USACE has jurisdiction under Section 10 of the Rivers and Harbors Act of 1899.

Other Organizations

Marine Exchange of Southern California

As described in Section 3.11.2.1 (Vessel Transportation Safety), the Marine Exchange is a non-profit organization affiliated with the L.A. Chamber of Commerce. The organization is supported by subscriptions from Port-related organizations that recognize the need for such an organization and use its services. This voluntary service is designated to enhance navigation safety in the Precautionary Area and harbor area of the Ports. The Marine Exchange monitors vessel traffic within the Precautionary Area. The Marine Exchange also operates PORTS (see Section 3.11.2.1) as a service to those making operational decisions based on oceanographic and meteorological conditions in the vicinity of the Ports.

Harbor Safety Committee

POLA and POLB have a Harbor Safety Committee (Committee) which is responsible for planning the safe navigation and operation of tankers, barges, and other vessels within San Pedro Bay and approach areas. This Committee has been created under the authority of Government Code Section 8670.23(a), which requires the Administrator of the Office of Oil Spill Prevention and Response to create a Harbor Safety Committee for the Los Angeles/Long Beach Harbor area. The Committee issued the original Harbor Safety Plan (HSP) in 1991, and has issued annual updates since. Major issues facing the Committee include questions regarding the need for escort tugs, required capabilities of escort tugs, and/or need for new or enhanced vessel traffic information systems to monitor and advise vessel traffic.

The Committee developed a regulatory scheme to institutionalize Good Marine Practices and guide those involved in moving tanker vessels, which include the minimum standards that are applicable under favorable circumstances and conditions. The master or pilot shall arrange for additional tug assistance if bad weather, unusual port congestion, or other circumstances so require.

Harbor Safety Plan

The Harbor Safety Plan (HSP) provides specific rules for navigation of vessels in reduced visibility conditions, and does not recommend transit for vessels greater than 150,000 DWT if visibility is less than 1 nautical mile (nm), and for all other vessels if visibility is less than 0.5 nm.
The HSP establishes vessel speed limits. In general, speeds should not exceed 12 knots within the Precautionary Area or 6 knots within the harbor. These speed restrictions do not preclude the master or pilot from adjusting speeds to avoid or mitigate unsafe conditions. Weather, vessel maneuvering characteristics, traffic density, construction/dredging activities, and other possible issues are taken into account.

**Vessel Transportation Service**

As described previously, VTS is a shipping service operated by USCG or public/private sector consortiums (see Section 3.11.2.1). These services monitor traffic in both approach and departure lanes, as well as internal movement within harbor areas. These services use radar, radio, and visual inputs to gather real time vessel traffic information and broadcast traffic advisories and summaries to assist mariners. The VTS that services POLA and POLB is located at the entrance of the Ports. The system is owned by the Marine Exchange and is operated jointly by the Marine Exchange and the USCG under the oversight of the Office of Spill Prevention and Response (OSPR) and the POLA/POLB Harbor Safety Committee.

This system provides information on vessel traffic and ship locations so that vessels can avoid collisions, allisions, and groundings in the approaches to the Los Angeles/Long Beach Harbor. The VTS assists in the safe navigation of vessels approaching POLA and POLB in the Precautionary Area. The partnership is a unique and effective approach that has gained acceptance from the maritime community.

**3.11.4 Impacts and Mitigation Measures**

**3.11.4.1 Methodology**

Impacts on marine transportation were assessed by determining the net increase in vessel traffic resulting from the proposed Project compared to the ability of the Port to safely handle vessel traffic, as well as the proposed Project’s potential to increase risks to vessel traffic caused by proposed Project-related activities, during both construction and operation.

**3.11.4.1.1 CEQA Baseline**

Section 15125 of the CEQA Guidelines requires EIRs to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the NOP. These environmental conditions would normally constitute the baseline physical conditions by which the CEQA lead agency determines whether an impact is significant. For purposes of this Draft EIS/EIR, the CEQA Baseline for determining the significance of potential impacts under CEQA is December 2003. CEQA Baseline conditions are described in Table 2-2 of Section 2.4.

The CEQA Baseline represents the setting at a fixed point in time, with no project growth over time, and differs from the “No Project” Alternative (discussed in Section 2.5.1) in that the No Project Alternative addresses what is likely to happen at the site over time,
starting from the baseline conditions. The No Project Alternative allows for growth at the proposed Project site that would occur without any required additional approvals.

### 3.11.4.1.2 No Federal Action/NEPA Baseline

For purposes of this Draft EIS/EIR, the evaluation of significance under NEPA is defined by comparing the proposed Project or other alternative to the No Federal Action scenario. The No Federal Action/NEPA Baseline condition for determining significance of impacts coincides with the “No Federal Action” condition, which is defined by examining the full range of construction and operational activities the applicant could implement and is likely to implement absent permits from the USACE. Therefore, the No Federal Action/NEPA Baseline would not include any dredging, filling of the Northwest Slip, wharf construction or upgrades, or crane replacement. The No Federal Action/NEPA Baseline would include construction and operation of all upland elements (existing lands) for backlands or other purposes. The upland elements are assumed to include:

- Adding 57 acres or existing land for backland area and an on-dock rail yard;
- Constructing a 500-space parking lot for union workers;
- Demolishing the existing administration building and constructing a new LEED certified administration building and other terminal buildings;
- Adding new lighting and replacing existing lighting, fencing, paving, and utilities on the backlands;
- Relocating the Pier A rail yard and constructing the new on-dock rail yard;
- Widening and realigning Harry Bridges Boulevard; and
- Developing the Harry Bridges Buffer Area.

Unlike the CEQA Baseline, which is defined by conditions at a point in time, the No Federal Action/NEPA Baseline is not bound by statute to a “flat” or “no growth” scenario; therefore, the USACE may project increases in operations over the life of a project to properly analyze the No Federal Action/NEPA Baseline condition. Normally, any ultimate permit decision would focus on direct impacts to the aquatic environment, as well as indirect and cumulative impacts in the uplands determined to be within the scope of federal control and responsibility. Significance of the impacts of the proposed Project or alternatives is defined by comparing the proposed Project or alternative to the No Federal Action/NEPA Baseline (i.e., the increment). The No Federal Action/NEPA Baseline conditions are described in Table 2-2 of Section 2.4.

The No Federal Action/NEPA Baseline also differs from the “No Project” Alternative, where the Port would take no further action to construct and develop additional backlands (other than the 176 acres that currently exist). Under this alternative, no construction impacts would occur. However, forecasted increases in cargo throughput would still occur as greater operational efficiencies are made.
3.11 Marine Transportation

3.11.4.2 Thresholds of Significance

According to the *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006), the determination of significance for marine transportation impacts shall be made on a case-by-case basis. While this document does not include specific provisions regarding marine transportation, the following criterion was developed in cooperation with the Port. The proposed Project would have a significant impact on marine transportation if it would:

VT-I Potentially interfere with the operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, West Basin area, or precautionary areas.

3.11.4.3 Impacts and Mitigation

3.11.4.3.1 Proposed Project

3.11.4.3.1.1 Construction Impacts

**Impact VT-1a:** Proposed Project construction-related marine traffic would potentially interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.

Phase I (2007-2015) and Phase II (2015-2025) dredging and in-water construction activities would occur within the Port’s existing federal channel limits (i.e., channel and berthing areas). The majority of in-water activities (i.e., dredging, wharf seismic improvements, and new wharf construction) would occur in the West Basin area. Proposed dredging and in-water construction activities would require use of marine-based construction equipment (i.e., derrick/supply barge and/or dump scow) to support development of Berth 147, installation of wharf seismic improvements at Berths 136-139 and 145-146, filling the Northwest Slip, and transporting rock material from Catalina Island. A diesel-powered clamshell dredge would also be used to deepen waters within close proximity to berths to be consistent with the proposed -53-foot channel depth. Sediments from the clamshell dredge would be placed in a barge and transported by a tugboat to the designated disposal area.

Dredged material generated during Phase I would be transported by barge to confined disposal facilities (CDFs) at the Port, the Port of Long Beach, or at an appropriate upland disposal site. To transport the dredged material to a disposal site, it is assumed that a 2,000 cy barge would have a 90 percent effective material loading capacity because 10 percent of the capacity would be taken up by water and material bulking, which is the volume of the material that expands upon excavation. This reduction in barge capacity would also accommodate the need to not load the barges beyond the extent to which they can fully contain the dredged material during transport to the disposal site. Therefore, each barge would load approximately 1,800 cy of material. However, as fill and rock material are dry, all barges transporting fill and rock material from Catalina Island would have a 2,000 cy material loading capacity.
During Phase I, marine-based construction equipment would be present within the West Basin for up to approximately 10 months (Table 3.11-5). Approximately 265 total barge trips (i.e., approximately 2 barge trips per day) would be required to support Phase I construction activities, including transport of rock material from Catalina Island to Berth 144, sheet pile delivery associated with installation of new cranes, and transport of dredge material to Berth 205. Phase I in-water construction activities would result in an increase of approximately 3.6 active construction equipment/day within the West Basin (Table 3.11-5) (NOTE: This total includes the presence of tugboats during roundtrip bargeing activities associated with transporting dredge material, fill, and rock material from Catalina Island).

<table>
<thead>
<tr>
<th>Proposed Project Element</th>
<th>Activity</th>
<th>Equipment Type</th>
<th>Number of Active Equipment</th>
<th>Duration of Activity (work days)</th>
<th>Total Active Equipment Work Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Wharves at Berths 146-147</td>
<td>Wharf Demolition</td>
<td>Derrick Barge/Tugboat(1)</td>
<td>1</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Piledriving(2)</td>
<td>Derrick Barge/Tugboat(1)</td>
<td>1</td>
<td>87</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Derrick Barge/Tugboat(1)</td>
<td>1</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Rip Rap Placement</td>
<td>Barge/Tugboat(1)</td>
<td>4</td>
<td>40.5</td>
<td>243</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tugboat(4)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Cranes</td>
<td>Existing Crane Removal</td>
<td>Tugboat(5)</td>
<td>4</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>Install New Cranes</td>
<td>Cargo ship(3) (sheet pile delivery)/ Tugboat (cargo ship assist)</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Dredging</td>
<td>Dredge and Disposal</td>
<td>Derrick Barge</td>
<td>5</td>
<td>88</td>
<td>616</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tugboat(6)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (Phase I)</td>
<td>23</td>
<td>289</td>
<td>1,044</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Number of Equipment/Work Day (Phase I)</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHASE II (2015-2025)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Wharf at Northwest Slip</td>
<td>Dredge Dike Toe</td>
<td>Derrick Barge</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tugboat(7)</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Rip-Rap Placement</td>
<td>Barge/Tugboat(1)</td>
<td>4</td>
<td>23.5</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tugboat(4)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel Deepening</td>
<td>Anchor Barge/Tugboat(1)</td>
<td>1</td>
<td>25</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Disposal into Dike</td>
<td>Tugboat(7)</td>
<td>27</td>
<td>25</td>
<td>675</td>
<td></td>
</tr>
<tr>
<td>Piledriving(6)</td>
<td>Derrick Barge/Tugboat(1)</td>
<td>1</td>
<td>20</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Derrick Barge/Tugboat(1)</td>
<td>1</td>
<td>14</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cargo ship(3) (sheet pile delivery)/ Tugboat (cargo ship assist)</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total (Phase II)</td>
<td>40</td>
<td>111.5</td>
<td>880</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Number of Equipment/Work Day (Phase II)</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3.11-5. Marine-Based Construction Equipment Associated with the Proposed Project (continued)

<table>
<thead>
<tr>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Tugboats are used to assist construction barges (i.e., derrick/supply barge and/or dump scow) during in-water activities within the West Basin.</td>
</tr>
<tr>
<td>(2) Piledriving information includes data for both sheet piles and waterside piles.</td>
</tr>
<tr>
<td>(3) Arrival/departure would not occur on the same day; cargo ships would hotel at berth.</td>
</tr>
<tr>
<td>(4) Rock material from Catalina Island would be placed in a barge and transported by a tugboat to Berth 144 (Phase I) and Berth 136 (Phase II).</td>
</tr>
<tr>
<td>(5) These tugboats would be stationed along the wharf adjacent to Berths 136-139 and Berths 144-147.</td>
</tr>
<tr>
<td>(6) Dredged material would be placed in a barge and transported by a tugboat to Berth 205.</td>
</tr>
<tr>
<td>(7) Dredged material would be placed in a barge and transported by a tugboat from Berth 136 to Pier 400.</td>
</tr>
</tbody>
</table>

Proposed activities during Phase II (2015-2025) construction focus on increasing the size and capacity of the terminal and backlands. During Phase II, 10 acres of additional backland would be created for container terminal use by filling in the remaining 10 acres of the Northwest Slip. Proposed wharf improvements would construct a 400-foot new wharf adjacent to the new 10-acre fill. Phase II In-water construction equipment would be present within the West Basin for approximately 4 months (Table 3.11-5). Approximately 724 barge trips (i.e., approximately 6 barge trips per day) would be required to support Phase II construction activities; 47 barge trips would be required to transport rock material from Catalina Island to Berth 136; 675 barge trips would be required to transport dredge material to create the 10-acre Northwest Slip; and 2 barge trips would be required to transport sheet pile associated with piledriving activities required to construct the new wharf. Phase II in-water construction activities would result in an increase of approximately 8 active construction equipment/day within the West Basin (Table 3.11-5) (NOTE: This total includes the presence of tugboats during roundtrip barging activities associated with transporting dredge material, fill, and rock material from Catalina Island).

Dredging and in-water construction activities in the West Basin could create in-water hazards to vessel traffic and increase the potential for accidents. No specific accident data are available for the project area (Berths 136-147). Due to the relatively low vessel traffic volumes within West Basin (approximately 6 vessel trips per day), the increase of approximately 3.6 active construction equipment/day for up to 10 months (Phase I) and the increase of approximately 8 active construction equipment/day for up to four months (Phase II), would not significantly increase the potential accident risk for vessels navigating within West Basin area associated with in-water construction equipment.

Approximately 265 total barge trips (i.e., approximately 2 barge trips per day) would be required to support Phase I construction activities, including transport of rock material from Catalina Island to Berth 144, sheet pile delivery associated with installation of new cranes, and transport of dredge material to Berth 205. Phase I in-water construction activities would result in an increase of approximately 3.6 active construction equipment/day within the West Basin (Table 3.11-5). However, as vessel calls at Berths 136-147 represent approximately one percent of the total vessels calling at the Port, the additional barge trips would not significantly increase the potential accident risk for vessels navigating within the Port and/or West Basin area.
Barge trips required to transport rock material from Catalina Island would increase traffic within the approach corridors to the Precautionary Area; however, the additional 128 barge trips that would occur over a 65 day would not result in a significant contribution to vessel congestion within the approach corridors. Furthermore, as dredged material generated would be transported by barge to CDFs at the Ports of Los Angeles and Long Beach, the additional barge trips would not increase vessel congestion within the approach corridors in the open ocean.

Although marine-based construction equipment would restrict vessel movement within the turning basin, derricks and supply barges would be highly visible, well-marked, and would be relatively stationary as dredging equipment would only be moved prior to dredging at another location. These activities are routinely conducted in the Port and contractors performing in-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts, including navigation hazard markings. Prior to activities that require anchoring vessels in the main navigation channels, the Port’s standard vessel safety regulations require dredging contractors to acquire an Anchorage Waiver Permit. An Anchorage Waiver permit, issued by the USCG, requires notifying the COTP of expected activities; providing official and ongoing notice to mariners during construction; developing a mooring plan; and marking equipment and any debris for visibility. Compliance with Anchorage Waiver permit requirements would ensure compliance with regulations governing the Port’s Outer Harbor and main navigation channel areas. As standard safety precautions would be utilized by all contractors, the presence supply barges/support boats would not substantially impact marine vessel safety within the main channels and connected basin areas. Accordingly, proposed in-water construction equipment would not interfere with existing operations at adjacent West Basin berths, including Yang Ming container terminal operations at Berth 121, Kinder Morgan liquid bulk operations at Berths 118-120, and China Shipping container terminal operations at Berth 100.

**CEQA Impact Determination**

Construction activities could create in-water hazards to vessel traffic and increase the potential for accidents. Phase I (2007-2015) dredging and in-water construction activities would require use of marine-based construction equipment (i.e., derrick/supply barge) to support development of Berth 147 and installation of wharf seismic improvements at Berths 136-139 and 145-146. Phase II (2015-2025) in-water activities associated with filling the Northwest Slip would also require use of dump scow/supply barges to support new wharf construction (e.g., pile driving). Although barge trips required to transport rock material from Catalina Island would increase traffic within the Port and the approach corridors to the Precautionary Area, the additional barge trips would not result in a significant contribution to vessel congestion within the Port and/or approach corridors. These activities are routinely conducted in the Port and contractors performing in-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts and Department of the Army permits. As standard safety precautions would be utilized by the Port in piloting these vessels through harbor waters, the short-term presence of supply barges/support boats at Berths 136-139 and 145-147 and associated barge trips would not reduce the existing level of safety for vessel navigation in the Port.
Therefore, construction impacts on vessel traffic would be less than significant under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Less than significant impact.

**NEPA Impact Determination**

Proposed Project construction activities include dredging, filling of the Northwest Slip, new wharf and dike construction, and upgrades to existing wharves, as described above. These construction activities would potentially create in-water hazards and increase the potential for accidents for vessels navigating in the Main Channel or the West Basin areas during construction activities compared to No Federal Action/NEPA Baseline conditions. However, these activities are routinely conducted in the Port and compliance with standard safety precautions for in-water activities is mandated in all Port contracts. In addition, USACE permit requirements also include safety provisions (i.e., USCG notification, monitoring the VTS, and preparation of Dredge and Disposal Plans). Therefore, the temporary presence of supply barges/support boats at Berths 136-139 and 145-147 would not reduce the existing level of safety for vessel navigation in the Port. Construction impacts on vessel traffic would be less than significant under NEPA.

**Mitigation Measures**

No mitigation is required.

**Residual Impact**

Less than significant impact.

**3.11.4.3.1.2 Operational Impacts**

**Impact VT-1b:** Proposed Project operations would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or the precautionary areas.

Proposed Project operations would result in a maximum of 334 vessel calls per year when optimized and functioning at maximum capacity (year 2025) (Table 3.11-6).
### Table 3.11-6. Existing and Projected Vessel Calls at Berths 136-147

<table>
<thead>
<tr>
<th>Activity</th>
<th>CEQA Baseline (2003)</th>
<th>NO FEDERAL ACTION/NEPA BASELINE</th>
<th>The proposed Project (2038*)</th>
<th>ANNUAL INCREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 2015</td>
<td>Year 2038*</td>
<td>The proposed Project compared to the CEQA Baseline</td>
<td>The proposed Project compared to No Federal Action/NEPA Baseline</td>
</tr>
<tr>
<td>Vessel Calls</td>
<td>246</td>
<td>283</td>
<td>250</td>
<td>334</td>
</tr>
</tbody>
</table>

**Note:**
* Maximum cargo throughput would be maximized at Year 2025; full-capacity level of operation would continue through the period from Year 2025 to Year 2038. As Berths 136-147 container throughput would remain constant between Year 2025 to Year 2038, projected vessel calls at Berths 136-147 during this period would be 334 calls per year.

**The annual increase in vessel calls under the No Federal Action/NEPA Baseline only accounts for the projected annual vessel calls when Berths 136-147 are operating at full-capacity levels of operation through the period from Year 2025 to Year 2038. It is anticipated that vessel size will increase by this time, transporting more containers via fewer ships.

### CEQA Impact Determination

The proposed Project would result in an increase of 88 calls per year (approximately 8 vessel calls per month) when functioning at maximum capacity (year 2025) compared to existing vessel calls at Berths 136-147, which would be about a 35 percent increase for these berths. Due to the relatively low vessel traffic volumes at Berths 136-147 (approximately 20 vessel trips per month), the increase of approximately 8 vessel calls per month would not significantly increase vessel congestion within the West Basin.

Overall, the proposed Project would increase the total number of vessels calling at the Port by approximately 3.3 percent over the current number of the vessels that call at the Port annually. Although the additional 88 vessel calls would increase vessel traffic within the West Basin, Port, and precautionary areas, the proposed Project would not significantly increase vessel congestion within the approach corridors in the open ocean.

Proposed Project improvements would also improve overall conditions in Los Angeles Harbor by creating berth depths sized to accommodate the modern, deeper-draft class of vessels. The deeper draft berths would improve the efficiencies of shipping and port operations by reducing the relative number of vessels and vessel trips required to accommodate projected container throughput at the Port. The design parameters of the new wharves at Berths 146-147 would allow for safe maneuvering and passage through the West Basin of all ships that currently call at the Port. The proposed deepening of the areas adjacent to the berths in this area as part of the Channel Deepening Project further ensures that the larger, deeper-draft ships can safely navigate within the West Basin. While the increased ship size could affect maneuverability, the risk of accident is largely based on the number of vessels present and would therefore not have significant impacts on marine vessel safety within the Port.

Given the continued use of standard practices, including adherence to HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), and Port tariffs requiring vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board to...
use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, the projected 35 percent increase in annual vessel calls at Berths 136-147 would not significantly decrease the margin of safety for marine vessels within the proposed Project area. Scheduling of vessel call at Berths 136-147 to accommodate available berths and anchoring vessels outside the breakwater until safe transit to Berths 136-147 is authorized by the COTP would ensure the project-related 35% increase over the current number of the vessels that call at Berths 136-147 annually would not result in changes to routing and/or vessel safety procedures. Continued implementation of COTP uniform procedures including advanced notification to vessel operators, vessel traffic managers, and Port Pilots identifying the location of dredges, derrick barges, and any associated operational procedures and/or restrictions (i.e., one-way traffic) ensure safe transit of vessels operating within and to and from the project area. Therefore, marine vessel safety impacts associated with proposed Project operations would be less than significant under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Less than significant impact.

**NEPA Impact Determination**

Proposed Project operations would result in an increase of 84 vessel calls per year (approximately 7 vessel calls per month) when functioning at maximum capacity in 2025 compared to the No Federal Action/NEPA Baseline conditions (2025-2038) (see Section 2.5, Tables 2-2 and 2-4), which would be an approximately 34 percent increase for these berths. Due to the relatively low vessel traffic volumes at Berths 136-147 (approximately 20 vessel trips per month), the increase of approximately 7 vessel calls per month would not significantly increase vessel congestion within the West Basin. The additional vessel calls at Berths 136-147 would not result in adverse safety impacts under NEPA due to continued implementation of HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), and Port tariffs requiring vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board to use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways. In addition, scheduling of vessel calls at Berths 136-147 to accommodate available berths and anchoring vessels outside the breakwater until safe transit to Berths 136-147 is authorized by the COTP would ensure the project related 34 percent increase in vessel calls at the proposed Project site would not require modifications to routing and/or vessel safety procedures.

Furthermore, as the additional 84 vessel trips would increase the total number of vessels calling at the Port by approximately 3.3 percent over the current number of the vessels that call at the Port annually, and would not substantially increase vessel traffic within the Port and precautionary areas, the proposed Project would not increase vessel congestion within the approach corridors in the open ocean. Additionally, the

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3.11-20

*Berths 136-147 Terminal EIS/EIR*
proposed Project would have long-term beneficial effects on marine transportation as berths would be deepened and existing wharf infrastructure would be upgraded to accommodate modern container ships. Therefore, impacts under NEPA would be less than significant.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Less than significant impact.

### 3.11.4.3.2 Alternatives

Table 3.11-7 provides a comparison of vessel calls under the proposed Project relative to four alternatives discussed below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>CEQA Baseline (2003)</th>
<th>No Federal Action/NEPA Baseline (2038*)</th>
<th>Proposed Project (2038*)</th>
<th>No Project Alternative (2038*)</th>
<th>Proposed Project without 10-Acre Fill (2038*)</th>
<th>Reduced Wharf Alternative (2038*)</th>
<th>Omni Terminal Alternative (2038*)</th>
<th>Landside Terminal Improvements (2038*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vessel Calls</td>
<td>246</td>
<td>250</td>
<td>334</td>
<td>250</td>
<td>334</td>
<td>300</td>
<td>83</td>
<td>250</td>
</tr>
</tbody>
</table>

* Maximum cargo throughput would be maximized at Year 2025; full-capacity level of operation would continue through the period from Year 2025 to Year 2038.

#### 3.11.4.3.2.1 Alternative 1 – No Project Alternative

**Alt 1 – Impact VT-1a:** Alternative 1 would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.

The No Project Alternative (Alternative 1) would not involve further dredging activities or wharf construction; therefore, navigation would not be affected from construction.

**CEQA Impact Determination**

Under this alternative, no construction activities, including dredging/sediment disposal or development would occur within the proposed Project area. So, there are no navigational hazards from vessels relating to construction. Therefore, no
3.11 Marine Transportation

Navigational hazards from vessel associated with construction activities would occur under Alternative 1. There would be no impacts under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

No impact.

**NEPA Impact Determination**

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, potential impacts under NEPA are not applicable since there would be no federal action associated with this alternative.

**Mitigation Measures**

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

**Residual Impacts**

No impact.

**Alt 1 – Impact VT-1b: Alternative 1 operations would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.**

**CEQA Impact Determination**

As forecasted increases in cargo throughput would still occur under Alternative 1, this alternative would result in a maximum of 250 vessel calls (a reduction of 84 calls per year compared to the proposed Project) when functioning at maximum capacity (year 2025) (Table 3.11-7). Because the No Project Alternative would not allow implementation of the proposed Project or other physical improvements at the Berths 136-147 terminal beyond what already exists, larger modern container ships would not be able to navigate and access the Berths 136-147 container terminals within West Basin. The No Project Alternative would not include the long-term beneficial effects on marine transportation associated with deepening berths and upgrading existing wharf infrastructure to accommodate modern container ships.

Alternative 1 would not result in significant safety hazards under CEQA to marine transportation due to the continued use of standard navigation safety practices such as use of the pilots on board incoming and outgoing vessels, compliance with the USCG Navigation Rules of the Road, and the use of tug boats for vessel maneuvering. Therefore, impacts would be less than significant impacts under CEQA.
Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, potential impacts under NEPA are not applicable since there would be no federal action associated with this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No impact.

3.11.4.3.2.2 Alternative 2 – Reduced Project: Proposed Project Without the 10-Acre Fill

Under the Reduced Project Alternative (Alternative 2), the proposed 10-acre Northwest Slip would not be filled and the 400-foot wharf adjacent to it would not be constructed. The Reduced Project Alternative (Alternative 2) would include new wharf construction at Berth 146-147, wharf seismic improvements, dredging to create deeper berths, relocation of the Pier A rail yard, construction of the new on-dock rail yard, widening of Harry Bridges Boulevard, and development of the landscaped buffer area between Harry Bridges Boulevard and “C” Street.

Alt 2 – Impact VT-1a: Alternative 2 construction-related marine traffic would potentially interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, West Basin area, an/or precautionary areas.

Phase I (2007-2015) dredging and in-water construction activities would occur within the Port’s existing federal channel limits (i.e., channel and berthing areas). The majority of in-water activities (i.e., dredging, wharf seismic improvements, and new wharf construction) would occur in the West Basin area. Proposed dredging and in-water construction activities would require use of marine-based construction equipment (i.e., derrick/supply barge and/or dump scow) to support development of Berth 147 and installation of wharf seismic improvements at Berths 136-139 and 145-146. A diesel-powered clamshell dredge would also be used to deepen waters within close proximity to berths to be consistent with the proposed -53-foot channel depth. Sediments from the clamshell dredge would be placed in a barge and transported by a tugboat to the designated disposal area. Dredged material generated during Phase 1 would be
transported by barge to CDFs at the Port, the Port of Long Beach, or at an appropriate upland disposal site.

During Phase I, marine-based construction equipment would be present within the West Basin for up to approximately 10 months (Table 3.11-5). Approximately 265 total barge trips (i.e., approximately 2 barge trips per day) would be required to support Phase I construction activities, including transport of rock material from Catalina Island to Berth 144, sheet pile delivery associated with installation of new cranes, and transport of dredge material to Berth 205. Phase I in-water construction activities would result in an increase of approximately 3.6 active construction equipment/day within the West Basin (Table 3.11-5) (This total includes the presence of tugboats during roundtrip barging activities associated with transporting dredge material, fill, and rock material from Catalina Island).

Dredging and in-water construction activities in the West Basin could create in-water hazards to vessel traffic and increase the potential for accidents. No specific accident data are available for the project area (Berths 136-147). Due to the relatively low vessel traffic volumes within West Basin (approximately 6 vessel trips per day), the increase of approximately 3.6 active construction equipment/day for up to 10 months would not significantly increase the potential accident risk for vessels navigating within West Basin area associated with in-water construction equipment.

Approximately 265 total barge trips (i.e., approximately 2 barge trips per day) would be required to support Phase I construction activities, including transport of rock material from Catalina Island to Berth 144, sheet pile delivery associated with installation of new cranes, and transport of dredge material to Berth 205. However, as vessel calls at Berths 136-147 represent approximately one percent of the total vessels calling at the Port, the additional barge trips would not significantly increase the potential accident risk for vessels navigating within the Port and/or West Basin area.

Barge trips required to transport rock material from Catalina Island would increase traffic within the approach corridors to the Precautionary Area; however, the additional 81 barge trips that would occur over a 41 day period would not result in a significant contribution to vessel congestion within the approach corridors. Furthermore, as dredged material generated would be transported by barge to CDFs at the Ports of Los Angeles and Long Beach, the additional barge trips would not increase vessel congestion within the approach corridors in the open ocean.

Although marine-based construction equipment would restrict vessel movement within the turning basin, derricks and supply barges would be highly visible, well-marked, and would be relatively stationary as dredging equipment would only be moved prior to dredging at another location. These activities are routinely conducted in the Port and contractors performing in-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts, including navigation hazard markings. Prior to activities that require anchoring vessels in the main navigation channels, the Port’s standard vessel safety regulations require dredging contractors to acquire an Anchorage Waiver Permit. An Anchorage Waiver permit, issued by the USCG, requires notifying the COTP of expected activities; providing official and ongoing notice to mariners during construction; developing a mooring plan; and marking equipment and any debris for visibility. Compliance with
Anchorage Waiver permit requirements would ensure compliance with regulations governing the Port’s Outer Harbor and main navigation channel areas. As standard safety precautions would be utilized by all contractors, the presence of approximately 3.6 supply barges/support boats per day would not substantially impact marine vessel safety within the main channels and connected basin areas. Accordingly, proposed in-water construction equipment would not interfere with existing operations at adjacent West Basin berths.

**CEQA Impact Determination**

Construction activities could create in-water hazards to vessel traffic and increase the potential for accidents. Phase I (2007-2015) dredging and in-water construction activities would require use of marine-based construction equipment (i.e., derrick/supply barge) to support development of Berth 147 and installation of wharf seismic improvements at Berths 136-139 and 145-146. Although barge trips required to transport rock material from Catalina Island would increase traffic within the Port and the approach corridors to the Precautionary Area, the additional barge trips would not result in a significant contribution to vessel congestion within the Port and/or approach corridors. These activities are routinely conducted in the Port and contractors performing in-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts and Department of the Army permits. As standard safety precautions would be utilized by the Port in piloting these vessels through harbor waters, the short-term presence of supply barges/support boats at Berths 136-139 and 145-147 would not reduce the existing level of safety for vessel navigation in the Port. Therefore, impacts under CEQA would be less than significant.

As Alternative 2 would not require use of dump scow/supply barges to fill the 10-acre Northwest Slip or support new wharf construction (e.g., pile driving), and the associated barge trips required to transport sediments and rock materials, this alternative would result in 724 fewer barge trips compared to the proposed Project. Accordingly the potential for in-water hazards to vessels transiting the West Basin would be reduced compared to those described for the proposed Project, and the impact would be less than significant.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Less than significant impact.

**NEPA Impact Determination**

Alternative 2 construction activities include dredging, new wharf and dike construction, and upgrades to existing wharves, as described above. These construction activities would potentially create in-water hazards and increase the potential for accidents for vessels navigating in the Main Channel or the West Basin areas during construction activities compared to No Federal Action/NEPA Baseline conditions. However, these activities are routinely conducted in the Port and compliance with standard safety
3.11 Marine Transportation

precautions for in-water activities is mandated in all Port contracts. In addition, USACE permit requirements also include safety provisions (i.e., USCG notification, monitoring the VTS, and preparation of Dredge and Disposal Plans). Therefore, the temporary presence of approximately 3.6 in-water construction equipment per day at Berths 136-139 and 145-147 would not significantly reduce the existing level of safety for vessel navigation in the Port. Construction impacts on vessel traffic would be less than significant under NEPA.

As Alternative 2 would not fill the 10-acre Northwest Slip or construct the adjacent 400-foot wharf, the potential for in-water hazards to vessel traffic associated marine-based construction equipment (i.e., dump scow/supply barges) would be reduced compared to those described for the proposed Project. Alternative 2 would result in a reduction of 724 barge trips and eliminate the presence of approximately 8 in-water pieces of construction equipment per day compared to the proposed Project.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Alt 2 – Impact VT-1b: Alternative 2 operations would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.

CEQA Impact Determination

Alternative 2 would result in an increase of 88 calls per year (approximately 8 vessel calls per month) when functioning at maximum capacity (year 2025) compared to existing vessel calls at Berths 136-147, which would be about a 35 percent increase for these berths. Due to the relatively low vessel traffic volumes at Berths 136-147 (approximately 20 vessel trips per month), the increase of approximately 8 vessel calls per month would not significantly increase vessel congestion within the West Basin. Overall, this alternative would increase the total number of vessels calling at the Port by approximately 3.3 percent over the current number of the vessels that call at the Port annually. Although the additional 88 vessel calls would increase vessel traffic within the Port and precautionary areas, Alternative 2 would not significantly increase vessel congestion within the approach corridors in the open ocean.

Proposed Project improvements would also improve overall conditions in Los Angeles Harbor by creating berths sized to accommodate the modern, deeper-draft class of vessels. The deeper draft berths would improve the efficiencies of shipping and port operations by reducing the number of vessels and vessel trips required to accommodate projected container throughput at the Port. The design parameters of the new wharves at Berths 146-147 would allow for safe maneuvering and passage through the West Basin of all ships that currently call at the Port. The proposed deepening of the areas adjacent to the berths as part of the Channel Deepening Project further ensures that the
larger, deeper-draft ships can safely navigate within the West Basin. While the increased ship size could affect maneuverability, the risk of accident is largely based on the number of vessels present and would therefore not have significant impacts on marine vessel safety within the Port.

Given the continued use of standard practices, including adherence to HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), and Port tariffs requiring use of a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, and implementation of COTP uniform procedures, the projected 35 percent increase in annual vessel calls at Berths 136-147 would not significantly decrease the margin of safety for marine vessels within the proposed Project area. Scheduling of vessel call at Berths 136-147 to accommodate available berths and anchoring vessels outside the breakwater until safe transit to Berths 136-147 is authorized by the COTP would ensure the project-related 35% increase over the current number of the vessels that call at Berths 136-147 annually would not result in changes to routing and/or vessel safety procedures. Therefore, marine vessel safety impacts associated with proposed Project operations would be less than significant under CEQA.

Alternative 2 operations would result in a maximum of 334 vessel calls per year when optimized and functioning at maximum capacity (year 2025) (Table 3.11-7). As the same number of vessels would be required to support proposed Project operations, impacts on marine transportation would be equivalent to those described for the proposed Project. Although limited construction would occur under Alternative 2 (i.e., the Northwest Slip would not be filled and the 400-foot wharf adjacent to it would not be constructed), this alternative would construct the same number of the berths as the proposed Project. Therefore, impacts on vessel congestion at Berths 136-147 would be equivalent to those described for the proposed Project and would be less than significant.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Less than significant impact.

**NEPA Impact Determination**

Alternative 2 operations would result in an increase of 84 vessel calls per year (approximately 7 vessel calls per month) when functioning at maximum capacity in 2025 compared to the No Federal Action/NEPA Baseline conditions (2025-2038) (see Section 2.5, Tables 2-2 and 2-4), which would be about a 34 percent increase for these berths. Due to the relatively low vessel traffic volumes at Berths 136-147 (approximately 20 vessel trips per month), the increase of approximately 7 vessel calls per month would not significantly increase vessel congestion within the West Basin. The additional vessel calls at Berths 136-147 would not result in adverse safety impacts under NEPA.
due to continued implementation of HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), and Port tariffs requiring vessels to use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways. In addition, scheduling of vessel calls at Berths 136-147 to accommodate available berths and anchoring vessels outside the breakwater until safe transit to Berths 136-147 is authorized by the COTP would ensure the project related 34 percent increase in vessel calls at the proposed Project site would not require modifications to routing and/or vessel safety procedures.

Furthermore, as the additional 84 barge trips would increase the total number of vessels calling at the Port by approximately 3.3 percent over the current number of the vessels that call at the Port annually, and would not substantially increase vessel traffic within the Port and precautionary areas, Alternative 2 would not increase vessel congestion within the approach corridors in the open ocean. Additionally, Alternative 2 would have long-term beneficial effects on marine transportation as berths would be deepened and existing wharf infrastructure would be upgraded to accommodate modern container ships. Therefore, impacts under NEPA would be less than significant.

As Alternative 2 container terminal operations would result in the same number of vessel calls (i.e., 334) required to support proposed Project operations, impacts on marine transportation would be equivalent to the proposed Project. Although limited construction would occur under Alternative 2 (i.e., the Northwest Slip would not be filled and the 400-foot wharf adjacent to it would not be constructed), this alternative would construct the same number of the berths as the proposed Project. Therefore, impacts on vessel congestion at Berths 136-147 would be equivalent to those described for the proposed Project, and would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

3.11.4.3.2.3 Alternative 3 – Reduced Wharf

Under the Reduced Wharf Alternative (Alternative 3), the proposed new 705-foot wharf along Berths 145-147 would not be constructed, the 10-acre Northwest Slip would not be filled, and the 400-foot wharf would not be constructed adjacent to the Northwest Slip.

Alt 3 – Impact VT-1a: Alternative 3 construction-related marine traffic would potentially interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.
Proposed Phase I (2007-2015) dredging and in-water construction activities would require use of marine-based construction equipment (i.e., derrick/supply barge and/or dump scow) to support dredging, installation of wharf seismic improvements at Berths 136-139 and 145-146, and installation of new cranes at Berth 144. A diesel-powered clamshell dredge would also be used to deepen waters within close proximity to berths to be consistent with the proposed -53-foot channel depth. Sediments from the clamshell dredge would be placed in a barge and transported by a tugboat to the designated disposal area. Dredged material generated during Phase 1 would be transported by barge to CDFs at the Port, the Port of Long Beach, or at an appropriate upland disposal site.

During Phase I, marine-based construction equipment would be present within the West Basin for up to approximately one month (Table 3.11-5). Approximately 40 total barge trips (i.e., approximately 1 barge trip per day) would be required to support Phase I construction activities, including pile delivery associated with installation of new cranes, and transport of dredge material to Berth 205. Phase I in-water construction activities would result in an increase of approximately 5.8 active construction equipment/day within the West Basin (Table 3.11-5) (NOTE: This total includes the presence of tugboats during roundtrip barging activities associated with transporting dredge material, fill, and rock material from Catalina Island).

Although marine-based construction equipment would restrict vessel movement within the turning basin, derricks and supply barges would be highly visible, well-marked, and would be relatively stationary as dredging equipment would only be moved prior to dredging at another location. These activities are routinely conducted in the Port and contractors performing in-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts, including navigation hazard markings. Prior to activities that require anchoring vessels in the main navigation channels, the Port’s standard vessel safety regulations require dredging contractors to acquire an Anchorage Waiver Permit. An Anchorage Waiver permit, issued by the USCG, requires notifying the COTP of expected activities; providing official and ongoing notice to mariners during construction; developing a mooring plan; and marking equipment and any debris for visibility. Compliance with Anchorage Waiver permit requirements would ensure compliance with regulations governing the Port’s Outer Harbor and main navigation channel areas. As standard safety precautions would be utilized by all contractors, the presence of approximately 5.8 supply barges/support boats per day for one month would not significantly impact marine vessel safety within the main channels and connected basin areas. Accordingly, proposed in-water construction equipment would not interfere with existing operations at adjacent West Basin berths.

Dredging and in-water construction activities in the West Basin could create in-water hazards to vessel traffic and increase the potential for accidents. No specific accident data is available for the project area (Berths 136-147). Due to the relatively low vessel traffic volumes within West Basin (approximately 6 vessel trips per day), the increase of approximately 5.8 active construction equipment/day for up to one month would not significantly increase the potential accident risk for vessels navigating within the Port and/or West Basin area.
3.11 Marine Transportation

**CEQA Impact Determination**

Construction activities could create in-water hazards to vessel traffic and increase the potential for accidents. Phase I (2007-2015) dredging and in-water construction activities would require use of marine-based construction equipment (i.e., derrick/supply barge) to support dredging, installation of wharf seismic improvements at Berths 136-139 and 145-146, and installation of new cranes at Berth 144. However, these activities are routinely conducted in the Port and contractors performing in-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts and Department of the Army permits. As standard safety precautions would be utilized by the Port in piloting these vessels through harbor waters, the short-term presence of supply barges/support boats at Berths 136-139 and 145-147 would not reduce the existing level of safety for vessel navigation in the Port. Therefore, construction impacts on vessel traffic would be less than significant under CEQA.

Under Alternative 3 the following in-water construction activities would not occur: constructing a 705-foot wharf along Berths 145-147, filling the 10-acre Northwest Slip, and constructing the 400-foot wharf adjacent to the Northwest Slip. Elimination of these in-water construction components would reduce the potential for navigation hazards associated with marine-based construction equipment (i.e., dump scow/supply barges) compared to the proposed Project., and the impact would be less than significant.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Less than significant impact.

**NEPA Impact Determination**

Alternative 3 construction activities include dredging, installation of wharf seismic improvements at Berths 136-139 and 145-146, and installation of new cranes at Berth 144. These construction activities would potentially create in-water hazards and increase the potential for accidents for vessels navigating in the Main Channel or the West Basin areas during construction activities compared to No Federal Action/NEPA Baseline conditions. However, these activities are routinely conducted in the Port and compliance with standard safety precautions for in-water activities is mandated in all Port contracts. In addition, USACE permit requirements also include safety provisions (i.e., USCG notification, monitoring the VTS, and preparation of Dredge and Disposal Plans). Therefore, the temporary presence of supply barges/support boats at Berths 136-139 and 145-147 would not reduce the existing level of safety for vessel navigation in the Port. Construction impacts on vessel traffic would be less than significant under NEPA.

Alternative 3 would only include minimal in-water construction activities (i.e., deepening berths and wharf seismic improvements). Reduction of in-water construction components would reduce the potential for in-water hazards to vessel traffic during construction activities compared to those described for the proposed Project under the NEPA analysis, and the impact would be less than significant.
3.11 Marine Transportation

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Alt 3 – Impact VT-1b: Alternative 3 operations would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.

CEQA Impact Determination

Alternative 3 would result in an increase of 54 calls per year (approximately 4.5 vessel calls per month) when functioning at maximum capacity (year 2025) compared to existing vessel calls at Berths 136-147, which would be about a 18 percent increase for these berths. Due to the relatively low vessel traffic volumes at Berths 136-147 (approximately 20 vessel trips per month), the increase of approximately 4.5 vessel calls per month would not significantly increase vessel congestion within the West Basin. Alternative 3 would increase the total number of vessels calling at the Port by approximately 2 percent over the current number of the vessels that call at the Port annually. Although the additional 54 vessel calls would increase vessel traffic within the Port and precautionary areas, the proposed Project would not significantly increase vessel congestion within the approach corridors in the open ocean.

Project improvements would also improve overall conditions in Los Angeles Harbor by creating berth depths sized to accommodate the modern, deeper-draft class of vessels. The deeper draft berths would improve the efficiencies of shipping and port operations by reducing the number of vessels and vessel trips required to accommodate projected container throughput at the Port. The design parameters of the new wharves at Berths 146-147 would allow for safe maneuvering and passage through the West Basin of all ships that currently call at the Port. The proposed deepening of the areas adjacent to the berths as part of the Channel Deepening Project further ensures that the larger, deeper-draft ships can safely navigate within the West Basin. While the increased ship size could affect maneuverability, the risk of accident is largely based on the number of vessels present and would therefore not have significant impacts on marine vessel safety within the Port.

Given the continued use of standard practices, including adherence to HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), Port tariffs requiring vessels to use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, and implementation of COTP uniform procedures, the projected 18 percent increase in annual vessel calls at Berths 136-147 would not significantly decrease the margin of safety for marine vessels within the Project area. Scheduling of vessel call at Berths 136-147 to accommodate available berths and anchoring vessels outside the breakwater until safe transit to Berths 136-147 is
authorized by the COTP would ensure the project-related 18 percent increase over
the current number of the vessels that call at Berths 136-147 annually would not
result in changes to routing and/or vessel safety procedures. Therefore, marine
vessel safety impacts associated with Project operations would be less than
significant under CEQA.

Under Alternative 3, operations would result in a maximum of 300 vessel calls (a
decrease of 34 calls per year compared to the proposed Project) when functioning at
maximum capacity (year 2025) (Table 3.11-7). The potential for in-water hazards to
time-traffic and the probability of accidents would be decreased under this
alternative compared to those described for the proposed Project. However, this
alternative would limit the beneficial effects associated with upgrading existing
wharf infrastructure required to accommodate foreseeable containerized cargo
volumes compared to the proposed Project.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

Alternative 3 operations would result in an increase of 50 vessel calls per year
(approximately 4 vessel calls per month) when functioning at maximum capacity in 2025
compared to the No Federal Action/NEPA Baseline conditions (2025-2038) (see Section
2.5, Tables 2-2 and 2-4), which would be about a 17 percent increase for these berths.
Due to the relatively low vessel traffic volumes at Berths 136-147 (approximately 20
vessel trips per month), the increase of approximately 4 vessel calls per month would
not significantly increase vessel congestion within the West Basin. The additional
vessel calls at Berths 136-147 would not result in adverse safety impacts under NEPA
due to continued implementation of HSP speed limit regulations, adherence to limited
visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls
by dredge operators on the VTS prior to commencement of dredge operations and
transit to disposal sites, and Port tariffs requiring vessels to use a Port Pilot for
transit in and out of the San Pedro Bay area and adjacent waterways. In addition,
scheduling of vessel calls at Berths 136-147 to accommodate available berths and
anchoring vessels outside the breakwater until safe transit to Berths 136-147 is
authorized by the COTP would ensure the project related 17 percent increase in
vessel calls at the Project site would not require modifications to routing and/or
vessel safety procedures.

Furthermore, as the additional 50 barge trips would increase the total number of vessels
calling at the Port by approximately 2 percent over the current number of the vessels
that call at the Port annually, and would not substantially increase vessel traffic within
the Port and precautionary areas, the Project would not increase vessel congestion within
the approach corridors in the open ocean. Additionally, the Project would have long-term
beneficial effects on marine transportation associated with deepening berths in the West Basin. Therefore, impacts under NEPA would be less than significant.

As Alternative 3 container terminal operations would result in 34 fewer vessel calls (i.e., 334) compared to the proposed Project operations, impacts on marine transportation would be reduced in comparison, and would be less than significant.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Less than significant impact.

### 3.11.4.3.2.4 Alternative 4 – Omni Terminal

The Omni Terminal Alternative (Alternative 4) would not include any dredging or in-water activities (i.e., wharf construction/renovation, deepening berths, and construction of the 10-acre Northwest Slip and adjacent wharf). Under this alternative, an omni terminal would be constructed within the entire Berths 136-147 area.

**Alt 4 – Impact VT-1a:** Alternative 4 would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.

**CEQA Impact Determination**

Development under this alternative would not include dredging or any in-water activities (i.e., wharf construction/renovation, deepening berths, and construction of the 10-acre Northwest Slip and adjacent wharf). Therefore, the potential for in-water hazards to vessel traffic and the probability of accidents during construction would not occur. Therefore, no impacts would occur under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

No impact.

**NEPA Impact Determination**

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, potential impacts under NEPA are not applicable since there would be no federal action associated with this alternative.
Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No impact.

Alt 4 – Impact VT-1b: Alternative 4 operations would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.

CEQA Impact Determination

Under Alternative 4, an omni terminal would be constructed within the Berths 136-147 area. It is assumed that one-third of the omni terminal would be used for container cargo, one-third for automobile off-loading/transport, and one-third for break-bulk operations. Proposed Project operations under this alternative would result in a maximum of 83 vessel calls (a reduction of 163 calls compared to existing conditions) per year when optimized and functioning at maximum capacity (year 2025) (Table 3.11-7). Given the continued use of standard practices, including adherence to HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), and Port tariffs requiring use of a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, the projected decrease in annual vessel calls at Berths 136-147 would not significantly decrease the margin of safety for marine vessels within the proposed Project area. However, Alternative 4 would not include the long-term beneficial effects on marine transportation associated with deepening berths and upgrading wharf infrastructure to accommodate modern container ships. Impacts on marine vessel safety associated with Alternative 4 operations would be less than significant under CEQA.

As Alternative 4 operations would result in a maximum of 83 vessel calls (a reduction of 251 calls compared to the proposed Project) per year when optimized and functioning at maximum capacity (year 2025) (Table 3.11-7), the potential for in-water hazards to vessel traffic and the probability of accidents would be reduced under this alternative when compared to the proposed Project. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.
3.11 Marine Transportation

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, potential impacts under NEPA are not applicable since there would be no federal action associated with this alternative.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact.

3.11.4.3.2.5 Alternative 5 – Landside Terminal Improvements

Under the Landside Terminal Improvements Alternative (Alternative 5), no new developments in Harbor waters would occur (e.g., dredging, filling, and wharf reconstruction/upgrades). Backland improvements, however would take place, including the Harry Bridges Boulevard widening and buffer area as well as the railyard relocation. Terminal acreage would increase from 176 acres in 2003 to 233 acres in 2015 and remain at that level through 2038. The increased acreage for backlands would be located entirely within Port boundaries and would be well within industrial areas at the Port. The extent of on-land ground disturbances would be somewhat less than the proposed Project. All mitigation measures of the proposed Project, except for mitigations relating to dredging and new cranes, would apply. Because no federal action would occur, NEPA would not apply and no impacts would occur.

Alt 5 – Impact VT-1a: Alternative 5 construction-related marine traffic would not interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.

CEQA Impact Determination

Development under this alternative would not include dredging or any in-water activities (i.e., wharf construction/renovation, deepening berths, and construction of the 10-acre Northwest Slip and adjacent wharf). Therefore, the potential for in-water hazards to vessel traffic and the probability of accidents during construction would not occur. Therefore, no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact.
**NEPA Impact Determination**

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, potential impacts under NEPA are not applicable since there would be no federal action associated with this alternative.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

No impact.

**Alt 5 – Impact VT-1b:** Alternative 5 operations would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas.

**CEQA Impact Determination**

Alternative 5 would result in a maximum of 250 vessel calls when functioning at maximum capacity (year 2025) (Table 3.11-7). Because Alternative 5 would not include implementation of in-water construction activities (i.e., wharf construction/renovation, deepening berths, and construction of the 10-acre Northwest Slip and adjacent wharf), larger modern container ships would not be able to navigate and access the Berths 136-147 container terminals within West Basin. Alternative 5 would not include the long-term beneficial effects on marine transportation associated with deepening berths and upgrading existing wharf infrastructure to accommodate modern container ships.

Given the continued use of standard practices, including adherence to HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), and Port tariffs requiring use of a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, and implementation of COTP uniform procedures, Alternative 5 would not result in significant safety hazards under CEQA to marine transportation. Therefore, impacts would be less than significant under CEQA.

Alternative 5 operations under this alternative would result in a maximum of 250 vessel calls (a reduction of 84 calls compared to the proposed Project) per year when functioning at maximum capacity (year 2025) (Table 3.11-7). Therefore, the potential for in-water hazards to vessel traffic and the probability of accidents would be reduced under this alternative when compared to the proposed Project.

**Mitigation Measures**

No mitigation is required.
3.11 Marine Transportation

Residual Impacts

Less than significant impact.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, potential impacts under NEPA are not applicable since there would be no federal action associated with this alternative.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact.

3.11.4.3.3 Summary of Impact Determinations

The following Table 3.11-8 summarizes the CEQA and NEPA impact determinations of the proposed Project and its alternatives related to Marine Transportation, as described in the detailed discussion in Section 3.11.4.3. This table is meant to allow easy comparison between the potential impacts of the proposed Project and its alternatives with respect to this resource. Identified potential impacts may be based on Federal, State, or City of Los Angeles significance criteria, Port criteria, and the scientific judgment of the report preparers.

For each type of potential impact, the table describes the impact, notes the CEQA and NEPA impact determinations, describes any applicable mitigation measures, and notes the residual impacts (i.e.: the impact remaining after mitigation). All impacts, whether significant or not, are included in this table. Note that impact descriptions for each of the alternatives are the same as for the proposed Project, unless otherwise noted.

3.11.4.4 Mitigation Monitoring

Since the proposed Project would have no significant impacts on marine transportation, no mitigation measures nor monitoring program is required.

3.11.5 Significant Unavoidable Impacts

No significant unavoidable impacts on marine transportation would occur during construction or operation of the proposed Project or alternatives.
### Table 3.11-8: Summary Matrix of Potential Impacts and Mitigation Measures for Marine Transportation Associated with the Proposed Project and Alternatives

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Environmental Impacts*</th>
<th>Impact Determination</th>
<th>Mitigation Measures</th>
<th>Impacts after Mitigation</th>
</tr>
</thead>
</table>
| Proposed Project | VT-1a: Proposed Project construction-related marine traffic would not interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas. | CEQA: Less than significant impact  
NEPA: Less than significant impact | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Less than significant impact |
| | VT-1b: Proposed Project operations would not interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, West Basin area, and/or precautionary areas. | CEQA: Less than significant impact  
NEPA: Less than significant impact | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Less than significant impact |
| Alternative 1 | VT-1a | CEQA: No impact  
NEPA: Not applicable | Mitigation not required  
Mitigation not required | CEQA: No impact  
NEPA: Not applicable |
| | VT-1b | CEQA: Less than significant impact  
NEPA: Not applicable | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Not applicable |
| Alternative 2 | VT-1a | CEQA: Less than significant impact  
NEPA: Less than significant impact | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Less than significant impact |
| | VT-1b | CEQA: Less than significant impact  
NEPA: Less than significant impact | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Less than significant impact |
**Table 3.11-8: Summary Matrix of Potential Impacts and Mitigation Measures for Marine Transportation Associated with the Proposed Project and Alternatives (continued)**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Environmental Impacts*</th>
<th>Impact Determination</th>
<th>Mitigation Measures</th>
<th>Impacts after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>3.11 Marine Transportation (continued)</strong></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
| Alternative 3 | VT-1a | CEQA: Less than significant impact  
NEPA: Less than significant impact | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Less than significant impact |
| | VT-1b | CEQA: Less than significant impact  
NEPA: Less than significant impact | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Less than significant impact |
| Alternative 4 | VT-1a | CEQA: No impact  
NEPA: Not applicable | Mitigation not required  
Mitigation not required | CEQA: No impact  
NEPA: Not applicable |
| | VT-1b | CEQA: Less than significant impact  
NEPA: Not applicable | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Not applicable |
| Alternative 5 | VT-1a | CEQA: No impact  
NEPA: Not applicable | Mitigation not required  
Mitigation not required | CEQA: No impact  
NEPA: Not applicable |
| | VT-1b | CEQA: Less than significant impact  
NEPA: Not applicable | Mitigation not required  
Mitigation not required | CEQA: Less than significant impact  
NEPA: Not applicable |

* Unless otherwise noted, all impact descriptions for each of the Alternatives are the same as those described for the proposed Project.