Section 3.10
Marine Transportation

SECTION SUMMARY

This section describes existing marine transportation within the Port and identifies potential impacts to marine transportation including navigation and safety that would result from the implementation of the proposed Project or an alternative.

Section 3.10, Marine Transportation, provides the following:

- A description of existing levels of marine vessel traffic in the Port area;
- A description of existing navigational hazards and factors affecting vessel traffic safety in the Port, including regulations and policies;
- A discussion of the methodology used to determine whether the proposed Project or alternatives would result in an impact to marine transportation;
- An impact analysis of both the proposed Project and alternatives; and,
- A description of any mitigation measures proposed to reduce any potential impacts, as applicable.

Key Points of Section 3.10:

The proposed Project and alternatives would expand an existing container terminal, and its operations would be consistent with other uses and container terminals in the Project area.

Under CEQA, the proposed Project, and Alternatives 5 and 6, would result in an increase of 143 ship calls per year (approximately 12 ship calls per month) when functioning at maximum capacity at 2027. This represents an increase over the 247 annual ship calls at Berths 302-305 during the CEQA baseline period of July 2008 through June 2009. The addition of 143 ship calls annually would represent an increase of seven percent over total annual ship calls of 2,010 at the Port in 2009. Under NEPA, the proposed Project, and Alternatives 5 and 6 would result in an increase of 104 ship calls per year (approximately 9 ship calls per month) when functioning at maximum capacity in 2027, compared to the NEPA baseline. This would represent an increase of approximately five percent over total annual ship calls of 2,010 at the Port in 2009. The remaining build alternatives (Alternatives 2, 3, and 4 under CEQA, and Alternatives 3 and 4 under NEPA) would result in fewer ship calls than the proposed Project, and Alternatives 5 and 6.

Neither the proposed Project nor any of the alternatives would result in a significant impact to Marine Transportation under both CEQA and NEPA. Specifically:

- The proposed Project and all alternatives construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area; and,
3.10.1 Introduction

This section describes existing marine transportation within the Port and identifies potential impacts to marine transportation including navigation and safety that would occur as a result of implementation of the proposed Project or alternatives.

3.10.2 Environmental Setting

The Port is located in San Pedro Bay and is protected from Pacific Ocean surge conditions by the San Pedro, Middle, and Long Beach breakwaters (see Figure 3.10-1). 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 Los Angeles Harbor, and numerous aids to navigation have been developed.

Numerous types of 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. When approaching and leaving the Harbor, commercial vessels follow vessel traffic lanes established by the USCG. Designated traffic lanes converge at the “Precautionary Area” (see Figure 3.10-1). The Federal Channels in the Port Complex are maintained by the USACE.

3.10.2.1 Vessel Transportation Safety

Several measures are in place to ensure the safety of vessel navigation in the Harbor area. The Harbor utilizes a Vessel Traffic Service (VTS) operated jointly by the USCG Captain of the Port (COTP) and the Marine Exchange of Southern California. Using shore-based radar, the VTS monitors traffic in the approach corridor traffic lanes to the Harbor and the Precautionary Zone to ensure that the total number of vessels transiting the Port does not exceed the design capacity of the federal channel limits. Container vessels are required to report their position and destination to the VTS at certain times and locations and may also request information about traffic that could be encountered in the Precautionary Area.

The Port Complex does not require the use of a Port Pilot (a local master with a small vessel who can be retained to help guide large commercial craft) for every vessel that transits in or out of the San Pedro Bay area and adjacent waterways. However, use of a Port Pilot is required for all vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board. As most commercial vessels are of foreign registry in the Port, the number of large commercial vessels transiting without Port Pilot services is negligible. The Los Angeles and Long Beach pilot services and the Marine Exchange all operate radar systems to monitor vessel traffic in the Harbor, and information is available to all vessels upon request. The pilot services also manage the use of anchorages under an agreement with the USCG. A communication system links 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 among the various organizations.
The Port Complex does not require the use of a Port Pilot (a local master with a small vessel who can be retained to help guide large commercial craft) for every vessel that transits in or out of the San Pedro Bay area and adjacent waterways. However, use of a Port Pilot is required for all vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board. As most commercial vessels are of foreign registry in the Port, the number of large commercial vessels transiting without Port Pilot services is negligible. The Los Angeles and Long Beach pilot services and the Marine Exchange all operate radar systems to monitor vessel traffic in the Harbor, and information is available to all vessels upon request. The pilot services also manage the use of anchorages under an agreement with the USCG. A communication system links 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 among the various organizations.

The USCG “Rules of the Road” apply to all marine vessels, regardless of size. To minimize the potential for accidents, all marine vessels in the Port Complex are required to follow vessel safety policies and regulations contained in the Navigation Rules: International and Inland (USCG Nav. Rule CG-169).

For the open seas, the International Rules apply and were ratified at the Convention on the International Regulations for Preventing Collisions at Sea, 1972. The International Rules apply to all vessels of nations that ratified the treaty, in addition to the United Nations. The International Rules include 38 numbered rules organized into five parts: A – General, B – Steering and Sailing Rules, C – Lights and Shapes, D – Sound and Light Signals, and E – Exemptions.

Efforts to unify and update various inland navigation rules culminated in 1980 with the enactment of the Inland Navigation Rules Act (22 CFR 83). The Inland Rules were established under the authorization of International Rule 1(b) to apply to all inland waters of the United States. The Inland Rules numbered 1 through 38 closely match, in some cases exactly, the International Rules. All marine vessels in the Port are required to follow these vessel safety policies and regulations.

The measures enacted to ensure safe vessel navigation are regulated by various agencies and organizations, as described below.

### Marine Exchange of Southern California

The Marine Exchange is a voluntary, nonprofit organization affiliated with the Los Angeles Chamber of Commerce that was created to enhance navigation safety in the Precautionary Area and Harbor area of the Ports. The services provided consist 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 (e.g., 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.
### 3.10.2.1.2 Vessel Traffic Service

VTS is jointly operated by the Marine Exchange and the USCG. VTS monitors traffic with shore-based radar in both the main approach and departure lanes, including the Precautionary Area, as well as internal movement inside the Harbor. VTS uses radar, radio, and visual inputs to collect real-time vessel traffic information and broadcasts traffic advisories to assist mariners. In addition, container vessels are required to report their positions and destinations to VTS at certain times and locations. They may also request information about traffic they could encounter in the Precautionary Area.

Further, VTS implements the COTP’s uniform procedures, including advance notification to vessel operators, vessel traffic managers, and Port Pilots identifying the locations of dredges, derrick barges, and any associated operational procedures or restrictions (e.g., one-way traffic), to ensure safe transit of vessels in and to and from the proposed Project area. In addition, a communication system links 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 among the various organizations.

### 3.10.2.1.3 Traffic Separation Schemes

A Traffic Separation Scheme (TSS) is an internationally recognized vessel routing designation, which separates opposing flows of vessel traffic into lanes, including a zone between lanes where transit 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 a TSS, but failure to do so, if one is available, would be a major factor for determining liability in the event of a collision. TSS designations are proposed by the USCG, but they must be approved by the International Maritime Organization (IMO), which is part of the United Nations.

### 3.10.2.1.4 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. The USACE is prohibited from issuing permits for surface structures (e.g., oil platforms) in safety fairways, which are frequently located between a port and the entry into a TSS.

### 3.10.2.1.5 Precautionary and Regulated Navigation Areas

A Precautionary Area is designated in congested areas near the Harbor entrances. The Precautionary Area enables Harbor officials to set speed limits or to establish other safety precautions for ships entering or departing the Harbor. A regulated navigation area (RNA) is a water area within a defined boundary for which federal regulations have been established under 33CFR165.1109 for vessels navigating in this area. In the Harbor, RNA boundaries match the designated Precautionary Area. For example, 33CFR 165.1152 identifies portions of the Precautionary Area as RNA.

The Precautionary Area for the Port is defined by a line that extends south from Point Fermin approximately 7 nautical miles (nm), then due east approximately 7 nm, then northeast for approximately 3 nm, and then back northwest (see Figure 3.10-1). 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 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 and, thus, 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 Los Angeles/Long Beach Harbor Safety Committee. Pilots typically board the vessels at the Angels Gate entrance, and then direct the vessels to their destinations. Pilots normally leave the vessels after docking and reboard 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 in 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 (e.g., Port Tariffs) in the 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. When a local pilot is not used, masters must have a local federal pilot license and receive approval from the USCG COTP prior to entering or departing the Port. 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 to 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 in the Harbor (Los Angeles/Long Beach 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, thus can accomplish maneuvers with the same precision as a tug-assisted vessel. These ships are not required to have external tug assistance. No vessels using internal tugs would be associated with the proposed Project.

### Physical Oceanographic Real Time System

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 Port. 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 Harbor water levels, currents, salinity, and winds.

The instruments that collect the PORTS information are deployed to provide data at critical locations and to allow “now-casting” and forecasting using a mathematical model of the oceanographic processes of the Harbor. 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 Harbor Safety Plan (HSP) contains additional procedures for vessels operating in the Port vicinity. The vessel operating procedures stipulated in the HSP are considered Good Marine Practice. Some of the 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 Port jurisdiction. Another important safety measure is the issuance of the weekly Local Notice to Mariners by the USCG. These notices list various activities that could pose a hazard to mariners in the Port.

### 3.10.2.2 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 that compose the Harbor complex. These hazards are easily visible on 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. The Port 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 longer than 656 ft (200 meters).

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 Port Complex experiences a mechanical failure during their inbound or outbound transit.

### 3.10.2.2.1 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. As shown in Table 3.10-1, the number of vessel allisions, collisions, and groundings (ACGs) in the Harbor has remained fairly constant between 1996 and 2009. The number of ACGs ranged from 3 to 12 per year between 1996 and 2009, at an average of seven ACG incidents per year (U.S. Naval Academy, 1999; Los Angeles/Long Beach Harbor Safety Committee, 2004, 2007, and 2011). While there are no reliable data on the level of recreational boating incidents in the Harbor over this 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 a USCG marine casualty investigation, and the subsequent actions taken were targeted at preventing future occurrences.

According to the USCG vessels accidents database, the 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 ACG probability for all U.S. ports (U.S. Naval Academy, 1999).

### Table 3.10-1: Allisions, Collisions, and Groundings – Port Complex (1996-2009)

<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>
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<td>5</td>
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<td>6</td>
<td>5</td>
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<td>11</td>
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<td>2003</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>8</td>
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<td>2004</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>2005</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
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<tr>
<td>2006</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>2007</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>2008</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2009</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>


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.

#### 3.10.2.2 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 nm, or 500 yards. These incidents usually occur in the Precautionary Area. No reliable data are available for close-quarters incidents outside the VTS area. Normal action taken in response to close-quarters situations includes initiating informal USCG investigation, sending Letters of Concern to owners and operators, having the involved vessel master visit VTS and review the incident, and USCG enforcement boardings. A 6-year history of the number of close-quarters situations is presented in Table 3.10-2. Recent near-miss data for 2006 through 2008 were obtained from the 2009 Harbor Safety Plan, which is also included in Table 3.10-2 (Los Angeles/Long Beach Harbor Safety Committee, 2009). Given the relatively steady number of commercial transits over the past 5 years, a decreasing trend in close-quarters incidents is discernable (Los Angeles/Long Beach Harbor Safety Committee, 2007 and 2009). This is noticeable in the low number of near-miss situations from 2006 to 2008.
Table 3.10-2: Number of VTS-Recorded Close-Quarters Incidents, 1998-2009

<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>
<tr>
<td>2004</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>0</td>
</tr>
<tr>
<td>2006</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>1</td>
</tr>
<tr>
<td>2008</td>
<td>1</td>
</tr>
<tr>
<td>2009</td>
<td>5</td>
</tr>
</tbody>
</table>


3.10.2.3 Factors Affecting Vessel Traffic Safety

This section summarizes environmental conditions that could affect vessel safety in the Harbor area.

3.10.2.3.1 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 San Pedro Bay is below 0.5 mile for 7 to 10 days per month. Fog at the Port 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 on 3 to 8 days per month from August through April and is generally at its worst in December (Los Angeles/Long Beach Harbor Safety Committee, 2004).

3.10.2.3.2 Winds

Wind conditions vary widely, particularly in fall and winter. Winds can be strongest 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 wind 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 (Los Angeles/Long Beach Harbor Safety Committee, 2004).
Winter storms produce strong winds over San Pedro Bay, particularly southwesterly through northwesterly 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 (Los Angeles/Long Beach Harbor Safety Committee, 2004).

### 3.10.2.3.3 Tides

The mean range of tide is 3.8 ft for the Port. The diurnal range is about 5.4 ft, and a range of 9 ft may occur at maximum tide.

### 3.10.2.3.4 Currents

The tidal currents follow the axes of the channels and rarely exceed 1 knot. The Harbor area is subject to seiches (i.e., 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 1-hour period. Near Reservation Point, the prominent hourly surge causes velocity variations as great as 1 knot. These variations often overcome the lesser tidal current, so that the current ebbs and flows at 0.5-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 (Los Angeles/Long Beach Harbor Safety Committee, 2004).

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

### 3.10.2.3.5 Water Depths

The USACE maintains the Federal Channels in the Port Complex. Table 3.10-3 includes the water depth at various locations in the Harbor.
Table 3.10-3: Water Depths within the Port of Los Angeles

<table>
<thead>
<tr>
<th>Channel/Basin</th>
<th>Depth – MLLW ft (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Channel</td>
<td>-53 (-16.2)</td>
</tr>
<tr>
<td>Turning Basin</td>
<td>-53 (-16.2)</td>
</tr>
<tr>
<td>West Basin</td>
<td>-53 (-16.2)</td>
</tr>
<tr>
<td>East Basin</td>
<td>-45 (-13.7)</td>
</tr>
<tr>
<td>Pier 300/400 Channel</td>
<td>-55 (-16.8)</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>


3.10.2.4 Vessel Traffic

A total of 2,010 vessels were called at the Port in 2009. Vessel traffic to the Port was relatively constant through 2007, but has declined over the last two years, as indicated in Table 3.10-4. The increase in cargo volumes prior to 2009 has been accommodated primarily by larger vessels, rather than additional vessels.

Table 3.10-4: Ship Calls at the Port of Los Angeles

<table>
<thead>
<tr>
<th>Year</th>
<th>Ship Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>2,786</td>
</tr>
<tr>
<td>1998</td>
<td>2,569</td>
</tr>
<tr>
<td>1999</td>
<td>2,630</td>
</tr>
<tr>
<td>2000</td>
<td>3,060</td>
</tr>
<tr>
<td>2001</td>
<td>2,717</td>
</tr>
<tr>
<td>2002</td>
<td>2,526</td>
</tr>
<tr>
<td>2003</td>
<td>2,660</td>
</tr>
<tr>
<td>2004</td>
<td>2,850</td>
</tr>
<tr>
<td>2005</td>
<td>2,500</td>
</tr>
<tr>
<td>2006</td>
<td>2,701</td>
</tr>
<tr>
<td>2007</td>
<td>2,537</td>
</tr>
<tr>
<td>2008</td>
<td>2,239</td>
</tr>
<tr>
<td>2009</td>
<td>2,010</td>
</tr>
</tbody>
</table>


Commercial vessel traffic in the Pier 300 Channel consists mostly of container shipping associated with the APL Terminal (Berths 302-305) and the APM Terminal (Berths 401-406), with an average of approximately 1-2 vessels per day transiting the Pier 300 Channel to support these terminals.
3.10.3 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.

3.10.3.1 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.

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

3.10.3.2 U.S. Coast Guard

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 continuous service of a licensed pilot for vessels moving between the Port Complex outside the breakwaters.

3.10.3.3 Department of Defense

The Department of Defense (DoD), through the USACE, is responsible for reviewing all aspects of a project and spill response activities that could affect navigation. The USACE Operations and Maintenance (O&M) program is responsible for maintaining navigation channels, removing navigation obstructions, and accomplishing structural repairs. The USACE has regulatory jurisdiction under Section 10 of the River and Harbor Act of 1899 for all work and structures in, over, or under navigable waters that could affect navigable capacity.

3.10.3.4 Other Organizations

3.10.3.4.1 Marine Exchange of Southern California

As described in Section 3.10.2.1, Vessel Transportation Safety, the Marine Exchange is a non-profit organization affiliated with the Los Angeles 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 in the Precautionary Area and
operates PORTS (see Section 3.10.2.1) as a service to those making operational decisions based on oceanographic and meteorological conditions in the vicinity of the Ports.

### 3.10.3.4.2 Harbor Safety Committee

The Los Angeles/Long Beach Harbor Safety Committee (Committee) is responsible for planning the safe navigation and operation of tankers, barges, and other vessels in San Pedro Bay and approach areas. This Committee was 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 HSP in 1991 and has issued annual updates since. Major issues facing the Committee include the need for escort tugs, required capabilities of escort tugs, and 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.

### 3.10.3.4.3 Harbor Safety Plan

The HSP provides specific rules for navigation of vessels in reduced visibility conditions. The HSP does not recommend transit for vessels greater than 150,000 deadweight tonnage (DWT) if visibility is less than 1 nm. For all other vessels, transit is not recommended if visibility is less than 0.5 nm.

The HSP establishes vessel speed limits. In general, speeds should not exceed 12 knots inside the Precautionary Area or 6 knots in 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, and other possible issues are taken into account.

### 3.10.3.4.4 Vessel Transportation Service

As described previously, VTS is a shipping service operated by USCG or public/private sector consortiums (see Section 3.10.2.1). These services monitor traffic in both approach and departure lanes, as well as internal movement in 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 the Port Complex is located at the entrance of the Los Angeles/Long Beach Harbor area. The system is owned by the Marine Exchange and is operated jointly by the Marine Exchange and the USCG under the oversight of the OSPR and the 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 Harbor. The VTS assists in the safe navigation of vessels approaching the Port in the Precautionary Area. The partnership is a unique and effective approach that has gained acceptance from the maritime community.
3.10.4 Impacts and Mitigation Measures

3.10.4.1 Methodology

Impacts on marine transportation are assessed by determining the net increase in vessel traffic resulting from the proposed Project or an alternative compared to the ability of the Port to safely accommodate vessel traffic and the potential for proposed Project- or alternative-related activities during both construction and operation to increase risks to vessel traffic. Existing regulations regarding vessel safety are designed to avoid potential impacts and are considered standard practice.

3.10.4.1.1 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 normally would constitute the baseline physical conditions by which the CEQA lead agency determines if an impact is significant. For purposes of this Draft EIS/EIR, the CEQA baseline for determining the significance of potential Project impacts is the environmental set of conditions that prevailed at the time the NOP was published for the proposed Project - July 2009. The CEQA baseline takes into account the throughput for the 12-month period preceding July 2009 (July 2008 through the end of June 2009) in order to provide a representative characterization of activity levels throughout the year. The CEQA baseline conditions are described in Section 2.6.1. The CEQA baseline for this proposed Project includes approximately 1.13 million TEUs per year, 998,728 annual truck trips, and 247 annual ship calls that occurred on the 291-acre APL Terminal in the year prior to and including June 2009.

The CEQA baseline represents the setting at a fixed point in time and differs from the No Project Alternative (Alternative 1) in that the No Project Alternative addresses what is likely to happen at the proposed Project site over time, starting from the existing conditions. Therefore, the No Project Alternative allows for growth at the proposed Project site that could be expected to occur without additional approvals, whereas the CEQA baseline does not.

3.10.4.1.2 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 NEPA baseline. The NEPA baseline conditions are described in Section 2.6.2. Briefly, the NEPA baseline condition for determining significance of impacts includes the full range of construction and operational activities the applicant could implement and is likely to implement absent a federal action, in this case the issuance of a USACE permit. The NEPA baseline includes minor terminal improvements in the upland area (i.e., conversion of a portion of the dry container storage unit area to reefers and utility infrastructure), operation of the 291-acre container terminal, and assumes that by 2027, the terminal (Berths 302 to 305) handles up to approximately 2.15 million TEUs annually and accommodates 286 annual ships calls and 2,336 on-way rail trips, without any federal action. Because the NEPA baseline is dynamic, it includes different levels of terminal operations at each study year (2012, 2015, 2020, 2025, and 2027).

Unlike the CEQA baseline, which is defined by conditions at a point in time, the NEPA baseline is not bound by statute to a “flat” or “no-growth” scenario. Therefore, the
USACE could project increases in operations over the life of a project to properly describe the NEPA baseline condition. Normally, any federal permit decision would focus on direct impacts of the proposed Project 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 proposed Project or alternative under NEPA is defined by comparing the proposed Project or alternative to the NEPA baseline (i.e., the increment).

The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative. Under the No Federal Action Alternative, only minor terminal improvements (utility infrastructure, and conversion of dry container storage to refrigerated container storage) would occur, but no new cranes would be added, and the terminal configuration would remain as it was configured in 2008 (291 acres, 12 A-frame cranes, and a 4,000-ft wharf). However, forecasted increases in cargo throughput and annual ship calls would still occur as container growth occurs.

### 3.10.4.2 Thresholds of Significance

There are no marine transportation thresholds specific to NEPA; therefore, the CEQA thresholds are used for both NEPA and CEQA analysis.

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 or alternative would have a significant impact on marine transportation if it would:

VT-1 Substantially interfere with the operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.

### 3.10.4.3 Impact Determination

#### 3.10.4.3.1 Proposed Project

**Impact VT-1: Proposed Project construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.**

Construction of the proposed terminal improvements would include dredging of approximately 20,000 cy along Berth 306 (and associated beneficial reuse and/or disposal of the dredged material at approved sites) to increase the berth depth to -55 ft MLLW plus an additional two ft of overdepth to accommodate larger deeper draft vessels. In addition, the existing wharf would be extended by approximately 1,250 lf at Berth 306 would be constructed (no fill or dike would be required). The wharf would be extended eastward from the existing Berth 305 to the area where Berth 306 would be created. Wharf construction would include pile driving. The piles would be transported to the site by truck and thus not require in-water transport.

Under the proposed Project, a total of 12 new A-frame cranes would be installed on the wharf at Berths 302-306. Their installation would require the use of general cargo ships
for delivery to the proposed Project site. Initially, four cranes would be installed by the 
beginning of 2013, and the remaining eight cranes would be installed by the end of 2014.

The types of marine-based construction equipment and the duration of its use at the 
proposed Project site are presented in Table 3.10-5. Phase I in-water and over-water 
construction extends over a 24-month period during which equipment would be active for 
a total of 46 workdays. When weighted by the number of pieces of equipment, this 
equates to 93 equipment workdays. On average, there would be 0.13 pieces of 
equipment active daily over the 730 days during in-water/over-water construction. No 
in-water/over-water construction would occur during Phase II.

The construction of the wharf extension and Berth 306 would last approximately 22 
months (beginning around the fourth quarter of 2012). The initial new crane delivery is 
expected by the third quarter of 2012 and additional crane deliveries in the third quarter 
of 2014. Delivery and installation of the A-frame cranes would last up to one (1) month 
in 2012 and again in 2014. Delivery of the cranes would occur by general cargo vessel 
with one tugboat, and up to four cranes would be carried by one vessel.

Table 3.10-5: Marine-Based Construction Equipment Associated with the Proposed Project

<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 (Workdays)</th>
<th>Total Active Equipment Workdays</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Wharf and Dredging</td>
<td>Pile driving/dredging</td>
<td>Derrick Barge Crane Hoist</td>
<td>1</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support Boat</td>
<td>1</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>Crane Delivery and</td>
<td>General Cargo Ship – Transit</td>
<td>General Cargo Ship – Hoteling</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Installation</td>
<td></td>
<td>Tugboat</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total (Phase I)</td>
<td></td>
<td></td>
<td></td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>Average Number of Marine Equipment Workdays</td>
<td></td>
<td></td>
<td></td>
<td>0.13</td>
<td></td>
</tr>
</tbody>
</table>

As discussed in Section 2.5.2.1, dredging activities at Berth 306 (Phase I) would require 
the presence of a dredge and associated equipment, likely an electronic dredge with a 
clamshell dredge (derrick barge) or a crane mounted on a barge with a clamshell bucket, 
and an associated support vessel (i.e., dive boat) for approximately one month. 
Depending upon the quality of the dredge sediments and site availability, dredged 
material would be beneficially reused and/or disposed of at an approved disposal site 
(such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat). If these 
options are unavailable or impracticable, an existing ocean disposal site could be 
considered (i.e., LA-2).
In-water/over-water construction activities in the Pier 300 Channel are not expected to result in substantial hazards to vessel traffic or substantially increase the potential for accidents. Currently, the Pier 300 Channel experiences a relatively low volume of commercial vessel traffic, averages between 1-2 vessel trips per day.\(^1\) Due to the staggered nature of construction activities, the APL Terminal would be partially operational as construction continues, which would slightly increase the number of vessels transiting the Pier 300 Channel.

Although marine-based construction equipment could restrict some vessel movement inside the Pier 300 Channel during the one month dredging period, the derrick and support boat would be highly visible, well-marked, and relatively stationary. In-water/over-water construction activities are conducted routinely in the Port; and contractors performing in-water/over-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 standard vessel safety regulations of the Port 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 Outer Harbor of the Port and main navigation channel areas during construction of the proposed Project. Because standard safety precautions would be utilized by all contractors, the presence of the derrick/support boat would not substantially affect marine vessel safety in the main channels and connected basin areas. Accordingly, proposed in-water construction equipment would not interfere with existing operations at Pier 300 berths, including APL Terminal and the APM Terminal operations at Berths 401-406.

By year 2027, the projected operational throughput at the APL Terminal is 3,206,000 (or 3.2 million) TEUs annually. The projected annual vessel traffic represents an increase over the existing (baseline) operational conditions as shown below. The proposed Project would result in approximately 390 annual ship calls per year (approximately 33 vessel calls per month) when functioning at maximum capacity in 2027, compared to the existing baseline conditions.

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\(^1\) No vessel traffic data specific to Pier 300 Channel are currently available. The average of daily commercial traffic presented here is based on combined annual throughput (existing levels) for the APL Terminal (Pier 300) and APM Terminal (Pier 400), since these are the major users. The APL Terminal has a current throughput of 1,128,080 annual TEUs, with approximately 247 annual ship calls (494 associated tug trips). The APM Terminal throughput for 2010 was 1,880,000 TEUs. Using the APL Terminal’s average TEUs per ship (i.e., 4,567 TEUs per ship), the annual number of ship calls at the APM Terminal would be approximately 412 (824 associated tug trips). Therefore, the average vessel traffic in the Pier 300 Channel is estimated to be 1.8 ship calls currently. The source of APM Terminal throughput is available at: [http://www.apmterminals.com/uploadedFiles/corporate/Media_Center/Press_Releases/110323-APM-Terminals-PMA-Safety-Awards-2010.pdf](http://www.apmterminals.com/uploadedFiles/corporate/Media_Center/Press_Releases/110323-APM-Terminals-PMA-Safety-Awards-2010.pdf)
Table 3.10-6: Existing and Projected Annual Ship Calls at Berths 302-306 at Full Build-out (2027)

<table>
<thead>
<tr>
<th>Activity</th>
<th>CEQA Baseline (July 2008-June 2009)</th>
<th>NEPA Baseline Year 2027</th>
<th>Proposed Project (2027)</th>
<th>Annual Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship Calls</td>
<td>247</td>
<td>286</td>
<td>390</td>
<td>+143</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+104</td>
</tr>
</tbody>
</table>

Although the increase in annual ship calls (143) would increase vessel traffic in the Pier 300 Channel, Outer Harbor, and Precautionary Area, the proposed Project would not significantly increase vessel congestion within these areas or in the open-ocean approach corridors.

The proposed Project would also improve overall conditions in the Harbor by extending the existing wharf by 1,250 lf and creating the new Berth 306, which would be sized to accommodate modern, deep-draft vessels with greater cargo capacity. The new deep-draft berth is expected to improve shipping and Port operations by helping to accommodate increased efficiencies associated with larger ship capacities to meet future Port throughput demands rather than meeting that demand with a higher number of smaller vessels. The design parameters of the new wharf at Berth 306 would continue to allow for safe maneuvering within the Pier 300 Channel of all ships that currently call at Berths 302-305 (north side of channel) and Berths 401-406 (south side of channel). The dredging along Berth 306 would ensure that the larger, deep-draft ships would be able to navigate and berth safely.

Given the continued use of standard practices, including adherence to HSP speed-limit regulations, adherence to limited-visibility guidelines, VTS monitoring requirements, 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 increase in annual ship calls in the Pier 300 Channel at Berths 302-306 would not significantly decrease the margin of safety for marine vessels in the proposed Project area. Scheduling of ship calls from outside the breakwaters to Berths 302-306 would continue to be authorized by the COTP to ensure that the projected increase in vessel traffic would not result in changes to routing or vessel safety procedures. Continued implementation of COTP uniform procedures, including providing advanced notification to vessel operators, vessel traffic managers, and Port Pilots to identify the location of dredges, derrick barges, or other possible obstructions and any associated operational procedures or restrictions (e.g., one-way traffic), would ensure safe transit of vessels operating within and to and from the proposed Project site.

**CEQA Impact Determination**

The increase in construction vessels (approximately five vessels during the 24-month construction period) in the Pier 300 Channel is not expected to significantly increase the potential accident risk for vessel navigation or navigation safety. Therefore, construction impacts on vessel traffic would be less than significant under CEQA.

The proposed Project would result in an increase of 143 ship calls per year (approximately 12 ship calls per month) when functioning at maximum capacity in 2027,
compared to the existing 247 ship calls under the CEQA baseline period. The addition of 143 ship calls annually would represent an increase of just over seven percent over total annual ship calls of 2,010 at the Port Complex in 2009. Although the additional 143 ship calls per month would increase vessel traffic in the Pier 300 Channel, Outer Harbor, and Precautionary Area, the proposed Project would not significantly increase vessel congestion or compromise safety within these areas or in the open-ocean approach corridors. Therefore, vessel congestion and safety impacts associated with operation of the proposed Project would be less than significant under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Impacts would be less than significant.

**NEPA Impact Determination**

The increase in construction vessels (approximately five vessels during the 24-month construction period) in the Pier 300 Channel is not expected to significantly increase the potential accident risk for vessel navigation or navigation safety. Therefore, construction impacts on vessel traffic would be less than significant under NEPA.

The proposed Project operations would result in a maximum of 390 ship calls per year by 2027. This would result in an increase of 104 ship calls per year (approximately nine ship calls per month) when functioning at maximum capacity in 2027, compared to the NEPA baseline. This would represent an increase of just about five percent over total annual ship calls of 2,010 at the Port in 2009.

Although the additional 104 ship calls would increase vessel traffic in the Pier 300 Channel, Outer Harbor, and Precautionary Area, the proposed Project would not significantly increase vessel congestion in the open-ocean approach corridors or result in adverse safety impacts under NEPA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Impacts would be less than significant.

### 3.10.4.3.2 Alternatives

Table 3.10-7 provides a comparison of annual ship calls under the proposed Project to the six Project alternatives discussed below.
Table 3.10-7: Comparison of Ship Calls under the Proposed Project and Alternatives (2012-2027)

<table>
<thead>
<tr>
<th>Alternative</th>
<th>2012</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2027</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Project</td>
<td>234</td>
<td>286</td>
<td>338</td>
<td>364</td>
<td>390</td>
</tr>
<tr>
<td>Alternative 1 – No Project</td>
<td>234</td>
<td>234</td>
<td>234</td>
<td>286</td>
<td>286</td>
</tr>
<tr>
<td>Alternative 2 – No Federal Action</td>
<td>234</td>
<td>234</td>
<td>234</td>
<td>286</td>
<td>286</td>
</tr>
<tr>
<td>Alternative 3 – Reduced Project: Four New Cranes</td>
<td>234</td>
<td>234</td>
<td>286</td>
<td>338</td>
<td>338</td>
</tr>
<tr>
<td>Alternative 4 – Reduced Project: No New Wharf</td>
<td>234</td>
<td>234</td>
<td>286</td>
<td>338</td>
<td>338</td>
</tr>
<tr>
<td>Alternative 5 – Reduced Project: No Space Assignment</td>
<td>234</td>
<td>286</td>
<td>338</td>
<td>364</td>
<td>390</td>
</tr>
<tr>
<td>Alternative 6 – Proposed Project with Expanded On-Dock Railyard</td>
<td>234</td>
<td>286</td>
<td>338</td>
<td>364</td>
<td>390</td>
</tr>
</tbody>
</table>

3.10.4.3.2.1 Alternative 1 – No Project

Under Alternative 1, no further Port action or federal action would occur. The Port would not construct and develop additional backlands, wharves, or terminal improvements. No new cranes would be added, no gate or backland improvements would occur, and no infrastructure for AMP at Berth 306 or automation in the backland area adjacent to Berth 306 would be provided. This alternative would not include any dredging, new wharf construction, or new cranes. The No Project Alternative would not include development of any additional backlands because the existing terminal is berth-constrained and additional backlands would not improve its efficiency.

Under the No Project Alternative, the existing APL Terminal would continue to operate as an approximately 291-acre container terminal. Based on the throughput projections, terminal operations are expected to grow over time as throughput demands increase.

Under Alternative 1, the existing APL Terminal would handle approximately 2.15 million TEUs by 2027, which would result in 286 annual ship calls at Berths 302-305. In addition, this alternative would result in up to 7,273 peak daily one-way truck trips (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Under Alternative 1, cargo ships that currently berth and load/unload at the Berths 302-305 terminal would continue to do so.

The No Project Alternative would not preclude future improvements to the proposed Project site. However, any future changes in use or new improvements with the potential to significantly impact the environment would need to be analyzed in a separate environmental document.

Impact VT-1: Alternative 1 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.

Under the No Project Alternative, no terminal improvements, in-water, or over-water construction would occur, and the 291-acre terminal would continue to operate through
2027. When operating at full capacity in 2027 under Alternative 1, the existing APL Terminal is projected to handle a cargo throughput of approximately 2.15 million TEUs. This increase in throughput would require 286 annual ship calls and up to 572 tug boat trips.

**CEQA Impact Determination**

Alternative 1 would result in an increase of 39 ship calls per year (approximately three additional calls per month) when functioning at maximum capacity in 2027. These ship calls would exceed the ship calls that occurred in the CEQA baseline (247 ship calls), but would be less than the proposed Project.

Given the continued adherence to standard navigation and piloting safety protocols and measures, the projected increase in annual ship calls in the Pier 300 Channel at Berths 302-305 would not significantly decrease the margin of safety for marine vessels in the proposed Project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 1 would be less than significant under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Impacts would be less than significant.

**NEPA Impact Determination**

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

**Mitigation Measures**

Mitigation measures are not applicable.

**Residual Impacts**

An impact determination is not applicable.

**3.10.4.3.2.2 Alternative 2 – No Federal Action**

The No Federal Action Alternative would be the same as the NEPA baseline and would include only the activities and impacts likely to occur absent further USACE federal approval but could include improvements that require a local action. Under Alternative 2, no federal action would occur; however, minor terminal improvements in the upland area of the existing APL Terminal would be implemented. These minor upland improvements would include conversion of a portion of the dry container storage area to an additional 200 reefers, associated electrical lines, and installation of utility infrastructure at locations in the existing backland areas. Beyond these minor upland improvements, the Port would not construct and develop additional backlands or wharves. No gate or additional backland improvements would occur, and no in-water features such as dredging or a new berth, wharf extension, or over-water features such as new cranes would occur under the No Federal Action Alternative.
Under the No Federal Action Alternative, the existing APL Terminal would continue to operate as an approximately 291-acre container terminal, and up to approximately 2.15 million TEUs could be handled at the terminal by 2027. Based on the throughput projections, the No Federal Action Alternative would result in 286 annual ship calls at Berths 302-305. In addition, this alternative would result in up to 7,273 peak daily truck trips (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Cargo ships that currently berth and load/unload at the Berths 302-305 terminal would continue to do so.

**Impact VT-1: Alternative 2 construction- or operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.**

Alternative 2 would include minor upland improvements, including installation of utility infrastructure throughout the backland areas and conversion of dry container storage to refrigerated container storage (referred to as a new reefer area). No construction of in-water or over-water features would occur under Alternative 2, and therefore, marine vessel safety impacts associated with construction of Alternative 2 improvements would not occur under CEQA.

**CEQA Impact Determination**

Similar to Alternative 1, the existing APL Terminal under Alternative 2 would increase its throughput to 2.15 million TEUs, which would require 286 annual ship calls and up to 572 tug boat trips. Given the continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project, the projected increase in annual ship calls in the Pier 300 Channel at Berths 302-305 would not significantly decrease the margin of safety for marine vessels in the proposed Project area or transit of vessels operating within and to and from the proposed Project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 2 would be less than significant under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Impacts would be less than significant.
NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

3.10.4.3.2.3 Alternative 3 – Reduced Project: Four New Cranes

Under Alternative 3, four new cranes would be added to the existing wharf along Berths 302-305 and only minor improvements to the existing APL Terminal would be made (utility infrastructure and conversion of dry container storage to reefers). No other upland terminal improvements would be constructed. The existing terminal is berth-constrained, and adding the additional four cranes would improve the terminal’s efficiency.

The total acreage of backlands under Alternative 3 would remain at approximately 291 acres, which would be less than the proposed Project. This alternative would not include the extension of the existing wharf, construction of a new berth, dredging, or the relocation and improvement of various gates and entrance lanes.

Based on the throughput projections, TEU throughput under Alternative 3 would be less than the proposed Project, with an expected throughput of approximately 2.58 million TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305. In addition, this alternative would result in up to 8,725 peak daily truck trips (2,306,460 annual), and up to 2,544 annual one-way rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

Impact VT-1: Alternative 3 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.

Under Alternative 3, no expansion of the terminal area would occur, but minor upland improvements to the existing terminal would be made and four new cranes would be added to the existing wharf. The addition of new cranes would be subject to the same navigation and construction requirements as the proposed Project. Crane delivery and installation would not interfere with existing operations at Pier 300 berths, including APL Terminal and the APM Terminal operations at Berths 401-406 (Pier 400), because the Pier 300 Channel can accommodate vessels delivering cranes. Under Alternative 3, one additional cargo vessel would use the Pier 300 Channel for crane delivery. Delivery and installation of the four new cranes are not expected to result in a significant contribution to vessel navigation or safety in the Pier 300 Channel approach corridors. Such construction activities are routinely conducted in the Port, and contractors performing in-water/over-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts and USACE permits.
CEQA Impact Determination

Construction activities, including the delivery of four additional cranes via ships, would be subject to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project. As discussed under the proposed Project, and above, Alternative 3 is not expected to result in construction-related impacts due to the installation of four cranes, and minor upland improvements. Therefore, construction impacts on vessel traffic under Alternative 3 would not result in a significant impact under CEQA.

Alternative 3 would result in 91 additional ship calls to Berths 302-305 over to the CEQA baseline level, which is an increase that would occur gradually through 2027. Given the continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project, the projected increase in annual ship calls in the Pier 300 Channel at Berths 302-305 would not significantly decrease the margin of safety for marine vessels in the proposed Project area or transit of vessels operating within and to and from the proposed Project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 3 would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction activities, including the delivery of four additional cranes via ships, would be subject to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project. As a consequence, the addition of cranes under Alternative 3 would not result in a significant impact to navigation or navigation safety under NEPA.

Alternative 3 would result in 52 additional ship calls to Berths 302-305 at the APL Terminal over the NEPA baseline, which is an increase that would occur gradually through 2027. Given the continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project, the projected increase in annual ship calls in the Pier 300 Channel at Berths 302-305 would not significantly decrease the margin of safety for marine vessels in the proposed Project area and transit of vessels operating within and to and from the proposed Project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 3 would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.
Alternative 4 – Reduced Project: No New Wharf

Under Alternative 4, six cranes would be added to the existing terminal wharf at Berths 302-305, and the 41-acre fill area adjacent to the APL Terminal would be developed as container yard backlands. EMS would relinquish the 30 acres of backlands under space assignment. EMS would not add the nine acres of land behind Berth 301 or the two acres at the main gate to its permit. Because no new wharf would be constructed at Berth 306, the 41-acre backland would be operated using traditional methods and would not be expected to transition to use of automated equipment. As the existing wharf would not be extended to create Berth 306, no dredging would occur.

Under Alternative 4, the total terminal acreage would be 302 acres, which is less than the proposed Project. Based on the throughput projections, TEU throughput would be less than the proposed Project, with an expected throughput of approximately 2.78 million TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305. In addition, Alternative 4 would result in up to 9,401 peak daily truck trips (2,485,050 annual), and up to 2,563 annual one-way rail trip movements. Configuration of all other landside terminal components (i.e., Main Gate improvements) would be identical to the proposed Project.

Impact VT-1: Alternative 4 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.

Under Alternative 4, the existing APL Terminal would be expanded to increase its backland acreage and six new cranes would be added to the existing wharf along Berths 302-305. The addition of new cranes would be subject to the same navigation and construction requirements as under the proposed Project. Delivery and installation of the new cranes are not expected to interfere with existing operations at Pier 300 berths, including the APL Terminal and the APM Terminal operations at Berths 401-406 (Pier 400), because the Pier 300 Channel can accommodate vessels delivering cranes. Under Alternative 4, two additional cargo vessels would use the Pier 300 Channel for crane delivery. Crane delivery and installation activities are not expected to result in a significant contribution to vessel navigation or safety in the Pier 300 Channel or approach corridors. Such activities are routinely conducted in the Port, and contractors performing in-water/over-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts and USACE permits.

CEQA Impact Determination

Construction activities, including the delivery of four additional cranes via ships, would be subject to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project. As discussed under the proposed Project, and above, Alternative 4 is not expected to result in construction-related impacts due to the installation of six new cranes, backland development, and minor upland improvements. Therefore, construction impacts on vessel traffic under Alternative 4 would not result in a significant impact under CEQA.

Alternative 4 would result in an operational increase of 91 ship calls per year (approximately eight additional calls per month) through 2027, compared to existing ship calls at Berths 302-305 under the CEQA baseline. Given the continued adherence to
standard navigation and piloting safety protocols and measures, as previously described for the proposed Project, the projected increase in annual ship calls in the Pier 300 Channel at Berths 302-305 would not significantly decrease the margin of safety for marine vessels in the proposed Project area and transit of vessels operating within and to and from the proposed Project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 4 would be less than significant under CEQA.

Mitigation Measures
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

NEPA Impact Determination
Construction activities, including the delivery of six additional cranes and other equipment via ships, would be subject to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project. As a consequence, the addition of cranes under Alternative 4 would not result in a significant impact to navigation or navigation safety under NEPA.

Alternative 4 would result in an operational increase of 52 ship calls per year by 2027 (approximately eight additional calls per month) at the existing Berths 302-305, when compared to existing ship calls at Berths 302-305 under the CEQA baseline.

Alternative 4 would result in 52 additional ship calls at the existing Berths 302-305 over the NEPA baseline, which is an increase that would occur gradually through 2027. Given the continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project, the projected increase in annual ship calls in the Pier 300 Channel at Berths 302-305 would not significantly decrease the margin of safety for marine vessels in the proposed Project area and transit of vessels operating within and to and from the proposed Project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 4 would be less than significant under NEPA.

Mitigation Measures
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

3.10.4.3.2.5 Alternative 5 – Reduced Project: No Space Assignment

Alternative 5 would improve the existing terminal, construct a new wharf (1,250 ft) creating Berth 306, add 12 new cranes to Berths 302-306, add 56 acres for backlands, wharfs, and gates improvements, construct electrification infrastructure in the backlands behind Berths 305-306, and relinquish the 30 acres currently on space assignment. This alternative would be the same as the proposed Project, except that EMS would relinquish the 30 acres of backlands under space assignment. As with the proposed Project, the 41-acre backlands and Berth 306 under Alternative 5 could utilize traditional container operations, electric automated operations, or a combination of the two over time.
Dredging of the Pier 300 Channel along the new wharf at Berth 306 (approximately 20,000 cy) would occur, with the dredged material beneficially reused, and/or disposed of at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal site (i.e., LA-2).

Under Alternative 5, the total gross terminal acreage would be 317 acres, which is less than the proposed Project. TEU throughput would be the same as the proposed Project, with an expected throughput of approximately 3.2 million TEUs by 2027. This would translate into 390 annual ship calls at Berths 302-306. In addition, this alternative would result in up to 11,361 peak daily truck trips (3,003,157 annual) including drayage, and up to 2,953 annual one-way rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

**Impact VT-1: Alternative 5 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.**

Alternative 5 would include primarily the same in-water and over-water features as the proposed Project, such as extending the existing wharf by approximately 1,250 lf for the creation of Berth 306, dredging of approximately 20,000 cy along Berth 306 (and the associated beneficial reuse and/or disposal of the dredged material), and delivery and installation of 12 new cranes along the existing and extended wharf. Wharf construction and crane delivery and installation would be subject to the same regulatory and construction requirements as described for the proposed Project. Accordingly, proposed in-water and over-water construction under Alternative 5 would not interfere with existing vessel operations in the Pier 300 Channel, including APL Terminal (Berths 302-305) and the APM Terminal (Berths 401-406). Under Alternative 5, the increase in the number of construction vessels in the Pier 300 Channel would average 0.13 vessels per day. In-water and over-water construction activities for the new wharf at Berth 306, dredging of Berth 306, and crane delivery and installation are not expected to result in a significant contribution to vessel navigation or safety in the Pier 300 Channel or approach corridors. Such construction 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 USACE permits.

**CEQA Impact Determination**

Construction activities, including the delivery of 12 additional cranes and other construction equipment and supplies via water (ships), would be subject to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project. As discussed under the proposed Project, and above, Alternative 5 is not expected to result in construction-related impacts due to the construction and installation of the elements described above. Therefore, construction impacts on vessel traffic during dredging under Alternative 5 would not result in a significant impact under CEQA.

Alternative 5 would result in an operational increase of 143 ship calls per year (approximately 12 ship calls per month) when functioning at maximum capacity in 2027, compared to existing ship calls at Berths 302-305 under the CEQA baseline. This projected increase is the same level under the proposed Project. The addition of 143 ship calls annually would represent an increase of just over seven percent over total annual
ship calls of 2,010 at the Port in 2009. Although the additional 143 ship calls would increase vessel traffic in the Pier 300 Channel, Outer Harbor, and Precautionary Area, Alternative 5 is not expected to significantly increase vessel congestion in the open-ocean approach corridors. The same navigational safety protocols that would apply to the proposed Project would also apply to Alternative 5.

Given the continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project, the projected increase in annual ship calls in the Pier 300 Channel at Berths 302-306 would not significantly decrease the margin of safety for marine vessels in the terminal area and transit of vessels operating within and to and from the proposed Project area. Therefore, marine vessel safety impacts associated with Alternative 5 operations would be less than significant under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Impacts would be less than significant.

**NEPA Impact Determination**

Construction and installation of the elements described above are not included in the NEPA baseline, which only includes minor upland improvements that would occur absent federal action as described in Section 2.6.2. Implementation of Alternative 5 would be subject to the same navigation and construction requirements as described under the proposed Project, and above. Accordingly, proposed in-water and over-water construction under Alternative 5 would not interfere with existing vessel operations in the Pier 300 Channel, including APL Terminal (Berths 302-305) and the APM Terminal (Berths 401-406). Construction activities associated with Alternative 5 are not expected to create substantial in-water or over-water hazards or substantially increase the potential for accidents for vessels navigating in the Pier 300 Channel or elsewhere in the Harbor, compared to NEPA baseline conditions. As discussed for the proposed Project, in-water and over-water construction activities are routinely conducted in the Port, and would be required to comply with standard safety precautions mandated by the Port and USACE permit requirements. Therefore, construction impacts on vessel traffic would be less than significant under NEPA.

Terminal operations under Alternative 5 would result in an increase of 104 ship calls per year (approximately nine ship calls per month) when functioning at maximum capacity in 2027, compared to the NEPA baseline. This is the same as the proposed Project and would represent an increase of just over five percent over total annual ship calls of 2,010 at the Port in 2009. Although the additional 104 ship calls would increase vessel traffic in the Pier 300 Channel, Outer Harbor, and Precautionary Area, Alternative 5 would not significantly increase vessel congestion in the open-ocean approach corridors.

The additional ship calls at Berths 302-306 would not result in adverse safety impacts under NEPA because of continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 5 would be less than significant under NEPA.
Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.10.4.3.2.6 Alternative 6 – Proposed Project with Expanded On-Dock Railyard

Alternative 6 would be the same as the proposed Project; however, the existing on-dock railyard on the terminal would be redeveloped and expanded. Under this alternative, approximately 10 acres of backlands would be removed from container storage for the railyard expansion. Alternative 6 would improve the existing terminal, develop the existing 41-acre fill area as backlands, add 1,250 ft of new wharf creating Berth 306, and dredge the Pier 300 Channel along Berth 306. Under this alternative, 12 new cranes would be added to the wharves along Berths 302-306, for a total of 24 cranes. As with the proposed Project, the 41-acre backlands and Berth 306 under Alternative 6 could utilize traditional container operations, electric automated operations, or a combination of the two over time. Dredging of the Pier 300 Channel along Berth 306 would occur (removal of approximately 20,000 cy of material), with the dredged material beneficially reused and/or disposed of at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal site (i.e., LA-2). Total terminal acreage (347) would be the same as the proposed Project.

Based on the throughput projections, TEU throughput would be the same as the proposed Project, with an expected throughput of approximately 3.2 million TEUs by 2027. This would translate into 390 annual ship calls at Berths 302-306. In addition, Alternative 6 would result in up to 10,830 peak daily truck trips (2,862,760 annual), and up to 2,953 annual rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

Impact VT-1: Alternative 6 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.

Alternative 6 would include the same in-water and over-water features as the proposed Project, including the wharf extension (1,250 lf) for the creation of Berth 306, dredging of approximately 20,000 cy along Berth 306 (and the associated beneficial reuse, disposal of the dredged material, or a combination of these methods), and delivery and installation of 12 new cranes along the APL Terminal wharf. Construction activities would be subject to the same regulatory and construction requirements as described for the proposed Project. Accordingly, the proposed in-water and over-water construction activities under Alternative 6 would not interfere with existing vessel operations in the Pier 300 Channel, including APL Terminal (Berths 302-305) and the APM Terminal (Berths 401-406). Under Alternative 6, the increase in the number of construction vessels in the Pier 300 Channel would average 0.13 vessels per day. In-water and over-water construction activities for the wharf extension for the new Berth 306, dredging of Berth 306, and crane delivery/installation are not expected to result in a significant contribution to vessel navigation or safety in the Pier 300 Channel or approach corridors. Such construction activities are routinely conducted in the Port, and
contractors performing in-water construction/over-water activities are subject to
applicable rules and regulations stipulated in all LAHD contracts and USACE permits.

**CEQA Impact Determination**

Construction activities, including the delivery of 12 additional cranes and other
construction equipment and supplies via water (ships), would be subject to standard
navigation and piloting safety protocols and measures, as previously described for the
proposed Project. As discussed under the proposed Project and above, implementation of
Alternative 6 is not expected to result in substantial impacts due to the construction and
installation of the elements described above. Therefore, construction impacts on vessel
traffic during dredging and associated dredged material reuse and/or disposal under
Alternative 6 would not result in a significant impact under CEQA.

Alternative 6 would result in an operational increase of 143 ship calls per year
(approximately 12 ship calls per month) when functioning at maximum capacity in 2027,
compared to existing ship calls at Berths 302-305 under the CEQA baseline. This is the
same as the proposed Project. The addition of 143 ship calls annually would represent an
increase of just over 7 percent over total annual ship calls of 2,010 at the Port in 2009.
Although the additional 143 ship calls would increase vessel traffic in the Pier 300
Channel, Outer Harbor, and Precautionary Area, Alternative 6 is not expected to
significantly increase vessel congestion in the open-ocean approach corridors. The same
navigational safety protocols that would apply to the proposed Project would also apply
to Alternative 6.

Given the continued adherence to standard navigation and piloting safety protocols and
measures, as previously described for the proposed Project, the projected increase in
annual ship calls in the Pier 300 Channel at Berths 302-306 would not significantly
decrease the margin of safety for marine vessels in the terminal area and safe transit of
vessels operating within and to and from the proposed Project area. Therefore, marine
vessel safety impacts associated with Alterative 6 operations would be less than
significant under CEQA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Impacts would be less than significant.

**NEPA Impact Determination**

Improvements under Alternative 6 are not included under the NEPA baseline. The
in-water/over-water construction activities are not expected to create substantial hazards
or substantially increase the potential for accidents of vessels navigating in the Pier 300
Channel or elsewhere in the Harbor, compared to NEPA baseline conditions. As
discussed for the proposed Project, these activities are routinely conducted in the Port and
must comply with standard safety precautions mandated in all Port contracts and USACE
permit requirements. Therefore, construction impacts on vessel traffic would be less than
significant under NEPA.
Terminal operations under Alternative 6 would result in an increase of 104 ship calls per year (approximately 9 ship calls per month) when functioning at maximum capacity in 2027, compared to the NEPA baseline. This is the same as the proposed Project and would represent an increase of just over five percent over total annual ship calls of 2,010 at the Port in 2009. Although the additional 104 ship calls would increase vessel traffic in the Pier 300 Channel, Outer Harbor, and Precautionary Area, Alternative 6 would not significantly increase vessel congestion in the open-ocean approach corridors.

The additional ship calls would not result in adverse safety impacts under NEPA because of continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project. Therefore, terminal operations under Alternative 6 would not result in significant impacts to marine navigation or vessel safety under NEPA.

**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Impacts would be less than significant.

### 3.10.4.4 Summary of Impact Determinations

The following Table 3.10-8 summarizes the CEQA and NEPA impact determinations of the proposed Project and alternatives related to Marine Transportation, as described in the detailed discussion above. This table is meant to allow easy comparison between the potential impacts of the proposed Project and alternatives with respect to this resource. The potential impacts identified below 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 impact threshold, 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.
Table 3.10-8: 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>
<tbody>
<tr>
<td>Proposed Project</td>
<td>VT-1: Proposed Project construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.</td>
<td>CEQA: Less than significant</td>
<td>Mitigation not required</td>
<td>CEQA: Less than significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NEPA: Less than significant</td>
<td></td>
<td>NEPA: Less than significant</td>
</tr>
<tr>
<td>Alternative 1 – No Project</td>
<td>VT-1: Alternative 1 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.</td>
<td>CEQA: Less than significant</td>
<td>Mitigation not required</td>
<td>CEQA: Less than significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NEPA: Not applicable</td>
<td></td>
<td>NEPA: Not applicable</td>
</tr>
<tr>
<td>Alternative 2 – No Federal Action</td>
<td>VT-1: Alternative 2 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.</td>
<td>CEQA: Less than significant</td>
<td>Mitigation not required</td>
<td>CEQA: Less than significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NEPA: No impact</td>
<td></td>
<td>NEPA: No impact</td>
</tr>
<tr>
<td>Alternative 3 – Reduced Project: Four New Cranes</td>
<td>VT-1: Alternative 3 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.</td>
<td>CEQA: Less than significant</td>
<td>Mitigation not required</td>
<td>CEQA: Less than significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NEPA: Less than significant</td>
<td></td>
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<tbody>
<tr>
<td>Alternative 4 – Reduced Project: No New Wharf</td>
<td>VT-1: Alternative 4 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.</td>
<td>CEQA: Less than significant</td>
<td>Mitigation not required</td>
<td>CEQA: Less than significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NEPA: Less than significant</td>
<td></td>
<td>NEPA: Less than significant</td>
</tr>
<tr>
<td>Alternative 5 – Reduced Project: No Space Assignment</td>
<td>VT-1: Alternative 5 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.</td>
<td>CEQA: Less than significant</td>
<td>Mitigation not required</td>
<td>CEQA: Less than significant</td>
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<tr>
<td></td>
<td></td>
<td>NEPA: Less than significant</td>
<td></td>
<td>NEPA: Less than significant</td>
</tr>
<tr>
<td>Alternative 6 – Proposed Project with Expanded On-Deck Railyard</td>
<td>VT-1: Alternative 6 construction- and operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area.</td>
<td>CEQA: Less than significant</td>
<td>Mitigation not required</td>
<td>CEQA: Less than significant</td>
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<tr>
<td></td>
<td></td>
<td>NEPA: Less than significant</td>
<td></td>
<td>NEPA: Less than significant</td>
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</table>
3.10.4.5 Mitigation Monitoring

Neither the proposed Project nor any of the alternatives would result in significant impacts on Marine Transportation. Therefore, no mitigation measures or a monitoring program are required.

3.10.5 Significant Unavoidable Impacts

No significant unavoidable impacts on Marine Transportation would occur during construction or operation of the proposed Project or alternatives.