

3.11

MARINE TRANSPORTATION

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3.11.1 Introduction

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

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

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3.11.2 Environmental Setting

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

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Numerous vessels including fishing boats, pleasure vessels, passenger-carrying vessels, tankers, auto carriers, container vessels, dry bulk carriers, and barges call or reside in the Port. Commercial vessels follow vessel traffic lanes established by the U.S. Coast Guard (USCG) when approaching and leaving the Harbor. Designated traffic lanes converge at the "Precautionary Area" (Figure 3.11-1).

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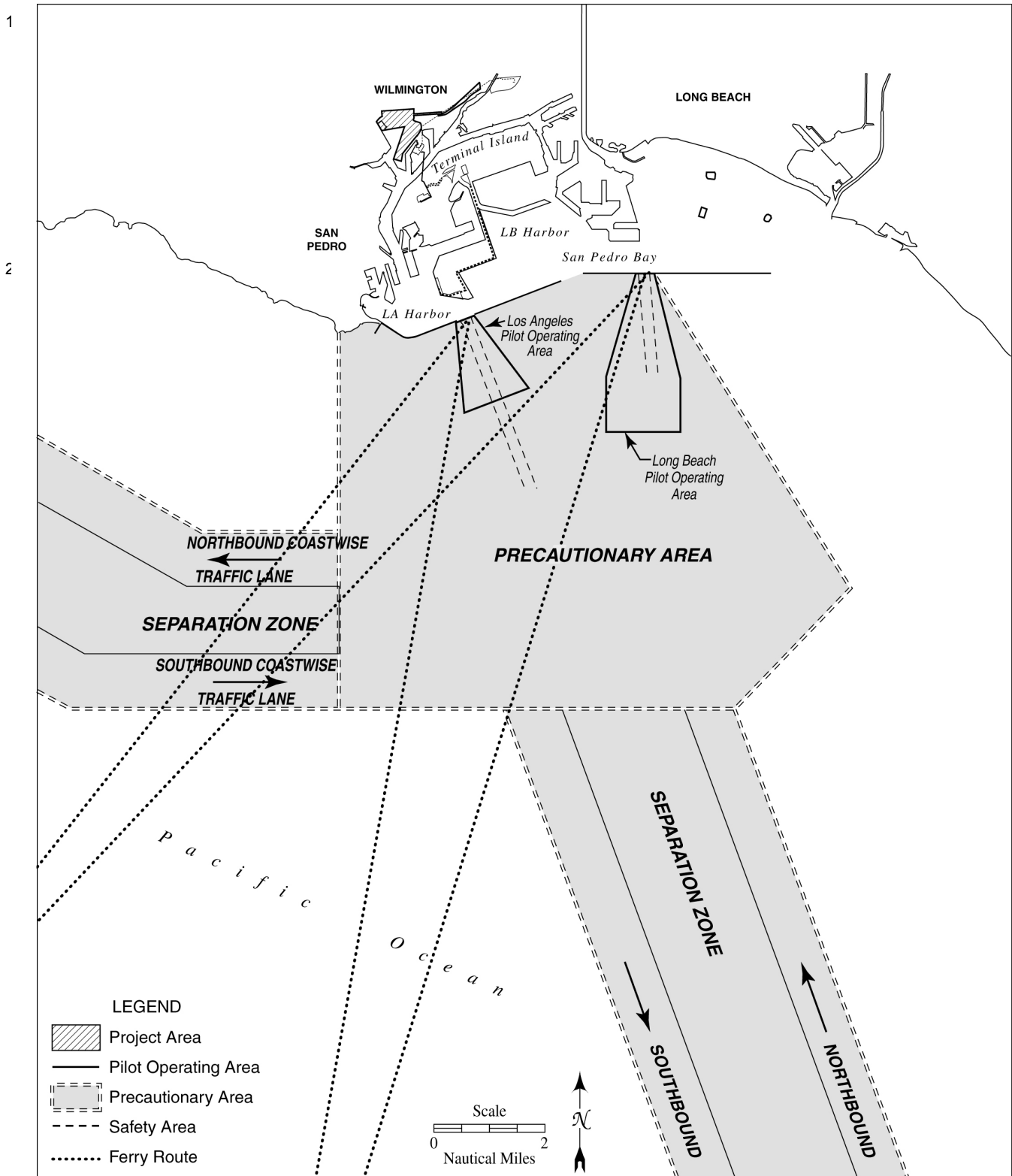


Figure 3.11-1. Vessel Navigation Safety Areas at Port of Los Angeles and Port of Long Beach

3.11.2.1 Vessel Transportation Safety

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

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

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

Vessel Traffic Service (VTS). VTS is operated by the Marine Exchange and the USCG, to monitor traffic with shore-based radar within both the main approach and departure lanes, including the Precautionary Area, as well as internal movement within harbor areas. The VTS uses radar, radio, and visual inputs to collect “real time” vessel traffic information and broadcast traffic advisories to assist mariners. In addition, vessels are required to report their positions and destinations to the VTS at certain times and locations, and may also request information about traffic they could encounter in the Precautionary Area. Furthermore, the VTS implements the COTP’s uniform procedures including advanced notification to vessel operators, vessel traffic managers, and Port Pilots identifying the location of dredges, derrick barges, and any associated operational procedures and/or restrictions (i.e., one-way traffic) ensure safe transit of vessels operating within and to and from the proposed Project area. In addition, a communication system links the following key operational centers: USCG COTP, VTS, Los Angeles Pilot Station, Long Beach Pilot Station, and Port of Long Beach Security. This system is used to exchange vessel movement information and safety notices between the various organizations.

1 **Traffic Separation Schemes (TSS).** A TSS is an internationally recognized vessel
2 routing designation, which separates opposing flows of vessel traffic into lanes,
3 including a zone between lanes where traffic is to be avoided. TSSs have been
4 designated to help direct offshore vessel traffic along portions of the California
5 coastline, such as the Santa Barbara Channel. Vessels are not required to use any
6 designated TSS, but failure to use one, if available, would be a major factor for
7 determining liability in the event of a collision. TSS designations are proposed by
8 the USCG, but must be approved by the International Maritime Organization (IMO),
9 which is part of the United Nations.

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

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

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

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

44 The Port also enforces numerous federal navigation regulations (i.e., Port tariffs)
45 within Los Angeles Harbor. Specifically, larger commercial vessels (i.e., greater

1 than 300 gross tons) are required to use a federally-licensed pilot when navigating
 2 inside the breakwater. In most circumstances, vessels employ the services of a
 3 federally-licensed local pilot from the Los Angeles Harbor Pilots. In instances where
 4 a local pilot is not used, masters must have a local federal pilot license and receive
 5 approval by the USCG COTP prior to entering or departing the Port. The Port
 6 Tariffs also require vessels to notify the affected pilot station(s) in situations when a
 7 pilot is not needed before entering, leaving, shifting, or moving between the Ports.

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

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

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

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

42 3.11.2.2 Navigational Hazards

43 Port Pilots can easily identify fixed navigational hazards in the ports, including
 44 breakwaters protecting the outer harbor, anchorage areas, and various wharfs and

landmasses which comprise the harbor complex. These hazards are both easily visibly by radar and are currently illuminated. Four bridges cross the navigation channels of both ports. All bridges have restricted vertical clearances, and two have restricted horizontal clearances as well.

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

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

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

Table 3.11-1. Allisions, Collisions, and Groundings – POLA/POLB (1996-2003)

<i>Year</i>	ACG INCIDENTS			<i>Total</i>
	<i>Allisions</i>	<i>Collisions</i>	<i>Groundings</i>	
1996	2	4	1	7
1997	1	3	2	6
1998	1	2	3	6
1999	3	4	2	9
2000	3	2	1	6
2001	4	1	0	5
2002	6	5	0	11
2003	4	2	2	8

Source: Harbor Safety Committee 2004; U.S. Naval Academy 1999

Note: These commercial vessel accidents meet a reportable level defined in 46 CFR 4.05, but do not include commercial fishing vessel or recreational boating incidents.

1 According to the USCG vessels accidents database, the POLA/POLB Harbor area has
 2 one of the lowest accident rates among all U.S. ports, with a 0.0038 percent probability of
 3 a vessel experiencing an ACG during a single transit, as compared to the average 0.025
 4 percent vessel ACG probability for all U.S. ports (U.S. Naval Academy 1999).

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

6 *A reportable ‘Near Miss’ is an incident in which a pilot, master or other*
 7 *person in charge of navigating a vessel, successfully takes action of a ‘non-*
 8 *routine nature’ to avoid a collision with another vessel, structure, or aid to*
 9 *navigation, or grounding of the vessel, or damage to the environment.*

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

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

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

<i>Year</i>	<i>No. of Close Quarters</i>
1998	9
1999	5
2000	1
2001	2
2002	6
2003	4
Source: Harbor Safety Committee 2004	

24 3.11.2.3 Factors Affecting Vessel Traffic Safety

25 This section summarizes environmental conditions that could impact vessel safety in
 26 the POLA area.

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

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

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

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

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

40 USACE ship navigation studies indicate that within the POLA channels, current
41 magnitudes are essentially a negligible 1/3 knot or less. Maximum current velocity in the
42 Angel's Gate area is less than one knot. These current magnitudes, determined during a
43 simulation study, indicate depth-averaged values over three layers. According to
44 Jacobsen Pilot Service, the Long Beach Queen's Gate has deeper water than Angel's

1 Gate and has more open waterways just inside the breakwater. The pilots have never
2 experienced a current greater than one knot in this area (Harbor Safety Committee 2004).

3 **Water Depths.** USACE maintains the Federal Channels in the POLA and POLB. Table
4 3.11-3 lists water depths in the LA Harbor. Some of the channels have been dredged
5 deeper than the required Proposed Project depth by POLA, and are maintained by POLA.

Table 3.11-3. Water Depths within POLA

<i>Channel/Basin</i>	<i>Depth – MLLW ft (m)</i>
Main Channel	-45 (-13.7)
Turning Basin	-45 (-13.7)
West Basin	-45 (-13.7)
East Basin	-45 (-13.7)
North Channel (Pier 300/400)	-53 (-16.2)
North Turning Basin	-81 (-24.7)
Approach and Entrance Channels	-81 (-24.7)
<i>Source: Harbor Safety Committee 2004</i>	

6 **3.11.2.4 Vessel Traffic**

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

Table 3.11-4. Vessel Calls at the Port of Los Angeles

<i>Year</i>	<i>Vessel Calls</i>
2003	2,660
2002	2,526
2001	2,899
2000	3,060
1999	2,630
1998	2,569
1997	2,786
<i>Source: LAHD 2004</i>	

11 Commercial vessel traffic in the West Basin consists mostly of container shipping, with
12 fewer tankers and other marine traffic. Approximately 6 vessels transit the West Basin
13 per day to support TraPac container terminal operations at Berths 136-147, Yang Ming

1 container terminal operations at Berth 121, Kinder Morgan liquid bulk operations at
2 Berths 118-120, and China Shipping container terminal operations at Berth 100).

3 The previously approved Los Angeles Harbor Channel Deepening Project (USACE
4 and LAHD 2000) would consist of deepening the main navigational channels and
5 connected basins from the existing -45' mean lower low water (MLLW) to -53'
6 MLLW. The Channel Deepening Project would occur within the Port's existing
7 federal channel limits (Main Channel, the West Basin, East Basin, and Cerritos
8 Channel) and five berthing areas (Berths 121-131, 136-139, 206-209, 212-221, and
9 226-236) to accommodate modern container ships.

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

14 **3.11.3 Applicable Regulations**

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

19 **Federal Agencies**

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

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

29 **U.S. Coast Guard (USCG)**

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

1 Department of Defense (DoD)

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

7 Other Organizations

8 Marine Exchange of Southern California

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

18 Harbor Safety Committee

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

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

34 Harbor Safety Plan

35 The Harbor Safety Plan (HSP) provides specific rules for navigation of vessels in
36 reduced visibility conditions, and does not recommend transit for vessels greater than
37 150,000 DWT if visibility is less than 1 nautical mile (nm), and for all other vessels if
38 visibility is less than 0.5 nm.

1 The HSP establishes vessel speed limits. In general, speeds should not exceed 12 knots
2 within the Precautionary Area or 6 knots within the harbor. These speed restrictions do
3 not preclude the master or pilot from adjusting speeds to avoid or mitigate unsafe
4 conditions. Weather, vessel maneuvering characteristics, traffic density,
5 construction/dredging activities, and other possible issues are taken into account.

6 **Vessel Transportation Service**

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

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

21 **3.11.4 Impacts and Mitigation Measures**

22 **3.11.4.1 Methodology**

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

28 **3.11.4.1.1 CEQA Baseline**

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

36 The CEQA Baseline represents the setting at a fixed point in time, with no project growth
37 over time, and differs from the "No Project" Alternative (discussed in Section 2.5.1) in
38 that the No Project Alternative addresses what is likely to happen at the site over time,

1 starting from the baseline conditions. The No Project Alternative allows for growth at
2 the proposed Project site that would occur without any required additional approvals.

3 **3.11.4.1.2 No Federal Action/NEPA Baseline**

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

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

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

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

3.11.4.2 Thresholds of Significance

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

VT-1 Potentially interfere with the operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, West Basin area, or precautionary areas.

3.11.4.3 Impacts and Mitigation

3.11.4.3.1 Proposed Project

3.11.4.3.1.1 Construction Impacts

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

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

Dredged material generated during Phase 1 would be transported by barge to confined disposal facilities (CDFs) at the Port, the Port of Long Beach, or at an appropriate upland disposal site. To transport the dredged material to a disposal site, it is assumed that a 2,000 cy barge would have a 90 percent effective material loading capacity because 10 percent of the capacity would be taken up by water and material bulking, which is the volume of the material that expands upon excavation. This reduction in barge capacity would also accommodate the need to not load the barges beyond the extent to which they can fully contain the dredged material during transport to the disposal site. Therefore, each barge would load approximately 1,800 cy of material. However, as fill and rock material are dry, all barges transporting fill and rock material from Catalina Island would have a 2,000 cy material loading capacity.

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

Table 3.11-5. Marine-Based Construction Equipment Associated with the Proposed Project

<i>Proposed Project Element</i>	<i>Activity</i>	<i>Equipment Type</i>	<i>Number of Active Equipment</i>	<i>Duration of Activity (work days)</i>	<i>Total Active Equipment Work Days</i>
PHASE I (2007-2015)					
New Wharves at Berths 146-147	Wharf Demolition	Derrick Barge/Tugboat ⁽¹⁾	1	28	28
	Piledriving ⁽²⁾	Derrick Barge/Tugboat ⁽¹⁾	1	87	87
		Derrick Barge/Tugboat ⁽¹⁾	1	33	33
		Cargo ship ⁽³⁾ (sheet pile delivery)/ Tugboat (cargo ship assist)	1	2	2
	Rip Rap Placement	Barge/Tugboat ⁽¹⁾	4	40.5	243
		Tugboat ⁽⁴⁾	2		
New Cranes	Existing Crane Removal	Tugboat ⁽⁵⁾	4	6	24
	Install New Cranes	Cargo ship ⁽³⁾ (sheet pile delivery)/ Tugboat (cargo ship assist)	2	4	8
Dredging	Dredge and Disposal	Derrick Barge	5	88	616
		Tugboat ⁽⁶⁾	2		
Total (Phase I)			23	289	1,044
Average Number of Equipment/Work Day (Phase I)					3.6
PHASE II (2015-2025)					
New Wharf at Northwest Slip	Dredge Dike Toe	Derrick Barge	1	1	1
		Tugboat ⁽⁷⁾	2	1	2
	Rip-Rap Placement	Barge/Tugboat ⁽¹⁾	4	23.5	141
		Tugboat ⁽⁴⁾	2		
	Channel Deepening	Anchor Barge/Tugboat ⁽¹⁾	1	25	25
	Disposal into Dike	Tugboat ⁽⁷⁾	27	25	675
	Piledriving ⁽²⁾	Derrick Barge/Tugboat ⁽¹⁾	1	20	20
		Derrick Barge/Tugboat ⁽¹⁾	1	14	14
Cargo ship ⁽³⁾ (sheet pile delivery)/ Tugboat (cargo ship assist)		1	2	2	
Total (Phase II)			40	111.5	880
Average Number of Equipment/Work Day (Phase II)					8

Table 3.11-5. Marine-Based Construction Equipment Associated with the Proposed Project (continued)

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

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

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

26 Approximately 265 total barge trips (i.e., approximately 2 barge trips per day) would be
 27 required to support Phase I construction activities, including transport of rock material
 28 from Catalina Island to Berth 144, sheet pile delivery associated with installation of
 29 new cranes, and transport of dredge material to Berth 205. Phase I in-water
 30 construction activities would result in an increase of approximately 3.6 active
 31 construction equipment/day within the West Basin (Table 3.11-5). However, as vessel
 32 calls at Berths 136-147 represent approximately one percent of the total vessels calling
 33 at the Port, the additional barge trips would not significantly increase the potential
 34 accident risk for vessels navigating within the Port and/or West Basin area.

1 Barge trips required to transport rock material from Catalina Island would increase
2 traffic within the approach corridors to the Precautionary Area; however, the
3 additional 128 barge trips that would occur over a 65 day would not result in a
4 significant contribution to vessel congestion within the approach corridors.
5 Furthermore, as dredged material generated would be transported by barge to CDFs
6 at the Ports of Los Angeles and Long Beach, the additional barge trips would not
7 increase vessel congestion within the approach corridors in the open ocean.

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

29 **CEQA Impact Determination**

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

1 Therefore, construction impacts on vessel traffic would be less than significant under
2 CEQA.

3 *Mitigation Measures*

4 No mitigation is required.

5 *Residual Impacts*

6 Less than significant impact.

7 **NEPA Impact Determination**

8 Proposed Project construction activities include dredging, filling of the Northwest Slip,
9 new wharf and dike construction, and upgrades to existing wharves, as described
10 above. These construction activities would potentially create in-water hazards and
11 increase the potential for accidents for vessels navigating in the Main Channel or the
12 West Basin areas during construction activities compared to No Federal Action/NEPA
13 Baseline conditions. However, these activities are routinely conducted in the Port and
14 compliance with standard safety precautions for in-water activities is mandated in all
15 Port contracts. In addition, USACE permit requirements also include safety provisions
16 (i.e., USCG notification, monitoring the VTS, and preparation of Dredge and Disposal
17 Plans). Therefore, the temporary presence of supply barges/support boats at Berths
18 136-139 and 145-147 would not reduce the existing level of safety for vessel
19 navigation in the Port. Construction impacts on vessel traffic would be less than
20 significant under NEPA.

21 *Mitigation Measures*

22 No mitigation is required.

23 *Residual Impact*

24 Less than significant impact.

25 **3.11.4.3.1.2 Operational Impacts**

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

30 Proposed Project operations would result in a maximum of 334 vessel calls per year
31 when optimized and functioning at maximum capacity (year 2025) (Table 3.11-6).

Table 3.11-6. Existing and Projected Vessel Calls at Berths 136-147

Activity	CEQA Baseline (2003)	NO FEDERAL ACTION/ NEPA BASELINE		The proposed Project (2038*)	ANNUAL INCREASE	
		Year 2015	Year 2038*		The proposed Project compared to the CEQA Baseline	The proposed Project** compared to No Federal Action/ NEPA Baseline
Vessel Calls	246	283	250	334	88	84

Note:

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

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

CEQA Impact Determination

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

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

Given the continued use of standard practices, including adherence to HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), and Port tariffs requiring vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board to

1 use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent
2 waterways, the projected 35 percent increase in annual vessel calls at Berths 136-147
3 would not significantly decrease the margin of safety for marine vessels within the
4 proposed Project area. Scheduling of vessel call at Berths 136-147 to accommodate
5 available berths and anchoring vessels outside the breakwater until safe transit to
6 Berths 136-147 is authorized by the COTP would ensure the project-related 35%
7 increase over the current number of the vessels that call at Berths 136-147 annually
8 would not result in changes to routing and/or vessel safety procedures. Continued
9 implementation of COTP uniform procedures including advanced notification to vessel
10 operators, vessel traffic managers, and Port Pilots identifying the location of dredges,
11 derrick barges, and any associated operational procedures and/or restrictions (i.e., one-
12 way traffic) ensure safe transit of vessels operating within and to and from the project
13 area. Therefore, marine vessel safety impacts associated with proposed Project
14 operations would be less than significant under CEQA.

15 *Mitigation Measures*

16 No mitigation is required.

17 *Residual Impacts*

18 Less than significant impact.

19 **NEPA Impact Determination**

20 Proposed Project operations would result in an increase of 84 vessel calls per year
21 (approximately 7 vessel calls per month) when functioning at maximum capacity in 2025
22 compared to the No Federal Action/NEPA Baseline conditions (2025-2038) (see Section
23 2.5, Tables 2-2 and 2-4), which would be an approximately 34 percent increase for these
24 berths. Due to the relatively low vessel traffic volumes at Berths 136-147
25 (approximately 20 vessel trips per month), the increase of approximately 7 vessel
26 calls per month would not significantly increase vessel congestion within the West
27 Basin. The additional vessel calls at Berths 136-147 would not result in adverse safety
28 impacts under NEPA due to continued implementation of HSP speed limit regulations,
29 adherence to limited visibility guidelines, VTS monitoring requirements (i.e.,
30 issuance of security calls by dredge operators on the VTS prior to commencement
31 of dredge operations and transit to disposal sites), and Port tariffs requiring vessels
32 of foreign registry and U.S. vessels that do not have a federally licensed pilot on
33 board to use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent
34 waterways. In addition, scheduling of vessel calls at Berths 136-147 to accommodate
35 available berths and anchoring vessels outside the breakwater until safe transit to
36 Berths 136-147 is authorized by the COTP would ensure the project related 34
37 percent increase in vessel calls at the proposed Project site would not require
38 modifications to routing and/or vessel safety procedures.

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

1 proposed Project would have long-term beneficial effects on marine transportation as
 2 berths would be deepened and existing wharf infrastructure would be upgraded to
 3 accommodate modern container ships. Therefore, impacts under NEPA would be less
 4 than significant.

5 *Mitigation Measures*

6 No mitigation is required.

7 *Residual Impacts*

8 Less than significant impact.

9 **3.11.4.3.2 Alternatives**

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

Table 3.11-7. Comparison of Vessel Calls under the Proposed Project and Alternatives

<i>Activity</i>	<i>CEQA Baseline (2003)</i>	<i>No Federal Action/ NEPA Baseline (2038*)</i>	<i>Proposed Project (2038*)</i>	<i>No Project Alternative (2038*)</i>	<i>Proposed Project without 10-Acre Fill (2038*)</i>	<i>Reduced Wharf Alternative (2038*)</i>	<i>Omni Terminal Alternative (2038*)</i>	<i>Landside Terminal Improvements (2038*)</i>
Vessel Calls	246	250	334	250	334	300	83	250
<i>Note:</i> * Maximum cargo throughput would be maximized at Year 2025; full-capacity level of operation would continue through the period from Year 2025 to Year 2038.								

13 **3.11.4.3.2.1 Alternative 1 – No Project Alternative**

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

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

20 **CEQA Impact Determination**

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

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

3 *Mitigation Measures*

4 No mitigation is required.

5 *Residual Impacts*

6 No impact.

7 **NEPA Impact Determination**

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

12 *Mitigation Measures*

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

14 *Residual Impacts*

15 No impact.

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

20 **CEQA Impact Determination**

21 As forecasted increases in cargo throughput would still occur under Alternative 1, this
22 alternative would result in a maximum of 250 vessel calls (a reduction of 84 calls per
23 year compared to the proposed Project) when functioning at maximum capacity (year
24 2025) (Table 3.11-7). Because the No Project Alternative would not allow
25 implementation of the proposed Project or other physical improvements at the Berths
26 136-147 terminal beyond what already exists, larger modern container ships would
27 not be able to navigate and access the Berths 136-147 container terminals within
28 West Basin. The No Project Alternative would not include the long-term beneficial
29 effects on marine transportation associated with deepening berths and upgrading
30 existing wharf infrastructure to accommodate modern container ships.

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

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

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

Mitigation Measures

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

Residual Impacts

No impact.

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

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

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

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

1 transported by barge to CDFs at the Port, the Port of Long Beach, or at an appropriate
2 upland disposal site.

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

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

20 Approximately 265 total barge trips (i.e., approximately 2 barge trips per day) would be
21 required to support Phase I construction activities, including transport of rock material
22 from Catalina Island to Berth 144, sheet pile delivery associated with installation of new
23 cranes, and transport of dredge material to Berth 205. However, as vessel calls at Berths
24 136-147 represent approximately one percent of the total vessels calling at the Port, the
25 additional barge trips would not significantly increase the potential accident risk for
26 vessels navigating within the Port and/or West Basin area.

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

34 Although marine-based construction equipment would restrict vessel movement
35 within the turning basin, derricks and supply barges would be highly visible, well-
36 marked, and would be relatively stationary as dredging equipment would only be
37 moved prior to dredging at another location. These activities are routinely conducted
38 in the Port and contractors performing in-water construction activities are subject to
39 applicable rules and regulations stipulated in all LAHD contracts, including
40 navigation hazard markings. Prior to activities that require anchoring vessels in the
41 main navigation channels, the Port's standard vessel safety regulations require
42 dredging contractors to acquire an Anchorage Waiver Permit. An Anchorage Waiver
43 permit, issued by the USCG, requires notifying the COTP of expected activities;
44 providing official and ongoing notice to mariners during construction; developing a
45 mooring plan; and marking equipment and any debris for visibility. Compliance with

1 Anchorage Waiver permit requirements would ensure compliance with regulations
2 governing the Port's Outer Harbor and main navigation channel areas. As standard
3 safety precautions would be utilized by all contractors, the presence of approximately
4 3.6 supply barges/support boats per day would not substantially impact marine vessel
5 safety within the main channels and connected basin areas. Accordingly, proposed
6 in-water construction equipment would not interfere with existing operations at
7 adjacent West Basin berths.

8 **CEQA Impact Determination**

9 Construction activities could create in-water hazards to vessel traffic and increase the
10 potential for accidents. Phase I (2007-2015) dredging and in-water construction
11 activities would require use of marine-based construction equipment (i.e.,
12 derrick/supply barge) to support development of Berth 147 and installation of wharf
13 seismic improvements at Berths 136-139 and 145-146. Although barge trips required
14 to transport rock material from Catalina Island would increase traffic within the Port
15 and the approach corridors to the Precautionary Area, the additional barge trips would
16 not result in a significant contribution to vessel congestion within the Port and/or
17 approach corridors. These activities are routinely conducted in the Port and contractors
18 performing in-water construction activities are subject to applicable rules and
19 regulations stipulated in all LAHD contracts and Department of the Army permits. As
20 standard safety precautions would be utilized by the Port in piloting these vessels
21 through harbor waters, the short-term presence of supply barges/support boats at Berths
22 136-139 and 145-147 would not reduce the existing level of safety for vessel
23 navigation in the Port. Therefore, impacts under CEQA would be less than significant.

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

31 *Mitigation Measures*

32 No mitigation is required.

33 *Residual Impacts*

34 Less than significant impact.

35 **NEPA Impact Determination**

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

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

8 As Alternative 2 would not fill the 10-acre Northwest Slip or construct the adjacent
9 400-foot wharf, the potential for in-water hazards to vessel traffic associated marine-
10 based construction equipment (i.e., dump scow/supply barges) would be reduced
11 compared to those described for the proposed Project. Alternative 2 would result in a
12 reduction of 724 barge trips and eliminate the presence of approximately 8 in-water
13 pieces of construction equipment per day compared to the proposed Project.

14 *Mitigation Measures*

15 No mitigation is required.

16 *Residual Impacts*

17 Less than significant impact.

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

22 **CEQA Impact Determination**

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

34 Proposed Project improvements would also improve overall conditions in Los Angeles
35 Harbor by creating berths sized to accommodate the modern, deeper-draft class of
36 vessels. The deeper draft berths would improve the efficiencies of shipping and port
37 operations by reducing the number of vessels and vessel trips required to accommodate
38 projected container throughput at the Port. The design parameters of the new wharves
39 at Berths 146-147 would allow for safe maneuvering and passage through the West
40 Basin of all ships that currently call at the Port. The proposed deepening of the areas
41 adjacent to the berths as part of the Channel Deepening Project further ensures that the

1 larger, deeper-draft ships can safely navigate within the West Basin. While the
2 increased ship size could affect maneuverability, the risk of accident is largely based on
3 the number of vessels present and would therefore not have significant impacts on
4 marine vessel safety within the Port.

5 Given the continued use of standard practices, including adherence to HSP speed
6 limit regulations, adherence to limited visibility guidelines, VTS monitoring
7 requirements (i.e., issuance of security calls by dredge operators on the VTS prior
8 to commencement of dredge operations and transit to disposal sites), and Port
9 tariffs requiring use a Port Pilot for transit in and out of the San Pedro Bay area and
10 adjacent waterways, and implementation of COTP uniform procedures, the
11 projected 35 percent increase in annual vessel calls at Berths 136-147 would not
12 significantly decrease the margin of safety for marine vessels within the proposed
13 Project area. Scheduling of vessel call at Berths 136-147 to accommodate available
14 berths and anchoring vessels outside the breakwater until safe transit to Berths 136-
15 147 is authorized by the COTP would ensure the project-related 35% increase over
16 the current number of the vessels that call at Berths 136-147 annually would not
17 result in changes to routing and/or vessel safety procedures. Therefore, marine
18 vessel safety impacts associated with proposed Project operations would be less
19 than significant under CEQA.

20 Alternative 2 operations would result in a maximum of 334 vessel calls per year
21 when optimized and functioning at maximum capacity (year 2025) (Table 3.11-7).
22 As the same number of vessels would be required to support proposed Project
23 operations, impacts on marine transportation would be equivalent to those described
24 for the proposed Project. Although limited construction would occur under
25 Alternative 2 (i.e., the Northwest Slip would not be filled and the 400-foot wharf
26 adjacent to it would not be constructed), this alternative would construct the same number
27 of the berths as the proposed Project. Therefore, impacts on vessel congestion at Berths
28 136-147 would be equivalent to those described for the proposed Project and would be
29 less than significant.

30 *Mitigation Measures*

31 No mitigation is required.

32 *Residual Impacts*

33 Less than significant impact.

34 **NEPA Impact Determination**

35 Alternative 2 operations would result in an increase of 84 vessel calls per year
36 (approximately 7 vessel calls per month) when functioning at maximum capacity in 2025
37 compared to the No Federal Action/NEPA Baseline conditions (2025-2038) (see Section
38 2.5, Tables 2-2 and 2-4), which would be about a 34 percent increase for these berths.
39 Due to the relatively low vessel traffic volumes at Berths 136-147 (approximately 20
40 vessel trips per month), the increase of approximately 7 vessel calls per month would
41 not significantly increase vessel congestion within the West Basin. The additional
42 vessel calls at Berths 136-147 would not result in adverse safety impacts under NEPA

1 due to continued implementation of HSP speed limit regulations, adherence to limited
2 visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls
3 by dredge operators on the VTS prior to commencement of dredge operations and
4 transit to disposal sites), and Port tariffs requiring vessels to use a Port Pilot for
5 transit in and out of the San Pedro Bay area and adjacent waterways. In addition,
6 scheduling of vessel calls at Berths 136-147 to accommodate available berths and
7 anchoring vessels outside the breakwater until safe transit to Berths 136-147 is
8 authorized by the COTP would ensure the project related 34 percent increase in
9 vessel calls at the proposed Project site would not require modifications to routing
10 and/or vessel safety procedures.

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

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

27 *Mitigation Measures*

28 No mitigation is required.

29 *Residual Impacts*

30 Less than significant impact.

31 **3.11.4.3.2.3 Alternative 3 – Reduced Wharf**

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

36 **Alt 3 – Impact VT-1a: Alternative 3 construction-related marine traffic**
37 **would potentially interfere with operation of designated vessel traffic**
38 **lanes and impair the level of safety for vessels navigating the Main**
39 **Channel, West Basin area, and/or precautionary areas.**

1 Proposed Phase I (2007-2015) dredging and in-water construction activities would
2 require use of marine-based construction equipment (i.e., derrick/supply barge and/or
3 dump scow) to support dredging, installation of wharf seismic improvements at Berths
4 136-139 and 145-146, and installation of new cranes at Berth 144. A diesel-powered
5 clamshell dredge would also be used to deepen waters within close proximity to berths
6 to be consistent with the proposed -53-foot channel depth. Sediments from the
7 clamshell dredge would be placed in a barge and transported by a tugboat to the
8 designated disposal area. Dredged material generated during Phase I would be
9 transported by barge to CDFs at the Port, the Port of Long Beach, or at an appropriate
10 upland disposal site.

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

20 Although marine-based construction equipment would restrict vessel movement
21 within the turning basin, derricks and supply barges would be highly visible, well-
22 marked, and would be relatively stationary as dredging equipment would only be
23 moved prior to dredging at another location. These activities are routinely conducted
24 in the Port and contractors performing in-water construction activities are subject to
25 applicable rules and regulations stipulated in all LAHD contracts, including
26 navigation hazard markings. Prior to activities that require anchoring vessels in the
27 main navigation channels, the Port's standard vessel safety regulations require
28 dredging contractors to acquire an Anchorage Waiver Permit. An Anchorage Waiver
29 permit, issued by the USCG, requires notifying the COTP of expected activities;
30 providing official and ongoing notice to mariners during construction; developing a
31 mooring plan; and marking equipment and any debris for visibility. Compliance with
32 Anchorage Waiver permit requirements would ensure compliance with regulations
33 governing the Port's Outer Harbor and main navigation channel areas. As standard
34 safety precautions would be utilized by all contractors, the presence of approximately
35 5.8 supply barges/support boats per day for one month would not significantly impact
36 marine vessel safety within the main channels and connected basin areas.
37 Accordingly, proposed in-water construction equipment would not interfere with
38 existing operations at adjacent West Basin berths.

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

1 **CEQA Impact Determination**

2 Construction activities could create in-water hazards to vessel traffic and increase the
3 potential for accidents. Phase I (2007-2015) dredging and in-water construction activities
4 would require use of marine-based construction equipment (i.e., derrick/supply barge) to
5 support dredging, installation of wharf seismic improvements at Berths 136-139 and 145-
6 146, and installation of new cranes at Berth 144. However, these activities are routinely
7 conducted in the Port and contractors performing in-water construction activities are
8 subject to applicable rules and regulations stipulated in all LAHD contracts and
9 Department of the Army permits. As standard safety precautions would be utilized by
10 the Port in piloting these vessels through harbor waters, the short-term presence of supply
11 barges/support boats at Berths 136-139 and 145-147 would not reduce the existing level
12 of safety for vessel navigation in the Port. Therefore, construction impacts on vessel
13 traffic would be less than significant under CEQA.

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

20 *Mitigation Measures*

21 No mitigation is required.

22 *Residual Impacts*

23 Less than significant impact.

24 **NEPA Impact Determination**

25 Alternative 3 construction activities include dredging, installation of wharf seismic
26 improvements at Berths 136-139 and 145-146, and installation of new cranes at Berth
27 144. These construction activities would potentially create in-water hazards and
28 increase the potential for accidents for vessels navigating in the Main Channel or the
29 West Basin areas during construction activities compared to No Federal Action/NEPA
30 Baseline conditions. However, these activities are routinely conducted in the Port and
31 compliance with standard safety precautions for in-water activities is mandated in all
32 Port contracts. In addition, USACE permit requirements also include safety provisions
33 (i.e., USCG notification, monitoring the VTS, and preparation of Dredge and Disposal
34 Plans). Therefore, the temporary presence of supply barges/support boats at Berths
35 136-139 and 145-147 would not reduce the existing level of safety for vessel
36 navigation in the Port. Construction impacts on vessel traffic would be less than
37 significant under NEPA.

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

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

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

CEQA Impact Determination

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

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

Given the continued use of standard practices, including adherence to HSP speed limit regulations, adherence to limited visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), Port tariffs requiring vessels to use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, and implementation of COTP uniform procedures, the projected 18 percent increase in annual vessel calls at Berths 136-147 would not significantly decrease the margin of safety for marine vessels within the Project area. Scheduling of vessel call at Berths 136-147 to accommodate available berths and anchoring vessels outside the breakwater until safe transit to Berths 136-147 is

1 authorized by the COTP would ensure the project-related 18 percent increase over
2 the current number of the vessels that call at Berths 136-147 annually would not
3 result in changes to routing and/or vessel safety procedures. Therefore, marine
4 vessel safety impacts associated with Project operations would be less than
5 significant under CEQA.

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

14 *Mitigation Measures*

15 No mitigation is required.

16 *Residual Impacts*

17 Less than significant impact.

18 **NEPA Impact Determination**

19 Alternative 3 operations would result in an increase of 50 vessel calls per year
20 (approximately 4 vessel calls per month) when functioning at maximum capacity in 2025
21 compared to the No Federal Action/NEPA Baseline conditions (2025-2038) (see Section
22 2.5, Tables 2-2 and 2-4), which would be about a 17 percent increase for these berths.
23 Due to the relatively low vessel traffic volumes at Berths 136-147 (approximately 20
24 vessel trips per month), the increase of approximately 4 vessel calls per month would
25 not significantly increase vessel congestion within the West Basin. The additional
26 vessel calls at Berths 136-147 would not result in adverse safety impacts under NEPA
27 due to continued implementation of HSP speed limit regulations, adherence to limited
28 visibility guidelines, VTS monitoring requirements (i.e., issuance of security calls
29 by dredge operators on the VTS prior to commencement of dredge operations and
30 transit to disposal sites), and Port tariffs requiring vessels to use a Port Pilot for
31 transit in and out of the San Pedro Bay area and adjacent waterways. In addition,
32 scheduling of vessel calls at Berths 136-147 to accommodate available berths and
33 anchoring vessels outside the breakwater until safe transit to Berths 136-147 is
34 authorized by the COTP would ensure the project related 17 percent increase in
35 vessel calls at the Project site would not require modifications to routing and/or
36 vessel safety procedures.

37 Furthermore, as the additional 50 barge trips would increase the total number of vessels
38 calling at the Port by approximately 2 percent over the current number of the vessels
39 that call at the Port annually, and would not substantially increase vessel traffic within
40 the Port and precautionary areas, the Project would not increase vessel congestion within
41 the approach corridors in the open ocean. Additionally, the Project would have long-term

1 beneficial effects on marine transportation associated with deepening berths in the West
2 Basin. Therefore, impacts under NEPA would be less than significant.

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

6 *Mitigation Measures*

7 No mitigation is required.

8 *Residual Impacts*

9 Less than significant impact.

10 **3.11.4.3.2.4 Alternative 4 – Omni Terminal**

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

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

19 **CEQA Impact Determination**

20 Development under this alternative would not include dredging or any in-water
21 activities (i.e., wharf construction/renovation, deepening berths, and construction of the
22 10-acre Northwest Slip and adjacent wharf). Therefore, the potential for in-water
23 hazards to vessel traffic and the probability of accidents during construction would not
24 occur. Therefore, no impacts would occur under CEQA.

25 *Mitigation Measures*

26 No mitigation is required.

27 *Residual Impacts*

28 No impact.

29 **NEPA Impact Determination**

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

1 *Mitigation Measures*

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

3 *Residual Impacts*

4 No impact.

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

9 **CEQA Impact Determination**

10 Under Alternative 4, an omni terminal would be constructed within the Berths 136-
11 147 area. It is assumed that one-third of the omni terminal would be used for container
12 cargo, one-third for automobile off-loading/transport, and one-third for break-bulk
13 operations. Proposed Project operations under this alternative would result in a
14 maximum of 83 vessel calls (a reduction of 163 calls compared to existing
15 conditions) per year when optimized and functioning at maximum capacity (year
16 2025) (Table 3.11-7). Given the continued use of standard practices, including
17 adherence to HSP speed limit regulations, adherence to limited visibility
18 guidelines, VTS monitoring requirements (i.e., issuance of security calls by dredge
19 operators on the VTS prior to commencement of dredge operations and transit to
20 disposal sites), and Port tariffs requiring use of a Port Pilot for transit in and out of
21 the San Pedro Bay area and adjacent waterways, the projected decrease in annual
22 vessel calls at Berths 136-147 would not significantly decrease the margin of safety
23 for marine vessels within the proposed Project area. However, Alternative 4 would
24 not include the long-term beneficial effects on marine transportation associated
25 with deepening berths and upgrading wharf infrastructure to accommodate modern
26 container ships. Impacts on marine vessel safety associated with Alternative 4
27 operations would be less than significant under CEQA.

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

34 *Mitigation Measures*

35 No mitigation is required.

36 *Residual Impacts*

37 Less than significant impact.

NEPA Impact Determination

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

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact.

3.11.4.3.2.5 Alternative 5 – Landside Terminal Improvements

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

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

CEQA Impact Determination

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

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact.

1 **NEPA Impact Determination**

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

6 *Mitigation Measures*

7 No mitigation is required.

8 *Residual Impacts*

9 No impact.

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

14 **CEQA Impact Determination**

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

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

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

37 *Mitigation Measures*

38 No mitigation is required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

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

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact.

3.11.4.3.3 Summary of Impact Determinations

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

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

3.11.4.4 Mitigation Monitoring

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

3.11.5 Significant Unavoidable Impacts

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

Table 3.11-8: Summary Matrix of Potential Impacts and Mitigation Measures for Marine Transportation Associated with the Proposed Project and Alternatives

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

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Table 3.11-8: Summary Matrix of Potential Impacts and Mitigation Measures for Marine Transportation Associated with the Proposed Project and Alternatives (continued)

<i>Alternative</i>	<i>Environmental Impacts*</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
3.11 Marine Transportation (continued)				
Alternative 3	VT-1a	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	VT-1b	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
Alternative 4	VT-1a	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not required	NEPA: Not applicable
	VT-1b	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Not applicable	Mitigation not required	NEPA: Not applicable
Alternative 5	VT-1a	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not required	NEPA: Not applicable
	VT-1b	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Not applicable	Mitigation not required	NEPA: Not applicable
* Unless otherwise noted, all impact descriptions for each of the Alternatives are the same as those described for the proposed Project.				

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