PUBLIC NOTICE

US Army Corps of Engineers®

NOTICE OF AVAILABILITY OF A DRAFT EIS/EIR

LOS ANGELES DISTRICT

Public Notice/Application No.: 2006-2062-JWM
Comment Period: October 14, 2011 through November 15, 2011
Project Manager: John W. Markham (805) 585-2150

Applicant
Port of Long Beach (Port)
P.O. Box 570
Long Beach, CA 90801-0570

Contact
Mr. Richard D. Cameron
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Location
The 160-acre Pier S site is located in the Port of Long Beach, Terminal Island Harbor District, Los Angeles County, California. The Cerritos Channel and Back Channel are located on the north and east boundaries of the Pier S site, respectively (at: lat: 33.765926 lon: -118.231318). See page 10 of this notice.

Activity
The proposed project involves the development of Pier S and the widening of the Cerritos Channel and improvements to the Back Channel for navigational safety. The construction footprint encompasses approximately 210 acres of land and water. For more information see pages 6-9 of this notice.

Interested parties are hereby notified that an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). Interested parties are invited to provide their views on the proposed work, which will become a part of the record and will be considered in the decision. This permit will be issued or denied under Section 404 of the Clean Water Act of 1972 (33 U.S.C. 1344). Comments should be mailed to:

U.S. Army Corps of Engineers, Los Angeles District
Regulatory Branch - Ventura Field Office
ATTN: CESPL-RG-N 2006-02062-JWM
2151 Alessandro Drive, Suite 110
Ventura, California 93001

Alternatively, comments can be sent electronically to: john.w.markham@usace.army.mil

Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, if the proposal would discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Preliminary Review of Selected Factors

EIS Determination- The Corps has determined that an environmental impact statement is required for the proposed work and this public notice supplements the Notice of Intent to Prepare a Draft Environmental Impact Statement (DEIS) that was published in the Federal Register on September 23, 2011. The information in the DEIS will be sufficient for the Corps to make a decision regarding the issuance of a Section 10/Section 404 permit for the proposed marine terminal development at Pier S and navigational safety improvements within the Back Channel. The document will be a joint Federal and state document. The lead State agency for purposes of the California Environmental Quality Act (CEQA) is the Port of Long Beach (Port). The Corps and Port have worked cooperatively to prepare a joint Draft Environmental Impact Statement/Environmental Impact Report (DEIS/DEIR), and to coordinate the public noticing and hearing processes under Federal and state laws.

The impact analysis will follow the directives in 33 CFR 325 which requires that it be limited to the impacts of the specific activities requiring a 404 permit and only those portions of the project outside of "waters of the United States" over which the Corps has sufficient control and responsibility to warrant Federal review. The Corps will extend the geographic scope of the environmental analysis beyond the boundaries of "waters of the United States" in certain areas to address indirect and cumulative impacts of the regulated activities, and to address connected actions pursuant to National Environmental Policy Act (NEPA) guidelines (40 CFR 1508(a)[1]). In these upland areas, the Corps will evaluate impacts to the environment and identify feasible and reasonable mitigation measures and the appropriate state or local agencies with authority to implement these measures if they are outside

the authority of the Corps. However, the Corps will exercise its independent expertise and judgment in addressing indirect and cumulative impacts to upland areas due to issuance of the proposed Section 404 permit.

A copy of the DEIS/EIR is available for public review at the following locations:

- Port of Long Beach Harbor Administration Building, 925 Harbor Plaza, Long Beach
- Long Beach City Clerk, 333 W. Ocean Boulevard, Long Beach
- Long Beach Main Library, 101 Pacific Avenue, Long Beach
- San Pedro Regional Branch Library, 931 Gaffey Street, San Pedro
- Wilmington Branch Library, 1300 N. Avalon Boulevard, Wilmington

The Draft EIS/EIR also will be made available for public review at the following website: http://www.polb.com/ceqa.

Water Quality- The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act, from the California Regional Water Quality Control Board. Section 401 requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers prior to permit issuance.

Coastal Zone Management- For those projects in or affecting the coastal zone, the Federal Coastal Zone Management Act requires that prior to issuing the Corps authorization for the project, the applicant must obtain concurrence from the California Coastal Commission that the project is consistent with the State's Coastal Zone Management Plan. The applicant has certified that the proposed activity would comply with and would be conducted in a manner that is consistent with the approved State Coastal Zone Management Program. The District Engineer hereby requests the California Coastal Commission's concurrence or nonconcurrence.

Cultural Resources- Terminal Island, which includes Pier S, was constructed predominantly from hydraulically-dredged sediments derived from other locations within the Ports of Long Beach and Los Angeles and discharged into areas contained by earthen dikes with riprap faces. The hydraulic fills are generally 30 to 45 feet thick. Additional (engineered) fill, ranging in thickness from approximately 10 to 25 feet, was placed on top of the hydraulic fill. The proposed project area has been further disturbed by past oil and gas drilling operations and more recently, remediation of oil and gas drilling wastes placed within shallow impoundments or "sumps." Cultural resources were not observed during construction, operation, or remediation of these facilities. In addition, there are no sites listed on the National Register of Historic Places within the proposed project area or its vicinity (National Park Service, March 2011). Further, there are no structures within the proposed project area that are potentially eligible for listing as historic resources (*Initial Study, Pier S Marine Terminal and Back Channel Improvements*, Port of Long Beach, January 2007). The Port notified the Native American Heritage Commission (NAHC) on September 16, 2011 of the availability of the DEIS/EIR. A copy of this Public Notice will be distributed to Tribal representatives designated by the NAHC.

This review constitutes the extent of cultural resources investigations by the District Engineer, and he is otherwise unaware of the presence of such resources. Based upon the above information, the Corps has made a preliminary determination that there are no cultural or historic resources located within the proposed project area, and that the proposed project would have "no potential to cause effects" upon cultural or historic resources. With this Public Notice, the Corps is seeking comment from the State Historic Preservation Office or other interested parties regarding these determinations.

Endangered Species-

Table 1: Federal and State-listed species within the project area and vicinity

Common Name	Scientific Name	Status[1]		Habitat Use
		Federal	State	
California least tern	*Sterna antillarum browni*	E	E, FP	Nests at designated site on Pier 400; forages over shallow water near nest site; present April-August
California brown pelican	*Pelecanus occidentalis californicus*	Delisted	E	Roosts on breakwaters; forages over open water; rests on water or structures; present all year
American peregrine falcon	*Falco peregrinus anatum*	Delisted	E, FP	Nests in the Inner Harbor on Vincent Thomas, Gerald Desmond, and Schuyler F. Heim bridges; forages on birds throughout the harbor
Western snowy plover	*Charadrius alexandrinus nivosus*	T	CSC	Several migrants in California least tern nesting site at Pier 400, but no nesting in 2003-2007
Black skimmer	*Rynchops niger*	--	CSC	Nested on Pier 400 in 1998-2000 and 2004; forages over water near nests; present all year
Burrowing owl	*Athene cunicularia hypugea*	--	CSC	One observed on riprap in Long Beach Outer Harbor in 2000; one trapped on Pier 400 in 2003 and 2004; observed/trapped on Pier 400 in 2005-2007, but no confirmed nesting
Loggerhead shrike	*Lanuis ludovicianus*	--	CSC	A few in Inner Harbor on riprap or dock/piling habitat; no nesting habitat in Project area

Sources: MEC and Associates 2002; Keane Biological Consulting 2003, 2005b, 2007a, 2007b; CNDDB 2008.

Note:

1. *E = endangered; T = threatened; CSC = California Species of Special Concern (nesting populations for birds in this table); FP = fully protected*

The federally endangered California least tern has been observed nesting on Terminal Island since 1974 (KBC 2007). Since 1984, the Los Angeles Harbor Department has provided nesting habitat for this species pursuant to a Memorandum of Agreement (MOA) with the USFWS, USACE, and CDFG for management of a 15-acre least tern nesting site, which has been located on Pier 400 for the past ten years. The number of nests at the site varies from year to year, but was 669 in 2007 (KBC 2007). Previous foraging studies conducted in the harbor have found that least terns forage for small fish primarily over shallow water (generally less than 20 feet deep) predominantly in the Outer Harbor, and rarely in the Inner Harbor (KBC 1997, 1998). The proposed project footprint generally consists of water depths greater than 30 feet, and thus contains little potential foraging habitat for this species. The Port does not contain designated critical habitat for this species.

The federally threatened western snowy plover was observed on Pier 400 during the least tern nesting surveys in 2003 through 2007. This species appears to have been using the area as a stop-over during migration, and was never observed nesting during the five-year survey period (KBC 2007). This species generally forages for invertebrates in the wet sand and amongst surf-cast kelp within the intertidal zone, in dry, sandy areas above the high tide, on salt pans, on spoil sites, and along the edges of salt marshes, salt ponds, and lagoons (*Western Snowy Plover Pacific Coast Population Draft Recovery Plan,* U.S. Fish and Wildlife Service, May 2001). This species is not expected to utilize the proposed project area or its vicinity for foraging or nesting. The Port does not contain designated critical habitat for this species.

The federally endangered salt marsh bird's beak (*Cordylanthus maritimus* Nutt. ex Benth. ssp. *Maritimus*) is listed under the California Natural Diversity Database (CNDDB, California Department of Fish and Game, 2011) as occurring within the vicinity of the proposed project. Port biologists are currently investigating the location and extent of prior occurrences, and will be conducting reconnaissance surveys for this species within the proposed project area and its vicinity.

No additional federally listed animal species, federally listed plant species, or designated critical habitat have been identified as occurring within the proposed project area or its vicinity. Given the relative lack of shallow water within the vicinity of the proposed project footprint and the availability of more suitable foraging habitat elsewhere within the Harbor, the proposed project is not expected to adversely affect foraging behavior for California least tern. In addition, the proposed project is not expected to alter nesting behavior or locations for this species, based upon the current high level of activity on terminal island and the distance of the existing tern nesting sites (approximately 6,600 linear feet) from the southwest project boundary.

Based upon the above information, the Corps has made a preliminary determination that the proposed project would have no effect upon the federally endangered California least tern, the federally threatened western snowy plover, or their designated critical habitat. In addition, the Corps will coordinate with the U.S. Fish and Wildlife Service as required under the Endangered Species Act should salt marsh bird's beak or suitable habitat for this species be identified within the proposed project area or its vicinity.

Essential Fish Habitat- In accordance with the 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act, an assessment of Essential Fish Habitat (EFH) is necessary for proposed federal actions. The Proposed Project is located within an area designated as EFH for two Fishery Management Plans (FMPs): Coastal Pelagic and Pacific Coast Groundfish. Of the 94 species federally managed under these plans, four Coastal Pelagic and eight Pacific Coast Groundfish species are known to occur in the Long Beach Harbor area. EFH for several species is present in the harbor, including eelgrass (*Zostera marina*) and soft-bottom habitat, and hard-substrate habitat in the form of riprap. With respect to eelgrass, designated a Habitat Area of Particular Concern for groundfish, surveys of the harbor in 2008 identified eelgrass beds in Los Angeles Harbor along Cabrillo Beach and on the east side of Pier 300 (SAIC 2010), and a more recent survey identified eelgrass beds in Cerritos Channel just east of the Heim Bridge (MBC 2011), within the dredge footprint of the proposed project.

Potential impacts to marine biota and habitats during construction would occur from dredging. Dredging would destroy eelgrass beds present in the project footprint, which provide suitable spawning, foraging, and cover habitat for a variety of fish and invertebrate species. Dredging would also impact the epibenthic and benthic organisms present in soft-bottom habitat in the dredge footprint, which are an important food source for many fish species, including the managed species of the Pacific Groundfish FMP. Removal of existing riprap for construction activities would also remove associated hard substrate communities and habitat structure for fish from the water column.

Adverse impacts on eelgrass beds would indirectly affect fish and invertebrate populations due to loss of spawning, foraging and cover habitat. The recently discovered eelgrass bed is the first documented occurrence of eelgrass in Long Beach Harbor and without mitigation, dredging could significantly impact its persistence in the harbor. Adverse short-term impacts on soft-bottom and hard-substrate communities would indirectly affect fish populations from loss of forage opportunities.

However, these impacts would affect a small portion of the harbor and, except for the mortality of benthic organisms, would last only during construction. Following construction, the benthic communities would recolonize both soft-bottom and the new hard substrate habitats.

The proposed dredging, filling, pile driving, and wharf construction activities would temporarily increase turbidity, noise, and vibration levels within the proposed project area and its vicinity, resulting in disturbances to normal fish behavior in the water column and in or near the channel bottom. The vast majority of fish would be expected to temporarily avoid the in-water activities, although some may remain to feed on invertebrates released from the sediments. Direct or indirect fish mortality has not been observed in the Outer Harbor as a result of dredging activities associated with the Deep Draft Navigation Improvements Project (Pier 400) (USACE and LAHD 1992). Previous studies have also shown that large-scale channel dredging and landfill operations in the 1980s and 1990s did not lead to long-term adverse effects on fish populations (MEC 1988, SAIC and MEC 1996, MEC 2002, MBC 2009b, and SAIC 2010). Noise and disturbance associated with construction activities, particularly pile driving, could result in short-term adverse effects on aquatic habitat and cause fish kills, but because noise and disturbance from boat traffic and other activities in the Port are part of the ambient conditions, fish impacts associated with the proposed project are expected to be temporary and minor.

In order to reduce the generation and migration of suspended sediments within the proposed project footprint and its vicinity, the Corps would require the implementation of best management practices (BMPs) commensurate with observed turbidity levels (e.g., more frequent or quantitative monitoring of water quality, slowing or cessation of dredging activities, installation of silt curtains). In addition, the Corps would require sound abatement BMPs to reduce both noise and vibrations from pile driving activities, including vibration or hydraulic insertion techniques, "soft-start/ramping-up" for pile driving (i.e., approximately 40 to 60 percent energy levels with no less than a one-minute interval between each strike for a five-minute period), drilled or augured holes for cast-in place piles, bubble curtain technologies, and sound aprons where feasible.

The proposed discharge of dredge material within a confined aquatic disposal facility (e.g., Port of Long Beach Middle Harbor) is not expected to result in additional impacts to federally listed species or their prey base. However, the proposed discharge of dredge material within an unconfined aquatic disposal site (e.g., Western Anchorage disposal site and/or LA-2 ocean disposal site) may adversely affect benthic organisms (fish, invertebrates) located within the proposed fill area and its immediate vicinity. Disposal at the Western Anchorage and LA-2 sites would require review by members of the Dredged Materials Management Taskforce (DMMT), including the National Marine Fisheries Service (NMFS), and final approval by the Corps, U.S. Environmental Protection Agency, and the Regional Water Quality Control Board following chemical, and if necessary, bioassay testing of the material.

Based upon this information, the Corps intends to consult with the National Marine Fisheries Service (NMFS) for direct (e.g., dredging, filling) and indirect (e.g., turbidity, shading) effects upon essential fish habitat, and will also require the applicant to provide compensation for unavoidable impacts to eelgrass consistent with the most recent version of the Southern California Eelgrass Mitigation Policy (SCEMP) (NMFS and CDFG 1991).

Project Purpose and Proposed Activity for Which a Permit is Required- The overall purpose of the proposed project is to construct a container terminal to increase efficiency in order to accommodate a portion of the predicted future containerized cargo throughput volume and the modern cargo vessels that transport those goods to and from the Port.

The applicant (Port) requires authorization pursuant to Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act, to implement various regulated activities within waters of the U.S., including dredging, excavation to create open water, wharf construction, and disposal of dredged material. These project elements are described in detail below.

Additional Project Information

The basic objectives of the proposed project consist of the following:

- Construct and operate marine terminal facilities that maximize the use of existing waterways, available shoreline, and existing land;
- Construct and operate berthing and infrastructure to accommodate forecasted cargo volumes;
- Provide efficient access to land-based rail and truck infrastructure systems that maximizes the use of rail;
- Provide channel improvements that would improve navigational safety in the Back Channel; and,
- Fulfill the Port's obligations under the Public Trust Doctrine, the Tideland Trust and the California Coastal Act to fully utilize the tidelands within the Harbor District.

The development of Pier S and Back Channel improvements would result in an approximately 160-acre marine container terminal, and would include the following elements: property acquisition; dredging, wharf construction, other waterside improvements, and container cranes; container yard and associated structures; terminal buildings and other structures; truck gates, associated structures, and roadwork; intermodal rail yard, structures, and dual rail lead; and utility and oil facility relocation. These project elements are described below. The estimated duration of the proposed project is 22 (consecutive) months.

Dredging of Cerritos Channel and Excavation of Adjacent Uplands

In order to allow for berthing of larger-class vessels and to improve navigational safety within the Cerritos Channel, the proposed project would involve widening of Cerritos Channel to 808 feet between Pier A and future Pier S pierhead lines, including dredging of approximately 631,000 cubic yards of material from the Cerritos Channel and excavation of approximately 1,500,000 cubic yards of rock and sediment from the adjacent wharf (total disturbance area of approximately 39 acres), and re-alignment of approximately 1,600 feet of the existing riprap dike structure. Excavation would result in a conversion of 10.3 acres of uplands to open water. The minimum and maximum dredge depths extending 80 feet north of the future Pier S pierhead line would be -60 feet MLLW and -62 feet MLLW, respectively, including a 2-foot over-dredge allowance (overdepth). The proposed project would also include the installation of a 3,500-foot long, 3-foot-thick, and 60- to 65-foot-deep soil-cement-bentonite barrier along the waterfront in order to prevent mixing of shallow (tidal) groundwater with stabilized sump material remaining from prior oil processing and remediation activities.

Dredging, Wharf Excavation, and Stabilization of Back Channel
In order to improve navigational safety within the Back Channel, the proposed project would also involve dredging the Back Channel to a width of 323 feet and a depth of -52 feet (MLLW) plus up to 2 feet of overdepth, and dredging the Back Channel Turning Basin at piers C, D, and S to a diameter of 1,200 feet and a depth of -52 feet (MLLW) plus up to 2 feet of overdepth. Total volumes of dredged and excavated material would be approximately 250,000 cubic yards of channel sediment and approximately 3,000 cubic yards of rock and soil from the adjacent wharf. Similar to Cerritos Channel, the Back Channel side slopes would be stabilized through the installation of a soil-cement embankment stabilization on both sides of the Back Channel and if necessary, at the turning basin, as well as through the placement of approximately 80,000 tons of rip-rap on the exposed slope.

Pier S Wharf
At present, the Pier S shoreline consists of a rocky slope along a non-uniform alignment and depth. Improvements to the shoreline and adjacent upland areas are proposed in order to safely and efficiently accommodate larger class, modern container transport vessels. Specifically, these improvements would include the installation of approximately 470,000 tons of imported quarry rock for erosion protection, installation of approximately 2,000 concrete support piles (up to 110 feet in length), and construction of a 3,200-linear-foot, steel-reinforced concrete wharf and associated crane rails and utilities.

Container Terminal
The proposed project would include construction of a new 160-acre container terminal at Pier S, including LEED-certified terminal buildings, above and below-ground utilities, storm drain system, 12 rail-mounted electric-powered gantry cranes, and intermodal rail yard (10-loading tracks), served by a new lead track along the terminal's southwest corner.

Modification of Existing Facilities and Infrastructure
In order to allow for navigational safety in the Back Channel the proposed project would involve removal of an abandoned power plant intake structure (Long Beach Generating Station), relocation of an oil facility, realignment of approximately 2,800 feet of the existing Pier T east lead track, and potential modifications to the outfall structure of the adjacent Long Beach Generating Station.

Disposal of Dredged and Excavated Wharf Material
The proposed project would include disposal of approximately 631,000 cubic yards of dredged material and 1,500,000 cubic yards of excavated wharf material from Cerritos Channel, and 250,000 cubic yards of dredged material and approximately 3,000 cubic yards of excavated wharf material from Back Channel at the previously-approved Middle Harbor Redevelopment landfills (i.e., Piers D, E, and F). If required by timing or capacity constraints at the Middle Harbor sites, a small amount of chemically-suitable dredged material could be disposed of at the Western Anchorage Disposal Site and the approved LA-2 ocean disposal site following testing and agency approval.

NEPA (40 C.F.R. 1502.14[a]) and CEQA Guidelines (15126.6) require that an EIS and an EIR examine a range of reasonable alternatives to a project that meet most of the basic project objectives, while reducing the severity of potentially significant environmental impacts.

Additionally, when proposed impacts fall within Clean Water Act jurisdiction, alternatives must be evaluated pursuant to the Clean Water Act Section 404(b)(1) Guidelines (Guidelines) (40 CFR 230). The purpose of these guidelines is to restore and maintain the chemical, physical, and biological integrity of waters of the U.S. through the control of discharges of dredged or fill material. As

stipulated in the Guidelines, dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge would not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern. Consistent with these guidelines, the USACE is required to select the least environmentally damaging practicable alternative (LEDPA).

The following alternatives were considered during preparation of the Draft EIS/EIR, including alternative terminal configurations and locations:

1) Sites outside the Port of Long Beach;
2) Alternative sites within the Port of Long Beach;
3) Rail yard alternative;
4) Auto terminal alternative;
5) Three-Berth Alternative – Container Terminal with Rail Access, Full-Length Wharf, and Back Channel Improvements (Proposed Project);
6) Two-Berth Alternative – Container Terminal with Rail Access, Reduced-Length Wharf, and Back Channel Improvements;
7) Multi-Use Storage Alternative (No Federal Action) – Multi-Use Storage Facility without Wharf or Back Channel Improvements; and,
8) No Project Alternative.

All except the No Project Alternative would meet at least some of the basic objectives of the Project. Three of the seven alternatives met the majority of the Proposed Project's objectives and were selected to be carried forward for detailed analysis (Draft EIS/EIR, Section 1.6.3). Alternatives considered but not carried forward are discussed in Draft EIS/EIR Section 1.6.2.

For additional information please contact John W.Markham of my staff at (805) 585-2150 or john.w.markham@usace.army.mil. This public notice is issued by the Chief, Regulatory Division.

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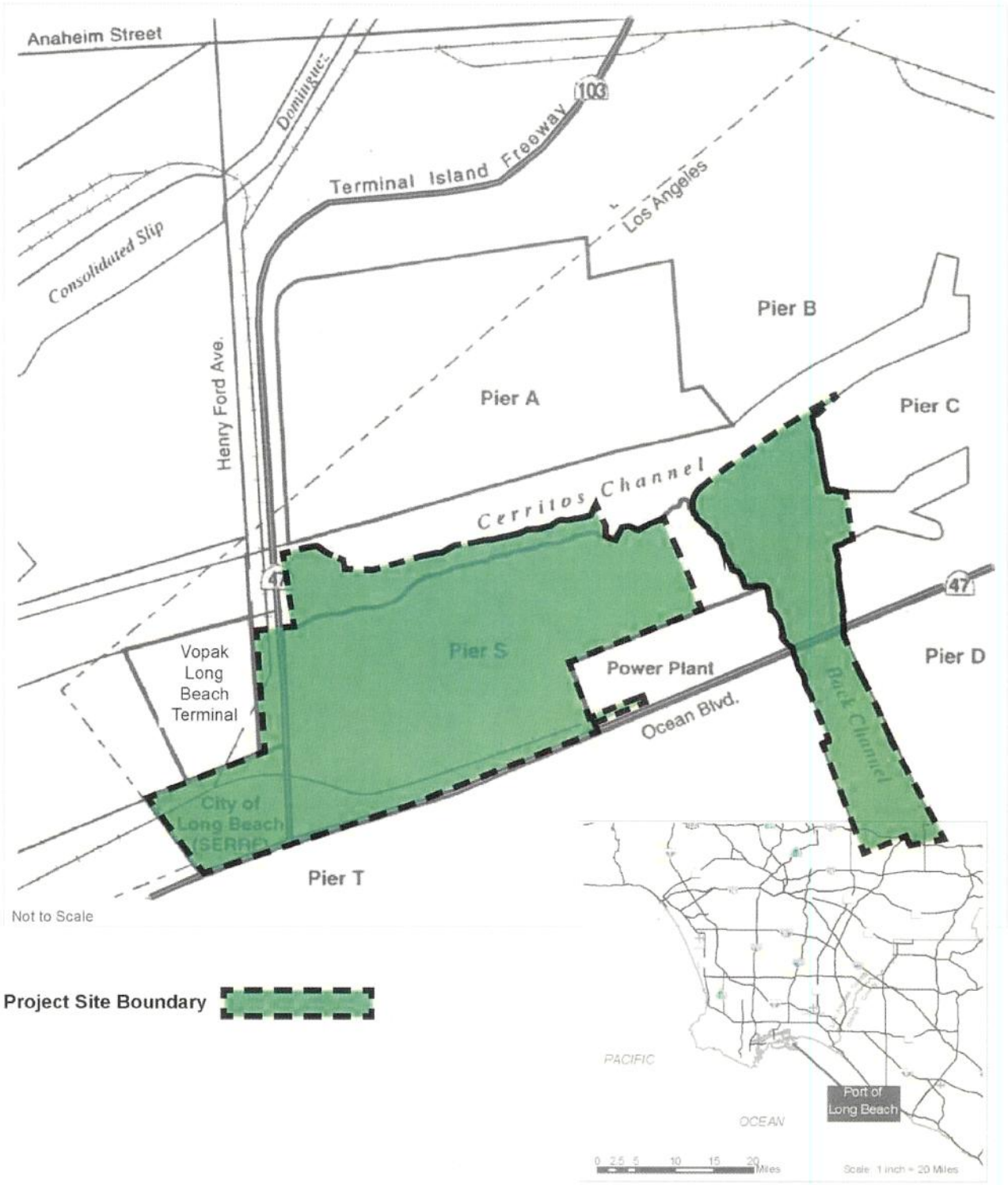
Figure 1-1
Project Location



Source: California Geospatial Information Library and Southern California Association of Governments

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Figure ES-1
Project Location

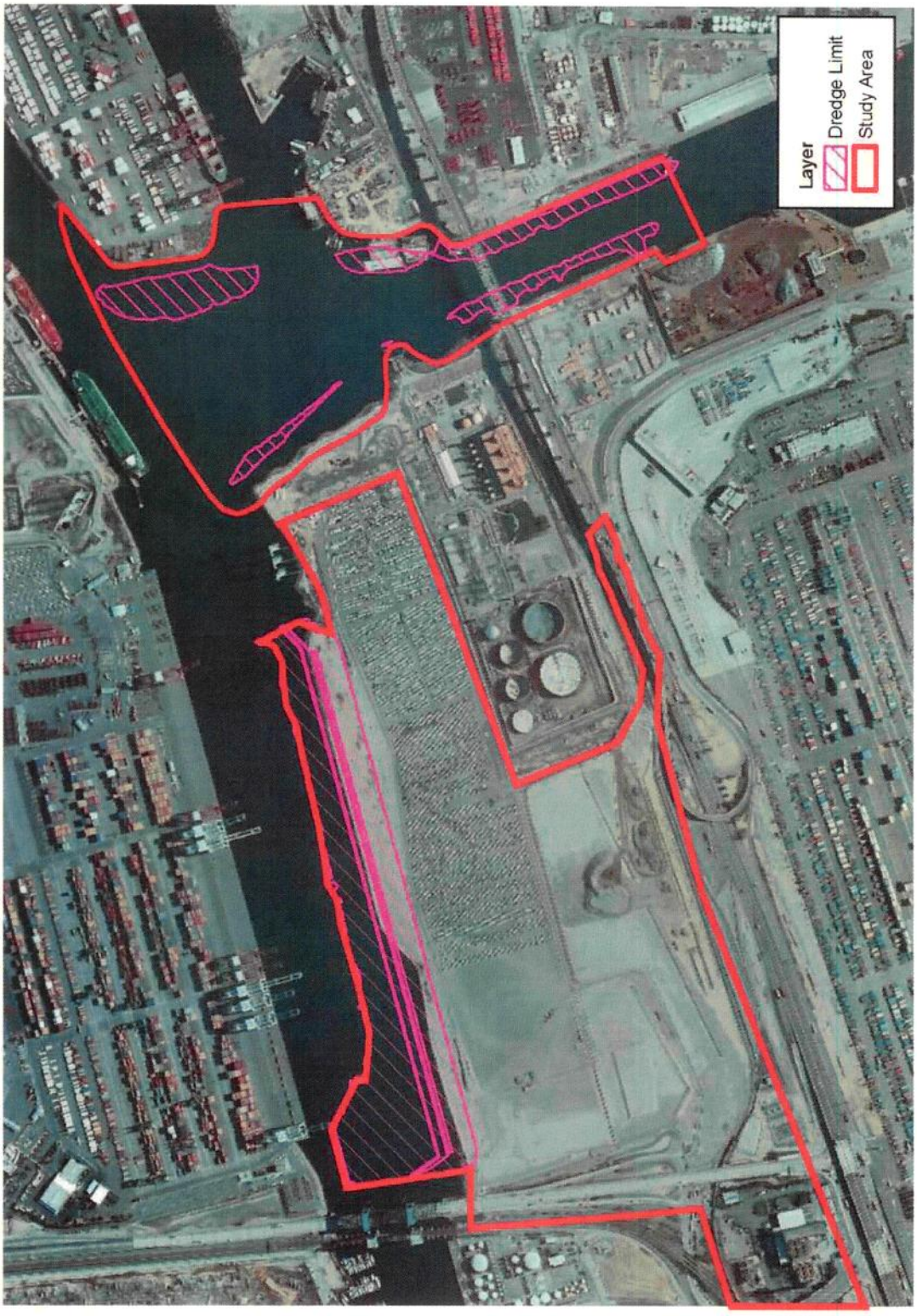

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Figure 1-4
Dredge Footprint

Table 1-1. Pier S Project Alternatives Operations Summary

	Three-Berth Alternative	Two-Berth Alternative	Multi-Use Storage Alternative	No Project Alternative
Gross Site Acreage	160 acres	150 acres	150 acres	150 acres
Wharf Length	3,200 feet	2,800 feet	N/A	N/A
Dredged Material from Cerritos Channel and Back Channel	881,000 cy (631,000 cy for Cerritos Channel and 250,000 for the Back Channel)	881,000 cy (631,000 cy for Cerritos Channel and 250,000 for the Back Channel)	N/A	N/A
Dredge Depth	-54 to -62 feet MLLW	-54 to -62 feet MLLW	N/A	N/A
Dredge Footprint	51.0 acres	44.3 acres	N/A	N/A
Imported Rock for Construction, including Back Channel	551,000 tons	476,000 tons	N/A	N/A
Wharf Excavation (Upland)	1,500,000 cy	1,310,000 cy	N/A	N/A
New Water Surface Area	10.3 acres	9.4 acres	N/A	N/A
Container Cranes on Wharf	12	8	none	none
Building Construction	13 buildings	13 buildings	5 buildings	none
Truck Gates	1 primary, 1 secondary	1 primary, 1 secondary	1 primary	none
Rail Yard	10 tracks, 1,480 feet each	10 tracks 1,480 feet each	N/A	N/A
Rail Yard Acreage	17 (16.8) acres	17 (16.8) acres	N/A	N/A
Construction Period	2011 to 2013	2011 to 2013	2011 to 2013	N/A
Full Capacity (year)	2020	2016	2030	N/A
Throughput (2013)	1.05 million TEU	1.05 million TEU	0.56 million TEU	N/A
Throughput (full capacity year)	1.8 million TEU	1.33 million TEU	1.27 million TEU	N/A
Daily Truck Trips (2013)	3,692	3,692	2,291	N/A
Daily Truck Trips (2020)	7,168	4,861	4,731	N/A
Daily On-Dock Train Trips (2020)	1.5	1.6*	none	N/A
Daily Off-Dock Trail Trips (2020)	3.2	1.8	3.4	N/A

Table 1-1. Pier S Project Alternatives Operations Summary

	Three-Berth Alternative	Two-Berth Alternative	Multi-Use Storage Alternative	No Project Alternative
Annual Vessel Calls	312	260	N/A	N/A

Source: Port of Long Beach, July 2006, updated March 2011

*The higher daily on-dock train trips for the Two-Berth Alternative indicate the difference in footprint between the two alternatives. As Three-Berth Alternative occupies a larger development footprint, it accommodates few daily train trips compared to the Two-Berth Alternative.

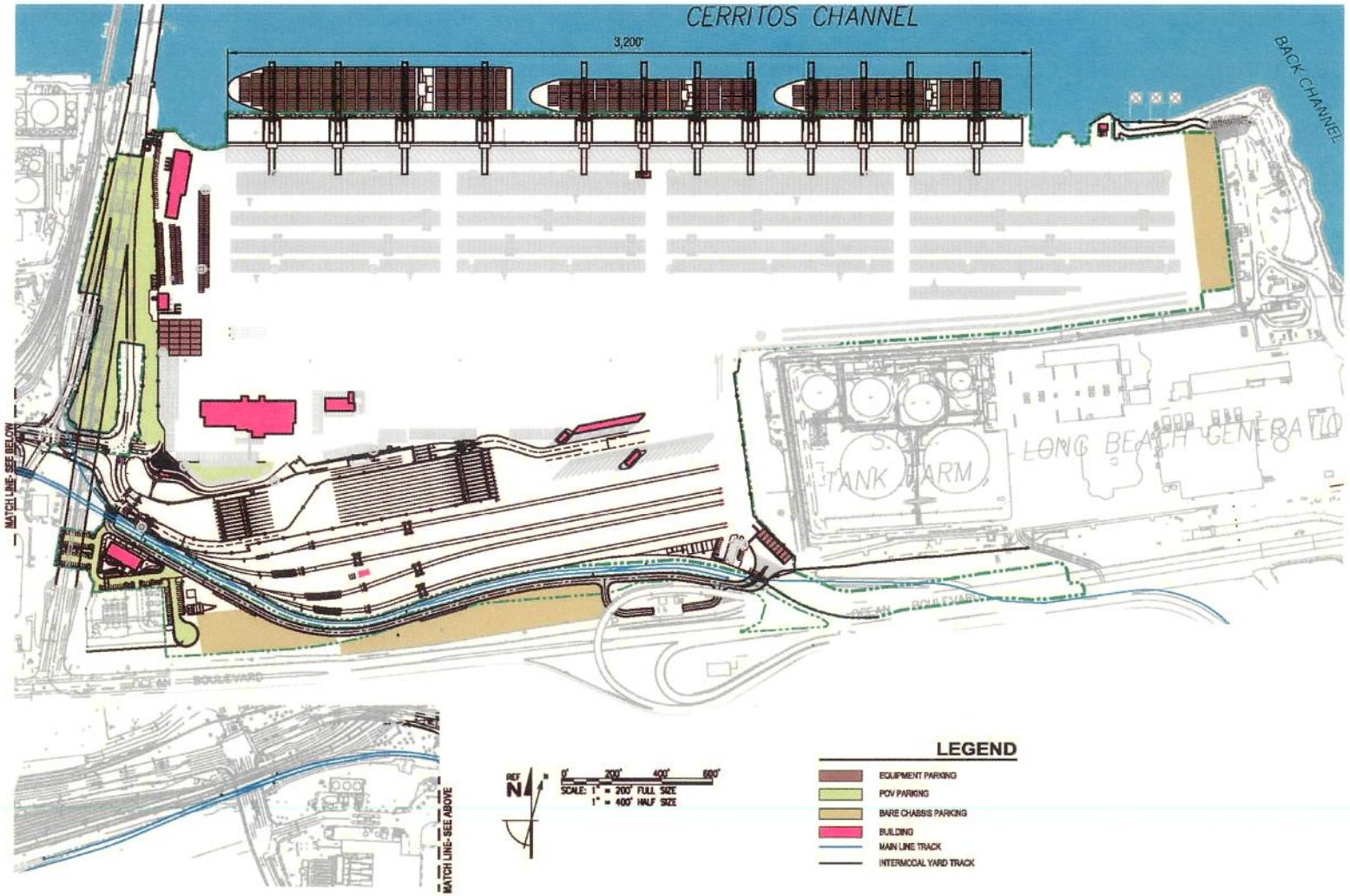

Figure 1-3
Three-Berth Alternative

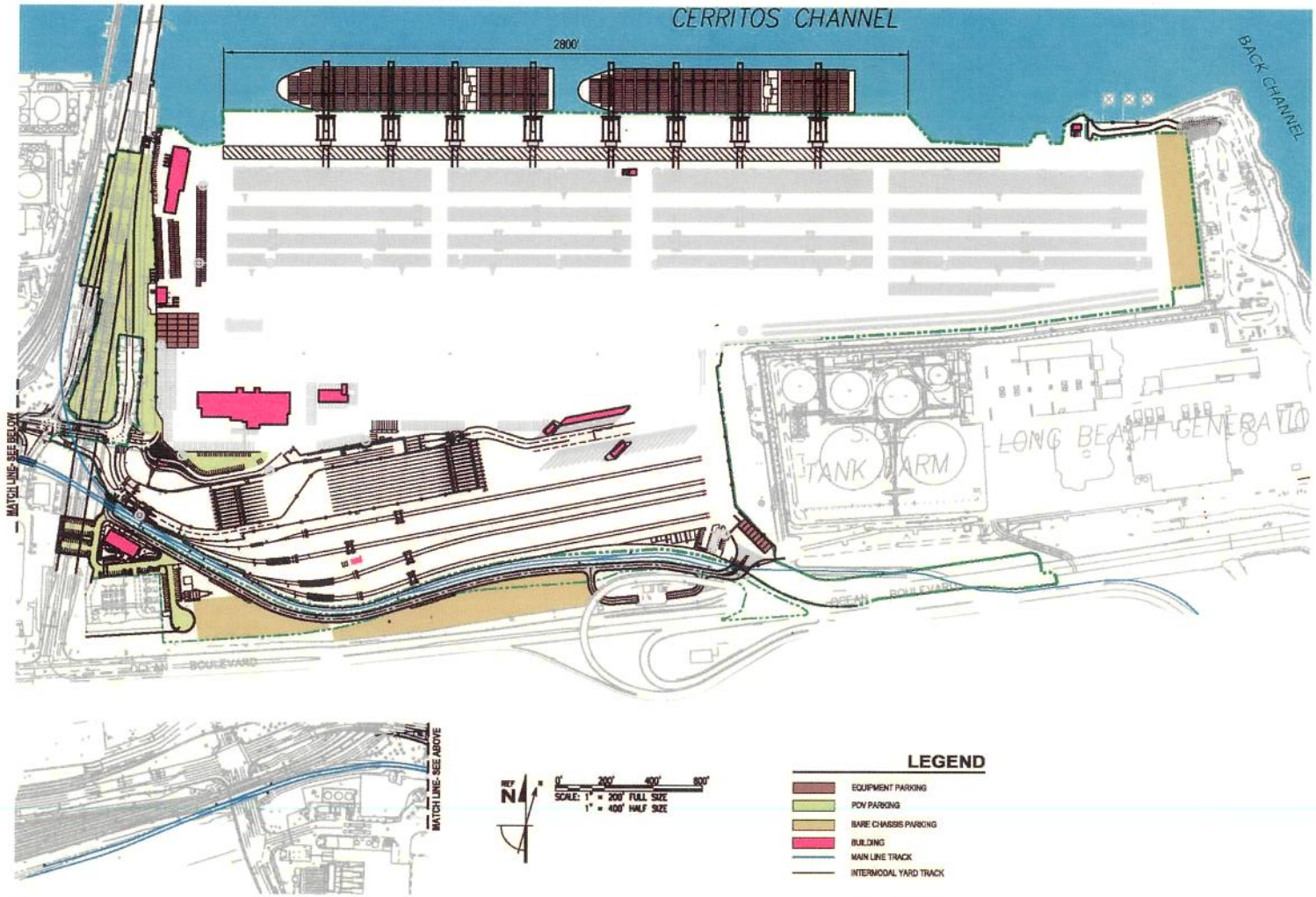

Figure 1-7
Two-Berth Alternative

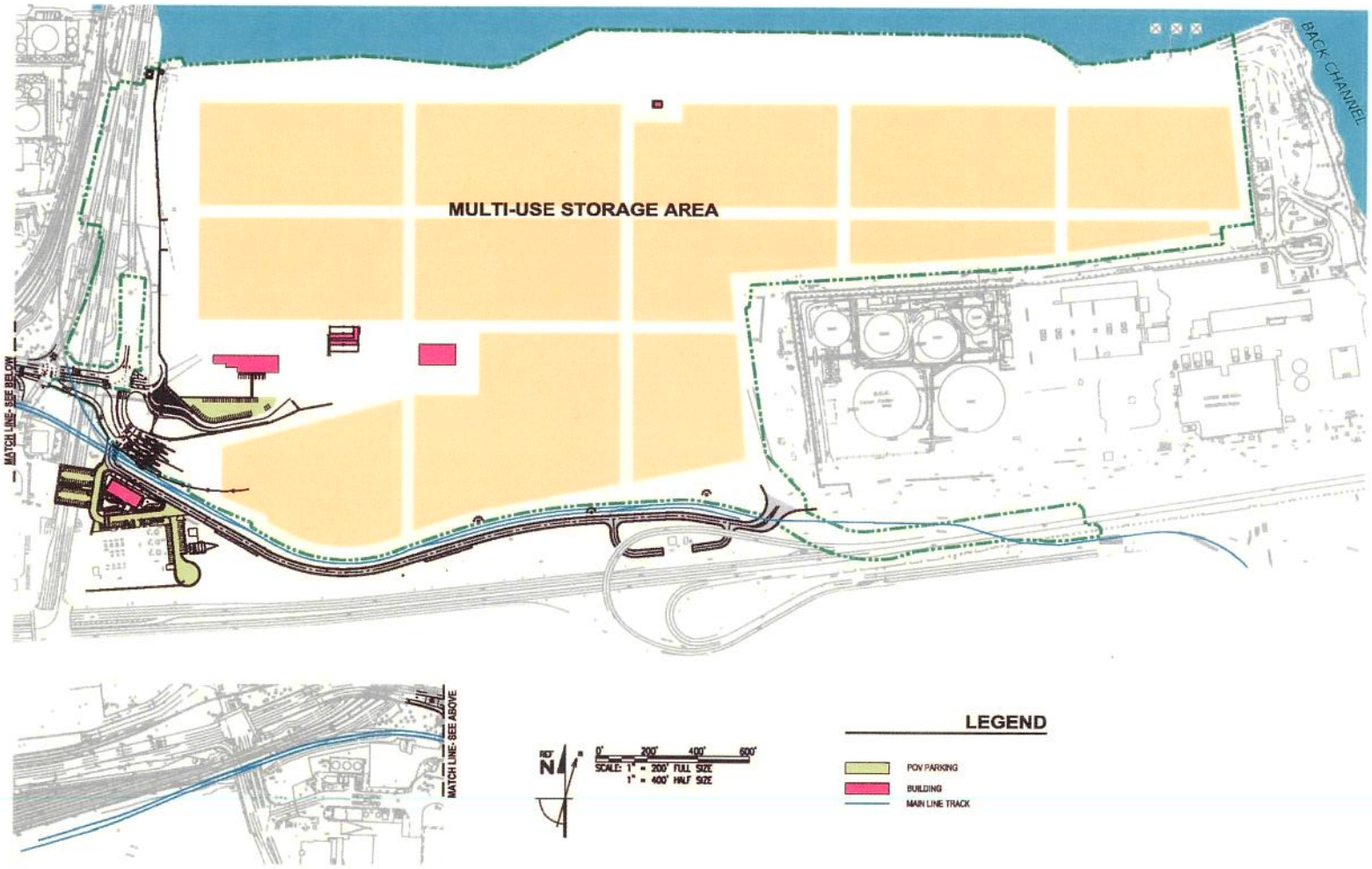

Figure 1-8
Multi-Use Storage Alternative

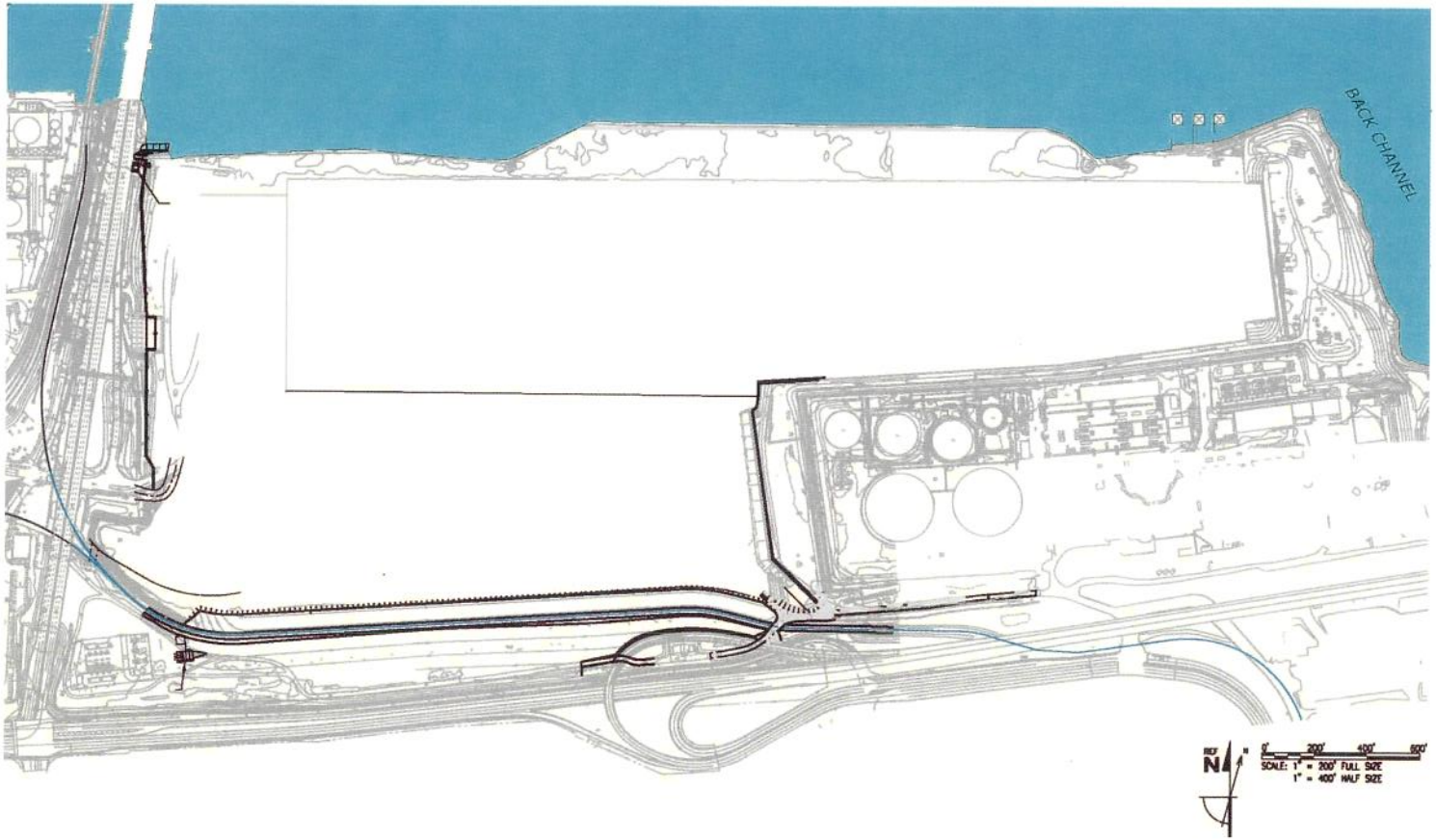

Figure 1-9
No Project Alternative