

MITIGATION MONITORING AND REPORTING PROGRAM

City Dock No.1 Marine Research Center Project

Environmental Impact Report (EIR)

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September 2012

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MITIGATION MONITORING AND REPORTING PROGRAM

1.1 Introduction

Section 21081.6 of the California Public Resources Code (PRC) requires a Lead or Responsible Agency to adopt a mitigation monitoring and reporting program (MMRP) when approving or carrying out a project. The purpose of this program is to ensure that when an environmental document, either an Environmental Impact Report (EIR) or a negative declaration, identifies measures to reduce potential adverse environmental impacts to less-than-significant levels that those measures are implemented as detailed in the environmental document. As lead agency for the City Dock No.1 Marine Research Center Project (proposed Project), the Los Angeles Harbor Department (LAHD) is responsible for implementation of this MMRP.

An EIR has been prepared for the proposed Project that addresses the potential environmental impacts, and where appropriate, recommends measures to mitigate these impacts. As such, this MMRP is required to ensure that adopted mitigation measures are successfully implemented and a monitoring strategy was prepared for each mitigation measure identified in the proposed Project. Once the Board of Harbor Commissioners adopts the MMRP, the applicable LAHD division(s) will incorporate the mitigation monitoring/reporting requirements in the appropriate permits (i.e., engineering specifications, engineering construction permits, real estate entitlements, and/or coastal development permits). Therefore, in accordance with the aforementioned requirements, this document lists each mitigation measure, describes the methods for implementation and verification, and identifies the responsible party or parties as detailed below in the MMRP Implementation section.

1.2 Proposed Project Overview

The proposed project site is bounded by the East Channel to the west, the Main Channel to the east, 22nd Street to the north, and the open water of the San Pedro Bay to the south. Local access to the site is provided by 22nd Street and Sampson Way.

The proposed Project involves a comprehensive plan for the reuse of City Dock No. 1 that would be built out in two phases. The proposed City Dock No. 1 Marine Research Center Project involves the following major elements:

- Adaptive reuse of the transit sheds at Berths 57–60 to accommodate marine research laboratory, classroom, and meeting spaces within a collaborative environment to create research synergies among universities, colleges, government agencies, and business ventures.
- Wharf retrofits of Berths 57–60 and related infrastructure, including a seawater circulation system and berthing facilities for large research vessels as well as street improvements.
- Construction of a new building at Berth 56 with classrooms and a lecture hall/auditorium.
- Relocation of the Southern California Marine Institute (SCMI) from its existing location at Berth 260 on Terminal Island to Berths 56 and 57.
- Development of an interpretive center open to the public.
- Establishment of a marine science business park/incubator space with offices and research laboratory space within Berths 58–60 transit sheds.
- Installation of floating docks in the East Channel to accommodate smaller research vessels.
- Integration with and development of the waterfront promenade along the water's edge, consistent with the approved San Pedro Waterfront Project while not impacting the health and safety of the visiting public.
- Development of Berths 70 and 71, following the planned demolition and remediation of the existing Westway Terminal site. This development would include the construction of a new building for National Oceanographic and Atmospheric Administration (NOAA) operations, the use of existing berthing space for research vessels, and the construction of a new building to host a natural seawater wave tank facility.

Each of these key proposed project elements is described in further detail below.

1.3 Proposed Project Purpose

The overall purpose of the proposed Project is to adaptively reuse the transit sheds at Berths 57–60 and the adjacent Berths 70–71 proposed project site and existing buildings (e.g., transit centers) to provide world-class marine research facilities and space to bring together leading researchers and entrepreneurs, including SCMI, southern California universities and colleges, government research agencies, such as the NOAA, and businesses to conduct cutting-edge urban marine research and education, and develop technologies to address the most pressing problems of the day. The proposed Project seeks to achieve this purpose through the rehabilitation of the existing buildings and wharves to house state-of-the-art marine research and educational facilities and provide deep draft berthing space for research vessels, and by providing for a cluster of university researchers, educational programs, and spin-off marine science technology ventures.

1.3.1 Proposed Project Objectives

The proposed Project would provide a world-class urban marine research center and support the research needs of the Southern California region's universities, research and education institutions, and government agencies, as well as provide an incubator for marine-related business venues. Specifically, the proposed Project would achieve the following objectives.

- Adaptively reuse Berths 56–60 and 70–71 to provide marine researchers in Southern California with world-class marine research facilities including laboratories, a seawater circulation system, offices, classrooms, a lecture hall/auditorium, and storage space to study the most pressing marine-related problems of the day.
- Construct a natural seawater wave tank to allow scientists from around the world to study tsunamis, rouge waves, and the generation of wave energy; conduct vessel and platform studies; and conduct coastal engineering studies.
- Provide space within Los Angeles Harbor to relocate, upgrade, and expand SCMI's operations, which are currently located at Berth 260 in Fish Harbor.
- Provide an opportunity for SCMI and its members, government and other institutional researchers, and research organizations with multiple deep draft berths to accommodate vessels ranging in size from small to large 300-foot vessels adjacent to landside facilities.
- Provide a location for a marine-related business incubator park for synergy among research and commercial interests, and develop commercial technologies to address marine environmental problems.
- Provide public amenities, including public education classroom space and interpretive exhibits related to marine studies and a cafe, along with a waterfront promenade, consistent with the San Pedro Waterfront Project while not impacting the health and safety of the visiting public.

1.4 Proposed Project Elements

The proposed Project involves a comprehensive plan for the reuse of City Dock No. 1 that would be built out in two phases. Phase I, which is anticipated to begin in late 2012 and conclude in 2016, would include the conversion of Berths 56 and 57 into a new SCMI facility and development of an interpretive center open to the public. The majority of the remaining proposed project elements would be constructed under Phase II, which is anticipated to commence construction in 2013 and conclude around 2024. Table 1-1 provides a summary of the two phases of development by each element and the total area each major element would contribute to the overall proposed Project.

All construction staging and material laydown would occur within the proposed project site at Berths 70-71 and the Sampson Way and 22nd Street Parking Lot during Phase I, with the majority of the staging and laydown occurring at the parking lot as Phase II progresses toward completion. In addition, prior to commencement of the

proposed Project, the existing occupant (SP Bait Company) would relocate its operations from the proposed project site.

Table 1-1. Elements of the Proposed Project

<i>Element/Phase</i>	<i>Area</i>
PHASE I (2012–2016)	
Berth 56	
<ul style="list-style-type: none"> ▪ Construct 2-Story Learning Center at Berth 56 (150-seat lecture hall/auditorium and classrooms) 	11,500 sf
Berth 57	
<ul style="list-style-type: none"> ▪ Convert Berth 57 Transit Shed into SCMI Research Facility and Develop Marine Research- and Education-Related Facilities <ul style="list-style-type: none"> □ Office-Related Space (12,000 sf) <ul style="list-style-type: none"> ○ Faculty Office Space ○ Administrative Suite ○ Staff Support Facilities (toilets, showers, and lockers) □ Laboratory Related Space (34,500 sf) <ul style="list-style-type: none"> ○ Teaching Laboratories ○ Research Laboratories and Facilities ○ Lab Support Space ○ Building Support Facilities (machine shop, storeroom, chemical storage, hazardous waste, scuba gear, instrument support, etc.) 	46,500 sf
<ul style="list-style-type: none"> □ Outdoor Space (8,200 sf)¹ <ul style="list-style-type: none"> ○ Outdoor Teaching/Outreach Classroom ○ Outside Storage Space 	
<ul style="list-style-type: none"> ▪ Replace Berth 57 Entrance (3,640 sf) with New Addition (Public Interpretive Center) 	3,600 sf
<ul style="list-style-type: none"> ▪ Install Seawater Circulation and Life Support System including Exterior Storage Tanks for Berths 57 and Seawater Intake/Discharge Infrastructure to Serve City Dock No.1 Research Laboratory Buildout 	New utility
<ul style="list-style-type: none"> ▪ Construct Floating Docks Adjacent to Berth 57 (12 vessel slips) 	18,500 sf
<ul style="list-style-type: none"> ▪ Rehabilitate/Repair Berth 57 Wharf and Associated Ground Improvements <ul style="list-style-type: none"> □ Create Berthing for Research Vessels and Loading Space on the Wharf for Crane 	625 lf ¹
<ul style="list-style-type: none"> □ Create Berthing for Research Vessels and Loading Space on the Wharf for Crane 	--
<ul style="list-style-type: none"> ▪ Construct Public Plaza at Berth 57 	7,500 sf ¹
<ul style="list-style-type: none"> ▪ Relocate SCMI from Berth 260 to new Berth 57 Facilities 	--

<i>Element/Phase</i>	<i>Area</i>
Berth 260	
<ul style="list-style-type: none"> ▪ Demolish Existing SCMI Facility (demolition of existing 19,000-sf building, 2,700-sf warehouse, and 2,400-sf shop storage) 	(24,100 sf)
<i>Total Structure Square Feet in Phase I</i>	<i>80,100 sf²</i>
Signal Street Improvements/Parking Facilities	
<ul style="list-style-type: none"> ▪ Repair/Repave/Restripe 	625 lf ¹
<ul style="list-style-type: none"> ▪ Add Surface Parking Adjacent to Berth 56 	15 spaces
<ul style="list-style-type: none"> ▪ Add Surface Parking Adjacent to Berth 57 	40 spaces
<ul style="list-style-type: none"> ▪ Utilize Sampson Way and 22nd Street (existing parking lot; 4.5 acres) 	409 spaces
<i>Total Parking Added in Phase I</i>	<i>55 spaces</i>
<i>Total Available Parking in Phase I</i>	<i>464 spaces</i>
<i>Total Area Redeveloped and Enhanced in Phase I</i>	<i>8.8 acres</i>
PHASE II (2013–2024)	
Berths 58–60	
<ul style="list-style-type: none"> ▪ Covert Transit Sheds into Marine Research Facility <ul style="list-style-type: none"> □ Office Related Space (50,000) <ul style="list-style-type: none"> ○ Office/Administrative Space³ ○ Staff Support Facilities (toilets, showers, and lockers) ○ Hallways, Walkways □ Laboratory Related Space (70,000) <ul style="list-style-type: none"> ○ Research Laboratories and Facilities ○ Lab Support Space ○ Storage Facilities (robotics, instruments, etc. deployed on marine research vessels) ○ Marine Research Vessel Support Facilities (crew quarters, showers, etc.) ○ Building Support Facilities (machine shop, storeroom, chemical storage, hazardous waste, scuba gear support, etc.) □ Outdoor Space (16,400 sf) <ul style="list-style-type: none"> ○ Outside Storage Space 	120,000 sf
<ul style="list-style-type: none"> ▪ Convert Transit Shed to Marine Business Incubator Space <ul style="list-style-type: none"> □ Office Related Space (20,000) <ul style="list-style-type: none"> ○ Office/Administrative Space³ ○ Staff Support Facilities (toilets, showers, and lockers) □ Laboratory Related Space (40,000) <ul style="list-style-type: none"> ○ Research Laboratories and Facilities ○ Lab Support Space ○ Storage Facilities (robotics, instruments, etc. deployed on marine research vessels) 	60,000 sf

<i>Element/Phase</i>	<i>Area</i>
▪ Develop Waterfront Promenade including Public Plaza/Viewing Platform at Berth 60	6,000 lf ¹
▪ Construct Waterfront Café	1,000 sf
▪ Install Seawater Circulation System including Exterior Storage Tanks for Berths 58–60	New utility
▪ Relocate Items Stored by Water Taxi Service (to within the general vicinity)	--
▪ Rehabilitate/Repair Berths 58–60 Wharf and Associated Ground Improvements	1,875 lf ¹
□ Create Berthing for Research Vessels and Loading Space on the Wharf ³	--
Berths 70-71 (Westways)⁴	
▪ Construct 2-Story NOAA Administration and Research Facility	50,000 sf
▪ Implement Wharf Maintenance	--
▪ Construct 5-story Building (to house an 80,000 sf wave tank), including Seawater Intake	100,000 sf
▪ Opportunity Site. Options could include: <ul style="list-style-type: none"> □ Support Facilities for Berth 57–60 Operations such as Seawater Storage Tanks, Life Support Facilities, Discharge Treatment Facilities, and Storage Space. □ Outside Research Tanks □ Additional Marine Research/Business Laboratory Space 	
<i>Total Structure Square Feet in Phase II</i>	<i>331,000 sf</i>
Signal Street Improvements/Parking Facilities	
▪ Implement Repaving and Restriping	1,875 lf ¹
▪ Install New Diagonal Parking	155 spaces
▪ Remove Existing Heavy Rail Line from Street	8,000 lf ¹
<i>Total Parking Added in Phase II</i>	<i>155 spaces</i>
<i>Total Parking Available in Phase II</i>	<i>619 spaces⁵</i>
<i>Total Area Redeveloped and Enhanced in Phase II</i>	<i>25.00 acres</i>
PROPOSED PROJECT TOTALS	
Total Proposed Project Area Structures	411,100
Total Parking Spaces Available for Proposed Project	619
Total Proposed Project Area Redeveloped and Enhanced	33.8 acres
¹ Not a structure and is therefore not counted in total structure sf. ² Excludes demolition of existing SCMI Facility at Berth 260. ³ NOAA facilities, including office and research space within Berths 58–60 Transit Shed and berthing space at Berths 58–60 to be relocated to Berths 70–71 when remediation and development of those berths has been completed. ⁴ Demolition of the Westway tanks, piping, and related structures at Berths 70–71 as well as the remediation following has been analyzed under the San Pedro Waterfront EIS/EIR and is not considered a component of the proposed Project. ⁵ In addition to the 155 new parking spaces provided under Phase II, visitors and employees would have access to the 464 parking spaces identified under Phase I for a total of 619 spaces for the proposed Project. sf = square feet; lf = linear feet	

1.4.1 Learning Center Building (Berth 56)

Berth 56 improvements under Phase I would include construction of a Learning Center building. This building would include three classrooms and a 150-seat auditorium that would feature theater-style seating and related facilities. The Learning Center would be designed in accordance with the Secretary of the Interior's Standards for Rehabilitation (Secretary's Standards) to ensure architectural compatibility with adjacent historic resources, including plan review by a qualified consulting architectural historian for compliance with the Secretary's Standards.

1.4.2 Transit Shed Upgrades for SCMI (Berth 57)

In order to achieve the conversion of Berth 57, construction would first involve wharf upgrades and landside improvement to meet current seismic code. Upon completion of the wharf retrofit and ground improvements, work would begin on upgrading the existing Berth 57 transit shed to current seismic and occupancy codes. Phase I would also include the demolition of an existing 1933 wood-frame structure to allow construction of a new glazed entryway to potentially house the public interpretive center. The new structure would introduce a contemporary, neutral, and visually prominent entrance into the SCMI facility, distinct from the existing historic transit shed façade. This new façade may include large glass aquaria at the entrance way. The façade would reflect the same general shape and profile as the transit shed in height and massing and could include an area for public education and outreach.

The existing Berth 57 transit shed would require extensive renovations prior to occupancy by SCMI. The SCMI research facility would include office space for faculty, staff, and administration; laboratory space for teaching and research laboratories; lab support and building support spaces; and outdoor space for outdoor teaching, classrooms, and storage space. A seawater circulation and life support system would be installed at Berth 57, including exterior storage tanks, and seawater intake/discharge infrastructure adequate to serve City Dock No. 1 urban marine research center build-out.

Repair, retrofit, and rehabilitation of the transit shed to address structural deficiencies would be facilitated by the exposed condition of all structural elements. These include repairing rusted exterior corrugated metal siding with new panels, upgrading structural connections to meet established seismic and wind load resistance, retrofitting large openings (east and west façades) to ensure stability and water tight openings, sandblasting and repainting corroded steel members and gusset plates, and replacing deteriorated and damaged steel members, as required. In addition, it is anticipated that new traverse and longitudinal frames would be added, interior steel columns repaired, and new concrete encasements around the base of each column constructed. Installation of a continuous perimeter foundation wall, limited to shallow (2 to 3 feet maximum) excavations to inhibit water intrusion at the building perimeter and utility placement may be required. However, to gain access to the wharf underlying the transit sheds, the roof and western façade of the transit sheds would be temporarily removed to provide direct access to the wharf for pile driving purposes.

All renovations would be required to conform to the Secretary's Standards for buildings eligible for listing or listed on the National Register of Historic Places (NRHP) and would undergo a plan review by a qualified consulting architectural historian to ensure compliance. Due to the minimal nature of the existing structure (without insulation), the existing transit sheds would primarily serve as an "outer shell building" to provide basic shelter from water and wind and sun. The proposed marine laboratory, classroom, and office SCMI facility facilities would be within the existing envelope of the transit shed and be constructed by the tenant, SCMI. Therefore, the historic integrity of Berth 57 would be maintained and, at the same time, it would be adaptively re-used to integrate state-of-the-art fire/life safety protection, seismic resistance, security features, and utility infrastructure as required by its change in use. The exterior of the transit sheds would largely be maintained with the exception of necessary improvements to the siding, roof, cornices, etc. There is a potential that a few of the current loading doors would be replaced with windows to provide for public viewing/research interpretive opportunities. The following list summarizes the ways in which this project element would generally meet the guidance provided in the Secretary's Standards.

- Existing metal roll-up-style doors would be replaced with new glazed openings to provide more light, air, and egress into the interior spaces. This modification would be consistent with the guidance provided by the Secretary's Standards because it would maintain the repetitive punched openings along the structure's elevations, and most of the roll-up doors are non-original replacements. The design of the new glazing systems would reference the industrial maritime character of the building, with industrial metal sashes and clear glazing, as opposed to vinyl or wood sashes and reflective or opaque glazing.
- Deteriorated historic features would be repaired rather than replaced whenever feasible. Where the severity of deterioration requires replacement of a distinctive feature, the new feature would match the old in design, color, texture, and other visual qualities and, where possible, materials. In the case of the Berth 57 transit shed, rusting corrugated metal siding, steel members, and gusset plates would be repaired, and those materials that cannot be repaired due to advanced deterioration would be replaced in-kind with similar metal materials.
- Correcting structural deficiencies in preparation for the new use is allowable by the Secretary's Standards assuming that the improvements are completed in a manner that preserves the structural system and individual character-defining features. In the case of the interior of the transit shed at Berth 57, the open trusses are character-defining features of the building's interior. Upgrading the structural connections would not obscure, remove, or otherwise significantly alter in an adverse manner the metal truss system.
- Removal and replacement of portions of the roof and western façade to accommodate the wharf improvements and associated ground improvements at the Berths 57–60 transit shed would reuse the existing materials (corrugated metal roofing and siding) to the extent feasible. Where the severity of deterioration requires replacement of a distinctive feature, the new feature would match the old in design, color, texture, and, where feasible, materials
- In the case of the Berth 57 transit shed, the new interior "buildings" would not obscure or destroy the interior truss work, allowing these features to read as

original features of the building. The new interior structures would not reach the ceiling, thus allowing the open, floor-to-ceiling height of the interior spaces to read visually as they do today (i.e., not obscure the clerestories). The new construction would also retain a significant amount of open interior space, particularly in the center of the building, where long interior vistas are possible (i.e., new construction will be relegated to the side aisles of the structure). The buildings would be differentiated from the old but also compatible with the massing and scale of the building. Therefore, industrial shed-like architecture with exposed steel structures and metal siding would be an appropriate architectural motif for the new construction.

- New additions and adjacent or related new construction would be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

1.4.3 Floating Docks (Berth 57)

Phase I would also develop an 18,500-square-foot, 12-slip floating dock in the East Channel adjacent to Berth 57 to accommodate existing small SCMI research vessels and to allow sufficient capacity for additional small research vessels.

1.4.4 Wharf Improvements and Associated Ground Improvements (Berths 57–60)

In order to accommodate the proposed project elements at Berths 57–60, construction would involve first upgrading the adjacent wharf and the existing retaining wall to current seismic code. There are two potential options for the wharf improvements and associated ground improvements.

The first option involves installing 127 new 72-inch diameter steel pipe piles (superpiles) with 20 feet of spacing along the footprint of the existing building. The superpiles would be installed in-water and would carry virtually all of the seismic loads, leaving the existing structure to carry only gravity loads. In addition, to retain the existing aesthetic appearance, the new superpiles would be set back from view, and the existing viewable rows of piles would be replaced with new concrete piles that would be indistinguishable from the existing condition, which would allow the new wharf to retain the same general appearance. Similar to the existing wharf design, the first row of concrete piles, end caps, and decking along the westernmost edge of the wharf would be reconstructed using approximately 16-inch-square concrete piles spaced about 15 feet apart with a concrete deck resting directly above. As such, these new features would match the old in design, color, texture, and materials, and would conform to the guidance provided by the Secretary's Standards. When detailed plans of the replacement piles are available, they would be reviewed by a qualified consulting architectural historian to ensure compliance with the Secretary's Standards. Work would include removing the roof of the existing transit sheds, demolishing 18,288 square feet of existing concrete slab, installing silt curtains, driving the piles, pouring new pile caps and deck slab, and replacing the

roof. Exterior façade removal and reinstallation along the entire length of Berths 58–60 would be required.

The second option involves the installation of 252 new 60-inch-diameter steel pipes (in groups of four), which would be located along the back face of the existing seawall, outside of the water, spaced 40 feet apart. The four-pile groups would be installed with a 5-foot-thick concrete pile cap to minimize the displacement of the wharf structure during a seismic event. A 6-inch-thick topping slab acting as a “drag-slab” would extend across the existing deck to tie in the existing wharf structure to the new pile clusters. The existing viewable rows of piles would be replaced with new concrete piles that would be indistinguishable from the existing condition, which would allow the new wharf to retain the same general appearance. Similar to the existing wharf design, the first row of concrete piles, end caps, and decking along the westernmost edge of the wharf would be reconstructed using approximately 16-inch-square concrete piles spaced about 15 feet apart with a concrete deck resting directly above. As such, these new features would match the old in design, color, texture, and materials, and would conform to the guidance provided by the Secretary’s Standards. When detailed plans of the replacement piles are available, they would also be reviewed by a qualified consulting architectural historian to ensure compliance with the Secretary’s Standards. Work would include removing the roof of the existing transit sheds, demolishing 6,300 square feet of existing concrete slab, installing silt curtains, driving the piles, pouring new pile caps and deck slab, and replacing the roof.

Both options would require removal and replacement of the transit shed’s roof and western façade, which are considered character-defining features of these historic buildings. In order to comply with the Secretary’s Standards, the existing corrugated metal siding and roofing would be removed, stored, and reinstalled to the extent feasible and where such materials and features are currently in good condition, or would be replaced in-kind if such materials are deteriorated beyond repair.

Prior to initiating the wharf improvements, the SP Bait Company would relocate operations either across the East Channel or to Fish Harbor. However, the barge would remain in its current location as permitted under the current lease.

1.4.5 Demolition of SCMI Facilities (Berth 260)

Upon completion of the conversion of Berth 57 into new SCMI marine research and educational space, SCMI would be relocated from its Berth 260 location to Berth 57. The existing SCMI building and parking lot at Berth 260 in Fish Harbor on Terminal Island would be vacated. The facilities to be demolished include an existing office and research building, a storage warehouse, a workshop, and shop storage. The floating docks would remain. After structure demolition, the site would be graded and restored as required by LAHD’s agreement with SCMI. Any future development associated with this site would be subject to separate environmental review in accordance with CEQA.

1.4.6 Transit Shed Upgrades for Marine Research Facility and Business Incubator Space (Berths 58–60)

Under Phase II, Berths 58–60 would be converted to provide approximately 120,000 square feet for marine research facilities and approximately 60,000 square feet of marine business incubator space. These facilities would include office space, which could be utilized for temporary office space for NOAA, until Berths 70–71 are developed. The storage areas at the end of Berth 60 utilized by the water taxi service would be relocated within the general vicinity of Berth 60 to better accommodate the proposed Project.

The seawater circulation and life support system would be expanded to Berths 58–60 during Phase II, as described further in Section 2.3.4.8 of the Draft EIR. In order to achieve the conversion of Berths 58–60, construction would first involve wharf upgrades and ground improvement to meet current seismic code. Upon completion of the wharf and ground improvements, the next steps would involve upgrading the existing transit shed at Berths 58–60 to meet current seismic code, as well as renovating the building in conformance with the Secretary's Standards for buildings eligible for listing or listed on the NRHP. Conversion of Berths 58–60 would occur much as it would for Berth 57 in that tenant improvements would be constructed within the envelope of the existing transit shed.

The repairs and upgrades to the transit shed at Berths 58–60 would be designed to meet the Secretary's Standards' requirement for new work to be compatible with, yet architecturally differentiated from, the old, including plan review by a qualified consulting architectural historian for compliance with the Secretary's Standards. The building parameters discussed above for the Berth 57 transit shed would be applicable to the Berth 58–60 transit shed repairs.

1.4.7 Berths 70 and 71 (Westway Terminal)

Once remediation and restoration activities at Berths 70–71 are completed, the proposed Project would develop Berths 70–71 with a 50,000-square-foot facility for NOAA that would include office and laboratory space. The NOAA building would be designed in accordance with the Secretary's Standards, including plan review by a qualified consulting architectural historian for compliance with the Secretary's Standards.

The two-story building would be subordinate to the six-story Municipal Warehouse No. 1 building. The building design would reference the adjacent building's maritime industrial character, materials, and massing. As an example, appropriate design cues would be taken from the adjacent Municipal Warehouse No. 1 building, such as a rectilinear form with flat roof or monitor roof shapes, exposed exterior walls painted a light color, expressed pilasters, repetitively punched openings, and symmetrically arranged elevation. The use of overly elaborate architectural styles that purposely depart from the simple, maritime industrial character of the area would

be avoided, as would large amounts of landscaping, because landscaping is not characteristic of the area.

The Westway Terminal Administration Building (also known as the Pan-American Oil Company Pump House) would be adaptively reused by a future occupant. The Mission Revival style character of the Westway Terminal Building would be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize this building, stucco wall cladding, or stepped Mission parapet, would be avoided.

Deteriorated historic features of the Westway Terminal Building would be repaired rather than replaced, to the extent feasible. Where the severity of deterioration requires replacement of a distinctive feature, the new feature would match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features would be substantiated by documentary, physical, or pictorial evidence, to the extent available.

In addition, Berths 70–71 along the Main Channel would be made available for berthing of research vessels, with a maximum vessel length of approximately 250 feet. There are no plans to relocate current vessels in the NOAA fleet to the proposed project site, but there is a possibility that future built vessels could be home ported at City Dock No.1. Furthermore, full functioning of the site would include the regular docking of NOAA vessels home-ported in other locations but passing through Los Angeles as part of research expeditions.

Redevelopment of Berths 70–71 would also involve development of an 80,000-square-foot steel-reinforced concrete wave tank on the land side, which would be enclosed within its own five-story, 100,000-square-foot building. The wave tank would be constructed to allow the study of tsunamis, rouge waves, and the generation of wave energy, as well as vessel and platform, and coastal engineering studies. The wave tank building would include an internal crane mechanism for moving tank baffles and actuators and equipment within the building.

The base of the building would be above the mean high tide mark, which would allow for a depth of approximately 10 feet below the existing grade elevation. The first story would comprise the foundation, the next two stories would house the wave tank, the fourth story would include walkways and view platforms, and the final story would provide clearance for cranes to maneuver the wave tank baffles.

The building would be designed to be compatible with the historic materials and features of nearby historic structures to the extent feasible given its required size. For example, the design of the wave tank would reference motifs, massing, and materials of other large-scale buildings in the immediate vicinity to help maintain the industrial maritime character of the district.

1.4.8 Marine Research Facility Support Structures

The proposed urban marine research center is intended to support marine research and entrepreneurial business development to address the next generation of ocean-

driven challenges and opportunities such as tidal, wind, and biomass energy; aquaculture and sustainable fisheries; shoreline dynamics; and tsunamis, rouge waves, remote sensing, coastal resource management, marine pollution, marine biochemistry and pharmacology, underwater robotics, and climate change and sea-level rise. The proposed Project would not only support marine research being conducted by Southern California universities and colleges and state and national marine-related agencies, but is also intended to accommodate visiting researchers from around the nation and world.

Research would be selected, undertaken, and managed by the tenants/subtenants of City Dock No. 1. Research topics are anticipated to evolve and change over time, as new information and environmental concerns are identified. Similarly, equipment storage needs, seawater circulation system, life support system, and seawater volume needs are anticipated to fluctuate over time based on research being conducted.

1.4.8.1 Marine Research Seawater In-Take, Life Support, and Treatment Systems

Initially, the seawater system, and associated life support and water treatment systems, and water would only serve Berth 57, but the intake/discharge infrastructure would be designed with enough capacity to eventually serve Berths 58–60 and 70–71 once those upgrades and new construction are completed in Phase II. The current combined volume of all Berths 57–60 and 71 marine research tanks is estimated at approximately 1,000,000 gallons.

Seawater storage tanks necessary for Berth 57 marine research operations would be installed as part of Phase I. Additional seawater storage tanks would be added as additional research and business incubator facilities are developed in Phase II in order to address the needs of those additional operations. Life support systems, such as water filtration, protein skimmers, and ozone treatment systems would also be constructed and installed, as applicable, to all City Dock No. 1 facilities, with space reserved for additional components to be added as build out of the center proceeds. Chillers and heaters would be installed for seawater systems that require specific temperature requirement.

The exact seawater system(s), life support, and treatment systems to be utilized at the facilities would be designed to meet the needs of the research planned to be conducted within each section of the proposed City Dock No. 1 facility, for which specific detailed needs are currently unknown. However, it is anticipated that the seawater systems would comprise a combination of both flow-through and recirculating capabilities. Depending on the system that is ultimately developed, the quantity of discharge, and the types of activities that occur and species handled in the research laboratories, different discharge and filtration requirements may be needed for either ocean or sewer discharge. Conservative intake and discharge estimates for each type of seawater system are included to ensure potential impacts of both potential marine research facility seawater systems were evaluated and addressed in the Draft EIR.

1.4.8.2 Seawater In-Take and Discharge

The seawater intake and discharge locations for the Berths 57–60 and 70–71 research facilities are proposed to be located at the southern end of City Dock No.1, slightly extending out past the rip-rap, or under the Berths 57–60 wharves, as deemed most appropriate for the final seawater system design. It is anticipated that the seawater systems would comprise a combination of both flow-through and recirculating capabilities. The intake flows would be limited to 0.5 feet per second or less, which is the velocity identified in the U.S. Environmental Protection Agency (EPA) guidelines as a rate that generally allows fish to pull away from the intake structure and results in *de minimus* impingement levels. The intake pipe size would be designed to acquire the volume of water needed, while ensuring a velocity of 0.5 feet/second or less. The in-take would be located in an area without nearby sensitive habitat, would operate at low flows and velocities, and would be screened to minimize entrainment and impingement. Should a combination of recirculation and flow-through system be used, seawater in-take volume would be significantly less.

The discharge rate for flow-through systems would use the same rate as the in-take. The discharge location would be to the west of the proposed in-take location at the southern end of City Dock No.1, or under the Berths 57–58 wharves, as deemed most appropriate for the final seawater system design.

1.4.8.3 Flow-Through Seawater Systems

Flow-through seawater systems would take in seawater and circulate it through the marine tanks. After circulation through the tanks, the seawater would be filtered and treated for discharge back to the harbor. This type of system minimizes the need for: (1) seawater storage tanks; (2) life support treatment systems, such as protein skimmers and ozone treatment; (3) seawater discharge to the sewer; and (4) electricity usage. Based on the experience of the existing SCMI operation, it is currently anticipated that filtering systems would be adequate to treat seawater from the flow-through system for ocean discharge.

To ensure a healthy environment for marine life, it is anticipated that the water in all tanks would need to be turned over twice daily. This would result in the need to in-take and discharge 2,000,000 gallons per day, twice the volume of the City Dock No. 1 research facility tanks, every 24-hour period.

In-take seawater may be chilled, or heated, as appropriate for the tanks and research being conducted. Water that is higher or lower than ambient harbor water temperatures would be managed during discharge to achieve ambient water temperatures prior to discharge to the harbor. Seawater used in tanks that house nonnative species would either be discharged to the sewer or processed through enhanced treatment systems, as necessary to eradicate any nonnative species and prevent their introduction into harbor waters.

1.4.8.4 Recirculating Seawater Systems

Recirculating seawater systems would take in seawater, circulate it through tanks, and then filter and treat the water to remove biological waste created by marine organisms maintained in the tanks through filtration, protein skimmers, and ozone treatment. The water would then be recirculated through the tanks. New seawater would be introduced on an ongoing basis as needed to maintain the appropriate water quality, and re-used seawater would be discharged. The turnover rates of seawater for recirculation systems vary based on the treatment systems used and marine organisms maintained. Based on the experience of local aquariums an annual turnover rate of between 6 and 10 is anticipated, resulting in daily intake and discharge volumes of between 16,438 and 27,397 gallons, respectively. Maximum marine research facility sanitary seawater discharge, based on a 100% recirculating seawater system with a 10 times per year turnover rate, would be 27,397 gallons/day. However, should a combination of recirculation be used, seawater discharge volume would be significantly less.

Used seawater would require treatment prior to discharge to the sanitary sewer or harbor. Should sanitary sewer discharge be involved, discharges would need to be scheduled to avoid negative impacts on the Terminal Island Treatment Plant, and would be sampled and monitored to ensure compliance with industrial waste discharge requirements for sanitary sewer discharge. In addition, filters used in the recirculated seawater cleansing process must be backwashed to maintain the cleansing ability. The backwash would require discharge to the sanitary sewer. Recirculation systems minimize water in-take and are able to better control fluctuations in water quality. However, recirculation systems are space intensive, requiring a large footprint for storage tanks and life support/treatment systems, and are energy intensive. In addition, due to the re-use of water, biological wastes are concentrated, and discharged water requires a greater level of treatment than flow-through systems for harbor discharge, resulting in additional space needs and energy resources.

As in the case of the flow-through system, in-take seawater may be chilled, or heated, as appropriate for the tanks and research being conducted. However, water temperature would not be a consideration for seawater discharged to the sanitary sewer.

1.4.8.5 Wave Tank Seawater In-Take and Discharge

A separate seawater intake and treatment system would be developed for the wave tank during Phase II. The proposed wave tank has a total proposed volume of approximately 14,361,600 gallons, and the in-take is proposed to be located along the Berths 70–71 wharf in the main channel.

The gallon per day seawater in-take for filling the proposed wave tank would largely be dependent upon the time allocated to initially fill the tank. A 90-day tank fill time would require 159,574 gallons/day. The in-take flows would be limited to 0.5 feet per second or less. After the initial filling of the wave tank, ongoing seawater in-take

needs would be minimal because discharges from the wave tank would be infrequent and intermittent.

Once filled, the seawater in the wave tank would be chemically treated to eliminate marine growth within the tank and retained in stasis except on rare occasions when lower water levels would be needed for a study. On such occasions water may be discharged from the tank. Upon completion of the study, seawater would be needed to again fill the tank. Prior to discharge, chemically treated water would be filtered to ensure that chemicals used to treat the water are removed prior to discharge to the harbor or would be discharged to the sanitary sewer. Discharges would be tested and monitored to ensure compliance with all applicable discharge requirements. The wave tank harbor discharge location would be adjacent to the in-take location along the Berths 70–71 wharf in the main channel.

1.4.9 Waterfront Promenade

The SPWP EIS/EIR (POLA 2009) assessed the construction of a continuous waterfront pedestrian promenade throughout the waterfront project site. Extending the promenade through a marine laboratory facility could pose special challenges because the waterfront would be utilized for vessel loading on a routine basis by forklifts, cranes, and other heavy equipment at unpredictable intervals. The approximately 6,000-linear-foot promenade would be constructed along the edge of the wharf in such a manner as to maintain public access without creating a safety hazard or otherwise unduly impeding the work that is necessary at a marine laboratory. As such, as part of the proposed Project, the proposed location of the promenade would be along East 22nd Street and Signal Street, and along the existing wharf that runs the perimeter of City Dock No. 1, to the extent feasible. The south end of Berth 60 would be developed to accommodate a public viewing area and platform.

1.4.10 Signal Street Improvements

Signal Street would be repaved and realigned as part of the proposed Project. As part of the realignment, a total of approximately 195 diagonal parking spaces would be provided along one side of the street. The proposed Project would add 15 spaces adjacent to the Berth 56 Learning Center building, 40 new spaces adjacent to the Berth 57 transit shed, and 155 spaces adjacent to Berths 58–60. In addition, the existing heavy rail tracks that are embedded within Signal Street would be removed (approximately 8,000 lineal feet), and the area that is disturbed during the rail removal would be repaved.

1.4.11 Utility Improvements

The proposed Project would provide new utility connections to the proposed buildings as well as the existing buildings to allow for the proposed project elements described above. All connections would be located within the proposed project site and would connect with the existing infrastructure located under Signal Street. In addition to the general utility connections, the proposed Project would potentially

upgrade the existing sewer pump servicing the proposed project site. This upgrade to the sewer pump would provide additional capacity to accommodate the proposed Project under full buildout as well as additional future projects if needed.

1.4.12 Sustainable Design Project Features

The proposed Project is intended to showcase LAHD's commitment to sustainability. The proposed Project would incorporate a number of sustainable elements focusing on the effort of LAHD to create a green Port. These are analyzed as part of the proposed Project within the Draft EIR. Additionally, the proposed Project would incorporate several features to enhance the final design of the proposed Project. Although not required to mitigate a significant impact, these design measures would further minimize the proposed Project's effect on surrounding uses and environmental resources. The following proposed project elements and design measures are consistent with LAHD's Sustainability Program and policies.

- Use recycled water if available for all landscaping and water feature purposes to decrease the proposed Project's use of potable water.
- Include drought-tolerant plants and shade trees in the planting palette.
- Require Leadership in Energy and Environmental Design (LEED™) certification for all new buildings as feasible by implementing and ensuring consistency with LAHD's Green Building Policy; LEED Certification (minimum Silver) is required for all new development over 7,500 square feet.
- Follow LAHD sustainable engineering design guidelines in the siting and design of new development.
- Employ LAHD sustainability measures during construction and operation and use recycled and locally derived materials for proposed project construction, while achieving recycling goals for construction and demolition debris.
- Implement energy efficient design features in the final design to help ensure energy needs are minimized to the extent feasible during construction and operation of the proposed Project.
- Implement water quality and conservation design features in the final design to help ensure water quality impacts are minimized during construction at the water's edge and in the water and operationally through the use of construction best management practices (BMPs) and bioswales.
- Implement aesthetic design features. Public art would be integrated into the proposed project area and would include sculptural pieces. Views of the waterfront would be created through the construction of the waterfront promenade around the edge of the site. The proposed Project would also implement the San Pedro Waterfront Development Design Guidelines to improve efficiency and reduce glare.
- Implement pedestrian access features. Pedestrian access to the waterfront and throughout the proposed project site would be improved through development of a waterfront promenade. The proposed Project would also be designed to

accommodate the extension of the Waterfront Red Car Line, which was previously approved under the SPWP in 2009.

1.5 Project Phasing and Construction Plan

The proposed Project involves a comprehensive plan for the reuse of City Dock No. 1 that would be built out in two phases. Phase I, which is anticipated to begin in late 2012 and conclude in 2016, would include the conversion of Berths 56 and 57 into a new SCMI facility and development of an interpretive center open to the public. The majority of the remaining proposed project elements would be constructed under Phase II, which is anticipated to commence construction in 2013 and conclude around 2024. Within this overall schedule, construction activities would be phased so as to minimize disruption to existing operations, which would continue to operate during the entire construction period, and to surrounding operations.

1.6 Monitoring and Reporting Procedures

Mitigation measures will be implemented in accordance with the LAHD Environmental Management Division's (LAHD/EMD) Environmental Compliance Plan program. Prior to release of bid specifications, construction plans shall be provided to LAHD/EMD for review and approval. Operational mitigation measures will be monitored by LAHD/EMD and any specified responsible parties designated by LAHD/EMD.

This MMRP for the Project will be in place through both phases of the Project, including design, construction, and operation, and will help ensure that project objectives are achieved. LAHD shall be responsible for administering the MMRP and ensuring that all parties comply with its provisions. LAHD may delegate monitoring activities to staff, consultants, or contractors. All construction contractors shall submit an Environmental Compliance Plan for Construction Management and EMD approval prior to beginning construction activities. This plan shall document how the contractor intends to comply with all measures applicable to the contract including application of Best Management Practices (BMPs). All mitigation measures and leasing policy requirements will be included in leases and lease amendments. LAHD also will ensure that monitoring is documented through periodic reports and that deficiencies are promptly corrected. The designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to rectify problems.

1.7 Mitigation Monitoring and Reporting Program Implementation

Pursuant to AB 3180, this MMRP was prepared and is accompanied by the associated report forms utilized to verify compliance with individual mitigation measures. This MMRP identifies each mitigation measure by discipline, the entity (organization) responsible for its implementation, the report/permit/certification

required for each measure, and an accompanying LAHD MMRP form used to certify completion. Certain inspections and reports may require preparation by qualified individuals, and these are specified as needed. The timing and method of verification for each measure is also specified.

2.0

1 2 MITIGATION MONITORING AND REPORTING PROGRAM SUMMARY

3 **Table 2-1.** Mitigation Monitoring and Reporting Program Summary for the City Dock No. 1 Marine Research Center Project

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
3.2 Air Quality		
<p>MM AQ-1: Implement Harbor Craft Engine Standards. All harbor craft used during the construction phase of the proposed Project will, at a minimum, be repowered to meet EPA Tier 2. Additionally, where available, harbor craft will meet EPA Tier 3 or cleaner marine engine emission standards unless one of the following circumstances exists, and the contractor is able to provide proof of its existence:</p> <ul style="list-style-type: none">▪ A piece of specialized equipment is unavailable in a controlled form within the state of California, including through a leasing agreement.▪ A contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the proposed Project, but the application process is not yet approved, or the application has been approved but funds are not yet available.▪ A contractor has ordered a control device for a piece of equipment planned for use on the proposed Project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has	<p>Timing: Throughout all construction phases.</p> <p>Methods: This measure shall be incorporated into the LAHD contract specifications for all construction work to reduce the impact of construction diesel emissions. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p> <p>Harbor craft will meet EPA Tier 3 or cleaner marine engine emission standards unless one of the following circumstances exists, and the contractor is able to provide proof of its existence:</p> <ol style="list-style-type: none">1. A piece of specialized equipment is unavailable in a controlled form within the state of California, including through a leasing agreement.	<p>Implementation: LAHD through Construction Contractor</p> <p>Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<p>not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must have attempted to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the proposed Project has the controlled equipment available for lease.</p> <p>The analysis conservatively reflects the use of engines that meet EPA Tier 2 standards.</p>	<ol style="list-style-type: none"> 2. A contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the Project, but the application process is not yet approved, or the application has been approved, but funds are not yet available. 3. A contractor has ordered a control device for a piece of equipment planned for use on the Project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must attempt to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the Project has the controlled equipment available for lease. 	
<p>MM AQ-2: Implement Fleet Modernization for Construction Equipment.</p> <ul style="list-style-type: none"> ▪ Tier Specifications: <ol style="list-style-type: none"> a. <u>From the start of construction through December 31, 2014:</u> All off-road diesel-powered construction equipment greater than 50 hp, except marine vessels and harbor craft, will meet Tier-3 off-road emission standards at a minimum. In addition, all construction equipment greater than 50 hp will be retrofitted with a CARB-verified Level 3 Diesel Emission Control Strategy (DECS). Any emissions control device used by the contractor will achieve emissions reductions that are no less than what could be achieved by a Level 3 DECS for a similarly sized engine as defined by CARB regulations. b. <u>From January 1, 2015:</u> All off-road diesel-powered construction equipment greater than 50 hp, except marine vessels and harbor craft, will meet Tier-4 off-road emission standards at a minimum. Any emissions 	<p>Timing: Throughout all construction phases.</p> <p>Methods: This measure shall be incorporated into the LAHD contract specifications for all construction work to reduce the impact of construction diesel emissions. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p> <p>The construction equipment measures shall be met, unless one of the following circumstances exist and the contractor is able to provide proof that any of these circumstances exists:</p> <ol style="list-style-type: none"> 1. A piece of specialized equipment is unavailable within 200 miles of the Port of Los Angeles, including 	<p>Implementation: LAHD through Construction Contractor</p> <p>Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<p>control device used by the contractor will achieve emissions reductions that are no less than what could be achieved by a Level 3 DECS for a similarly sized engine as defined by CARB regulations.</p> <p>A copy of each unit’s certified tier specification, BACT documentation, and CARB or SCAQMD operating permit will be provided at the time of mobilization of each applicable unit of equipment. The above “Tier Specifications” measures will be met, unless one of the following circumstances exists, and the contractor is able to provide proof that any of these circumstances exists:</p> <ul style="list-style-type: none"> ▪ A piece of specialized equipment is unavailable within 200 miles of the Port of Los Angeles, including through a leasing agreement. If this circumstance exists, the equipment must comply with one of the options contained in the Step-Down Schedule as shown in Table 3.2-14. At no time will equipment meet less than a Tier 1 engine standard with a CARB40-verified Level 2 DECS. ▪ The availability of construction equipment will be reassessed in conjunction with the years listed in the above Tier Specifications on an annual basis. For example, if a piece of equipment is not available prior to January 1, 2015, the contractor will reassess this availability on January 1, 2015. ▪ Construction equipment will incorporate, where feasible, emissions-savings technology such as hybrid drives and specific fuel economy standards. 	<p>through a leasing agreement. If this circumstance exists, the equipment must comply with one of the options contained in the Step-Down Schedule as shown in Table 3.2-14. At no time will equipment meet less than a Tier 1 engine standard with a CARB40-verified Level 2 DECS.</p> <ol style="list-style-type: none"> 2. The availability of construction equipment will be reassessed in conjunction with the years listed in the above Tier Specifications on an annual basis. For example, if a piece of equipment is not available prior to January 1, 2015, the contractor will reassess this availability on January 1, 2015. 3. Construction equipment will incorporate, where feasible, emissions-savings technology such as hybrid drives and specific fuel economy standards. 	

<i>Mitigation Measures</i>					<i>Timing and Methods</i>	<i>Responsible Parties</i>
Table 3.2-14. Compliance Step-Down Schedule for Non-Road Construction Equipment						
<i>Compliance Alternative</i>	<i>Engine Standard^a</i>	<i>CARB-Verified DECS</i>	<i>PM Emissions^b (g/bhp-hr)</i>	<i>NO_x Emissions (g/bhp-hr)</i>		
1	Tier 4	N/A	0.01	0.3		
2	Tier 3	Level 3	0.02	2.9		
3	Tier 2	Level 3	0.02	4.7		
4	Tier 1	Level 3	0.06	6.9		
5	Tier 2	Level 2	0.08	4.7		
6	Tier 2	Level 1	0.11	4.7		
7	Tier 2	Uncontrolled	0.15	4.7		
8	Tier 1	Level 2	0.2	6.9		
^a Equipment less than Tier 1, Level 2 will not be permitted. ^b Stated emission levels are for engine hp ratings to 176 bhp and above. Emission levels for engine bhp ratings below 176 hp are marginally higher (0.02–0.08 g/bhp-hr depending on hp, Tier, and Vehicle Diesel Emission Control (VDEC) level). g/bhp-hr = grams per brake horse power hour						

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<p>MM AQ-3: Implement Additional Fugitive Dust Controls. The calculation of fugitive dust (PM10) from proposed project earth-moving activities assumes a 61% reduction from uncontrolled levels to simulate three times per day watering of the site and use of other measures (listed below) to ensure compliance with SCAQMD Rule 403 (SCAQMD 2005). The construction contractor will reduce fugitive dust emissions by 74% from uncontrolled levels (SCAQMD 2007a). The proposed project construction contractor will specify dust-control methods that will achieve this control level in a SCAQMD Rule 403 dust control plan and will include holiday and weekend periods when work may not be in progress. Measures to reduce fugitive dust include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▪ Active grading sites will be watered every two hours. ▪ Contractors will apply approved non-toxic chemical soil stabilizers according to manufacturer's specifications to all inactive construction areas or replace groundcover in disturbed areas (previously graded areas inactive for ten days or more). ▪ Construction contractors will provide temporary wind fencing around sites being graded or cleared. ▪ Trucks hauling dirt, sand, or gravel will be covered in accordance with Section 23114 of the California Vehicle Code. ▪ Construction contractors will install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off tires of vehicles and any equipment leaving the construction site. Pave road and road shoulders. ▪ The use of clean-fueled sweepers will be required pursuant to SCAQMD Rule 1186 and Rule 1186.1 certified street sweepers. Sweep streets at the end of each day if visible soil is carried onto paved roads on site or on roads adjacent to the site to reduce fugitive dust emissions. 	<p>Timing: Throughout all construction phases. Methods: This measure shall be incorporated into the LAHD contract specifications for all construction work to reduce the impact of construction diesel emissions. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<ul style="list-style-type: none"> ▪ A construction relations officer will be appointed to act as a community liaison concerning onsite construction activity including resolution of issues related to PM10 generation. ▪ Traffic speeds on all unpaved roads will be reduced to 15 mph or less. ▪ Temporary traffic controls such as a flag person will be provided during all phases of construction to maintain smooth traffic flow. ▪ Construction activities that affect traffic flow on the arterial system will be conducted during off-peak hours to the extent practicable. ▪ The grading contractor will suspend all soil disturbance activity when winds exceed 25 mph or when visible dust plumes emanate from a site; disturbed areas will be stabilized if construction is delayed. 		
<p>MM AQ-4: Implement SCAQMD’s Super-Compliant Architectural Coating Standard and Use of Low VOC Products. Architectural coatings used on site will meet SCAQMD’s super-compliant VOC standard of 10 grams of VOC per liter. The use of water-based or low VOC cleaning products, where feasible, will result in further VOC reduction. The reductions associated with the use of water-based or low VOC cleaning products were conservatively excluded from emission calculations.</p>	<p>Timing: Throughout all construction phases and operations.</p> <p>Methods: This measure shall be incorporated into the LAHD contract specifications for all construction work and improvements during operation to reduce the impact related to architectural coatings and the use of VOC products. The final design plans shall include specifications for use of super-compliant VOC architectural coatings and cleaning products. The contractor shall adhere to these specifications throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p>	<p>Implementation: LAHD through Construction Contractor (during construction) and tenant (during operations)</p> <p>Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<p>MM AQ-5: Implement the Clean Trucks Program for Construction Haul Trucks. Heavy duty diesel trucks used for hauling must meet the EPA 2007 emission standards for on road heavy duty diesel engines (EPA 2006) by 2012. The CTP applies to heavy duty trucks used during construction activities.</p>	<p>Timing: Throughout all construction phases Methods: This measure shall be incorporated into the LAHD contract specifications for all construction work to reduce the impact of construction diesel emissions. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>
<p>MM AQ-6: Implement Best Management Practices. The following types of measures are required on construction equipment (including on-road trucks), as determined feasible and appropriate:</p> <ul style="list-style-type: none"> ▪ Use diesel oxidation catalysts and catalyzed diesel particulate trap; ▪ Maintain equipment according to manufacturers’ specifications ▪ Restrict idling of on-road heavy-duty trucks to a maximum of five minutes when not in use ▪ Install high-pressure fuel injectors on construction equipment vehicles ▪ Re-route construction trucks away from congested streets or sensitive receptor areas <p>LAHD will implement a process by which to select additional BMPs to further reduce air emissions during construction. LAHD will determine the BMPs once the contractor identifies and secures a final equipment list and project scope. LAHD will then meet with the contractor to identify potential BMPs and work with the contractor to include such measures in the contract. BMPs will be based on BACT guidelines and may</p>	<p>Timing: Throughout all construction phases. Methods: This measure shall be incorporated into the LAHD contract specifications for all construction work to reduce the impact of construction diesel emissions. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
also include changes to construction practices and design to reduce or eliminate environmental impacts.		
<p>MM AQ-7: Implement General Mitigation Measure. For any of the above mitigation measures, if a CARB-certified technology becomes available and is shown to be as good as or better in terms of emissions performance than the existing measure, the technology could replace the existing measure pending approval by LAHD. For construction, measures will be set at the time a specific construction contract is advertised for bid.</p>	<p>Timing: Throughout all construction phases and on annual checks during operations. Methods: This measure shall be incorporated into the LAHD contract specifications for all construction work. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>
<p>MM GHG-1: Solar Panels. The Port shall review the feasibility of including the City Dock site on their Inventory of Potential PV Solar Sites at POLA from their December 2007 Climate Action Plan. This measure is not quantified.</p>	<p>Timing: Prior to approving building design Methods: LAHD shall review the feasibility of including the City Dock site on their Inventory of Potential PV Solar Sites at POLA prior to initiation of construction of buildings. If listed as a potential PV solar site, LAHD will undertake a final evaluation regarding installation of PV solar panels during the building design process.</p>	<p>Implementation: LAHD through Engineering and Construction Contractors Monitoring and Reporting: Environmental Management Division, Engineering Division, Construction Management Division</p>
3.3 Biological Resources		
<p>MM BIO-1. Avoid Marine Mammals. Via the construction contract and the development permit the LAHD will require that pile driving activities for construction of the proposed Project include establishment of a safety zone and monitoring of the area surrounding the operations for pinnipeds by a qualified marine biologist. The monitor will have the authority to halt operations unless, in the opinion of the Port’s project engineer (Engineer), halting operations would be unsafe. The safety zone will extend out to 500 meters from the site of the pile driving, wherever that activity is taking place. Before pile driving is scheduled to commence, observers on</p>	<p>Timing: Throughout all construction phases. Methods: This measure shall be incorporated into LAHD contract specifications for all construction work. The construction contractor shall instruct construction personnel as part of normal construction procedures. LAHD shall arrange for the presence of an EMD approved biologist(s) to monitor during construction activity.</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<p>shore or in boats will survey the safety zone to ensure that no marine mammals are present. If marine mammals are observed within the safety zone, driving will be delayed until they move out of the area. If a marine mammal is seen above water and then dives below, the contractor will wait at least 15 minutes, and if no marine mammals are seen, it may be assumed that the animal has moved beyond the safety zone. This 15-minute criterion is based on a study indicating that pinnipeds dive for a mean time of up to about 4 minutes; the 15-minute delay will allow a more than sufficient period of observation to be reasonably sure the animal has left the vicinity.</p> <p>If pinnipeds enter the safety zone after pile has begun, pile driving will continue. The monitor will record the species and number of individuals observed and make note of their behavior patterns. If animals appear distressed, and if it is operationally safe to do so, the monitor will inform the Engineer that pile driving will cease until the animal leaves the area. In certain circumstances pile driving cannot be terminated safely and without severe operational difficulties. Therefore, if it is deemed operationally unsafe by the Engineer to discontinue pile driving activities, and a pinniped is observed in the safety zone, pile driving activities will continue <u>only</u> until the Engineer deems it safe to discontinue.</p>		
<p>MM BIO-2. Minimize In-water Pile Driving Noise. Via the construction contract the LAHD will require the contractor to use sound abatement techniques to reduce both noise and vibrations from pile driving activities. In addition to the “soft-start technique, which will be required at the initiation of each pile driving event or after breaks of more than 15 minutes, sound abatement techniques will include, but not be limited to, vibration or hydraulic insertion techniques, bubble curtains, isolation cage technology, sound aprons, and use of a cushion block on top of the pile being driven. Use of these techniques will reduce both the intensity of the underwater sound pressure levels radiating from the pile driving location and the area in which levels would exceed the Level A and B harassment levels</p>	<p>Timing: Throughout all construction phases. Methods: This measure shall be incorporated into LAHD contract specifications for all construction work. The construction contractor shall instruct construction personnel as part of normal construction procedures. LAHD shall arrange for the presence of an EMD approved biologist(s) to monitor during construction activity.</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
for marine mammals.		
<p>MM BIO-3. Conduct Nesting Bird Surveys. Between February 15 and September 1 and prior to ground-disturbing activities, a qualified biologist will conduct surveys for the presence of nesting birds protected under the MBTA and/or similar provisions of the California Fish and Game Code within areas of the proposed project study area that contain potential nesting bird habitat. Surveys will be conducted 24 hours prior to the clearing, removal, or grubbing of any vegetation or ground disturbance. If active nests are located, then a barrier installed at a 50-foot radius from the nest(s) will be established and the tree/location containing the nest will be marked and will remain in place and undisturbed until a qualified biologist performs a survey to determine that the young have fledged or the nest is no longer active.</p>	<p>Timing: Throughout all construction phases. Methods: This measure shall be incorporated into LAHD contract specifications for all construction work. The construction contractor shall instruct construction personnel as part of normal construction procedures. LAHD shall arrange for the presence of an EMD approved biologist(s) to monitor during construction activity.</p>	<p>Implementation: LAHD Environmental Management Division Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>
3.4 Cultural Resources		
<p>MM CR-1. HABS/HAER Recordation of Municipal Pier No. 1 Historic District Setting. Prior to construction of the wave tank and undertaking the Berths 57–60 wharf upgrades and ground improvements, LAHD will record the existing setting of the Municipal Pier No. 1 Historic District, including recordation of the western elevation of the wharf, in accordance with the federal Historic American Building Survey/Historic American Engineering Record (HABS/HAER) program. This program consists of large-format, black and white photographs, preparation of a historic resources report, and archiving of both at local repositories of historical information.</p>	<p>Timing: Prior to Project construction of the wave tank and Berths 57–60 wharf upgrades and ground improvements. Methods: LAHD shall retain a qualified historian to record and document the historic significance of Municipal Pier No. 1 in accordance with HABS/HAER program.</p>	<p>Implementation: LAHD Environmental Management Division Monitoring and Reporting: Environmental Management Division</p>
3.7 Hazards and Hazardous Materials		
<p>MM RISK-1. Remove all hazardous materials with flashpoints below 140°F from Mike’s fueling station. Mike’s fueling station will cease to handle hazardous materials with flashpoints below 140°F per the letter sent from LAHD to Mike Albano dated June 16, 2008, regarding the successor permit to revocable permit No. 98-14 prior to the operation of the proposed waterfront promenade. Products with a flashpoint</p>	<p>Timing: Prior to operation of the waterfront promenade in the vicinity of City Dock No. 1. Methods: LAHD will verify that products with flashpoints below 140°F have been removed from Mike’s fueling station prior to opening the waterfront promenade in the vicinity of City Dock No. 1.</p>	<p>Implementation: LAHD through permit to Mike’s Marine. Monitoring and Reporting: Environmental Management Division, Real Estate Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<p>below 140°F will not be permitted within the project area (i.e., San Pedro Waterfront Project area). The successor permit to RP No. 98-14 to allow the operation for Mike’s fueling station and continued lease of Mike’s fueling station will only allow handling of products above said threshold. Prior to the operation of the waterfront promenade, Mike’s fueling station will submit written confirmation identifying the complete removal of all hazardous materials on site with a flashpoint below 140°F as directed by the letter dated June 16, 2008. At the time of the written confirmation, Mike’s fueling station will also provide copies of all Material Safety Data Sheets (MSDS) for each product stored in bulk on site.</p>		
<p>3.8 Land Use and Planning</p>		
<p>Implement Mitigation Measure MM RISK-1 (see Section 3.7, “Hazards and Hazardous Materials”)</p>	<p>Timing: Prior to operation of the waterfront promenade in the vicinity of City Dock No. 1. Methods: LAHD will verify that products with flashpoints below 140°F have been removed from Mike’s fueling station prior to opening the waterfront promenade in the vicinity of City Dock No. 1.</p>	<p>Implementation: LAHD through permit to Mike’s Marine. Monitoring and Reporting: Environmental Management Division, Real Estate Division</p>
<p>3.9 Noise</p>		
<p>MM NOI-1: Maintain Construction Equipment. All construction equipment powered by internal combustion engines will be properly muffled and maintained.</p>	<p>Timing: Throughout all construction phases. Methods: This measure shall be incorporated into contract specifications for all construction work to reduce noise impacts. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications. The construction contractor shall ensure that the proposed pile driving equipment and measures are used during construction. LAHD shall evaluate the contractor</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
	<p>proposals with regard to reducing pile driving noise. LAHD would subsequently perform periodic inspections to ensure that the approved equipment and methods are being followed and to monitor the noise levels for compliance with the proposed noise levels.</p>	
<p>MM NOI-2: Locate Equipment away from Noise-Sensitive Land Uses. All stationary noise-generating construction equipment, such as air compressors and portable power generators, will be located as far as practical from existing noise-sensitive land uses.</p>	<p>Timing: Throughout all construction phases. Methods: This measure shall be incorporated into contract specifications for all construction work to reduce noise impacts. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p> <p>The construction contractor shall ensure that the proposed pile driving equipment and measures are used during construction. LAHD shall evaluate the contractor proposals with regard to reducing pile driving noise. LAHD would subsequently perform periodic inspections to ensure that the approved equipment and methods are being followed and to monitor the noise levels for compliance with the proposed noise levels.</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>
<p>MM NOI-3: Utilize Quiet Equipment. Quiet construction equipment (such as vibratory pile driving or pneumatic tools) will be utilized where practicable. Noise limits established in the City of Los Angeles Noise Ordinance will be fully complied with.</p>	<p>Timing: Throughout all construction phases. Methods: This measure shall be incorporated into contract specifications for all construction work to reduce noise impacts. The contractor(s) shall submit an Environmental Compliance Plan for review and approval by LAHD prior to the beginning of any construction activity. The contractor shall adhere to these specifications and Compliance Plan throughout construction phases. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
	<p>contract specifications.</p> <p>The construction contractor shall ensure that the proposed pile driving equipment and measures are used during construction. LAHD shall evaluate the contractor proposals with regard to reducing pile driving noise. LAHD would subsequently perform periodic inspections to ensure that the approved equipment and methods are being followed and to monitor the noise levels for compliance with the proposed noise levels.</p>	
<p>MM NOI-4: Notify Sensitive Receptors. Cabrillo Way Marina liveboards will be notified of the construction schedule in writing prior to the beginning of construction</p>	<p>Timing: Prior to initiation of construction phases. Methods: This measure shall be incorporated into contract specifications for all construction work to reduce noise impacts. The contractor will be required to notify Cabrillo Way Marina liveboards of potential noise impacts prior to initiation of construction activities. Enforcement shall include oversight by the LAHD Project/Construction Manager or designated building inspectors to ensure compliance with contract specifications.</p> <p>The construction contractor shall ensure that the proposed pile driving equipment and measures are used during construction. LAHD shall evaluate the contractor proposals with regard to reducing pile driving noise. LAHD would subsequently perform periodic inspections to ensure that the approved equipment and methods are being followed and to monitor the noise levels for compliance with the proposed noise levels.</p>	<p>Implementation: LAHD through Construction Contractor Monitoring and Reporting: Environmental Management Division, Construction Management Division</p>
<p>3.11 Transportation and Circulation—Ground</p>		
<p>MM TC-1: Develop and implement a Traffic Control Plan throughout proposed project construction. In accordance with the City’s policy on street closures and traffic diversion for arterial and collector roadways, the construction contractor will prepare a traffic control plan (to be approved by City and County engineers) before construction. The traffic control plan will include:</p>	<p>Timing: Prior to construction activities, to be implemented during construction. Methods: The construction contractor(s) shall prepare a construction traffic control plan to be approved by LAHD Engineering and the Los Angeles Department of Transportation (LADOT), detailing methods to minimize traffic congestion and access restrictions during</p>	<p>Implementation: LAHD Monitoring and Reporting: LAHD Environmental Management and Engineering Divisions</p>

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<ul style="list-style-type: none"> ▪ a street layout showing the location of construction activity and surrounding streets to be used as detour routes, including special signage; ▪ a tentative start date and construction duration period for each phase of construction; ▪ the name, address, and emergency contact number for those responsible for maintaining the traffic control devices during the course of construction; and ▪ written approval to implement traffic control from other agencies, as needed. <p>Additionally, the traffic control plan will include the following stipulations:</p> <ul style="list-style-type: none"> ▪ provide access for emergency vehicles at all times; ▪ avoid creating additional delay at intersections currently operating at congested conditions, either by choosing routes that avoid these locations, or constructing during nonpeak times of day; ▪ maintain access for driveways and private roads, except for brief periods of construction, in which case property owners will be notified; ▪ provide adequate off-street parking areas at designated staging areas for construction-related vehicles; ▪ maintain pedestrian and bicycle access and circulation during proposed project construction where safe to do so; if construction encroaches on a sidewalk, a safe detour will be provided for pedestrians at the nearest crosswalk; if construction encroaches on a bike lane, warning signs will be posted that indicate bicycles and vehicles are sharing the roadway; ▪ utilize flag persons wearing OSHA–approved vests and using a “Stop/Slow” paddle to warn motorists of construction activity; ▪ maintain access to Metro and LADOT transit services and 	<p>construction.</p>	

<i>Mitigation Measures</i>	<i>Timing and Methods</i>	<i>Responsible Parties</i>
<p>ensure that public transit vehicles are detoured;</p> <ul style="list-style-type: none"> ▪ post standard construction warning signs in advance of the construction area and at any intersection that provides access to the construction area; ▪ post construction warning signs in accordance with local standards or those set forth in the Manual on Uniform Traffic Control Devices (Federal Highway Administration 2009) in advance of the construction area and at any intersection that provides access to the construction area; ▪ during lane closures, have contractor and/or LAHD notify LAFD and LAPD, as well as the Los Angeles County Sheriff's and Fire Departments, of construction locations to ensure that alternative evacuation and emergency routes are designed to maintain response times during construction periods, if necessary; ▪ provide written notification to contractors regarding appropriate routes to and from construction sites, and weight and speed limits for local roads used to access construction sites; submit a copy of all such written notifications to the City of Los Angeles Planning Department; and ▪ repair or restore the road right-of-way to its original condition or better upon completion of the work. 		

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