CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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Clean Water Act Section 401 Water Quality Certification
and Waste Discharge Requirements
for Discharge of Dredged and/or Fill Materials

PROJECT: **Shelter Island Boat Launch Facility Improvements**
Certification Number R9-2015-0152
WDID: 9 000002900

Reg. Meas. ID: 402986
Place ID: 818315
Party ID: 39631
Person ID: 102127

APPLICANT: **San Diego Unified Port District**
3165 Pacific Highway
San Diego, CA 92101

ACTION:

☐ Order for Low Impact Certification	☐ Order for Denial of Certification
☑ Order for Technically-conditioned Certification	☐ Enrollment in Isolated Waters Order No. 2004-004-DWQ
☑ Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	

PROJECT DESCRIPTION

An application dated September 15, 2015 was submitted by the San Diego Unified Port District (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (United States Code (USC) Title 33, section 1341) for the proposed Shelter Island Boat Launch Facility Improvements Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on April 21, 2016. The Applicant proposes to discharge dredged or fill material to waters of the United States and/or State associated with construction activity at the Project site. The Applicant has also applied for a Rivers and Harbors Act section 10 Letter of Permission and a Clean Water Act section 404 permit from the United States Army Corps of Engineers for the Project (USACE File No. SPL-2015-00651-RRS).

The Project is located within the City of San Diego, San Diego County, California at 2210 Shelter Island Drive. The Project center reading is located at latitude 32.715278 and longitude -117.22305. The Applicant has paid all required application fees for this Certification in the amount of $17,921.00. On an annual basis, the Applicant shall also pay all active discharge fees and post discharge monitoring fees, as appropriate. On April 21, 2016, the San Diego Water Board provided public notice of the Project application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the Project on the San Diego Water Board's web site and providing a period of twenty-one days for public review and comment. No comments were received.

The Applicant proposes to repair, rehabilitate, and replace the Shelter Island Boat Launch Facility. The proposed Project will include the following:

- Replacement of the existing 10-lane boat launch ramp;
- Removal and replacement of the existing west jetty with a concrete sheet pile bulkhead wall that will expand the open water within the boat basin;
- Modification of the east jetty to install a concrete sheet pile bulkhead wall;
- Installation of publicly accessible walking platforms atop the new bulkhead walls;
- Replacement and reconfiguration of the existing floating docks and gangways;
- Installation of rock slope protection on the east and west sides of the new boat launch ramp;
- Minor re-grading of the beach area to re-instate the pre-construction beach profile; and
- Maintenance dredging of approximately 900 cubic yards of sediment from the bottom of the boat basin to -8 feet mean lower low water (MLLW).

The Project will include using a temporary steel sheet pile cofferdam to allow construction of the launch ramp to be constructed in dry conditions. The cofferdam's steel sheet piles and support H piles will be installed using either a vibratory pile driving hammer or an impact pile driving hammer depending on soil conditions. All piles will be removed using vibratory pile driving equipment.

The rock and soil jetties will be initially removed using land-based excavating equipment. Removal of the remaining subtidal jetty material and bottom sediment will be dredged with barge-mounted excavating equipment. A portion of the material from the jetty excavation will be reused for other construction components on-site with the remainder being disposed of at an offsite landfill.

The concrete sheet piles for the bulkhead walls will be pile jetted as far as possible and then driven to full design depth with an impact pile driving hammer. Concrete batter piles will also be installed using the impact pile driving method. All pile driving will incorporate the use of cushion blocks and soft start pile driving techniques to decrease the noise produced by the pile driver striking the piles.

The underwater pile driving and dredging activities will disrupt benthic habitats and organisms, directly through removal or burial, or indirectly through effects related to the disturbance of bottom sediments. This impact is less than significant because benthic communities are anticipated to recolonize disturbed sediment areas within 2 to 6 months. Additionally, the Project will include the use of silt curtains during all in-water construction activity in order to minimize turbidity. Construction of the Project is expected to begin in late 2016 and take a total of approximately 6 to 10 months to complete.

The Project will not change the amount of pervious or impervious ground cover. Runoff leaving the developed Project area is expected to be equivalent in volume, velocity, peak flow rate, and duration to the pre-development runoff from the same area without mitigation.

Under the terms of this Certification, the Applicant must ensure that the design, operation, and degree of treatment attained from equipment, facilities, or activities (including construction and post-construction BMPs) will adequately treat waste and reduce runoff or other effluents which

may be discharged. Compliance with the Certification conditions will help ensure that construction and post-construction discharges from the Project will not cause on-site or off-site erosion or damage to off-site properties in violation of water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan).

Project construction will permanently impact 0.84 acre (1,506 linear feet) of bay waters of the United States and/or State. The Applicant reports that the Project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impacts to aquatic resources considering all potential practicable alternatives, such as the potential for alternate available locations, designs, reductions in size, configuration or density.

The Project design includes replacing the west jetty structure with a sheet pile bulkhead wall that will occupy a smaller fill footprint, providing an increase in open water jurisdictional resource. Additionally, modification of the east jetty will also result in a small reduction of the current fill footprint by approximately 0.001 acre. The removal and modification of the existing earthen jetty structures will restore approximately 0.62 acre of open water habitat, which will offset the proposed permanent fill of approximately 0.50 acre. Because the difference between the removed fill footprint and the combined, proposed fill and occupied surface area footprint of 0.33 acre[1] will result in a net gain of 0.29 acre of restored open water and unvegetated, soft-bottom bay floor compared to pre-project conditions, additional compensatory mitigation is not required for the occupied surface area and shading impacts (0.18 acre).[2] Additionally, the impacts associated with maintenance dredging of the boat basin floor (approximately 0.16 acre) do not result in a loss of waters or impact existing eelgrass habitat. The benthic habitat impacts from this activity will be limited to the immediate area of disturbance and will be offset by benthic community re-colonization of the disturbed areas, including the restored bay floor. Therefore, no compensatory mitigation is required for the maintenance dredging. All waters of the United States and/or State receiving temporary discharges of fill material will be restored upon removal of the fill. The mitigation at the Project Site provided by the applicant for the discharge of permanent fill material to waters of the United States and/or State represents a minimum compensation ratio of 1.2:1 (area mitigated:area impacted) for re-establishment of open water.

Additional Project details are provided in Attachments 2 through 4 of this Certification.

[1] This value includes direct fill from rock slope protection (0.13 acre), bulkhead wall (0.022 acre), floating dock guide piles (0.0002 acre), and the occupied surface area/shading footprint (0.18 acre). The boat launch ramp fill was not included in this value because it is a replacement structure that will maintain essentially the same open water condition. Similarly, the re-graded beach fill was not included because it reinstates the pre-construction beach profile and will remain as a sandy beach habitat.

[2] The existing docks and gangways currently occupy 0.05 acre of bay surface water area (shading).

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Attachments:

1. **Definitions**
2. **Project Location Maps**
3. **Project Site Plans**
4. **CEQA Mitigation Monitoring and Reporting Program**

I. STANDARD CONDITIONS

Pursuant to section 3860 of title 23 of the California Code of Regulations, the following three standard conditions apply to all water quality certification actions:

A. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and chapter 28, article 6 (commencing with title 23, section 3867), of the California Code of Regulations.

B. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to California Code of Regulations title 23, section 3855 subdivision (b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

C. This Certification action is conditioned upon total payment of any fee required under title 23, chapter 28 (commencing with section 3830) of California Code of Regulations and owed by the applicant.

II. GENERAL CONDITIONS

A. **Term of Certification**. Water Quality Certification No. R9-2015-0152 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 USC Title 33, section1344) permit issued by the U.S. Army Corps of Engineers for this Project, or b) five (5) years from the date of issuance of this Certification, whichever occurs first.

B. **Duty to Comply.** The Applicant must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.

C. **General Waste Discharge Requirements**. The requirements of this Certification are enforceable through Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification* (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf.

D. **Project Conformance with Application.** All water quality protection measures and BMPs described in the application and supplemental information for water quality certification are incorporated by reference into this Certification as if fully stated herein. Notwithstanding any more specific conditions in this Certification, the Applicant shall construct, implement and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.

E. **Project Conformance with Water Quality Control Plans or Policies**. Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Basin Plan and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the Clean Water Act (33 USC section 1313). The Basin Plan is accessible at:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

The receiving water limitations set forth below for San Diego Bay waters are based on applicable water quality standards contained in the Basin Plan, other water quality control plans and policies and federal regulations and are a required part of this Certification. Project activities shall not cause or contribute to exceedances of these receiving water limitations in San Diego Bay. Compliance with these limitations shall be determined from samples collected at the points of compliance described in the Monitoring Requirements in section VI of this Certification.

1. **Visual**. Floating particulates and grease and oil shall not be visible.

2. **Color**. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.

3. **Hydrogen Ion Concentration**. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

4. **Hydrogen Ion Concentration**. The pH shall not be depressed below 7.0 nor raised above 9.0.

5. **Turbidity**. If natural turbidity is between 0 to 50 nephelometric turbidity units (NTUs), the maximum increase from dredge activities must not exceed 20 percent of the measured natural turbidity. If natural turbidity is between 51 to 100 NTUs, the maximum increase from dredge activities must not exceed 10 NTUs. If natural turbidity is greater than 100 NTUs, the maximum increase from dredge activities must not exceed 10% above natural background levels.

6. **Dissolved Oxygen**. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally.

7. **Benthic Communities**. Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities.

8. **Human Health**. Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health.

9. **Water Quality Objectives**. Water quality objectives applicable to San Diego Bay established in Chapter 3 of the San Diego Water Board's Water Quality Control Plan for the San Diego Basin (Basin Plan) shall not be exceeded.

10. **Priority Pollutant Criteria.** Priority pollutant criteria applicable to San Diego Bay promulgated by the U.S. Environmental Protection Agency (USEPA) through the a) National Toxics Rule (NTR) (40 CFR 131.36 promulgated on December 22, 1992 and amended on May 4, 1995) and b) California Toxics Rule (CTR) (40 CFR 131.38, (65 Fed. Register 31682-31719), adding Section 131.38 to Title 40 of the Code of Federal Regulations, on May 18, 2000) shall not be exceeded.

F. **Project Modification**. The Applicant must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this Certification, to the San Diego Water Board for prior review and written approval. If the San Diego Water Board is not notified of a significant change to the Project, it will be considered a violation of this Certification.

G. **Certification Distribution Posting**. During Project construction, the Applicant must maintain a copy of this Certification at the Project site. This Certification must be available at all times to site personnel and agencies. A copy of this Certification shall also be provided to any contractor or subcontractor performing construction work, and the copy shall remain in their possession at the Project site.

H. **Inspection and Entry**. The Applicant must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents as may be required under law, to:

1. Enter upon the Project or Compensatory Mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Certification;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Certification;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Certification; and

4. Sample or monitor, at reasonable times, for the purposes of assuring Certification compliance, or as otherwise authorized by the Clean Water Act or Water Code, any substances or parameters at any location.

I. **Enforcement Notification**. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.

J. **Certification Actions**. This Certification may be modified, revoked and reissued, or terminated for cause including but not limited to the following:

1. Violation of any term or condition of this Certification;

2. Monitoring results indicate that continued Project activities could violate water quality objectives or impair the beneficial uses of San Diego Bay;

3. Obtaining this Certification by misrepresentation or failure to disclose fully all relevant facts;

4. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

5. Incorporation of any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

The filing of a request by the Applicant for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.

K. **Duty to Provide Information**. The Applicant shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.

L. **Property Rights**. This Certification does not convey any property rights of any sort, or any exclusive privilege.

M. **Petitions**. Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with the California Code of Regulations, title 23, sections 3867 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Certification. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

III. CONSTRUCTION BEST MANAGEMENT PRACTICES

A. **Approvals to Commence Construction**. The Applicant shall not commence Project construction until all necessary federal, State, and local approvals are obtained.

B. **Personnel Education.** Prior to the start of the Project, and annually thereafter, the Applicant must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response measures, and BMP implementation and maintenance measures.

C. **Spill Containment Materials.** The Applicant must, at all times, maintain appropriate types and sufficient quantities of materials on-site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State.

D. **General Construction Storm Water Permit.** Prior to start of Project construction, the Applicant must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity*, (General Construction Storm Water Permit) and any reissuance. If Project construction activities do not require coverage under the General Construction Storm Water Permit, the Applicant must develop and implement a runoff management plan (or equivalent construction BMP plan) to prevent the discharge of sediment and other pollutants during construction activities.

E. **Waste Management.** The Applicant must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination or nuisance as defined in Water Code section 13050. Upon Project completion, all Project generated debris, building materials, excess material, waste, and trash shall be removed from the Project site(s) for disposal at an authorized landfill or other disposal site in compliance with federal, state and local laws and regulations.

F. **Waste Management**. Except for a discharge permitted under this Certification, the dumping, deposition, or discharge of trash, rubbish, unset cement or asphalt, concrete, grout, damaged concrete or asphalt, concrete or asphalt spoils, wash water, organic or earthen material, steel, sawdust or other construction debris waste from Project activities directly into waters of the United States and or State, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited.

G. **Construction Equipment**. All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g.,

motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.

H. **Process Water.** Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or State or placed in locations that may be subjected to storm water runoff flows. Pollutants discharged to areas within a stream diversion must be removed at the end of each work day or sooner if rain is predicted.

I. **Hazardous Materials.** Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, unused cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each Project activity involving hazardous materials.

J. **Limits of Disturbance.** The Applicant shall clearly define the limits of Project disturbance to waters of the United States and/or State using highly visible markers such as flag markers, construction fencing, or silt barriers prior to commencement of Project construction activities within those areas.

K. **Dredge Volume Limit.** The volume of sediment designated for upland disposal must not exceed 900 cubic yards of sediment.

L. **Silt Curtain Deployment**. The Applicant shall deploy and maintain a continuous length of silt curtain, fully surrounding active discharge activities, including active dredging, pile driving, and around the dredge barge/bucket area in conformance with the following requirements:

1. The silt curtains must restrict the surface visible turbidity plume to the area of construction and dredging and must control and contain the migration of re-suspended sediments at the water surface and at depth;

2. The bottom of the silt curtains must be weighted with ballast weights or rods affixed to the base of the fabric to resist the natural buoyancy of the silt curtain fabric and lessen its tendency to move in response to currents. Where feasible and applicable, the floating silt curtains must be anchored and deployed from the surface of the water to just above the substrate.

3. The silt curtain must be monitored for damage, dislocation or gaps and must be immediately repaired where it is no longer continuous or where it has loosened.

M. **Sediment Dredging.** The Applicant shall conduct dredging in accordance with, but not limited to, the following best management practices:

1. The dredging must be conducted using a standard clamshell bucket or whenever possible, an environmental cable arm clamshell bucket.

2. The clamshell bucket must not be overfilled in order to prevent the spillage of dredged material back in to San Diego Bay waters.

3. Dredging must be conducted to remove dredge material and not stockpile material on the floor of San Diego Bay.

4. The drop height from the clamshell bucket onto the barge must be controlled to prevent splashing or sloshing of dredged material back into San Diego Bay waters.

5. The swing radius of unloading equipment must be controlled to prevent spillage of dredged sediments back into the water.

6. Excess water from dredged sediment classified as nonhazardous may be decanted and discharged back into San Diego Bay within the confines of the silt curtains.

7. Dredged material barges must not be filled to a point that overflow or spillage could occur. Each material barge must be marked in such a way to allow the operator to visually identify the maximum load point.

8. Dredged material not suitable for ocean disposal must be loaded onto wide-pocket material barges with watertight compartments and water collection systems to prevent decant water from re-entering San Diego Bay.

N. **Upland Disposal of Dredged Sediments.** Dewatered dredged sediments for upland landfill disposal, classified as nonhazardous, must be transported for disposal at a landfill permitted to accept this material. It is anticipated that the Copper Mountain Landfill at 34853 East County 12th Street in Wellton, Arizona 85356 will be utilized for disposal of dredged sediments and the remainder of rip rap and jetty core fill not reused on-site, which is classified as nonhazardous. Alternative disposal of dredge materials at non-permitted disposal facilities is not authorized by this Certification.

O. **On-site Qualified Biologist.** The Applicant shall designate an on-site qualified biologist to monitor Project construction activities within or adjacent to waters of the United States and/or State to ensure compliance with the Certification requirements. The biologist shall be given the authority to stop all work on-site if a violation of this Certification occurs or has the potential to occur. Records and field notes of the biologist's activities shall be kept on-site and made available for review upon request by the San Diego Water Board.

P. **Protection of Eelgrass Beds at the Project Site.** A pre-construction eelgrass survey must be completed in accordance with the requirements of the California Eelgrass Mitigation Policy (CEMP; National Marine Fisheries Service 2014) by a qualified biologist, prior to initiation of construction activities at the site. The Applicant shall also comply with the following requirements:

1. Prior to construction, the boundaries of the eelgrass beds within the Applicant's facility must be staked with ridged PVC markers or self-centering buoys visible at all tide heights. The PVC markers or self-centering buoys must be protected, replaced,

and maintained as needed to ensure that they remain in place and properly stake the boundaries of the eelgrass beds.

2. Any turbidity curtains must be kept a minimum of 30 feet away from staked eelgrass beds in order to prevent damage to eelgrass beds from curtain drag or movement.

3. During project construction and regardless of the timing of the dredging or in-Bay placement of fill, the eelgrass beds must be protected with turbidity curtains deployed in a manner to protect eelgrass from excessive dredge or fill generated turbidity or sediment deposition.

Q. **Sound Impacts**. For the purpose of protecting sensitive fish species, bird species, eastern Pacific green sea turtles, and marine mammals, the Applicant shall monitor sound pressure levels during pile driving to verify the distance from the pile driving activity at which the 180 decibel root mean squared (dB rms) sound level threshold for marine life injury is not exceeded. Once the distance is determined, the Biological Monitor shall halt pile driving activities should marine mammals or turtles approach pile driving closer than the 180 dBrms buffer distance. Pile driving shall be initiated with a soft start methodology by initiating three rounds of noise from vibratory hammers for fifteen seconds at reduced energy followed by a 30-second waiting period before commencing with full use of equipment or using an initial three sets of three low energy strikes followed by a 30-second waiting period to initiate impact driving before ramping up to full hammer energy as described in the certified Final Mitigated Negative Declaration.

R. **Beneficial Use Protection**. The Applicant must take all necessary measures to protect the beneficial uses of waters of San Diego Bay. This Certification requires compliance with all applicable requirements of the Basin Plan. If at any time, an unauthorized discharge to surface waters (including rivers or streams) occurs or monitoring indicates that the Project is violating, or threatens to violate, water quality objectives, the associated Project activities shall cease immediately and the San Diego Water Board shall be notified in accordance with Notification Requirement VII.A of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.

IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES

A. **Post-Construction Discharges.** The Applicant shall not allow post-construction discharges from the Project site to cause or contribute to on-site or off-site erosion or damage to properties or stream habitats.

B. **Storm Drain Inlets.** All storm drain inlet structures within the Project boundaries must be stamped or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.

C. **Post-Construction BMP Design.** The Project must be designed to comply with the requirements for priority development projects in section E.3 of the Regional MS4 Permit Order No. R9-2013-0001, *National Pollutant Discharge Elimination Systems Permit and Waste Discharge Requirements for Discharges of Urban Runoff from the*

MS4s Draining the Watersheds within the San Diego Region (Regional MS4 Permit) as well as the most current BMP Design Manual for the San Diego Unified Port District. Where conflict exists between the referenced documents the most stringent requirements shall apply.

D. **Post-Construction BMP Maintenance.** The post construction BMPs must be designed, constructed, and maintained in accordance with the most recent California Storm Water Quality Association (CASQA) [3] guidance. The Applicant shall:

1. No less than two times per year, assess the performance of the BMPs to ensure protection of the receiving waters and identify any necessary corrective measures;

2. Perform inspections of BMPs, at the beginning of the wet season no later than October 1 and the end of the wet season no later than April 1, for standing water, slope stability, sediment accumulation, trash and debris, and presence of burrows;

3. Regularly perform preventative maintenance of BMPs, including removal of accumulated trash and debris, as needed to ensure proper functioning of the BMPs;

4. Identify and promptly repair damage to BMPs; and

5. Maintain a log documenting all BMP inspections and maintenance activities. The log shall be made available to the San Diego Water Board upon request.

V. PROJECT IMPACTS AND COMPENSATORY MITIGATION

A. **Project Impact Avoidance and Minimization**. The Project must avoid and minimize adverse impacts to waters of the United States and/or State to the maximum extent practicable.

B. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to San Diego Bay within the Pueblo Watershed must not exceed the type and magnitude of impacts described in the table below. At a minimum, compensatory mitigation required to offset unavoidable temporary and permanent Project impacts to waters of the United States and/or State must be achieved as described in the table below:

[3] California Storm Water Quality Association (*California Storm Water BMP Handbook, New Development and Redevelopment 2003)*, available on-line at: http://www.cabmphandbooks.org/ [Accessed on January 15, 2012]

	Impacts (acres)	Impacts (linear ft.)	Mitigation for Impacts (acres)	Mitigation Ratio (area mitigated :area impacted)	Mitigation for Impacts (linear ft.)	Mitigation Ratio (linear feet mitigated :linear feet impacted)
Permanent Impacts						
Bay	0.502[a]	1,006[a]	0.624[b] Re-Establishment	1.2:1[b]	NA[b]	NA[b]
	0.180[c]	500[c]	NA[d]	NA[d]	NA[d]	NA[d]
	0.163[e]	NA	NA[f]	NA[f]	NA[f]	NA[f]
Temporary Impacts[g]						
Bay	0.272[h]	437[h]	NA	NA	NA	NA

NA = Not Applicable

a. Permanent fill impacts within waters of the United States and/or State include 0.34 acres (150 linear feet)for the proposed concrete boat launch ramp, 0.13 acres (200 linear feet) of rip rap slope protection on the east and west shoreline of the boat launch ramp, 0.022 acre (582 linear feet) for the sheet pile bulkhead walls, 0.0002 acre (24 linear feet) for the floating dock guide piles, and 0.01 acre (50 linear feet) to re-grade the adjacent beach area to reinstate the pre-construction beach profile.

b. Re-establishment of open water of the U.S. and/or State from the excavation of 0.623 acres (360 linear feet) of fill to remove the existing west jetty. Additionally, the modification of the east jetty will result in a decrease in the jetty footprint by 0.001 acre (16 linear feet). Mitigation for linear foot impacts is not being calculated because the structure being removed restores an area of open water rather than a linear feature.

c. Permanent impacts resulting in occupied surface area and shading coverage of waters of the United States and/or State includes 0.12 acres (500 linear feet) from placement of two new floating docks and gangways and 0.06 acre from the walking platform on top of the proposed bulkhead wall.

d. The Project was designed to replace an existing fill structure with another structure that provides for more open space within the basin for boating activities. As a result, the proposed Project will occupy a smaller fill footprint within the bay, and provide a net benefit to the bay by creating a net increase of 0.294 acre of open water habitat. Therefore, additional compensatory mitigation for the occupied surface area coverage impact is not required.

e. Permanent impacts attributable to dredging approximately 900 cubic yards of unvegetated sediment from the floor of the basin to -8 MLLW representing a short-term degradation of ecological function.

f. The impacts associated with dredging the floor of the boat basin do not provide a loss of waters, impact eelgrass habitat, or permanent impact to benthic habitat, which is offset by benthic community re-colonization of the disturbed areas and restored bay floor; therefore, no compensatory mitigation is required.

g. All areas of temporary impacts must be restored to pre-project contours and re-vegetated with native species.

h. Temporary fill impacts within waters of the United States and/or state include 0.01 acre (421 linear feet) for the cofferdam and 0.262 acre (16 linear feet) of modification to the east jetty due to installation of the eastern bulkhead wall.

C. **Eelgrass.** A pre-construction eelgrass survey must be completed in accordance with the requirements of the California Eelgrass Mitigation Policy (CEMP; National Marine Fisheries Service 2014) by a qualified biologist, prior to initiation of construction activities at the site. This survey must include both aerial and density characterization of the beds. If eelgrass is found during the pre-construction survey, a post-construction survey must be performed by a qualified biologist within 30 days following project completion to quantify any unanticipated losses to eelgrass habitat. Impacts must then be determined from a comparison of pre- and post-construction survey results. Impacts to eelgrass, if any, must be mitigated through conformance with the CEMP, which defines the mitigation ratio and other requirements to achieve mitigation for significant eelgrass impacts. If required following the post-construction survey, the CEMP defined mitigation must be developed; submitted and approved by the San Diego Water Board, U.S. Army Corps of Engineers, and National Marine Fisheries Service; and implemented to offset losses to eelgrass.

D. **Temporary Project Impact Areas.** The Applicant must restore all areas of temporary impacts and all other areas of temporary disturbance which could result in a discharge or a threatened discharge of pollutants to waters of the United States and/or State. Restoration must include grading of disturbed areas to pre-project contours and re-vegetation with native species. The Applicant must implement all necessary BMPs to control erosion and runoff from areas associated with the Project.

VI. MONITORING AND REPORTING REQUIREMENTS

A. **Representative Monitoring**. Samples and measurements taken for the purpose of monitoring under this Certification shall be representative of the monitored activity.

B. **Monitoring Reports**. Monitoring results shall be reported to the San Diego Water Board at the intervals specified in section VI of this Certification.

C. **Monitoring and Reporting Revisions**. The San Diego Water Board may make revisions to the monitoring program at any time during the term of this Certification and may reduce or increase the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

D. **Records of Monitoring Information.** Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;

2. The individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed;

4. The individual(s) who performed the analyses;

5. The analytical techniques or methods used; and

6. The results of such analyses.

E. **Receiving Water Visual Observation Monitoring.** The Applicant must conduct visual observation monitoring of the Project activities in San Diego Bay prior to, during, and after each period of project construction. The visual observation monitoring documentation must be included in the Receiving Water and Visual Observation Monitoring Report(s).

1. **Parameters.** The following parameters shall be visually monitored immediately outside of the construction area:

   a. No floating particulates, suspended materials, grease, or oil; and

   b. No significant discoloration of the water surface.

2. **Field Documentation.** All visual observations shall be recorded throughout Project construction activities. In addition to the requirements listed in section VI.D., monitoring field logs shall include observations of water quality conditions including sheen, color, odor, floating particulates, and surface visible turbidity plume. Logs shall also include observations of sensitive biological resources and weather conditions, such as wind speed/direction and cloud cover; and

3. **Response Actions.** If the condition of the silt curtain is observed to be damaged, has become dislocated, or has gaps where a visible turbidity plume is forming outside of the silt curtain at the Project Site, a response action shall be taken immediately to correct the situation. Response actions may include, but are not limited to, work stoppage until silt curtain repair is completed, implementation of operational modifications, and/or implementation of additional BMPs (e.g., a second silt curtain). Response actions, if needed, shall be documented in the monitoring field log.

F. **Receiving Water Quality Monitoring**. The Applicant shall conduct at least weekly receiving water monitoring during construction activities at the Project Site to verify that applicable water quality standards for pH, dissolved oxygen and turbidity are not violated outside of the construction areas. The monitoring plan shall contain the following elements:

1. **Monitoring Stations**. During each monitoring event, water quality parameters including turbidity, dissolved oxygen, and pH shall be measured at four stations at the Project Site. Monitored water quality measurements shall be compared to "ambient" San Diego Bay reference measurements outside the construction area. Three stations shall be compliance stations and one station shall be a reference station. Monitoring station positions shall be located using a Global Position System (GPS) accurate to within ±3 meters. Station descriptions are as follows:

   a. ***Compliance Stations***. Three monitoring stations at the Project Site shall be located evenly along an arc located 200 feet from the edge of the construction area to capture all tidal and current conditions. Two of the compliance stations shall be located nearshore on the northward and southward sides along the 200-foot compliance arc, approximately the same distance from shore. One additional

offshore compliance stations shall be located off-shore from the Project Site along the 200-foot compliance arc. The locations shall be adjusted in the field to better target a visible turbidity plume, if a visible plume is observed; and

b. **Reference *Station***. One reference station shall be located 1,000 feet from the construction activity in the direction of the head of the bay and beyond the influence of construction activities. Natural turbidity, dissolved oxygen, and pH shall be determined through measurements at the reference station. A reference station shall be monitored during every event, because the turbidity water quality objective is based on an acceptably small increase in the vicinity of the construction activity relative to ambient reference levels. The location of the reference station shall remain the same for all monitoring events;

2. **Water Quality Measurements**. Monitored water quality measurements for turbidity, dissolved oxygen, and pH at the Compliance Stations shall be compared to Reference Station measurements outside the construction area. Water quality measurements shall be collected from a depth of 10 feet below the water surface at each of the stations. Monitoring depths shall be determined using a depth finder with an accuracy of ±0.5 feet. Water quality shall be monitored using instrumentation capable of measuring dissolved oxygen (DO), pH, and turbidity (in nephelometric turbidity units (NTU's));

3. **Monitoring Frequency**. Water quality monitoring at all Compliance and Reference Stations shall be conducted on a weekly basis after pile driving activities have been underway for at least 1 hour. After the commencement of dredging activities, water quality monitoring at all Compliance and Reference Stations shall be conducted twice weekly after dredging activities have been underway for at least 2 hours. Monitoring frequency will increase to daily if an exceedance of the Receiving Water Limitations described in section II.E of this Certification is observed. Daily water column monitoring may return to once or twice weekly monitoring after 3 consecutive days without an exceedance is observed. ;

4. **Sample Integrity**. The integrity of each water sample collected shall be maintained from the time of collection to the point of data reporting. Proper record keeping and chain of custody (COC) procedures shall be implemented to allow samples to be traced from collection to final disposition. After collection of water samples, documentation on various logs and forms shall be required to adequately identify and catalog sample information; and

5. **Compliance Criteria**. Receiving Water Limitations are provided in section II.E of this Certification. The point of compliance with these receiving water limitations shall be located 200 feet from the edge of the construction area. The construction area is defined as the area(s) occupied by the equipment performing in-water work activities for excavation, dredging, and pile driving, silt curtains, and other associated work activities.

G. **Response Actions to Monitoring Results**. In the event that visual observations or water quality monitoring described in Section VI.E and VI.F of this Certification indicate an exceedance of an applicable Receiving Water Limitation described in Section II.E of this Certification, the Applicant shall implement the additional or enhanced operational or engineering BMPs described below:

1. Evaluate the concurrent measurements at background and compliance monitoring stations and supporting visual evidence to determine whether the exceedance is caused by construction activities or by other ambient conditions in San Diego Bay (e.g., wind waves, boat wakes, barge/ship traffic, and storm inflow).

2. Immediately re-take measurements at background and compliance stations.

3. If the exceedance is confirmed, immediately notify the dredge contractor to immediately modify operations or implement additional BMPs to mitigate the exceedance. Operational modifications may include, but are not limited to the following modifications implemented individually or in combination:

   a. Adjust the sequence and/or speed of dredging and disposal operations;

   b. Reposition dredge operations in such a way as to ensure future exceedances do not occur;

   c. Fix, maintain, and/or upgrade floating silt curtains; and

   d. Modify, either on a temporary or permanent basis, dredge equipment (such as the dredging bucket size or type).

4. Re-evaluate field measurements at all relevant stations 30 minutes later, after additional BMPs or operational modifications are implemented.

5. If the receiving water limitation exceedance continues to persist, even with additional BMPs, determine and implement more aggressive BMPs or operational modifications that resolve the exceedance or stop work to further assess the source of the exceedance, identify effective mitigation measures, and allow the water column to recover.

H. **Geographic Information System Data.** The Applicant must submit Geographic Information System (GIS) shape files of the Project impact sites within 30 days of the start of project construction and GIS shape files of the Project mitigation sites within 30 days of mitigation installation. All impact and mitigation site shape files must be polygons. Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points. GIS metadata must also be submitted.

I. **Annual Project Progress Reports.** The Applicant must submit annual Project Progress Reports until this certification has expired or been terminated. The Project Progress Reports must describe the status of BMP implementation, compensatory mitigation (as required by CEMP), and compliance with all requirements of this Certification to the San Diego Water Board prior to **March 1** of each year following the issuance of this Certification, until the Project has reached completion. The Annual Project Progress Reports must contain compensatory mitigation monitoring information sufficient to demonstrate how the compensatory mitigation project is progressing towards accomplishing its objectives and meeting its performance standards. Annual Project Progress Reports must be submitted even if Project construction has not begun. The monitoring period for each Annual Project Progress Report shall be January 1st through December 31st of each year. Annual Project Progress Reports must include, at a minimum, the following:

1. **Project Status and Compliance Reporting.** The Annual Project Progress Report must include the following Project status and compliance information:

   a. The names, qualifications, and affiliations of the persons contributing to the report;

   b. The status, progress, and anticipated schedule for completion of Project construction activities including the installation and operational status of best management practices project features for erosion and storm water quality treatment;

   c. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion;

   d. A description of each incident of noncompliance during the annual monitoring period and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and

   e. The pre- and post- construction eelgrass surveys, as applicable, required under section V.C of this Certification, including a description of any additional actions that will be taken by the Applicant to mitigate for impact to eelgrass habitat beyond what is expected.

2. **Receiving Water and Visual Observation Monitoring Report**. The Applicant shall prepare monitoring reports that contain the results of receiving water quality and visual observation monitoring activities for each week of monitoring. The reports must include, at a minimum:

   a. The names, qualifications, and affiliations of the persons contributing to the report;

b. A summary table of the monitoring results with a comparison to receiving water limitation compliance criteria;

c. An evaluation, interpretation, and tabulation of the visual observations required under section VI.E and water quality data required under section VI.F including interpretations and conclusions as to whether applicable receiving water limitations were attained at each monitoring station;

d. A description of each incident of non-compliance and its cause, the period of the noncompliance including exact dates and times, and actions taken to reduce, eliminate, and prevent reoccurrence of the noncompliance; and

e. For any weekly monitoring period in which no pile driving or dredging activities were conducted, the reporting must include a statement certifying that no pile driving or dredging activities occurred during the monitoring period.

J. **Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion of the Project.** The final report must include the following information, at a minimum:

1. Date of construction initiation;

2. Date of construction completion;

3. BMP installation and operational status for the Project;

4. As-built drawings of the Project, no bigger than 11”X17”; and

5. Photo documentation of implemented post-construction BMPs and all areas of permanent and temporary impacts, prior to and after project construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced.

K. **Reporting Authority.** The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.

L. **Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification No. R9-2015-0152:818315:lhonma
2375 Northside Drive, Suite 100
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF), and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. R9-2015-0152:818315:lhonma.

M. **Document Signatory Requirements**. All applications, reports, or information submitted to the San Diego Water Board must be signed as follows:

1. For a corporation, by a responsible corporate officer of at least the level of vice president.

2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.

3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.

4. A duly authorized representative may sign applications, reports, or information if:

    a. The authorization is made in writing by a person described above.

    b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.

    c. The written authorization is submitted to the San Diego Water Board Executive Officer.

If such authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the Project, a new authorization satisfying the above requirements must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative.

N. **Document Certification Requirements**. All applications, reports, or information submitted to the San Diego Water Board must be certified as follows:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

VII. NOTIFICATION REQUIREMENTS

A. **Twenty Four Hour Non-Compliance Reporting.** The Applicant shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the San Diego Water Board within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

B. **Caulerpa Taxifolia.** The Applicant must conduct a surveillance-level survey for *Caulerpa taxifolia*, in accordance with the requirements in the National Marine Fisheries Service's *Caulerpa* Control Protocol (version 4), dated February 25, 2008, not more than 90 days before the initiation of construction to determine presence/absence of this species within the immediate vicinity of the project. If *Caulerpa taxifolia* is identified during a survey, or at any other time before, during, or within 120 days following completion of authorized activities, both National Marine Fisheries Service and California Department of Fish and Wildlife must be contacted within 24 hours of first noting the occurrence. In the event *Caulerpa taxifolia* is detected, all disturbing activity must cease until such time as the infestation has been isolated and treated, or the risk of spread from the disturbing activity is eliminated in accordance with the Caulerpa Control Protocol.

C. **Hazardous Substance Discharge**. Except as provided in Water Code section 13271(b), any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the County of San Diego, in accordance with California Health and Safety Code section 5411.5 and the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.17), and immediately notify the State Water Board or the San Diego Water Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity

as provided for under subdivisions (f) and (g) of section 13271 of the Water Code unless the Applicant is in violation of a Basin Plan prohibition.

D. **Oil or Petroleum Product Discharge.** Except as provided in Water Code section 13272(b), any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.1). This requirement does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Clean Water Act section 311, or the discharge is in violation of a Basin Plan prohibition.

E. **Anticipated Noncompliance**. The Applicant shall give advance notice to the San Diego Water Board of any planned changes in the Project or the Compensatory Mitigation project which may result in noncompliance with Certification conditions or requirements.

F. **Commencement of Construction Notification.** The Applicant must notify the San Diego Water Board in writing at least 5 days prior to the start of initial Project construction ground disturbance

G. **Transfers.** This Certification is not transferable in its entirety or in part to any person or organization except after notice to the San Diego Water Board in accordance with the following terms:

1. **Transfer of Property Ownership:** The Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the San Diego Water Board **within 10 days of the transfer of ownership.**

2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above

conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**

3. **Transfer of Post-Construction BMP Maintenance Responsibility:** The Applicant assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred the Applicant must submit to the San Diego Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications. The Applicant must provide such notification to the San Diego Water Board within **10 days** of the transfer of BMP maintenance responsibility.

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to the Applicant will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve the Applicant of responsibility for compliance with this Certification in the event that a transferee fails to comply.

VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

A. The San Diego Unified Port District is the Lead Agency under the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et seq.) section 21067, and CEQA Guidelines (California Code of Regulations, title 14, section 15000 et seq.) section 15367, and has filed a Notice of Determination dated January 13, 2016 for the Mitigated Negative Declaration (FMND) titled Shelter Island Boat Launch Facility Improvements Project and Port Master Plan Amendment (State Clearing House Number 2015061029). The Lead Agency has determined the Project will not have a significant effect on the environment and mitigation measures were made a condition of the Project.

B. The San Diego Water Board is a Responsible Agency under CEQA (Public Resources Code section 21069; CEQA Guidelines section 15381). The San Diego Water Board has considered the Lead Agency's FMND and finds that the Project as proposed will have a significant effect on resources within the San Diego Water Board's purview.

C. The San Diego Water Board has required mitigation measures as a condition of this Certification to avoid or reduce the environmental effects of the Project to resources within the Board's purview to a less than significant level.

D. The Lead Agency has adopted a mitigation monitoring and reporting program pursuant to Public Resources Code section 21081.6 and CEQA Guidelines section 15097 to ensure that mitigation measures and revisions to the Project identified in the FMND are implemented. The Mitigation Monitoring and Reporting Program (MMRP) is included and incorporated by reference in Attachment 4 to this Certification. The Applicant shall implement the Lead Agency's MMRP described in the FMND, as it pertains to resources within the San Diego Water Board's purview. The San Diego Water Board has imposed additional MMRP requirements as specified in sections V and VI of this Certification.

E. As a Responsible Agency under CEQA, the San Diego Water Board will file a Notice of Determination in accordance with CEQA Guidelines section 15096 subdivision (i).

IX. SAN DIEGO WATER BOARD CONTACT PERSON

Lisa Honma, Environmental Scientist
Telephone: 619-521-3367
Email: Lisa.Honma@waterboards.ca.gov

X. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Shelter Island Boat Launch Facility Improvements** (Certification No. R9-2015-0152) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "*Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)*," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited to, and all proposed mitigation being completed in strict compliance with, the applicants' Project description and/or the description in this Certification, and (b) compliance with all applicable requirements of the Basin Plan.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. R9-2015-0152 issued on October 6, 2016.

David W. Gibson

DAVID W. GIBSON
Executive Officer
San Diego Water Board

6 October 2016
Date

ATTACHMENT 1
DEFINITIONS

Activity - when used in reference to a permit means any action, undertaking, or project including, but not limited to, construction, operation, maintenance, repair, modification, and restoration which may result in any discharge to waters of the state.

Buffer - means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

California Rapid Assessment Method (CRAM) - is a wetland assessment method intended to provide a rapid, scientifically-defensible and repeatable assessment methodology to monitor status and trends in the conditions of wetlands for applications throughout the state. It can also be used to assess the performance of compensatory mitigation projects and restoration projects. CRAM provides an assessment of overall ecological condition in terms of four attributes: landscape context and buffer, hydrology, physical structure and biotic structure. CRAM also includes an assessment of key stressors that may be affecting wetland condition and a "field to PC" data management tool (eCRAM) to ensure consistency and quality of data produced with the method**.**

Compensatory Mitigation Project - means compensatory mitigation implemented by the Applicant as a requirement of this Certification (i.e., applicant -responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Discharge of dredged material – means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States and/or State.

Discharge of fill material – means the addition of fill material into waters of the United States and/or State.

Dredged material – means material that is excavated or dredged from waters of the United States and/or State.

Ecological Success Performance Standards – means observable or measurable physical (including hydrological), chemical, and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

Enhancement – means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment – means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist. Creation results in a gain in aquatic resource area.

Fill material – means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body.

Isolated wetland – means a wetland with no surface water connection to other aquatic resources.

Mitigation Bank – means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing mitigation for impacts authorized by this Certification.

Preservation - means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/ historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Start of Project Construction - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source within waters of the United States and/or State.

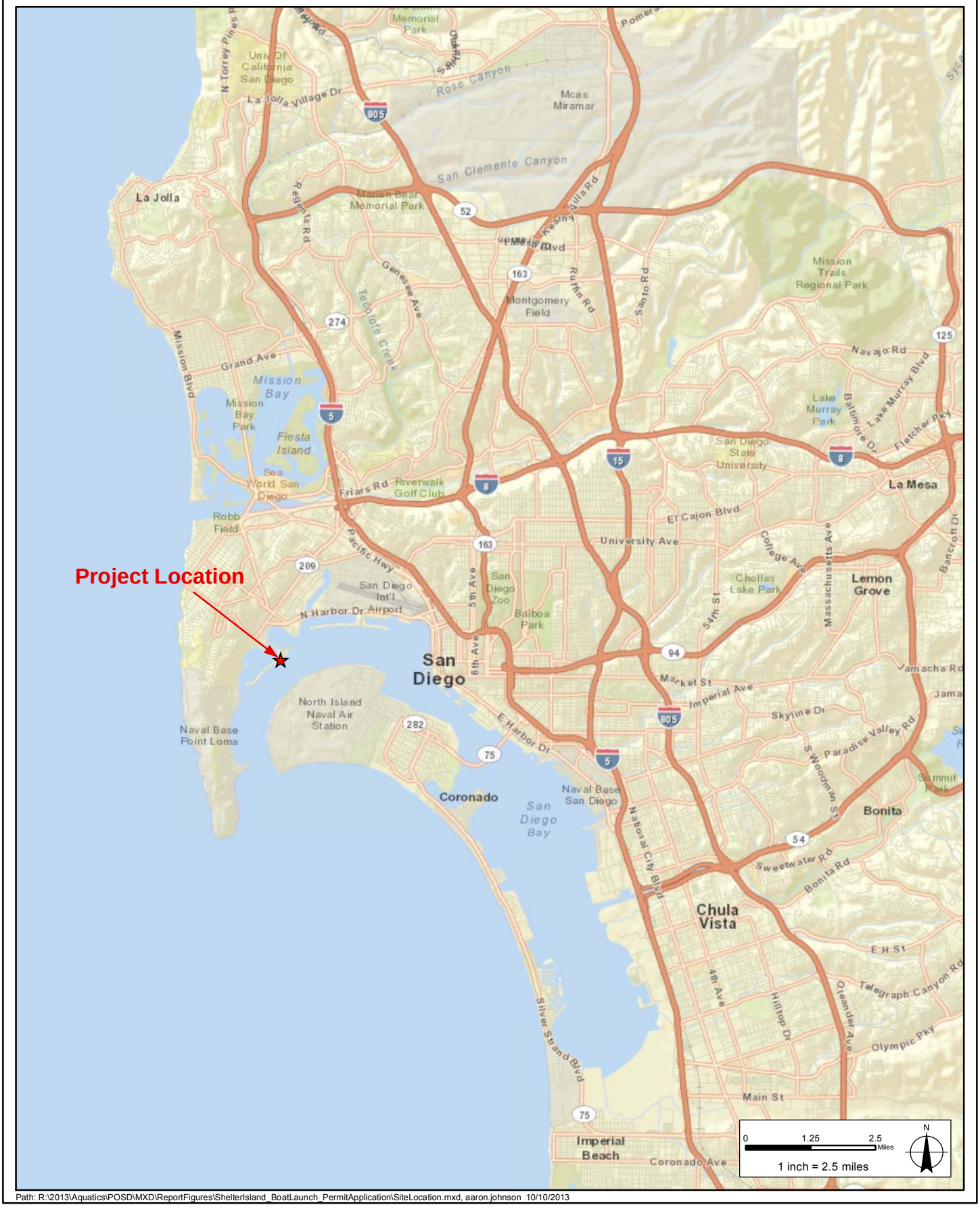
Uplands - means non-wetland areas that lack any field-based indicators of wetlands or other aquatic conditions. Uplands are generally well-drained and occur above (i.e., up-slope) from nearby aquatic areas. Wetlands can, however, be entirely surrounded by uplands. For example, some natural seeps and constructed stock ponds lack aboveground hydrological connection to other aquatic areas. In the watershed context, uplands comprise the landscape matrix in which aquatic areas form. They are the primary sources of sediment, surface runoff, and associated chemicals that are deposited in aquatic areas or transported through them.

Water quality objectives and other appropriate requirements of state law – means the water quality objectives and beneficial uses as specified in the appropriate water quality control plan(s); the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act; and any other appropriate requirement of state law.

Waters of the State - means any surface water or groundwater, including saline waters, within the boundaries of the State. [Water Code section13050, subd. (e)].

ATTACHMENT 2
PROJECT LOCATION MAPS

Figure 1 – Regional Map
Figure 2 – Project Location Overview Map
Figure 3 – Shelter Island Boat Launch Facility Existing Conditions



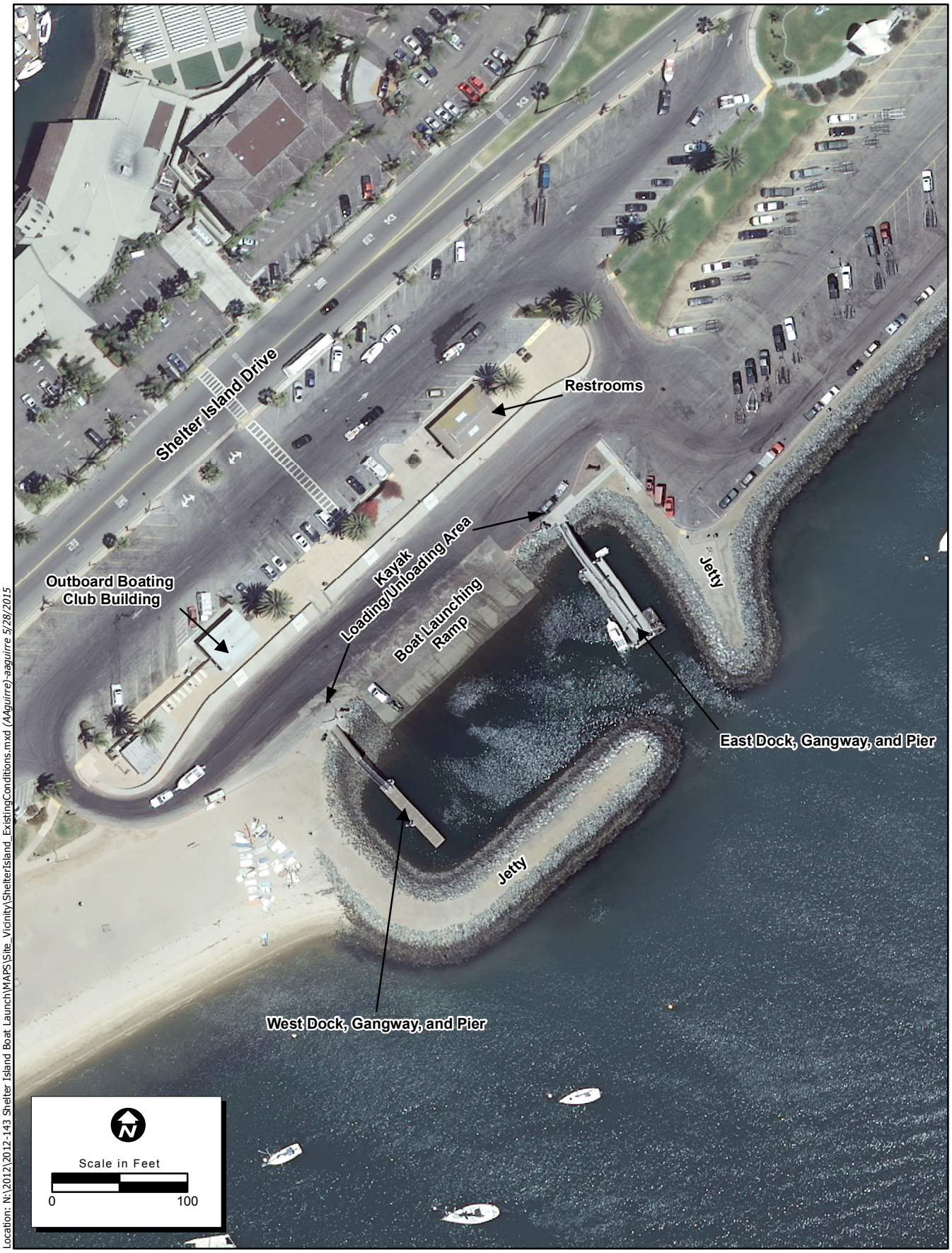
Path: R:\2013\Aquatics\POSD\MXD\ReportFigures\ShelterIsland_BoatLaunch_PermitApplication\SiteLocation.mxd, aaron.johnson 10/10/2013

Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, METI, TomTom, 2012

Regional Map
Shelter Island Boat Launch Redevelopment
San Diego County, CA

FIGURE 1

Figure 2. Project Location Overview Map



Location: N:\2012\2012-143 Shelter Island Boat Launch\MAPS\Site_Vicinity\ShelterIsland_ExistingConditions.mxd *(AAguirre)-aaguirre 5/28/2015*

Map Date: 5/28/2015
Photo Source: 2012 USGS

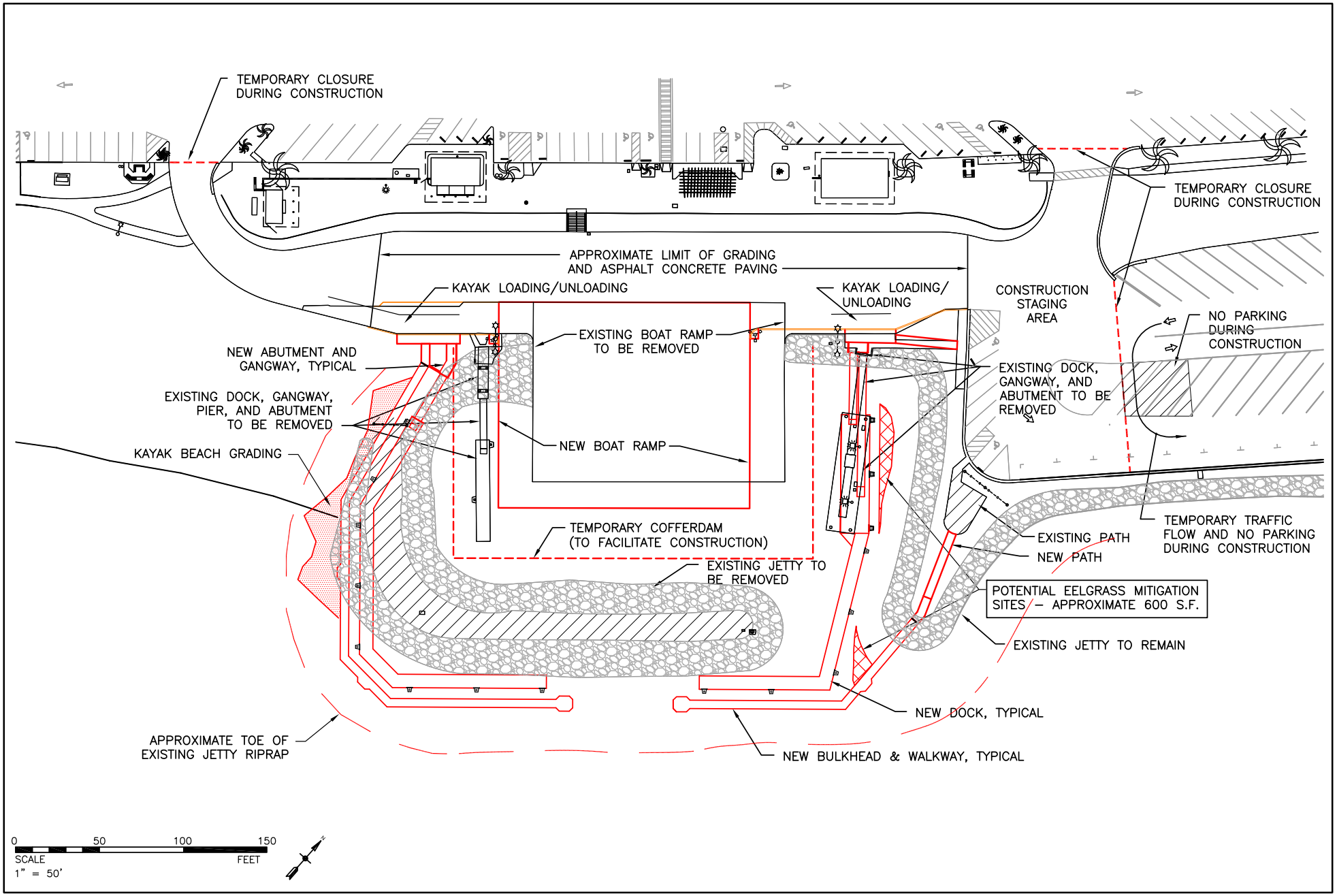
Figure 3 Shelter Island Boat Launch Facility Existing Conditions

2012-143 Shelter Island Boat Launch

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ATTACHMENT 3
PROJECT SITE PLANS

Figure 3 – Proposed Site Improvements
Civil and Structural Drawings for Shelter Island Boat Launch Ramp and Basin Improvements, Sheets 1 through 26



Map Date: 5/28/2015
Map Source: TransSystems 2015

Location: N:\2012\2012-143 Shelter Island Boat Launch\MAPS\Site_Vicinity\Site_Improvements.mxd *(AAguirre, 5/28/2015)* - aaguirre

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

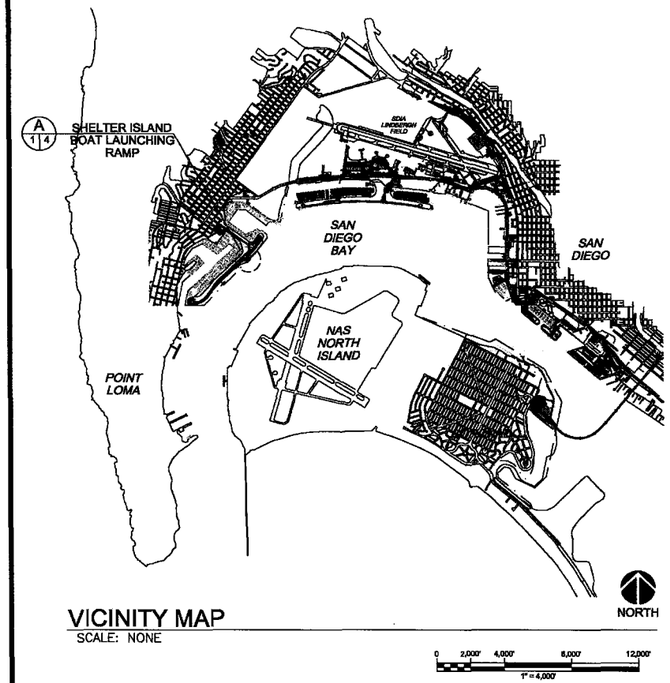
Figure 3 Proposed Site Improvements

2012-143 Shelter Island Boat Launch

SHELTER ISLAND

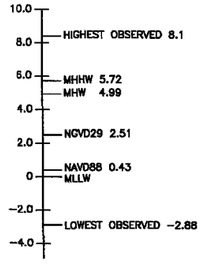
BOAT LAUNCHING RAMP AND BASIN

IMPROVEMENTS

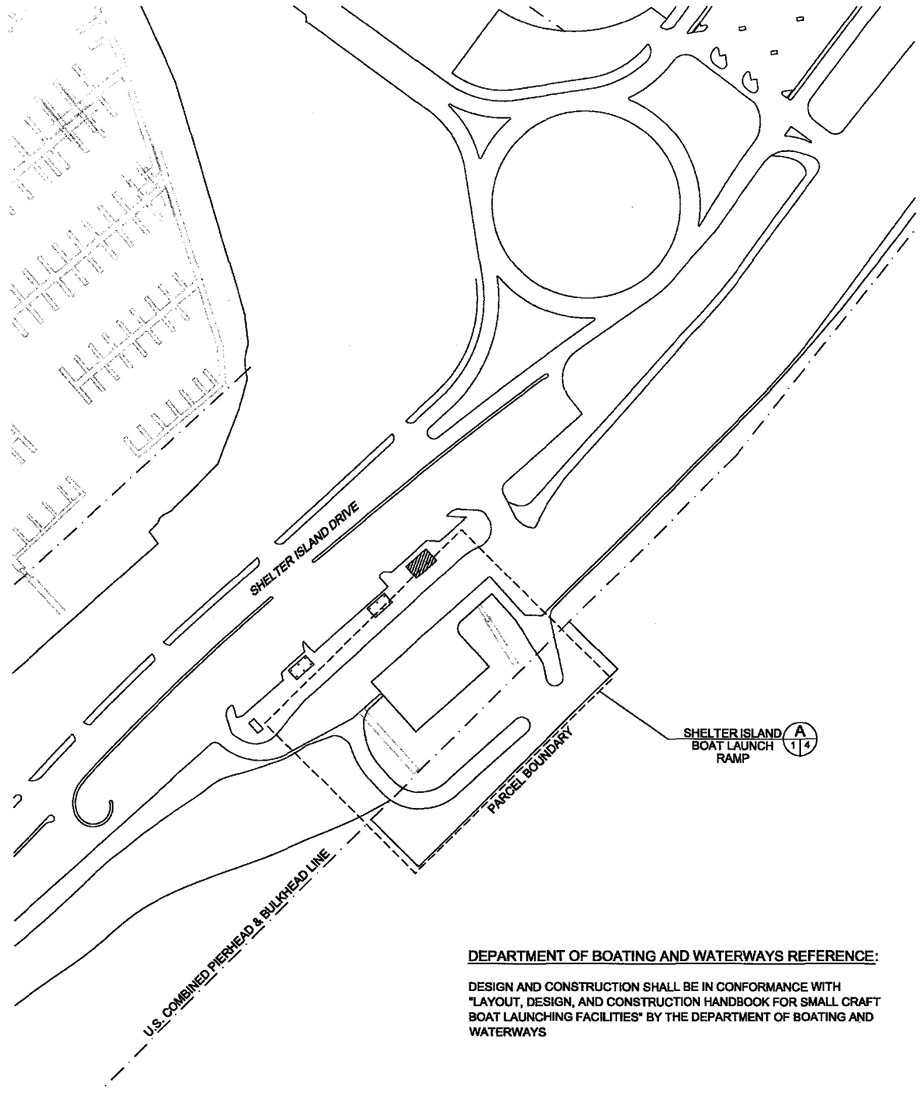


VICINITY MAP

SCALE: NONE



DATUM = MLLW



DEPARTMENT OF BOATING AND WATERWAYS REFERENCE:

DESIGN AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH "LAYOUT, DESIGN, AND CONSTRUCTION HANDBOOK FOR SMALL CRAFT BOAT LAUNCHING FACILITIES" BY THE DEPARTMENT OF BOATING AND WATERWAYS

0 100 200 300

SCALE FEET

1" = 100'

NORTH

A
1 1 PROJECT LOCATION MAP

SCALE: 1" = 100'

SHEET INDEX

WORK TO BE DONE

THE WORK TO BE DONE SHALL BE ACCORDING TO THESE DRAWINGS AND SPECIFICATION NUMBER 2012-06 OF THE SAN DIEGO UNIFIED PORT DISTRICT.

IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, LABOR, MATERIALS AND SYSTEMS NECESSARY TO DEMOLISH THE EXISTING LAUNCH RAMP, JETTIES, PILING, DOCKS AND OTHER IMPROVEMENTS,AND CONSTRUCT A NEW CONCRETE LAUNCH RAMP, NEW CONCRETE SHEET PILE BULKHEAD, NEW AND RELOCATED DOCKS, NEW CONCRETE PILING, DREDGING, PAVING, ELECTRICAL/LIGHTING SYSTEM AND ALL ASSOCIATED IMPROVEMENTS AT THE DESIGNATED PROJECT LOCATION.

REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING SITE CONDITIONS PRIOR TO COMMENCING ANY WORK.
2. AS-BUILT MARKUPS (FIELD SET) ARE TO BE MAINTAINED ONSITE BY THE CONTRACTOR AT ALL TIMES DURING THE COURSE OF THE PROJECT.

ABBREVIATIONS

C- CIVIL
E- ELECTRICAL
G- GENERAL
S- STRUCTURAL

DETAIL KEY

SHEET WHERE DETAIL IS REFERENCED FROM: A DASH (-) INDICATES THE DETAIL IS REFERENCED ON THE SAME SHEET, FROM MORE THAN ONE SHEET OR NOT REFERENCED.

A
3 4
DETAIL LETTER → A/4
SHEET WHERE DETAIL APPEARS

NOTE:
THIS DRAWING MAY BE A REDUCED SCALE PRINT OF THE ORIGINAL DRAWING. UTILIZE GRAPHIC SCALES TO VERIFY IF THE DRAWING IS A REDUCTION AND ADJUST DRAWING SCALES ACCORDING TO THE GRAPHIC SCALES SHOWN.

TranSystems
12555 High Bluff Drive Suite 210
San Diego, California 92130
Tel 858.481.6050 Fax 858.481.7427

* * * 60% SUBMITTAL SET * * *

SPEC NO. 2012-06	WBS NO. P03331.3		
REFERENCES			
PROJECT ENGINEER WILLIAM MELTON, P.E.			
CONTRACTOR			
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST INSPECTOR	REVISIONS	DATE	APPROVED

San Diego Unified Port District

San Diego, California

DESIGNED G. P. MALHO	APPROVAL RECOMMENDED PROJECT ENGINEER
DRAWN J. S. YOUNG	APPROVED PROJECT MANAGER
CHECKED W. D. WOOD	

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

PROJECT TITLE SHEET

	G-001
	* DATUM * MEAN LOWER LOW WATER
DATE	APRIL 15, 2013
SHEET	1 OF 29
DRAWING NO.	2277
REV.	

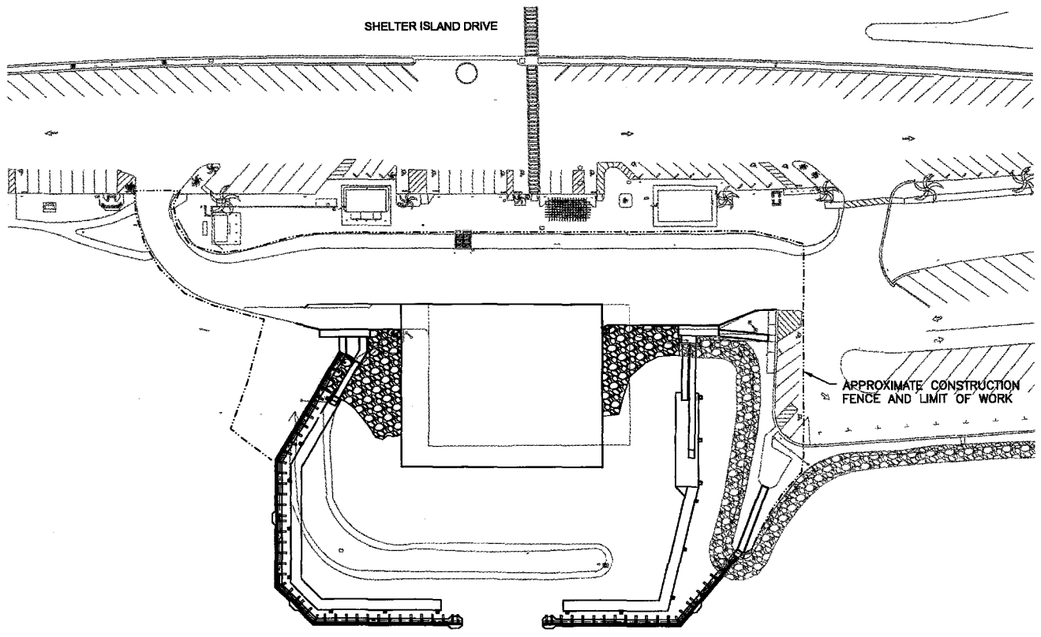
G-001.dwg

GENERAL NOTES:

1. THE WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS AND REFERENCE DOCUMENTS, CODES, STANDARDS AND LAWS.
2. AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE REGIONAL NOTIFICATION CENTER (UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA U.S.A. AT 1-800-422-4133) TO OBTAIN AN INQUIRY IDENTIFICATION NUMBER AND TO REQUEST THE UTILITY OWNERS TO MARK OR OTHERWISE INDICATE THE LOCATION OF THEIR SUBSURFACE FACILITIES. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF ALL UTILITIES, INCLUDING ALL SERVICE CONNECTIONS, WHICH HAVE BEEN MARKED BY THE RESPECTIVE OWNERS AND WHICH MAY AFFECT OR BE AFFECTED BY ITS OPERATIONS. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL UTILITIES AND ALL STRUCTURES FOUND AT THE SITE, UNLESS OTHERWISE SPECIFIED IN THE DEMOLITION PLANS.
3. ALL PERMITS NECESSARY, PRIOR TO BEGINNING CONSTRUCTION, OTHER THAN THOSE PROVIDED BY THE PORT SHALL BE OBTAINED BY THE CONTRACTOR.
4. THROUGHOUT ALL PHASES OF CONSTRUCTION, INCLUDING SUSPENSION OF WORK, UNTIL FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL KEEP THE WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS. THE CONTRACTOR SHALL ALSO ABATE DUST NUISANCE BY CLEANING, SWEEPING AND SPRINKLING WITH WATER AND USING DUST FENCES OR OTHER METHODS AS DIRECTED BY THE PORT THROUGHOUT THE CONSTRUCTION OPERATION.
5. THE CONTRACTOR SHALL KEEP A STRICT RECORD OF ALL CHANGES AND SUBMIT THIS RECORD TO THE PORT DISTRICT.
6. ALL DAMAGE CAUSED TO PUBLIC STREETS, INCLUDING HAUL ROUTES, ALLEYS, SIDEWALKS, CURBS OR STREET FURNISHINGS, OR TO PRIVATE PROPERTY SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR TO THE ENGINEER'S SATISFACTION.
7. PAVEMENT REMOVAL AND REPLACEMENT SHALL BE IN CONFORMANCE WITH THE PORT DISRICT STANDARDS AND SPECIFICATIONS. COMPACTION EFFORTS SHALL NOT DISTURB ADJACENT STREET STRUCTURAL SECTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SUCH DAMAGE.
8. ALL UNDERGROUND SEWER, STORM DRAIN, WATER LINES, ELECTRIC, TELEPHONE, CABLE TV CONDUITS AND GAS PIPELINES SHALL BE INSTALLED PRIOR TO CONSTRUCTION OF CURBS, GUTTERS, SIDEWALKS AND PAVEMENT.
9. WHERE JOINING THE EXISTING PAVEMENT, SAWCUT TO SOUND PAVEMENT AND OVERLAY AS REQUIRED TO PROVIDE PROPER GRADE. ANY UNSOUND PAVEMENT SHALL BE REPLACED AS REQUIRED BY THE ENGINEER.
10. AT LEAST TWO (2) WORKING DAYS BEFORE COMMENCING EXCAVATION, THE CONTRACTOR SHALL POTHOLE AND EXPOSE THE EXISTING UTILITIES AT ALL CROSSINGS AND AT THE POINTS OF TIE-IN.
11. THE SOIL ENGINEERS' RECOMMENDATIONS (AND ENGINEERING GEOLOGISTS' RECOMMENDATIONS, WHERE EMPLOYED) CONTAINED IN THE REPORTS REFERENCED HEREON AS APPROVED OR CONDITIONED BY THE PORT SHALL BE A PART OF ALL WORK ON THIS PROJECT.
12. ALL DELETERIOUS MATERIAL (E.G. – LUMBER, LOGS, BRUSH, RUBBISH, ETC.) SHALL BE REMOVED FROM ALL AREAS TO RECEIVE COMPACTED FILL AND HAULED TO A DUMP-SITE APPROVED BY THE PORT.
13. DURING THE RAINY SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING STORM DAMAGE PREVENTION MEASURES OR EROSION CONTROL DEVICES AND/OR TO PERFORM CERTAIN GRADING TO PREVENT SOIL OR EXCESS RUNOFF FROM FLOWING INTO PUBLIC STREETS OR ADJACENT PROPERTIES. IN THE EVENT OF SUCH AN OCCURRENCE, CLEANUP SHALL COMMENCE IMMEDIATELY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND CLEANUP OF ANY SPILL ON PUBLIC STREETS DURING CONSTRUCTION, AS WELL AS REPAIR OF DAMAGE TO HAUL ROUTES AND EXISTING FACILITIES.
15. HAUL ROUTES MUST BE ON OFFICIAL TRUCK ROUTES OF THE RESPECTIVE CITIES. A SEPARATE ENCROACHMENT PERMIT IS REQUIRED WHEN IT IS NECESSARY TO FLAG TRAFFIC OR INSTALL ANY TRAFFIC CONTROL DEVICES ON ANY PUBLIC RIGHT-OF-WAY.
16. ALL WORK CONTEMPLATED UNDER THE PERMITS SHALL BE COMPLETED WITHIN THE TIME LIMIT SPECIFIED IN THE PERMITS OR ANY TIME EXTENSIONS GRANTED THEREON AND SHALL BE DONE IN ACCORDANCE WITH THE APPROVED PLANS AND IN COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE PERMITS AND ALL OTHER PROVISIONS OF THE CODE, APPLICABLE LAWS, AND ORDINANCES.
17. ALL UNDERGROUND UTILITIES OR STRUCTURES REPORTED BY THE HARBOR OR THOSE SHOWN ON RECORDS EXAMINED ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT. THE CONTRACTOR, BY ACCEPTING THESE PLANS OR PROCEEDING WITH IMPROVEMENTS PURSUANT THERETO, UNDERSTANDS THAT THEY AGREE TO ASSUME LIABILITY, AND AGREE TO HOLD THE UNDERSIGNED HARMLESS FOR ANY LIABILITY FOR DAMAGE RESULTING FROM THE EXISTENCE OF UNDERGROUND UTILITIES OR STRUCTURES NOT REPORTED TO THE UNDERSIGNED, NOT INDICATED ON THE PUBLIC RECORDS EXAMINED, LOCATED AT VARIANCE WITH THAT REPORTED OR SHOWN ON RECORDS EXAMINED. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES FOUND AT THE SITE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE OWNERS OF THE UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING TO WORK.
18. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE PERMITS AND THE APPLICABLE POLICIES OF THE PORT. THESE INCLUDE SUCH THINGS AS CONSTRUCTION, MAINTENANCE, AND DEBRIS REMOVAL BMPs, WATER QUALITY MANAGEMENT AND PROTECTION BMPs, AIR QUALITY PROTECTION CONDITIONS, AND POLICIES.
19. THE CONTRACTOR IS REQUIRED TO PROTECT ALL EXISTING SURVEY MONUMENTATION DURING GRADING AND ALL SUBSEQUENT CONSTRUCTION. CONTRACTOR SHALL GIVE THE ENGINEER ADEQUATE NOTICE, BEFORE DISTURBING SAID MONUMENTS, SO THE ENGINEER CAN REPLACE OR RELOCATE ANY EXISTING SURVEY MONUMENTATION.
20. ALL MANHOLE RIMS, LIDS, VALVE BOXES AND OTHER STREET APPURTENANCES SHALL BE SET TO FINISH GRADE BY THE CONTRACTOR AS PART OF THIS PROJECT.

PUBLIC ACCESS AND PHASING NOTES:

1. MAINTAIN PUBLIC ACCESS TO EXISTING AREAS ADJACENT TO THE DESIGNATED WORK AREA AT ALL TIMES DURING CONSTRUCTION.
2. PROVIDE NECESSARY TEMPORARY BARRICADES, SIGNAGE AND PAVEMENT STRIPING TO DIRECT TRAFFIC INTO, THROUGH AND EXITING EXISTING PARKING LOT.
3. PROVIDE ACCESS AND PHASING PLAN TO PORY FOR REVIEW PRIOR TO CONSTRUCTION.
4. PHASE CONSTRUCTION WORK AS NECESSARY TO PROVIDE FULL-TIME PUBLIC ACCESS TO THE NOTED FACILITIES.
5. CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE PORT DISTRICT, A PUBLIC ACCESS PLAN THAT DEMONSTRATES THAT PUBLIC ACCESS IS MAINTAINED, BOTH FOR PEDESTRIANS AND FOR VEHICLE AND BOAT TRAFFIC, DURING CONSTRUCTION. SUCH PLAN SHALL PROVIDE FOR SIGNS, TRAFFIC CONTROL, AND TEMPORARY FENCING.
6. UTILITY PHASING –
   - A. CONTRACTOR SHALL LOCATE AND POTHOLE ALL UTILITIES ON THE PROJECT SITE BEFORE ANY DEMOLITION, GRADING AND SIMILAR WORK THAT COULD POTENTIALLY DAMAGE OR OTHERWISE INTERRUPT THE EXISTING UTILITY SERVICES.
   - B. THE PLANS MAY INDICATE VARIOUS UTILITY POTHOLING AREAS, BUT ADDITIONAL EXCAVATION, TRACING, POTHOLING OR OTHER MEANS SHALL BE PROVIDED BY THE CONTRACTOR AS NECESSARY TO LOCATE ALL OF THE UTILITIES, AND TO PROTECT THE RESPECTIVE UTILITIES AS REQUIRED.
   - C. CONTRACTOR SHALL MAINTAIN EXISTING UTILITY SERVICES AT ALL TIMES TO ALLOW THE PORT, BUILDINGS AND SIMILAR FACILITIES TO REMAIN IN FULL OPERATION THROUGHOUT CONSTRUCTION EXCEPT AS OTHERWISE APPROVED BY THE PORT DISTRICT FOR PLANNED SHUT DOWN PERIODS.
   - D. CONTRACTOR SHALL CONSTRUCT AND COMMISSION NEW UTILITY SERVICES AS REQUIRED TO CONNECT TO EXISTING MARINA, BUILDINGS, LANDSCAPING AND SIMILAR FACILITIES TO REMAIN TO ASSURE CONTINUED OPERATION OF THE FACILITIES.
   - E. CONTINUED OPERATION OF THE EXISTING FACILITIES MAY REQUIRE THAT THE CONTRACTOR PHASE THE UTILITY SERVICE WORK EARLY IN THE PROJECT SITE WORK SCHEDULE. THE CONTRACTOR'S WORK PLAN AND SCHEDULE SHALL PROPERLY IDENTIFY ALL WORK TASKS TO ASSURE CONTINUED MARINA AND BUILDING USE THROUGHOUT CONSTRUCTION.
   - F. THE CONTRACTOR SHALL MAINTAIN, IN HEALTHY CONDITION, ALL LANDSCAPING ON THE PROJECT SITE THAT IS TO REMAIN IN-PLACE OR TO BE RELOCATED. CONTRACTOR SHALL PROVIDE TEMPORARY WATERING OF LANDSCAPING AS REQUIRED DURING TIMES THAT THE IRRIGATION SYSTEM IS NOT OPERABLE.



1 / G-002 CONSTRUCTION ACCESS CIRCULATION PLAN
SCALE: 1" = 50'

NOTE:
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SPEC NO. 2012-06 WBS NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED G. P. MAILHO
DRAWN J. S. YOUNG
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

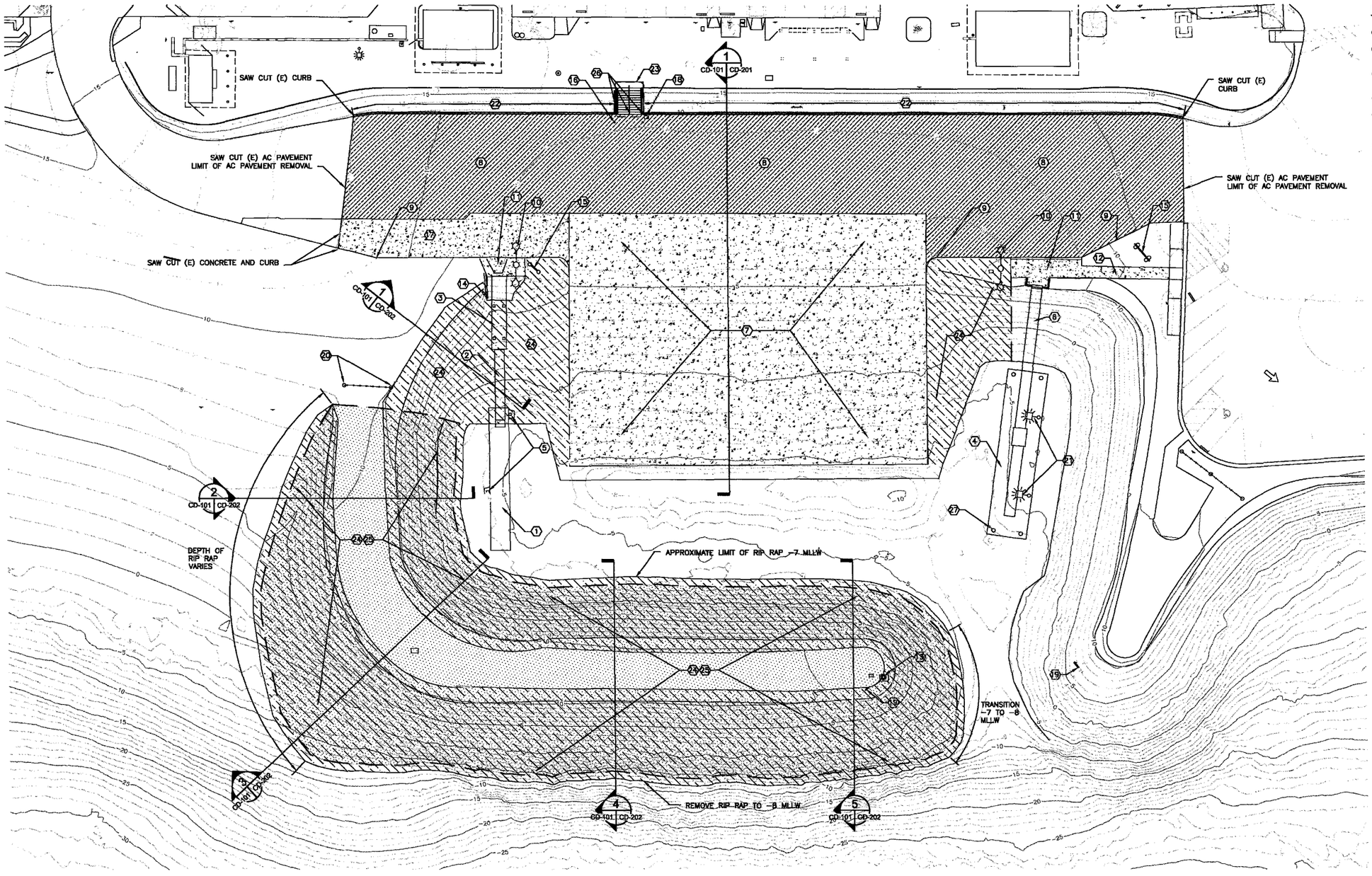
*** 60% SUBMITTAL SET ***

SAN DIEGO, CALIFORNIA
SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS
GENERAL NOTES

"DATUM" MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 2 OF 29
DRAWING NO. 2277
REV.

G-002

G-002.dwg



DEMOLITION KEY NOTES:

1. REMOVE AND DISPOSE OF (E) WOOD DOCK.
2. REMOVE AND SALVAGE (E) GANGWAY. DELIVER TO PORT DESIGNATED LOCATION.
3. REMOVE AND DISPOSE OF (E) WOOD PIER, CONCRETE PILES AND PILE CAP.
4. REMOVE AND DISPOSE OF (E) CONCRETE DOCK.
5. REMOVE AND DISPOSE OF (E) CONCRETE GUIDE PILES, TOTAL 2. PILES SHALL BE PULLED IN THEIR ENTIRETY.
6. REMOVE AND DISPOSE OF (E) GANGWAY.
7. REMOVE AND DISPOSE OF (E) CONCRETE LAUNCH RAMP.
8. REMOVE AND DISPOSE OF (E) AC PAVEMENT.
9. REMOVE AND DISPOSE OF (E) CONCRETE CURB.
10. REMOVE AND DISPOSE OF (E) ELECTROLIERS AND CONCRETE FOUNDATIONS. BACKFILL EXCAVATIONS AND COMPACT TO 95% RELATIVE COMPACTION, TOTAL 2, SEE ELEC. PLANS.
11. REMOVE AND DISPOSE OF (E) CONCRETE ABUTMENTS.
12. REMOVE AND DISPOSE OF CONCRETE SIDEWALK.
13. REMOVE AND SALVAGE (E) WARNING SIGN AND LIGHT, SEE ELEC. PLANS.
14. PROTECT IN PLACE (E) STORM DRAIN OUTFALL.
15. REMOVE SIGN, RELOCATE PER PLAN, TOTAL 2.
16. REMOVE AND SALVAGE BOLLARDS FOR RE-USE.
17. REMOVE AND DISPOSE OF (E) CONCRETE PAVEMENT.
18. (E) ELECTRICAL PULL BOX, SEE SHEET E-101.
19. REMOVE SIGNS (2-5 MPH), SALVAGE FOR REUSE.
20. REMOVE AND DISPOSE OF WOOD POSTS AND CHAIN.
21. REMOVE AND DISPOSE OF DOCK LIGHTING, SEE ELECTRICAL PLANS.
22. REMOVE AND DISPOSE OF (E) CONCRETE CURB.
23. (E) STAIRS TO REMAIN, PROTECT IN PLACE.
24. REMOVE AND SALVAGE (E) RIP RAP. DELIVER TO PORT DESIGNATED LOCATION.
25. REMOVE AND DISPOSE OF (E) MIXED MATERIAL.
26. MODIFY RAILING PER DETAIL 3/CD-201.
27. REMOVE 4 (E) 18" OCTAGONAL CONCRETE GUIDE PILES IN THEIR ENTIRETY. SALVAGE THREE OF THE (E) PILES FOR REUSE TO ANCHOR NEW DOCK. PROTECT PILES FROM DAMAGE DURING REMOVAL, STORAGE, AND DRIVING. ENGINEER SHALL INSPECT PILES AFTER REMOVAL BY CONTRACTOR.

LEGEND:

- AC PAVEMENT
- CONCRETE
- ROCK RIP RAP
- MIXED MATERIAL - GRAVELLY SAND WITH ROCK

N

0 20 40 60
SCALE FEET
1" = 20'

NOTE:
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DEMOLITION NOTES:

1. PREVENT DEBRIS FROM FALLING INTO THE WATER, RIPRAP, AND WETLAND AREAS.
2. ANY AND ALL DEBRIS THAT ENTERS THE WATER, RIPRAP, AND WETLAND AREAS SHALL BE REMOVED IMMEDIATELY WHETHER FLOATING, SUBMERGED, OR ON THE GROUND.
3. DO NOT DISTURB THE AREAS OUTSIDE OF WORK AREA SHOWN ON THE PLAN.
4. CONTRACTOR SHALL BE AWARE THAT THE WATER LEVEL VARIES ACCORDING TO THE TIDES. CONTRACTOR SHALL COORDINATE ALL WATER RELATED WORK TO BE DONE WITH THE PREDICTED AND ACTUAL TIDES.
5. THE CONTRACTOR SHALL SUPPLY TEMPORARY SANITARY FACILITIES. PORT FACILITIES SHALL NOT BE USED BY THE CONTRACTOR, HIS EMPLOYEES, OR HIS SUB-CONTRACTORS.
6. THE CONTRACTOR SHALL PROVIDE THE NECESSARY, TEMPORARY FENCING SYSTEMS TO PROTECT AND MAINTAIN PUBLIC ACCESS AROUND THE SITE AND TO EXCLUDE THE PUBLIC FROM THE WORK AREA.
7. CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND STATUS OF ALL UTILITIES WITHIN THE WORK AREA.
8. CONTRACTOR SHALL MAINTAIN FULL PUBLIC USE OF EXISTING WALKWAYS AND OTHER FACILITIES OUTSIDE THE LIMIT OF WORK AND THOSE FACILITIES NOTED ON THE PLAN WITHIN THE WORK AREA.
9. CONTRACTOR SHALL PROVIDE ACCESS TO PORT DISTRICT PERSONNEL AND THEIR VEHICLES AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL SUBMIT CONSTRUCTION OPERATIONS PLAN SHOWING ALL STAGING AREAS AND EQUIPMENT ACCESS ROUTES AND PUBLIC ACCESS ROUTES.
11. CONTRACTOR SHALL COMPLY WITH ALL REGULATORY PERMIT REQUIREMENTS AND DIRECTION FROM THE PORT DURING CONSTRUCTION ACTIVITIES.
12. APPROXIMATE CLEARING AND GRUBBING AREAS ARE SHOWN. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PROJECT SITE AND CONDITIONS BEFORE CLEARING AND GRUBBING. ACTUAL CLEARING AND GRUBBING AREA SHALL BE FIELD VERIFIED DURING DEMOLITION.
13. CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING POLICIES OF THE PUBLIC WORKS PLAN FOR PROTECTION OF WATERWAYS DURING DEMOLITION AND CONSTRUCTION.

*** 60% SUBMITTAL SET ***

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APPC NO. 2012-06 WBS NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

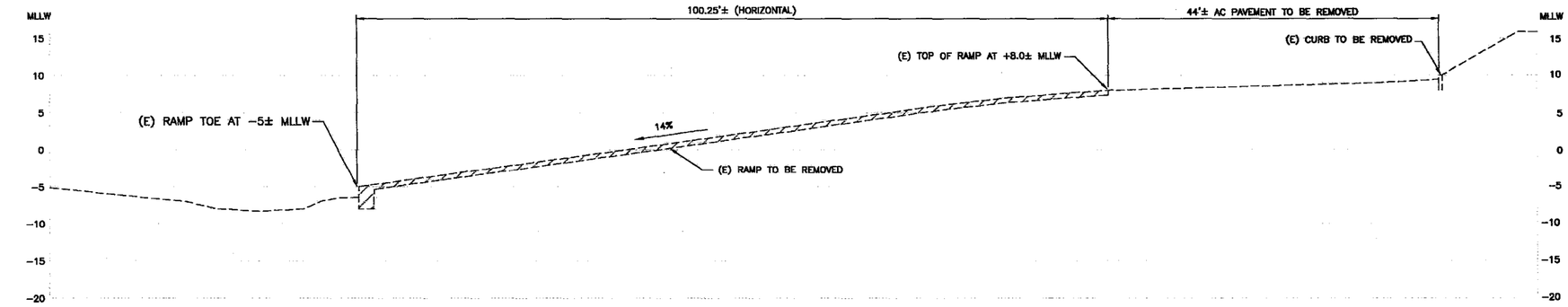
DESIGNED G. P. MALJIO
DRAWN J. S. YOUNG
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

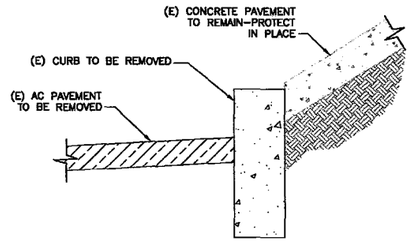
SAN DIEGO, CALIFORNIA
SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS
DEMOLITION PLAN

CD-101
"DATUM" MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 3 OF 29
DRAWING NO. 2277
REV.

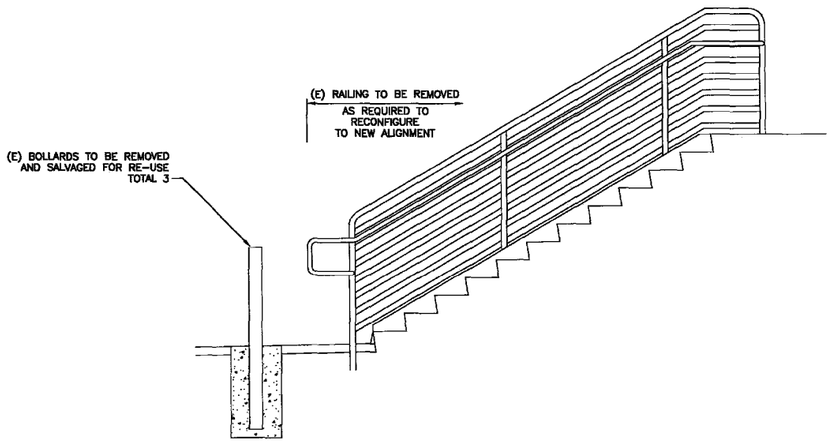
CD-101.dwg



1 CD-101 | CD-201 **SECTION THROUGH RAMP**
SCALE: 1" = 8'



2 CD-201 **CURB REMOVAL DETAIL**
SCALE: 1 1/2" = 1'–0"



3 CD-101 | CD-201 **RAILING DETAIL**
SCALE: 1/2" = 1'–0"

LEGEND:

DATUM = MLLW

0 4 8 16
SCALE FEET
1" = 8'

0 10 20 30
SCALE FEET
1" = 10'

NOTE:
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* * * 60% SUBMITTAL SET * * *

CD-201

SPEC NO. 2012-06 WBS NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

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CHECKED W. D. WOOD

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PROJECT ENGINEER
APPROVED
PROJECT MANAGER

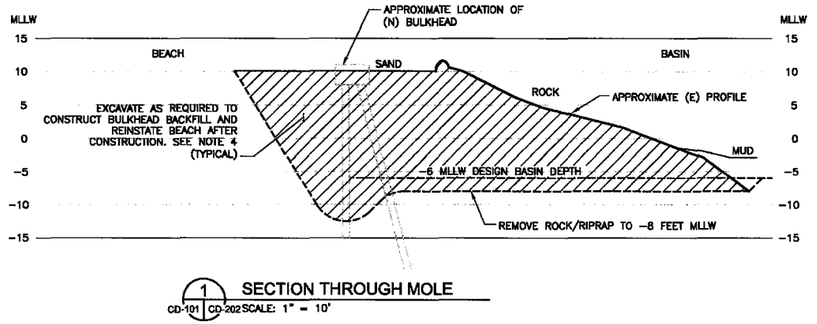
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

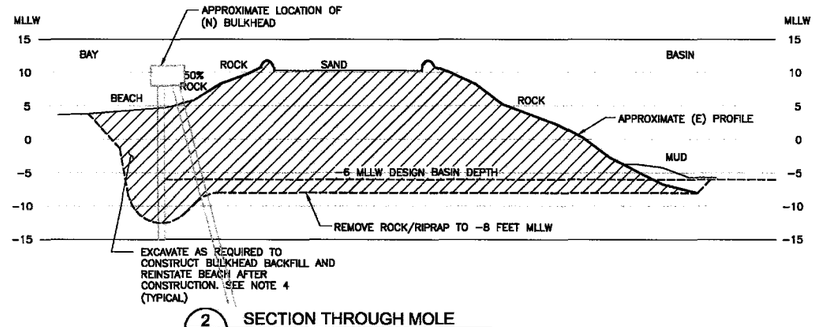
DEMOLITION SECTIONS

DATUM MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 4 OF 29
DRAWING NO. 2277
REV.

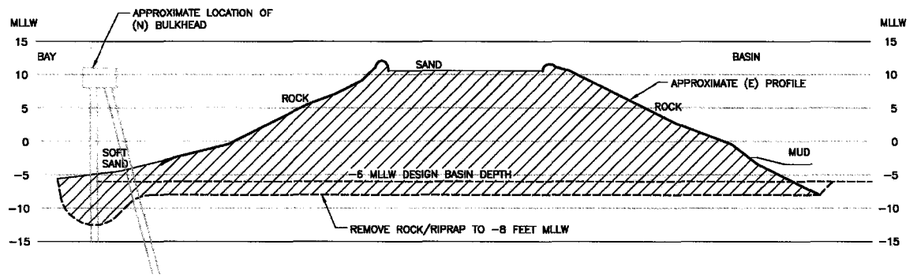
CD-201.dwg



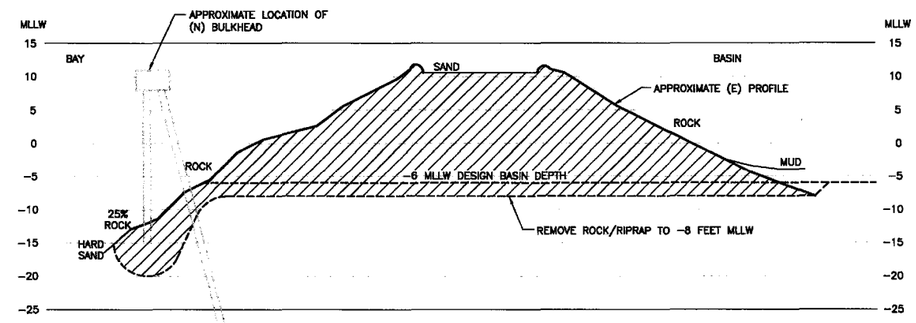
1 SECTION THROUGH MOLE
CD-101 | CD-202 SCALE: 1" = 10'



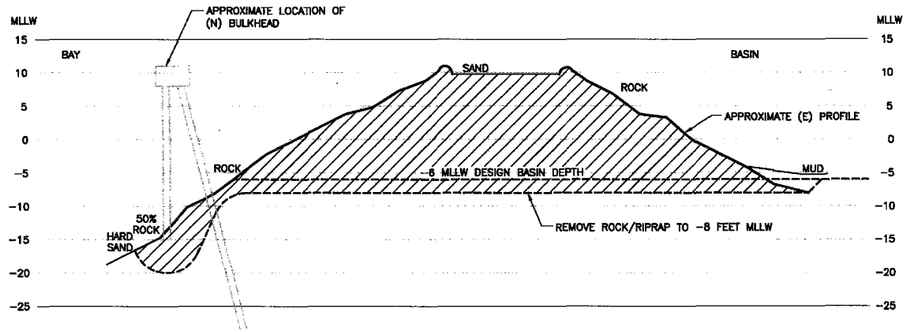
2 SECTION THROUGH MOLE
CD-101 | CD-202 SCALE: 1" = 10'



3 SECTION THROUGH MOLE
CD-101 | CD-202 SCALE: 1" = 10'



4 SECTION THROUGH MOLE
CD-101 | CD-202 SCALE: 1" = 10'



5 SECTION THROUGH MOLE
CD-101 | CD-202 SCALE: 1" = 10'

LEGEND:

JETTY REMOVAL

SCALE 1" = 10'
0 10 20 30 FEET

10.0
8.0 — HIGHEST OBSERVED 8.1
6.0 — MHHW 5.72
MHW 4.99
4.0
2.0 — NGVD29 2.51
0 — NAVD88 0.43
MLLW
−2.0 — LOWEST OBSERVED −2.88
−4.0

DATUM = MLLW

NOTE:

SECTIONS SHOWN ARE BASED ON THE FOLLOWING SURVEYS:

1. DIVE SURVEY BY TRANSYSTEMS ON FEBRUARY 8, 2012
2. TOPOGRAPHIC SURVEY BY FUSCOE ENGINEERING COMPLETED ON JANUARY 25, 2012
3. REMOVE ROCK AS NECESSARY TO DRIVE SHEET AND BATTER PILES. SEE SHEET S-201 FOR MORE INFORMATION. DEPTH AND LOCATION OF ROCK UNKNOWN. APPLIES TO ENTIRE PROJECT AREA.

NOTE:
THIS DRAWING MAY BE A REDUCED SCALE PRINT OF THE ORIGINAL DRAWING. UTILIZE GRAPHIC SCALES TO VERIFY IF THE DRAWING IS A REDUCTION AND ADJUST DRAWING SCALES ACCORDING TO THE GRAPHIC SCALES SHOWN.

TranSystems
12555 High Bluff Drive Suite 210
San Diego, California 92130
Tel 858.481.6050 Fax 858.481.7427

* * * 60% SUBMITTAL SET * * *

CD-202

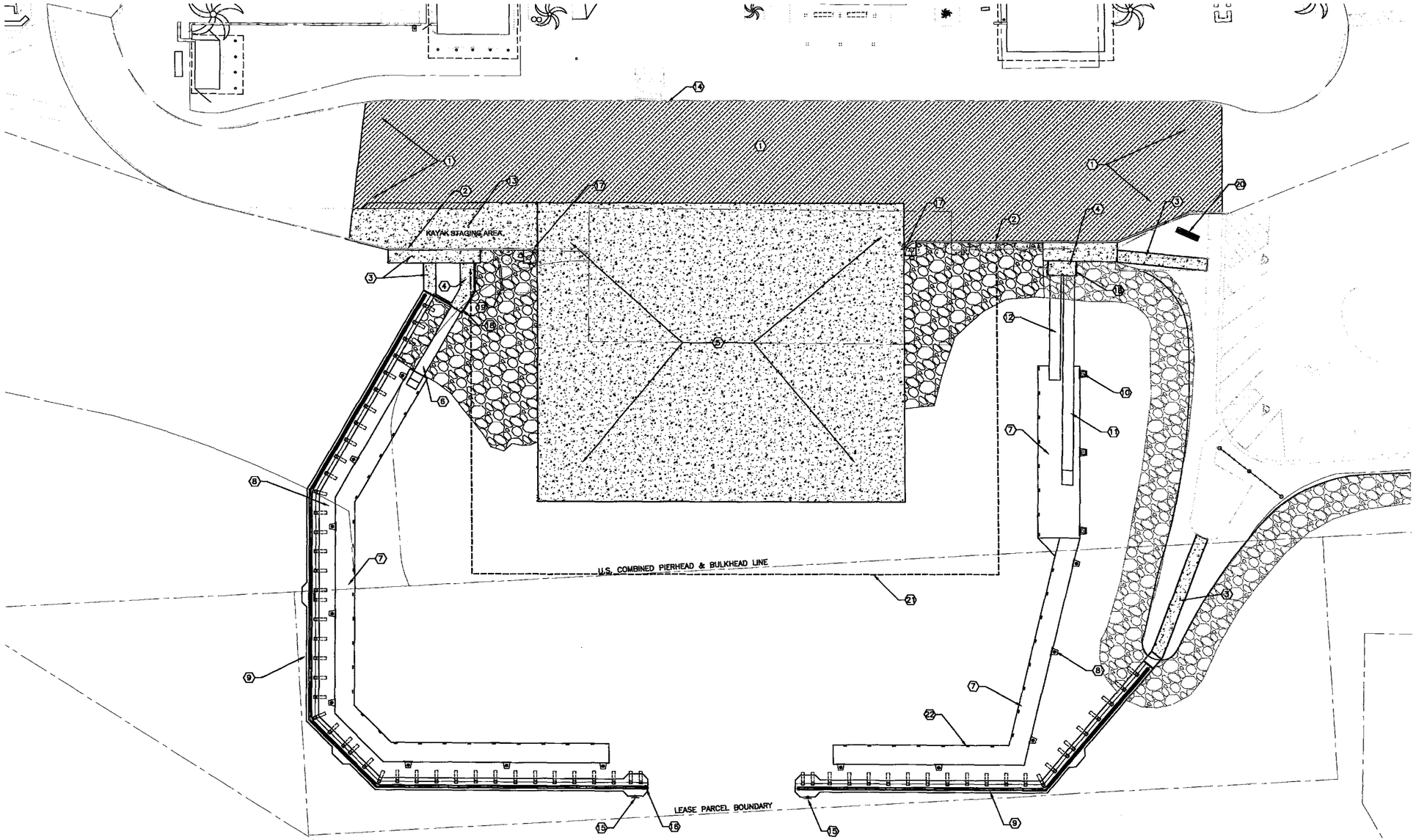
SPEC NO. 2012-06	WBS NO. P03331.3	DESIGNED S. P. MALHO	APPROVAL RECOMMENDED ____ PROJECT ENGINEER
REFERENCES		DRAWN J. S. YOUNG	APPROVED ____ PROJECT MANAGER
PROJECT ENGINEER WILLIAM MELTON, P.E.		CHECKED W. D. WOOD	
CONTRACTOR			
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST	INSPECTOR	REVISIONS	DATE / APPROVED

San Diego Unified Port District
San Diego, California

SAN DIEGO, CALIFORNIA
SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS
JETTY SECTIONS

"DATUM" MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 5 OF 29
DRAWING NO. 2277
REV.

CD-202.dwg



NOTES:

1. SEE STRUCTURAL PLANS FOR CONCRETE SHEET PILE BREAKWATER.
2. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. (N) AC PAVEMENT, SEE DETAIL A/CS-501
2. (N) CONCRETE CURB.
3. (N) CONCRETE SIDEWALK, SEE DETAIL B/CS-501
4. (N) CONCRETE ABUTMENT, SEE SHEET S-502
5. (N) CONCRETE LAUNCH RAMP, SEE DETAIL 1/CS-401.
6. (N) 34' STANDARD ALUMINUM GANGWAY, SEE SHEET CS-505, SIMILAR.
7. (N) CONCRETE FLOATS, SEE SHEET CS-503.
8. (N) CONCRETE PILING, TYP., SEE DETAIL4/S-002.
9. (N) CONCRETE SHEET PILE BREAKWATER, SEE STRUCTURAL DRAWINGS.
10. RELOCATED (E) 18" OCTAGONAL PILE, TOTAL 3.
11. (N) 80' ACCESSIBLE ALUMINUM GANGWAY, SEE SHEET CS-505.
12. (N) 40' STANDARD GANGWAY, SEE SHEET CS-505
13. (N) CONCRETE PAVEMENT, SEE DETAIL
14. (E) ELECTRIC PULL BOX, SEE ELECTRICAL DRAWINGS.
15. 5 MPH LIMIT SIGN.
16. NAVIGATION MARKER.
17. (N) RAMP LIGHTS, SEE ELECTRICAL DRAWINGS.
18. (N) GUARDRAIL.
19. (E) STORM DRAIN, PROTECT IN PLACE.
20. (N) PROJECT SIGN, SEE SHEET CS-506.
21. APPROXIMATE LOCATION OF TEMPORARY COFFERDAM AS NEEDED TO FACILITATE CONSTRUCTION. CONTRACTOR SHALL DETERMINE EXACT LOCATION, SIZE, AND MATERIALS FOR COFFERDAM. CONTRACTOR SHALL MAINTAIN COFFERDAM THROUGHOUT CONSTRUCTION AND COMPLETELY REMOVE AND DISPOSE OF THE COFFERDAM, SUPPORT PILES, AND OTHER RELATED FACILITIES.
22. CLEAT @ 10' O.C.

LEGEND:

- ASPHALT PAVEMENT
- CONCRETE
- FILL
- RE-GRADE BEACH

N

0 20 40 60
SCALE FEET
1" = 20'

NOTE:
THIS DRAWING MAY BE A REDUCED SCALE PRINT OF THE ORIGINAL DRAWING. UTILIZE GRAPHIC SCALES TO VERIFY IF THE DRAWING IS A REDUCTION AND ADJUST DRAWING SCALES ACCORDING TO THE GRAPHIC SCALES SHOWN.

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Tel 858.481.6050 Fax 858.481.7427

* * * 60% SUBMITTAL SET * * *

CS-101

SPEC NO. 2012-06 WBS. NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED G. P. MALIHO
DRAWN J. S. YOUNG
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

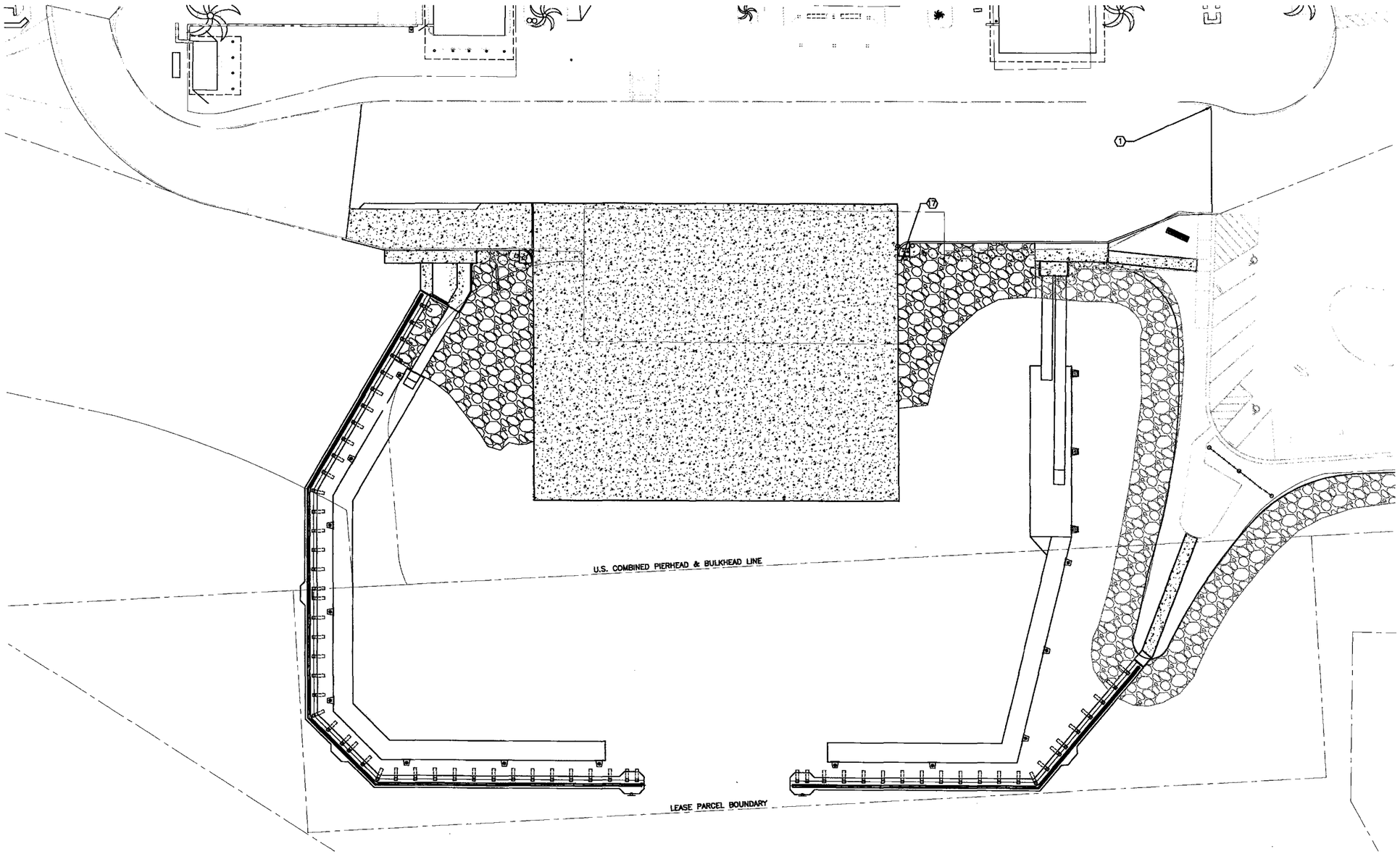
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

IMPROVEMENT PLAN

DATUM
MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 6 OF 29
DRAWING NO. 2277
REV.

CS-101.dwg



PROJECT COORDINATES		
POINT	NORTHING	EASTING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

SURVEY NOTES:

LANDSIDE TOPOGRAPHY BY:

FUSCOE ENGINEERING
6390 GREENWICH DRIVE
SAN DIEGO, CA. 92122

DATED: JANUARY 25, 2012

BENCHMARK: SAN DIEGO UNIFIED PORT DISTRICT CONTROL POINT NO. 301, ELEV. = 10.159 MLLW

HYDROGRAPHIC SURVEY BY:

NEARSHORE AND WETLAND SURVEYS
3248 PARK VISTA DRIVE
LA CRESCENTA, CA. 91214

DATED: MARCH 21, 2012

BENCHMARK: SAN DIEGO UNIFIED PORT DISTRICT CONTROL POINT NO. 301, ELEV. = 10.159 MLLW

0 20 40 60
SCALE FEET
1" = 20'

NOTE:
THIS DRAWING MAY BE A REDUCED SCALE PRINT OF THE ORIGINAL DRAWING. UTILIZE GRAPHIC SCALES TO VERIFY IF THE DRAWING IS A REDUCTION AND ADJUST DRAWING SCALES ACCORDING TO THE GRAPHIC SCALES SHOWN.

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San Diego, California 92130
Tel 858.481.6050 Fax 858.481.7427

* * * 60% SUBMITTAL SET * * *

CS-102

SPEC NO. 2012-06	WBS NO. P03331.3		
REFERENCES			
PROJECT ENGINEER WILLIAM MELTON, P.E.			
CONTRACTOR			
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST	INSPECTOR	REVISIONS	DATE / APPROVED

San Diego Unified Port District

San Diego, California

DESIGNED	G. P. MALIHO
DRAWN	J. S. YOUNG
CHECKED	W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

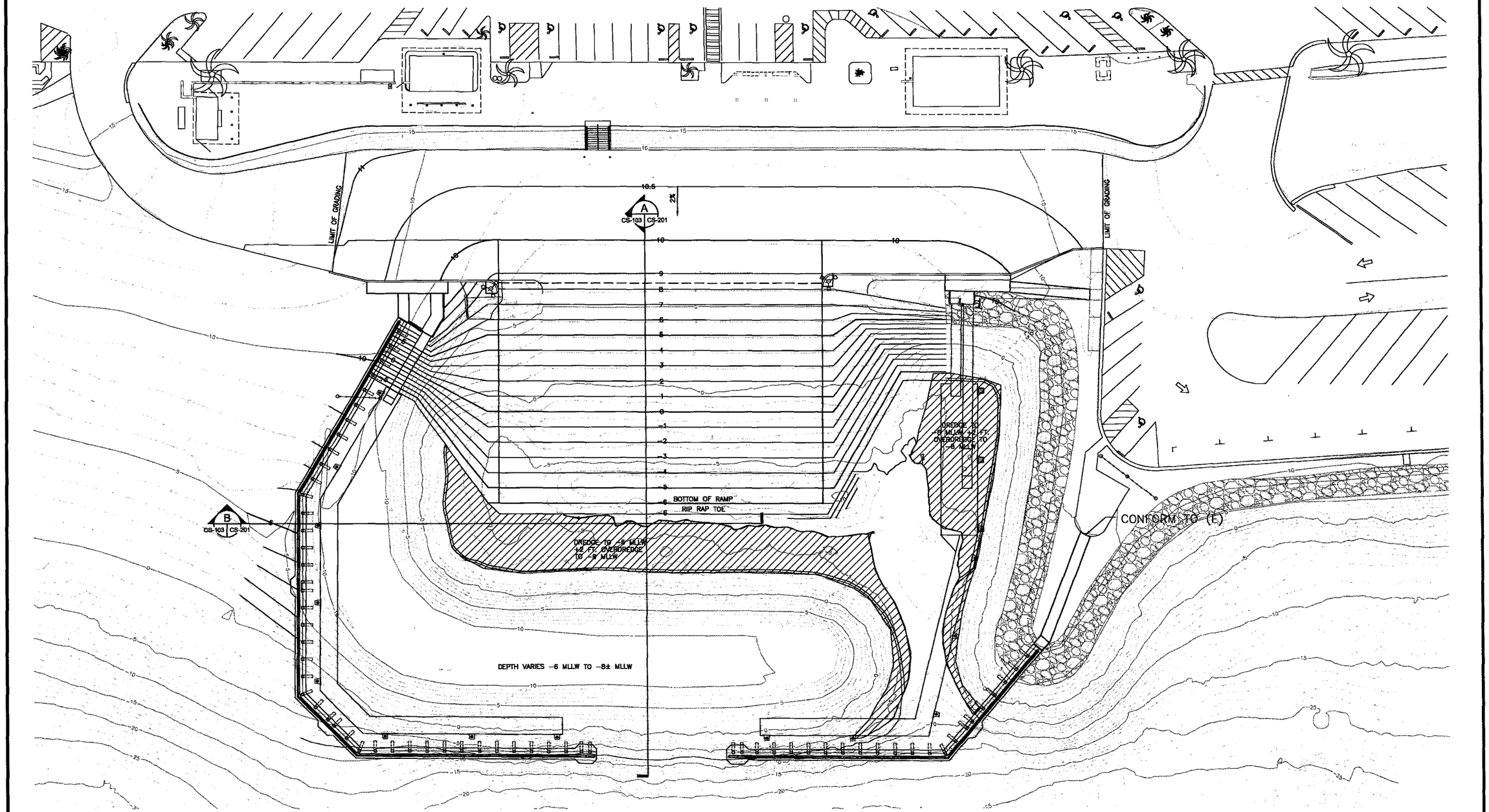
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

CONTROL PLAN

* DATUM * MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 7 OF 29
DRAWING NO. 2277
REV.

CS-102.dwg



NOTE:
THIS DRAWING MAY BE A REDUCED SCALE PRINT OF THE ORIGINAL DRAWING. UTILIZE GRAPHIC SCALES TO VERIFY IF THE DRAWING IS A REDUCTION AND ADJUST DRAWING SCALES ACCORDING TO THE GRAPHIC SCALES SHOWN.

TranSystems
12555 High Bluff Drive Suite 210
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Tel 858.481.6050 Fax 858.481.7427

*** 60% SUBMITTAL SET ***

CS-103

APPD NO. 2012-06	WBS NO. P03331.3	DESIGNED G. P. MALIHO	APPROVAL RECOMMENDED
REFERENCES		DRAWN J. S. YOUNG	PROJECT ENGINEER
PROJECT ENGINEER WILLIAM MELTON, P.E.		CHECKED W. D. WOOD	APPROVED
CONTRACTOR			PROJECT MANAGER
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST	INSPECTOR		

REVISIONS	DATE	APPROVED

San Diego Unified Port District

San Diego, California

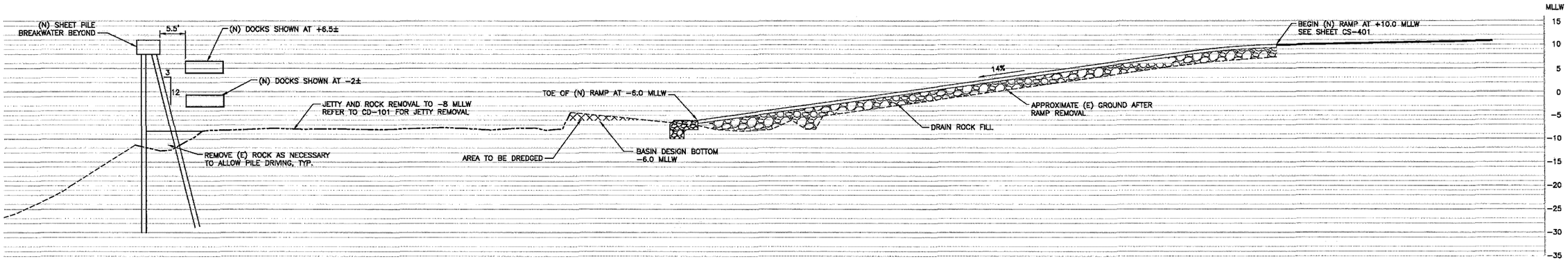
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

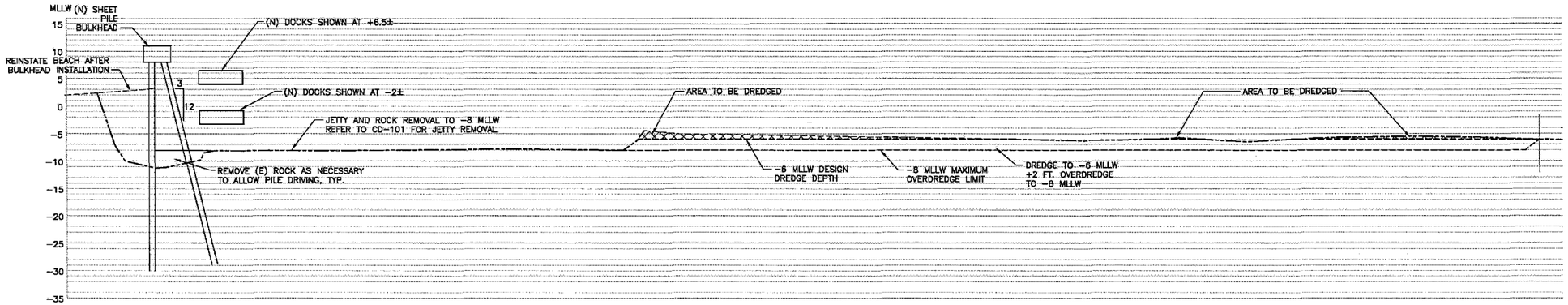
GRADING AND DREDGING PLAN

* DATUM * MEAN LOWER LOW WATER	
DATE	APRIL 15, 2013
SHEET	8 OF 29
DRAWING NO.	2277
REV.	

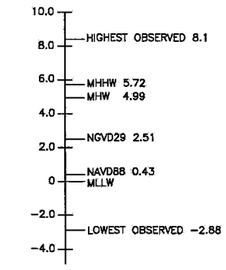
CS-102.dwg



A SECTION
CS-103 CS-201 SCALE: 1" = 10'



B SECTION
CS-103 CS-201 SCALE: 1" = 10'



DATUM = MLLW

SCALE 1" = 10'
0 10 20 30
FEET

NOTE:
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*** 60% SUBMITTAL SET ***

EPIC NO. 2012-06 WBS. NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED G. P. MAILHO
DRAWN J. S. YOUNG
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

CS-201

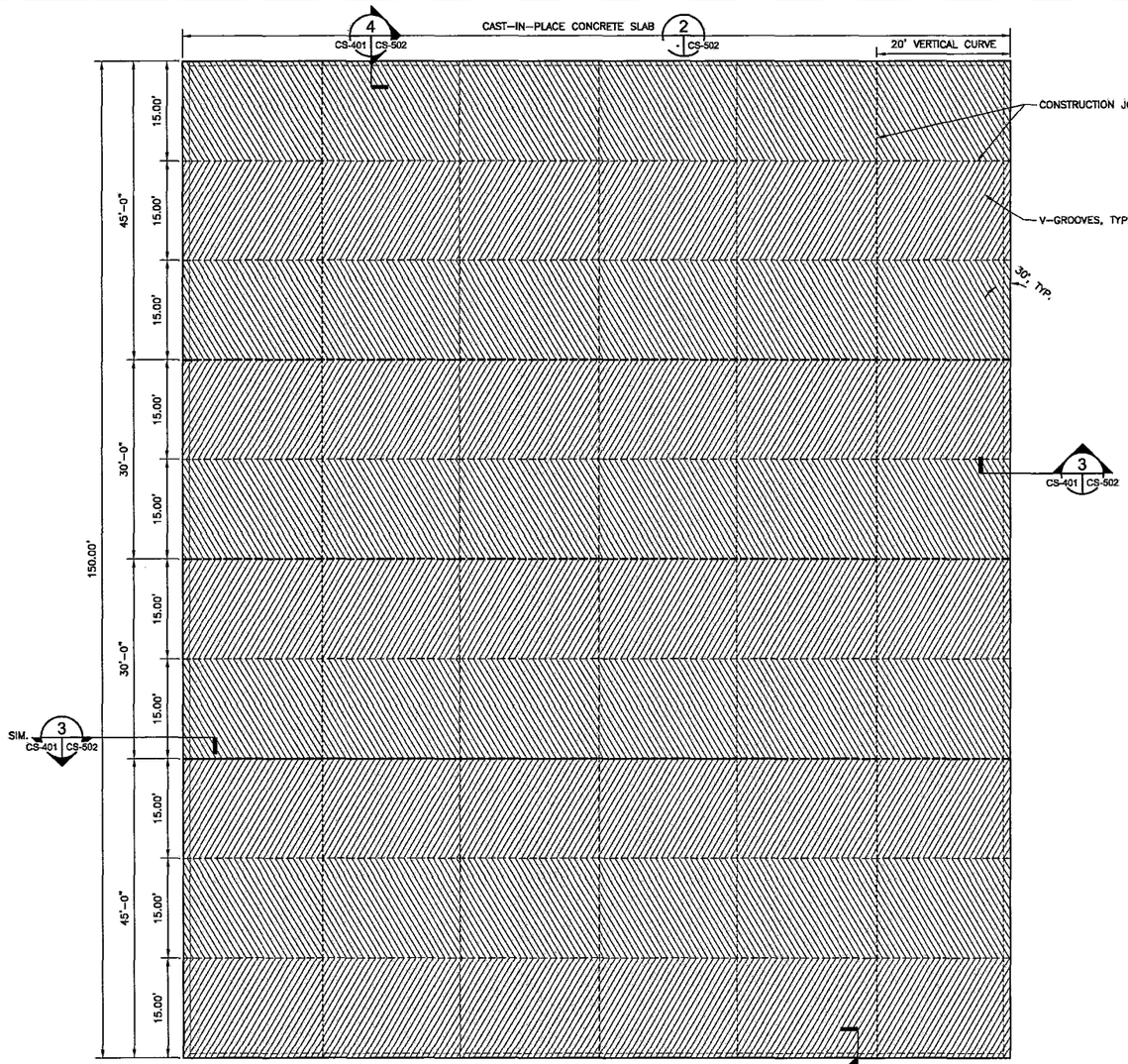
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

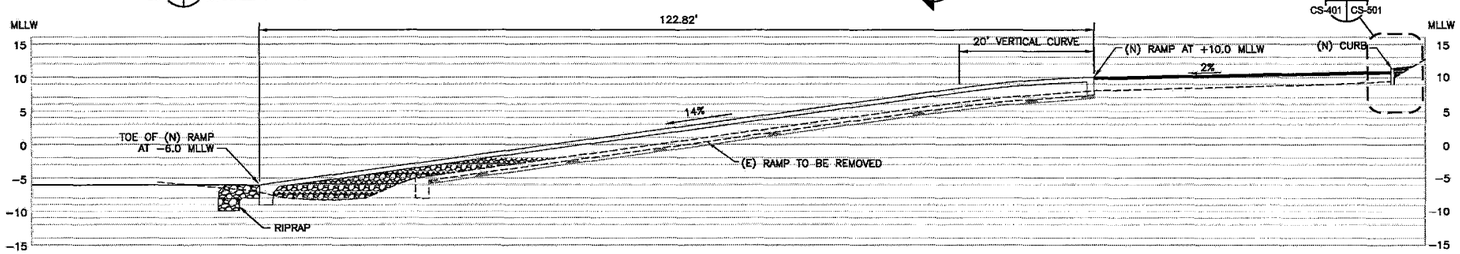
GRADING SECTIONS

"DATUM" MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 9 OF 29
DRAWING NO. 2277
REV.

CS-201.dwg



1 CS-101 CS-401 LAUNCH RAMP PLAN
SCALE: 1" = 10'



2 CS-401 LAUNCH RAMP SECTION
SCALE: 1" = 10'

NOTES:

1. RAMP SHALL BE CAST-IN-PLACE.
2. LAUNCH RAMP LANES SHALL BE PLACED IN ALTERNATING POURS TO ALLOW PROPER V-GROOVE FINISHING OF EACH ADJACENT LANE.
3. RAMP TO BE CONSTRUCTED ON DRY BASE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF DE-WATERING SYSTEM AND FOR TEMPORARY COFFERDAM TO FACILITATE CONSTRUCTION.
5. CONTRACTOR SHALL SUBMIT CONSTRUCTION AND DE-WATERING PLAN FOR DISTRICT REVIEW.

SCALE 0 10 20 30 FEET
1" = 10'

NOTE:
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San Diego, California 92130
Tel 858.481.6050 Fax 858.481.7427

* * * 60% SUBMITTAL SET * * *

SPEC NO. 2012-06	WBS NO. P03331.3		
REFERENCES			
PROJECT ENGINEER WILLIAM MELTON, P.E.			
CONTRACTOR			
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST INSPECTOR	REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED G. P. MALHO	APPROVAL RECOMMENDED PROJECT ENGINEER
DRAWN J. S. YOUNG	APPROVED PROJECT MANAGER
CHECKED W. D. WOOD	

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

LAUNCH RAMP PLAN AND PROFILE

CS-401

* DATUM *
MEAN LOWER LOW WATER

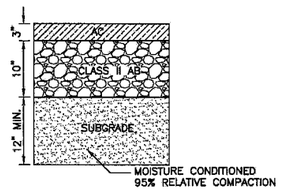
DATE: APRIL 15, 2013

SHEET 10 OF 29

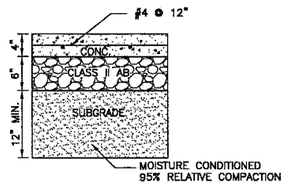
DRAWING NO. 2277

REV.

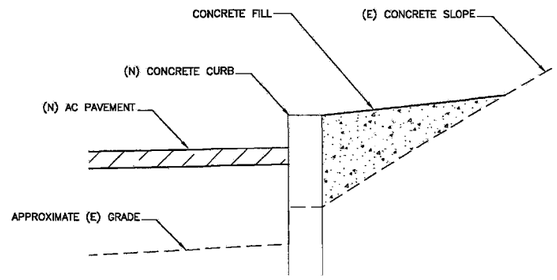
C-401.dwg



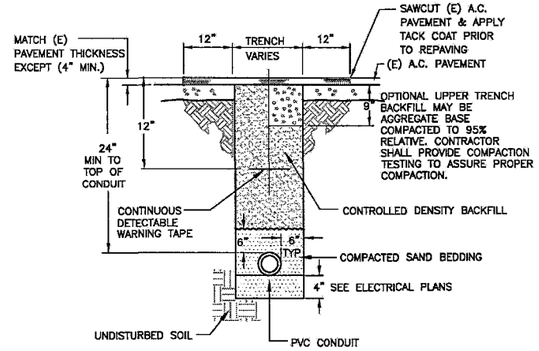
A TYPICAL AC PAVEMENT SECTION
CS-501 SCALE: 1" = 1'-0"



B TYPICAL SIDEWALK SECTION
CS-501 SCALE: 1" = 1'-0"



C CONCRETE SLOPE CONFORM DETAIL
C-401 CS-501 SCALE: 1" = 1'-0"



D TRENCH DETAIL
CS-501 SCALE: 1/2" = 1'-0"

0 1 2
SCALE FEET
1" = 1'-0"

NOTE:
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San Diego, California 92130
Tel 858.481.6050 Fax 858.481.7427

* * * 60% SUBMITTAL SET * * *

SPEC NO. 2012-06 WBS NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

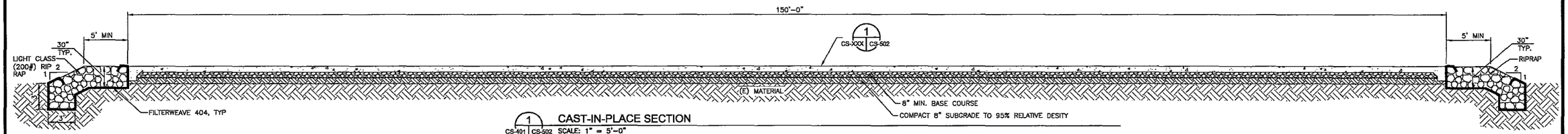
DESIGNED G. P. MAILHO
DRAWN J. S. YOUNG
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

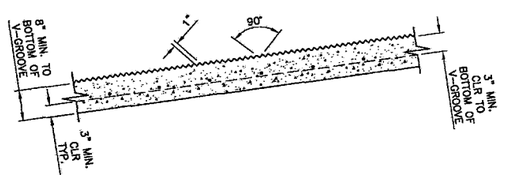
SAN DIEGO, CALIFORNIA
SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS
SITE DETAILS

CS-501
* DATUM * MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 11 OF 29
DRAWING NO. 2277
REV.

C-501.dwg



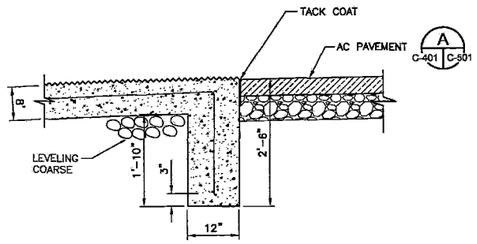
1 CS-401 | CS-502 **CAST-IN-PLACE SECTION** SCALE: 1" = 5'-0"



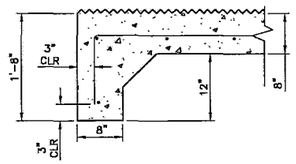
NOTE:

1. SAMPLE PANEL (MIN 4'xB') TO BE MADE BY THE CONTRACTOR ON SITE FOR REVIEW BY THE ENGINEER

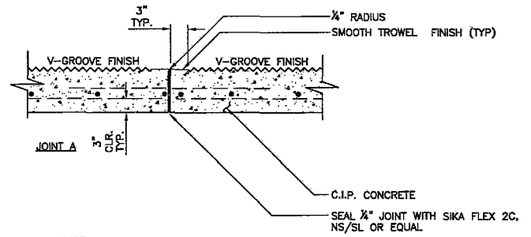
2 CS-401 | CS-502 **CAST-IN-PLACE SLAB SECTION** SCALE: 3/4" = 1'-0"



3 CS-401 | CS-502 **TOP OF RAMP SECTION** SCALE: 3/4" = 1'-0"



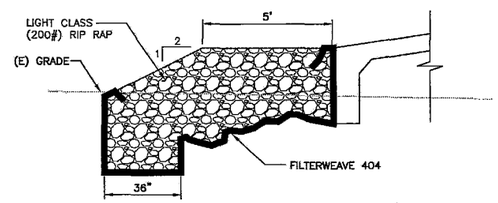
4 CS-401 | CS-502 **CAST-IN-PLACE EDGE SECTION** SCALE: 1"=1'-0"



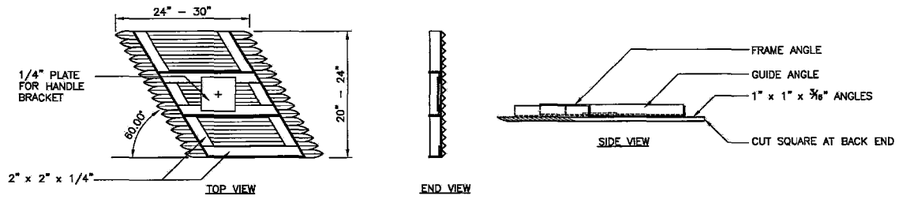
NOTE:

1. LANES SHALL BE CONSTRUCTED SEPARATELY.

5 CS-401 | CS-502 **CAST-IN-PLACE SLAB JOINT DETAILS** SCALE: 1"=1'-0"



6 C-401 | C-502 **RAMP TOE RIP RAP DETAIL** SCALE: 3/8" = 1'-0"



NOTE:

1. ALL ANGLES AND PLATES ARE ALUMINUM. FOR "HERRINGBONE" FINISH ON A MULTIPLE LANE LAUNCH RAMP, A SECOND "MIRROR IMAGE" TOOL IS REQUIRED. REFERENCE: DEPARTMENT OF BOATING AND WATERWAYS "SMALL CRAFT BOAT LAUNCHING FACILITIES" GUIDELINES, MARCH 1991.

7 CS-502 **GROOVE TOOL DETAIL** SCALE: 1" = 1'-0"

0 1 2 3 SCALE FEET
3/4" = 1'-0"

0 5 10 SCALE FEET
1" = 5'-0"

0 1 2 SCALE FEET
1" = 1'-0"

NOTE:
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12555 High Bluff Drive Suite 210
San Diego, California 92130
Tel 858.481.6050 Fax 858.481.7427

* * * 60% SUBMITTAL SET * * *

CS-502

SPEC NO. 2012-06	WBS NO. P03331.3	DESIGNED	G. P. MAILHO
REFERENCES		DRAWN	J. S. YOUNG
PROJECT ENGINEER	WILLIAM MELTON, P.E.	CHECKED	W. D. WOOD
CONTRACTOR		APPROVAL RECOMMENDED	PROJECT ENGINEER
CONSTRUCTION STARTED		APPROVED	PROJECT MANAGER
CONSTRUCTION COMPLETED			
COST	INSPECTOR		

REVISIONS	DATE	APPROVED

San Diego Unified Port District

San Diego, California

SAN DIEGO, CALIFORNIA

SHELTER ISLAND BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

LAUNCH RAMP DETAILS

* DATUM * MEAN LOWER LOW WATER

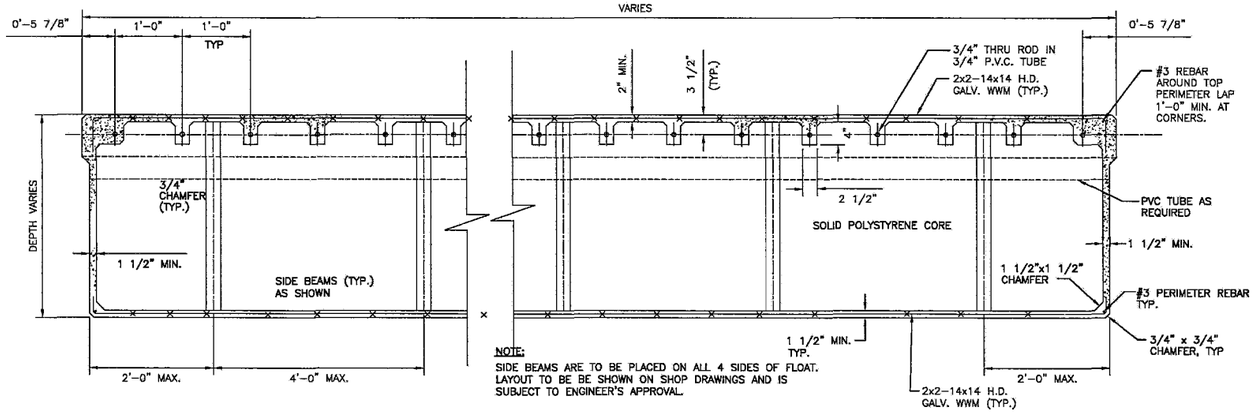
DATE APRIL 15, 2013

SHEET 12 OF 29

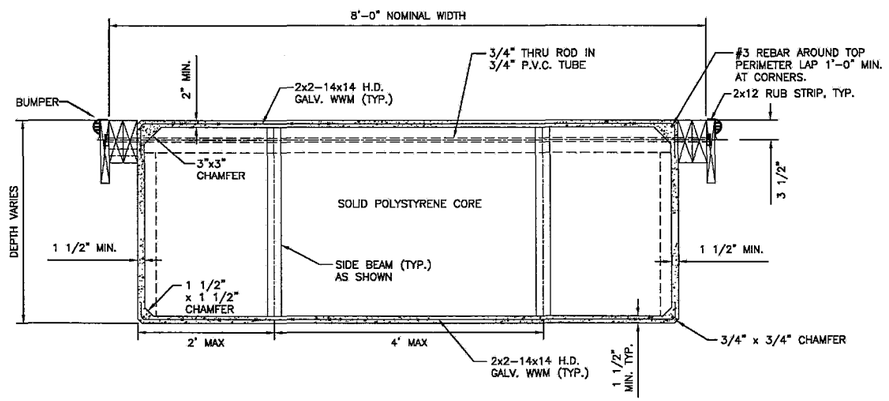
DRAWING NO. 2277

REV.

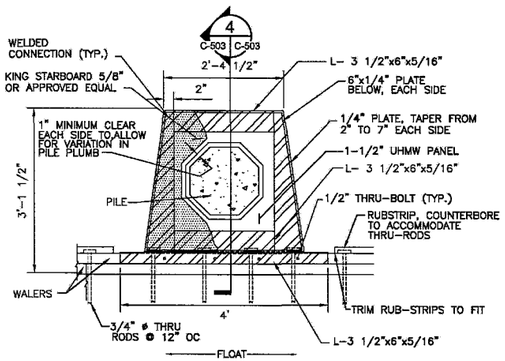
C-502.dwg



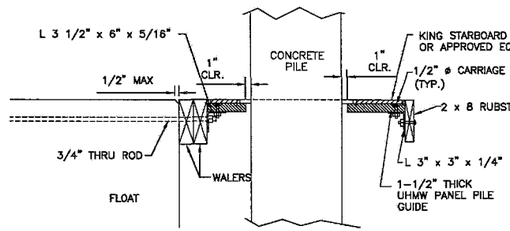
1 LONGITUDINAL FLOAT SECTION
C-503 SCALE: 1" = 1'-0"



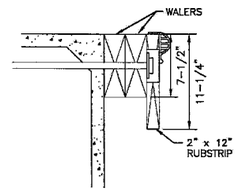
2 FLOAT SECTION
C-503 SCALE: 1" = 1'-0"



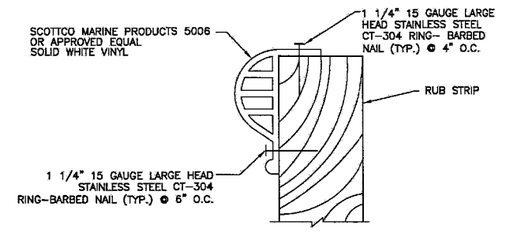
3 SIDE PILE BRACKET
C-503 SCALE: 3/4" = 1'-0"



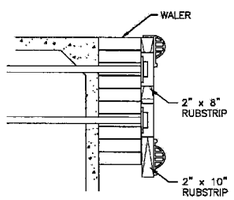
4 SIDE PILE BRACKET SECTION
C-503 C-503 SCALE: 1" = 1'-0"



5 WALER CONNECTION DETAIL
C-503 SCALE: 1 1/2" = 1'-0"



6 BUMPER STRIP DETAIL
C-503 SCALE: 6" = 1'-0"



7 GANGWAY FLOAT WALER CONNECTION DETAIL
C-503 SCALE: 1 1/2" = 1'-0"

SHEET NOTES:

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS PRIOR TO FABRICATION OF THE DOCKS.
2. THE CONTRACTOR SHALL DESIGN, FABRICATE AND INSTALL THE DOCK SYSTEM TO ASSURE PROPER FLOATATION AND OPERATION AT ALL TIDE ELEVATIONS.
3. FRAMING DETAILS ARE TYPICAL AND SHALL BE DETAILED IN THE SHOP DRAWINGS.
4. ALL EXPOSED METAL COMPONENTS SHALL BE 316 SS.

0 6" 1' 1'-6" 2'
SCALE
6" = 1'-0"

0 1/2 1 2
SCALE FEET
1 1/2" = 1'-0"

0 1 2 3
SCALE FEET
3/4" = 1'-0"

0 1 2
SCALE FEET
1" = 1'-0"

NOTE:
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TranSystems
12555 High Bluff Drive Suite 210
San Diego, California 92130
Tel 858.481.6050 Fax 858.481.7427

* * * 60% SUBMITTAL SET * * *

SPEC NO. 2012-06	WBS. NO. P03331.3
REFERENCES	
PROJECT ENGINEER	WILLIAM MELTON, P.E.
CONTRACTOR	
CONSTRUCTION STARTED	
CONSTRUCTION COMPLETED	
COST	INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED	G. P. MALHO
DRAWN	J. S. YOUNG
CHECKED	W. D. WOOD
APPROVAL RECOMMENDED	PROJECT ENGINEER
APPROVED	PROJECT MANAGER

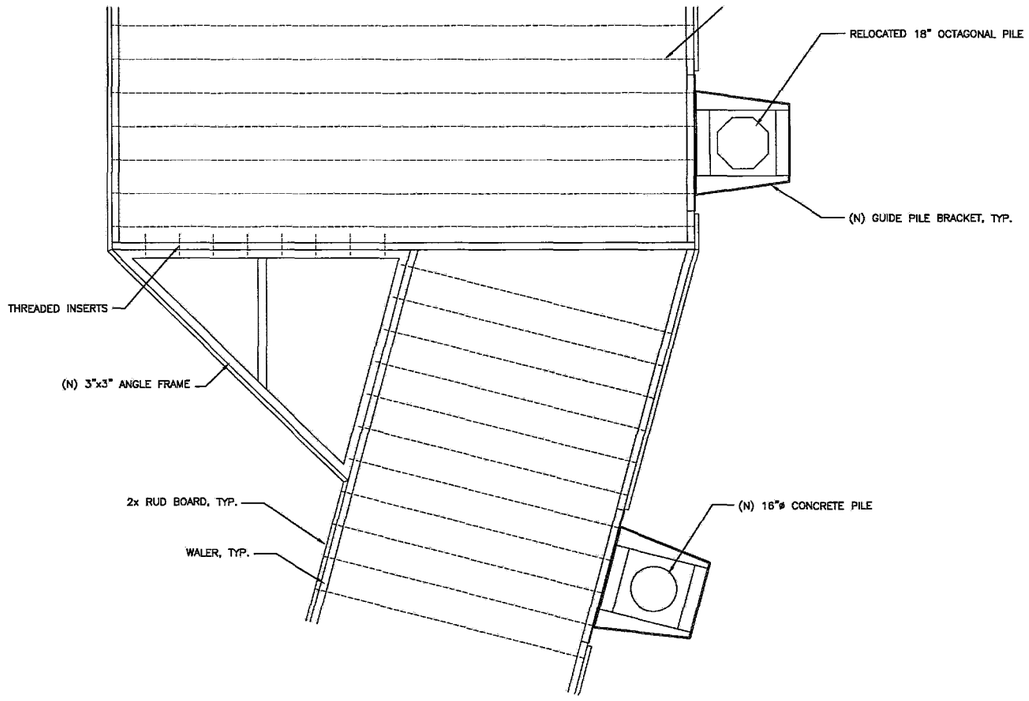
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

CONCRETE FLOAT DETAILS

	CS-503
"DATUM"	MEAN LOWER LOW WATER
DATE	APRIL 15, 2013
SHEET	13 OF 29
DRAWING NO.	2277
REV.	

C-504.dwg



1 / CS-101 | CS-505 FLOAT CONNECTION DETAIL
SCALE: 1/2" = 1'-0"

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4. ALL EXPOSED METAL COMPONENTS SHALL BE 316 SS.

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CONTRACTOR
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CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED G. P. MAILHO
DRAWN J. S. YOUNG
CHECKED W. D. WOOD

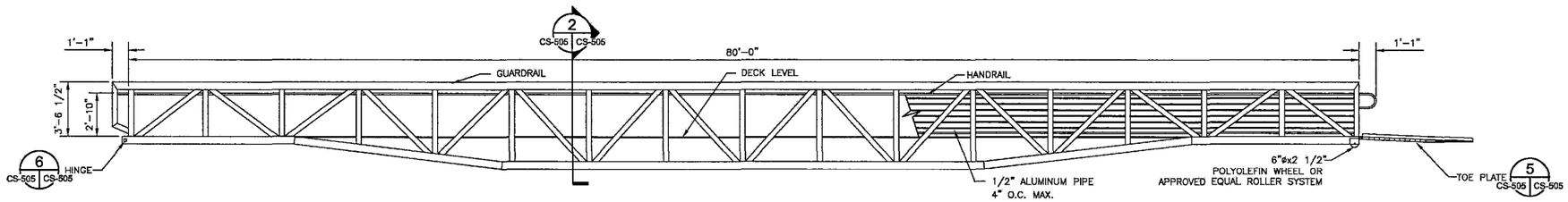
APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

*** 60% SUBMITTAL SET ***

SAN DIEGO, CALIFORNIA
SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS
CONCRETE FLOAT DETAILS

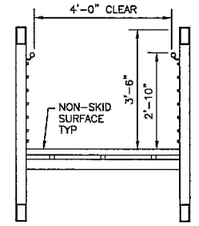
CS-504
"DATUM" MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 14 OF 29
DRAWING NO. 2277
REV.

C-504.dwg



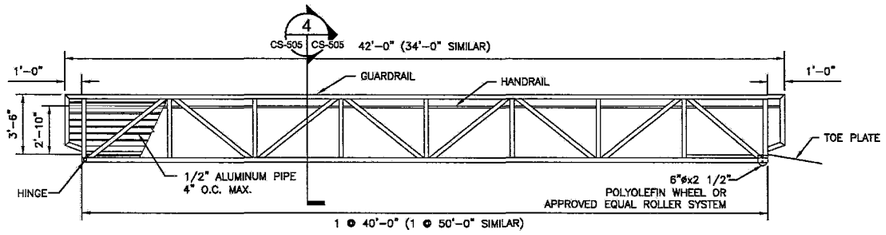
1 CS-101 CS-505 ACCESSIBLE GANGWAY

SCALE: 1/4" = 1'-0"



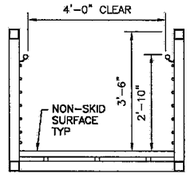
2 CS-505 CS-505 ACCESSIBLE GANGWAY SECTION

SCALE: 1/2" = 1'-0"



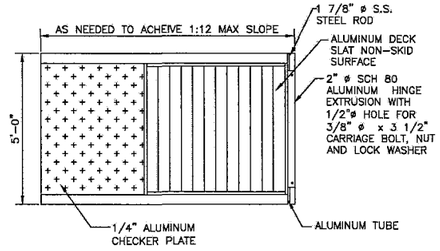
3 CS-101 CS-505 STANDARD GANGWAY

SCALE: 1/4" = 1'-0"



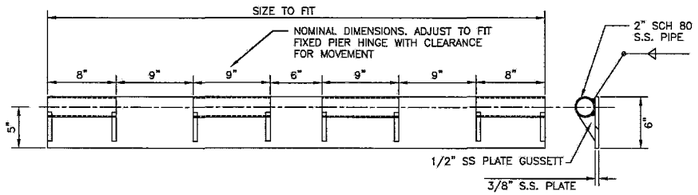
4 CS-505 CS-505 STANDARD GANGWAY SECTION

SCALE: 1/2" = 1'-0"

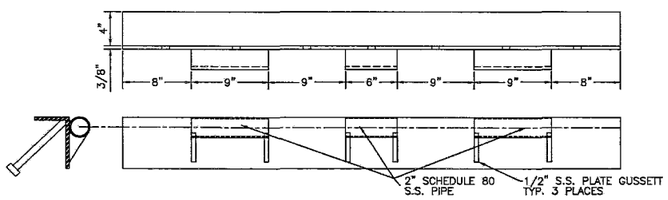


5 CS-505 CS-505 ACCESSIBLE GANGWAY TOE PLATE

SCALE: 1/2" = 1'-0"



GANGWAY HINGE



ABUTMENT HINGE

6 CS-505 CS-505 GANGWAY HINGE

SCALE: 1 1/2" = 1'-0"

NOTES:

1. ALL HARDWARE AND FASTENERS SHALL BE 316 STAINLESS STEEL UNLESS OTHERWISE NOTED.
2. ALL BOLTS SHALL BE SECURED WITH LOCK WASHERS OR SELF-LOCKING NUTS.
3. ALL GALVANIZED FABRICATIONS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
4. SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR APPROVAL.

NOTE:
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* * * 60% SUBMITTAL SET * * *

SPEC.NO. 2012-06 WBS. NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED G. P. MALHO
DRAWN J. S. YOUNG
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

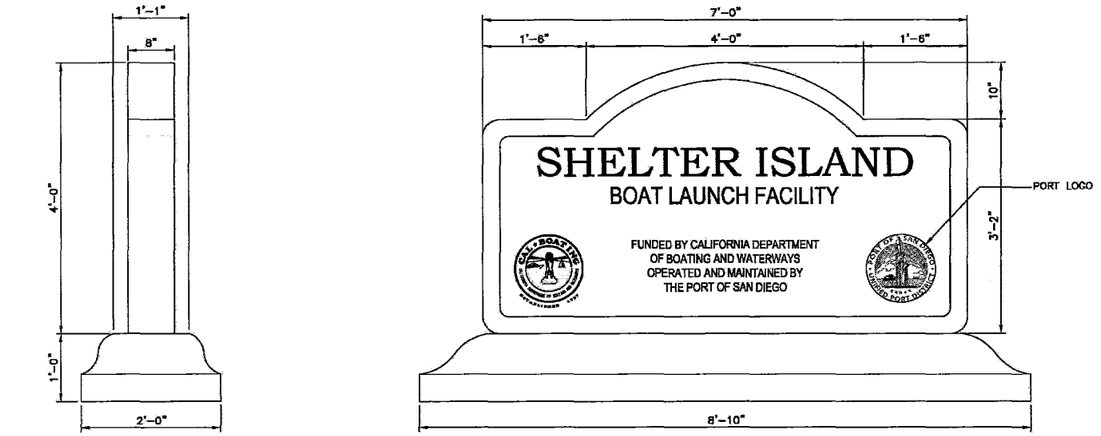
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

GANGWAY DETAILS

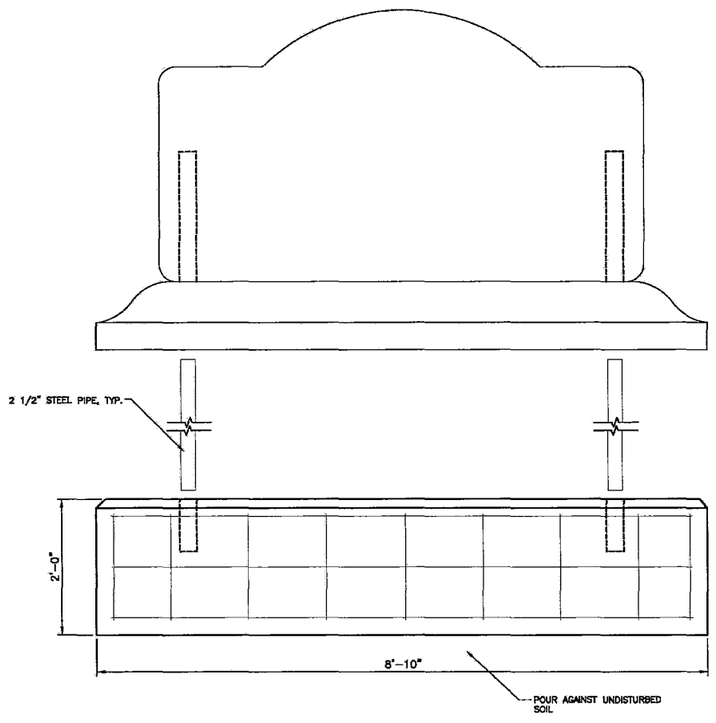
CS-505
* DATUM * MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 15 OF 29
DRAWING NO. 2277
REV.

C-505.dwg



1 CS-101 | C-506 CONCRETE PROJECT SIGN

SCALE: 1" = 1'-0"



2 CS-506 | CS-506 PROJECT SIGN MOUNTING DETAIL

SCALE: 1" = 1'-0"

PROJECT SIGN NOTES:

1. CONCRETE PROJECT SIGN TO BE OUTDOOR CREATIONS, INC. MODEL 707 S WITH RECESSED AND PAINTED BORDER, LETTERING AND LOGO, OR APPROVED EQUAL.
2. MULTICOLORED LOGOS ARE APPROXIMATELY 12" DIAMETER, WITH VARYING SHAPE. ENGINEER SHALL FURNISH TEMPLATES (IF REQUIRED) FROM WHICH SIGN MANUFACTURER WILL DEVELOP MOLDS AND INCORPORATE INTO A MONOLITHIC CONCRETE SIGN.
3. CONTRACTOR SHALL CONFIRM WITH DBW: COLOR, LOGO, LETTERING, AND MATERIAL BEFORE INSTALLING PROJECT AND BOATING SIGNS.

COLOR SCHEDULE

SIGN PANEL	DAVIS COLORS SEQUOIA SAND, OR EQUIVALENT
LETTERING	HUNTER GREEN
LOGOS (2)	MULTICOLOR

LETTERING SCHEDULE

NAME OF FACILITY	5"	CLARENDON MEDIUM UPPER CASE
TYPE OF FACILITY	3"	HELVETICA MEDIUM UPPER CASE ONLY
ACKNOWLEDGMENTS	1½"	HELVETICA MEDIUM UPPER CASE ONLY

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SPEC NO. 2012-06 WBS. NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED G. P. MALLHO
DRAWN J. S. YOUNG
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

PROJECT SIGN

CS-506

* DATUM * MEAN LOWER LOW WATER

DATE APRIL 15, 2013

SHEET 16 OF 29

DRAWING NO. 2277

REV.

C-505.dwg

A. GENERAL NOTES

1. CONTRACTOR SHALL VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY CONTRACTING OFFICER OF DISCREPANCIES.
2. PLANS AND DETAILS SHOWN IN THESE DRAWINGS OF THE EXISTING CONDITIONS ARE FROM THE REFERENCE DOCUMENTS AND FIELD INVESTIGATIONS.
3. UNLESS OTHERWISE NOTED ALL ELEVATIONS ARE BASED ON MLLW = 0.00 FT. REFER TO DIAGRAM OF DATUM PLANE ON THIS SHEET.
4. DESIGN CODES AND CRITERIA:
   CBC 2010, CALIFORNIA BUILDING CODE
   ASCE 7-05, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
   ACI 318-08, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   PCI 2004, PRECAST AND PRESTRESSED CONCRETE DESIGN HANDBOOK, 6th EDITION
   AISC 2005, STEEL CONSTRUCTION MANUAL, 13th EDITION

B. DESIGN LOADS

1. VERTICAL LOADS:

BOAT RAMP UNIFORM LOAD	100 PSF
BOAT RAMP VEHICLE LOAD	AASHTO HS20-44
PIER / GANGWAY UNIFORM LOAD	30 PSF
PIER / GANGWAY CONCENTRATED LOAD	400 POUNDS OVER 1 SQUARE FOOT
BULKHEAD SURCHARGE	100 PSF

2. MOORING LOAD: 12" CLEATS.
3. BERTHING VELOCITIES: SMALL CRAFT MAXIMUM APPROACH VELOCITY OF 2 FEET PER SECOND PERPENDICULAR TO FACE OF PIER.
4. WIND LOAD:

DESIGN WIND SPEED =	85 mph, 3 SECOND GUST
EXPOSURE CATEGORY =	C
IMPORTANCE FACTOR, I =	0.87

5. SEISMIC LOAD:

DESIGN CATEGORY =	D
IMPORTANCE FACTOR, I =	1.0
SITE CLASS =	D
S_S %g	161
S_1 %g	64
S_{DS} %g	107
S_{D1} %g	64
RESPONSE MODIFICATION FACTOR, R =	3
SEISMIC BASE SHEAR %g =	36

C. CONCRETE

1. CONCRETE TYPE

	28 DAY (MIN)	RELEASE (MIN)
a. MARINE CAST-IN-PLACE CONCRETE	5,000 PSI	------
b. PRESTRESSED CONCRETE	6,000 PSI	4,000 PSI
c. SITE CONCRETE	4,000 PSI	------

   MARINE CAST-IN-PLACE CONCRETE WILL BE USED AT THE RAMP AND SHEET PILE CAP POUR. CONCRETE FOR MINOR STRUCTURES WILL BE USED FOR SITE EQUIPMENT PADS, LIGHT POLE FOUNDATIONS, ETC.
2. FINISH ALL EXPOSED EXTERNAL CORNERS WITH A 45 DEG. CHAMFER AS SHOWN OR NOTED. SIZE OF CHAMFER FOR CONCRETE PILES SHALL BE 1 IN. FOR SLABS AND CURBS IT SHALL BE 3/4 IN. OR AS SHOWN.
3. REFER TO ELECTRICAL, PIPING AND VENDOR DRAWINGS FOR LOCATION AND SIZE OF SLEEVES AND EMBEDDED ITEMS.
4. CONCRETE SHEAR KEYS SHALL BE 1/3 THE THICKNESS OF THE ELEMENT BY 1-1/2 INCH DEEP.
5. ALL CONSTRUCTION JOINTS IN SLABS OR BEAMS SHALL BE MADE AT 1/3 SPAN, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
6. CONCRETE SHALL BE BONDED AT CONSTRUCTION JOINTS WITH CONTACT SURFACES CLEANED AND ROUGHENED TO AN AMPLITUDE OF APPROXIMATELY 1/4 INCH AND COATED WITH A BONDING COMPOUND.
7. REFER TO DRAWING S-002 FOR PRECAST PRESTRESSED CONCRETE PILE REQUIREMENTS.
8. REFER TO DRAWING S-003 FOR PRECAST PRESTRESSED CONCRETE SHEET PILE REQUIREMENTS.
9. CEMENT SHALL CONFORM TO ASTM C150, TYPE II OR V.
10. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33.
11. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
12. ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ADMIXTURES SHALL COMPLY WITH ASTM C494 & C1017 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT (CALCIUM CHLORIDE SHALL NOT BE USED).
13. WATER/CEMENT RATIO SHALL NOT EXCEED 0.40.
14. MAXIMUM SLUMP SHALL BE 4" BEFORE THE ADDITION OF ADMIXTURES.
15. ENGINEER SHALL REVIEW AND APPROVE MIX DESIGNS BEFORE INSTALLATION.

D. REINFORCING STEEL

1. REINFORCING STEEL BARS SHALL CONFORM TO ASTM A615 GRADE 60.
2. WHERE WELDABLE REINFORCING STEEL IS CALLED FOR IT SHALL CONFORM TO ASTM A706 GRADE 60.
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO THE A.C.I. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES, ACI 315.
4. CONCRETE COVER FOR REINFORCEMENT, UNLESS OTHERWISE NOTED OR SHOWN SHALL BE: 3"
5. SPLICE REINFORCEMENT AS INDICATED. SPLICES NOT SPECIFICALLY DIMENSIONED SHALL BE AN A.C.I. CLASS "B" (2005 ACI CODE) TENSION LAP SPLICE IN LENGTH WITH NO REDUCTION DUE TO BAR SPACING. CLASS "B" SPLICES ARE AS FOLLOWS:

   FOR PLAIN REINFORCEMENT:

BAR SIZE	4000 PSI	5000 PSI	6000 PSI
#3	24"	22"	20"
#4	32"	30"	28"
#5	40"	36"	32"
#6	52"	44"	40"
#7	72"	62"	58"
#8	80"	72"	66"
#9	90"	80"	74"
#10	102"	92"	84"
#11	114"	102"	92"

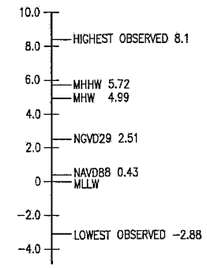
   FOR EPOXY COATED REINFORCEMENT:

BAR SIZE	4000 PSI	5000 PSI	6000 PSI
#3	28"	26"	24"
#4	38"	36"	34"
#5	48"	44"	38"
#6	62"	52"	48"
#7	86"	74"	70"
#8	96"	86"	80"
#9	108"	96"	88"
#10	122"	110"	100"
#11	136"	122"	110"

6. ALL SPLICES SHALL BE LOCATED SUCH THAT NO MORE THAN 50 PERCENT OF THE REINFORCEMENT IS SPLICED AT ANY ONE LOCATION, UNLESS OTHERWISE DETAILED.
7. ALL HOOKS SHALL BE STANDARD ACI 90 OR 180 DEGREE END HOOKS (ACI 315), UNLESS OTHERWISE SHOWN.
8. INTERSECTING CAPS, IF CAST SEPARATELY, SHALL BE KEYED AND DOWELED TOGETHER WITH CORNER BARS OF THE SAME SIZE AND SPACING AS NORMAL REINFORCEMENT. REINFORCEMENT SHALL BE SPLICED WITH AN A.C.I. CLASS "B" TENSION LAP SPLICE.
9. CORNER BARS AND VERTICAL DOWELS SHALL HAVE EMBEDMENT IN THE ADJOINING CONCRETE EQUIVALENT IN LENGTH TO AN A.C.I. CLASS "B" SPLICE.
10. SPLICE TOP BARS AT THE CENTER OF THE SPAN AND THE BOTTOM BARS AT THE SUPPORT, UNLESS OTHERWISE DETAILED.

E. STRUCTURAL AND MISCELLANEOUS STEEL

1. ALL STEEL WORK SHALL BE PERFORMED ACCORDING TO AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS. ALL WELDING SHALL CONFORM TO A.W.S D1.1.
2. MATERIALS SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED.
   a. SHAPES AND BARS AND PLATES — ASTM A36
   b. BOLTS — ASTM A307
   c. ANCHOR BOLTS, NUTS AND WASHERS — ASTM F1557
3. ALL MISCELLANEOUS METALS INCLUDING BOLTS, WASHERS, NUTS, SHAPES, PLATES, SLEEVES, ETC. ATTACHED TO OR EMBEDDED IN CONCRETE SHALL BE A36 STEEL AND HOT-DIP GALVANIZED WITH ASTM A123 OR ASTM A153, AS APPROPRIATE, UNLESS OTHERWISE NOTED.
4. UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL CONNECTIONS SHALL BE MADE WITH 3/4 IN DIA. (MINIMUM) HIGH STRENGTH BOLTS ASTM A325X. CONNECTIONS SHALL BE BEARING TYPE WITH THREADS EXCLUDED FROM SHEAR PLANE.
5. REFER TO SPECIFICATIONS FOR EPOXY ADHESIVE ANCHOR BOLTS, EPOXY ADHESIVE DOWELS AND EPOXY ADHESIVE INSERTS INSTALLED WITH ADHESIVE EPOXY.



DATUM = MLLW

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S-001

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REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED C. D. DUNCAN
DRAWN E. S. NEWMAN
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

GENERAL NOTES

* DATUM * MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 17 OF 29
DRAWING NO. 2277
REV.

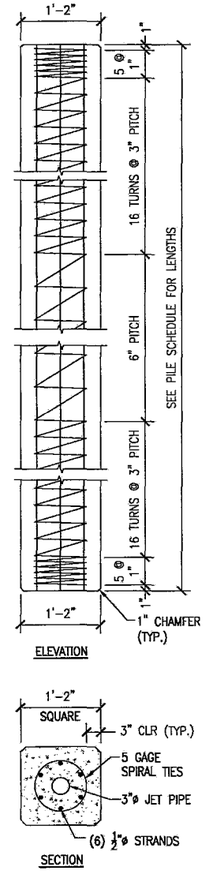
S-001.dwg

BATTER PILE SCHEDULE

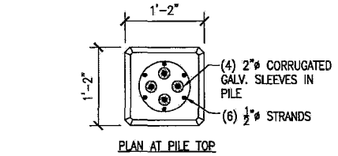
MARK	PILE SIZE	PILE LENGTH (FT)		BATTER	CAPACITY (TONS)		DESIGN ELEV.		AS-BUILT ELEV.	
		REQ'D	PROD.	HORIZ:12	COMP.	TENSION	CUT-OFF	TIP	CUT-OFF	TIP
BP1	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP2	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP3	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP4	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP5	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP6	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP7	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP8	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP9	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP10	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP11	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP12	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP13	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP14	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP15	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP16	14" SQ	53.60	54.00	3	200	50	+9.00	-43.00		
BP17	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP18	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP19	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP20	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP21	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP22	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP23	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP24	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP25	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP26	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP27	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP28	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP29	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP30	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP31	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP32	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP33	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP34	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP35	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP36	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP37	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP38	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP39	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP40	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP41	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP42	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP43	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP44	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP45	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP46	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP47	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP48	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP49	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP50	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP51	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP52	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP53	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP54	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP55	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP56	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP57	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP58	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP59	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP60	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP61	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP62	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP63	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP64	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		
BP65	14" SQ	46.38	47.00	3	200	50	+9.00	-36.00		

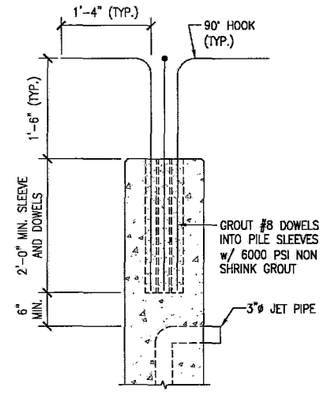
NOTES:

1. BID LENGTHS DO NOT INCLUDE ADDITIONAL 2'-6" OF BATTER PILE TO BE CUT OFF IN ORDER TO EXPOSE STRANDS.
2. CUT-OFF ELEVATIONS ARE BASED ON ELEVATION AT CENTERLINE OF PILE.
3. CONTRACTOR SHALL RECORD AND PROVIDE AS-BUILT DATA TO ENGINEER USING THIS SCHEDULE.
4. ALL LENGTHS AND ELEVATIONS ARE IN FEET.

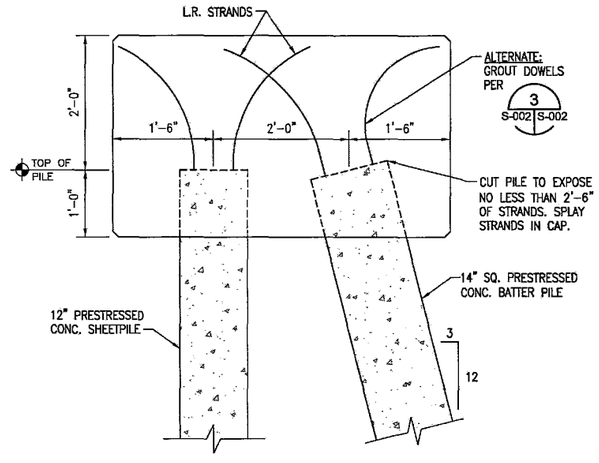


1 S-101 | S-002 — 14" SQUARE PRESTRESSED CONCRETE BATTER PILE
SCALE: 1" = 1'-0"





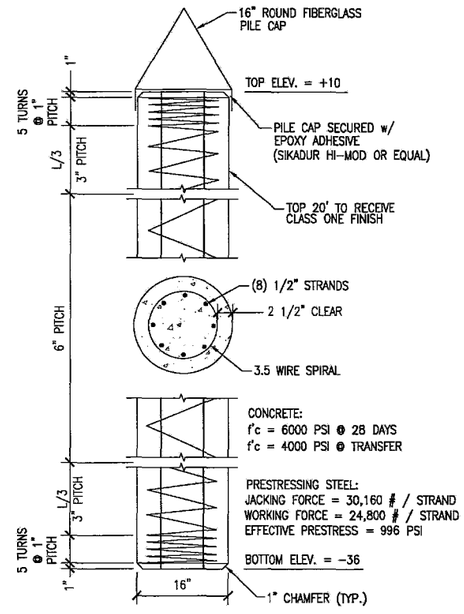
3 S-002 | S-002 — ALTERNATE PILE TO CAP ANCHORAGE DETAIL
SCALE: 1" = 1'-0"



2 S-503 | S-002 — TYPICAL PILE EMBEDDMENT DETAIL
SCALE: 1" = 1'-0"

PRECAST PRESTRESSED CONCRETE PILE NOTES:

1. CONCRETE IN PRESTRESSED PILES SHALL BE AIR-ENTRAINED AND HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 6000 PSI AT AN AGE OF 28 DAYS.
2. THE MINIMUM COMPRESSIVE STRENGTH AT TRANSFER SHALL BE (f'c) OF 4000 PSI.
3. PRESTRESSING STEEL SHALL BE UNCOATED SEVEN-WIRE LOW-RELAXATION STEEL STRAND CONFORMING TO ASTM A416, GRADE 270.
4. WIRE SPIRAL TIES SHALL CONFORM TO ASTM A 82 AND BE EPOXY-COATED..
5. MINIMUM COMPRESSIVE STRESS IN CONCRETE DUE TO PRESTRESS FORCE AFTER ALL LOSSES SHALL BE: 1200 PSI FOR THE 14 INCH SQUARE PILES
   996 PSI FOR THE 16 INCH ROUND PILES
6. ALL LIFTING AND HANDLING DETAILS OF PILING TO BE PROVIDED BY FABRICATOR.
7. CARE SHALL BE TAKEN TO ASSURE THAT THE HAMMER SELECTED IS CAPABLE OF ACHIEVING THE DESIRED PENETRATION WITHOUT CAUSING DAMAGE TO THE PILES OR CAUSE EXCESSIVE VIBRATIONS WHICH COULD DAMAGE EXISTING NEARBY STRUCTURES.
8. SEE SHEET S-101 FOR BATTER PILE & GUIDE PILE LAYOUT PLAN.



4 S-101 | S-002 — 16" ROUND PRESTRESSED CONCRETE GUIDE PILE
SCALE: 1" = 1'-0"

GRAPHIC SCALES:

1' 9" 6" 3" 0' 1' 2'
SCALE
1" = 1'-0"

NOTE:
THIS DRAWING MAY BE A REDUCED SCALE PRINT OF THE ORIGINAL DRAWING. UTILIZE GRAPHIC SCALES TO VERIFY IF THE DRAWING IS A REDUCTION AND ADJUST DRAWING SCALES ACCORDING TO THE GRAPHIC SCALES SHOWN.

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*** 60% SUBMITTAL SET ***

SPEC NO. 2012-06	WBS NO. P03331.3		
REFERENCES			
PROJECT ENGINEER WILLIAM MELTON, P.E.			
CONTRACTOR			
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST INSPECTOR	REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

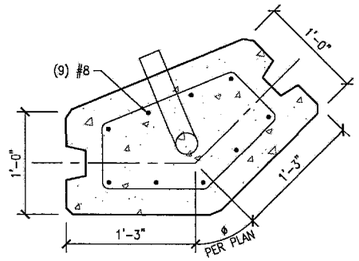
PORT OF SAN DIEGO — BOARD OF UNIFIED PORT DISTRICT

DESIGNED	C. D. DUNCAN
DRAWN	E. S. NEWMAN
CHECKED	W. D. WOOD
APPROVAL RECOMMENDED	PROJECT ENGINEER
APPROVED	PROJECT MANAGER

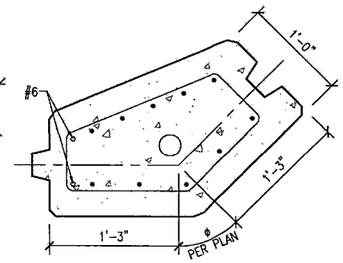
SAN DIEGO, CALIFORNIA
SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS
PRE-CAST CONCRETE PILE DETAILS AND SCHEDULE

	S-002
"DATUM" MEAN LOWER LOW WATER	
DATE	APRIL 15, 2013
SHEET	18 OF 29
DRAWING NO.	2277
REV.	

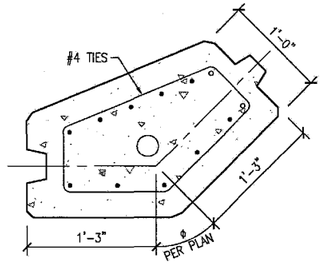
S-002.dwg



CORNER SHEET: SECTION D-D



CORNER TYPE 1: SECTION E-E



CORNER TYPE 2: SECTION F-F

CONCRETE SHEET PILE CORNER SECTIONS

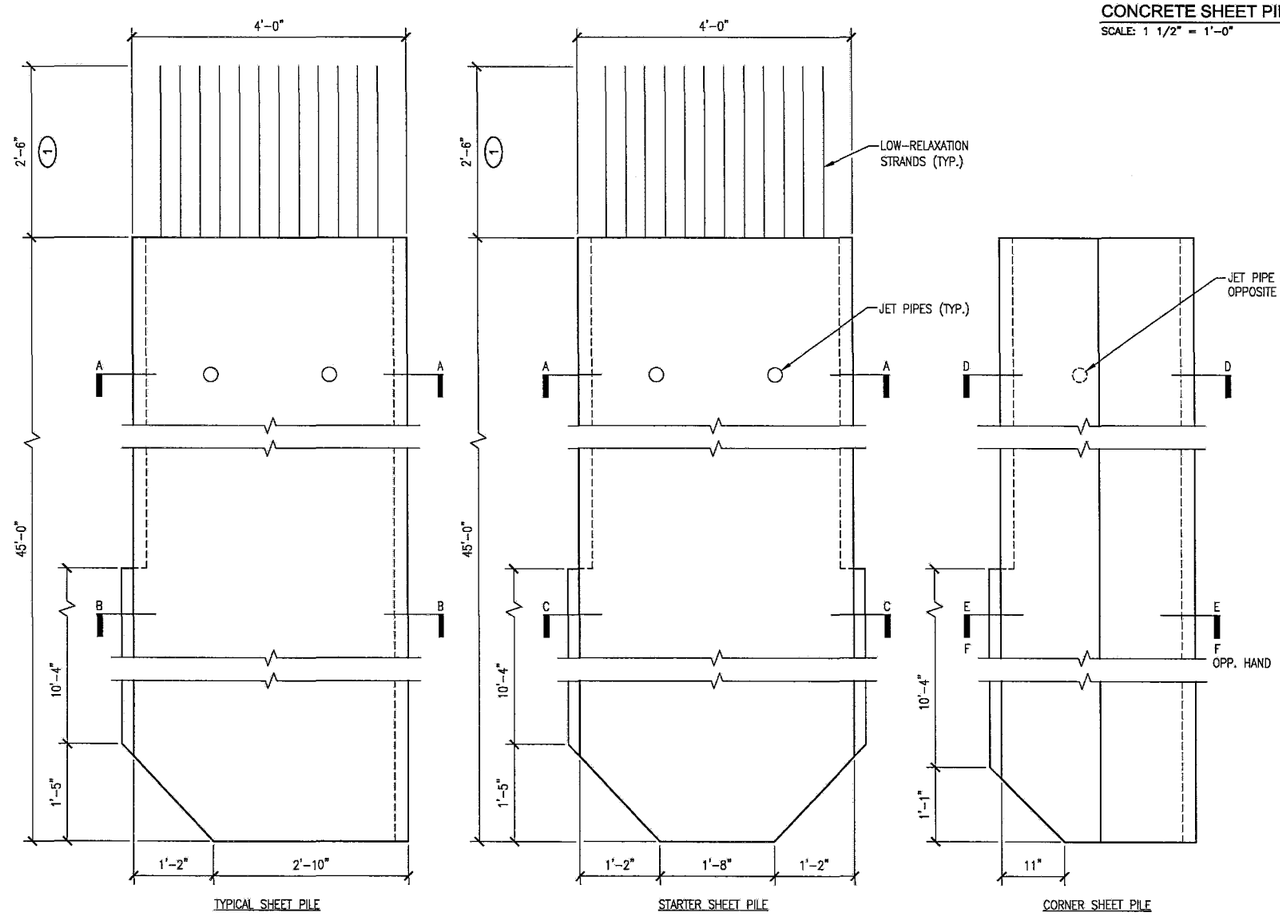
SCALE: 1 1/2" = 1'-0"

PRECAST PRESTRESSED CONCRETE SHEET PILE NOTES:

1. CONCRETE IN PRESTRESSED SHEET PILES SHALL BE AIR-ENTRAINED AND HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 6000 PSI AT AN AGE OF 28 DAYS.
2. THE MINIMUM COMPRESSIVE STRENGTH AT TRANSFER SHALL BE (f'c) OF 4000 PSI.
3. PRESTRESSING STEEL SHALL BE UNCOATED SEVEN-WIRE LOW-RELAXATION STEEL STRAND CONFORMING TO ASTM A416, GRADE 270.
4. TIES SHALL BE CONFORM TO ASTM A615 GRADE 60 AND BE EPOXY-COATED.
5. 12" SHEET PILING SHALL ACHIEVE A MINIMUM BENDING MOMENT CAPACITY OF 28.8 FT-KIPS BASED ON 0.0 PSI ALLOWABLE STRESS ON TENSILE FACE.
6. ALL LIFTING AND HANDLING DETAILS OF PILING TO BE PROVIDED BY FABRICATOR.
7. CARE SHALL BE TAKEN TO ASSURE THAT THE HAMMER AND/OR JETTING EQUIPMENT SELECTED IS CAPABLE OF ACHIEVING THE DESIRED PENETRATION WITHOUT CAUSING DAMAGE TO THE PILES OR CAUSE EXCESSIVE VIBRATIONS WHICH COULD DAMAGE EXISTING NEARBY STRUCTURES.
8. SEE SHEET S-201 FOR SHEET PILE LAYOUT PLAN.

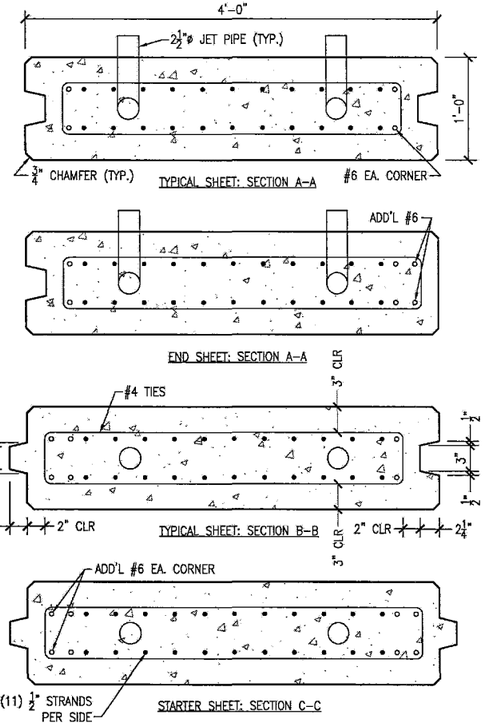
KEY NOTES:

(1) SHEET PILES SHALL HAVE EXPOSED STRANDS AT TOP PROJECTING A MINIMUM OF 2'-6".



1 S-101 | S-003 PRECAST CONCRETE SHEET PILE DETAILS

SCALE: 1" = 1'-0"



TYPICAL SHEET: SECTION A-A

END SHEET: SECTION A-A

TYPICAL SHEET: SECTION B-B

STARTER SHEET: SECTION C-C

CONCRETE SHEET PILE SECTIONS

SCALE: 1 1/2" = 1'-0"

GRAPHIC SCALES:

0' 3" 6" 1' 2'
SCALE
1 1/2" = 1'-0"

1' 9" 6" 3" 0' 1' 2'
SCALE
1" = 1'-0"

NOTE:
THIS DRAWING MAY BE A REDUCED SCALE PRINT OF THE ORIGINAL DRAWING. UTILIZE GRAPHIC SCALES TO VERIFY IF THE DRAWING IS A REDUCTION AND ADJUST DRAWING SCALES ACCORDING TO THE GRAPHIC SCALES SHOWN.

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*** 60% SUBMITTAL SET ***

S-003

SPEC NO. 2012-06	WBS NO. P03331.3			
REFERENCES				
PROJECT ENGINEER WILLIAM MELTON, P.E.				
CONTRACTOR				
CONSTRUCTION STARTED				
CONSTRUCTION COMPLETED				
COST	INSPECTOR	REVISIONS	DATE	APPROVED

San Diego Unified Port District

San Diego, California

DESIGNED C. D. DUNCAN	APPROVAL RECOMMENDED ____ PROJECT ENGINEER
DRAWN E. S. NEWMAN	APPROVED ____ PROJECT MANAGER
CHECKED W. D. WOOD	

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

PRE-CAST CONCRETE SHEET PILE DETAILS AND SCHEDULE

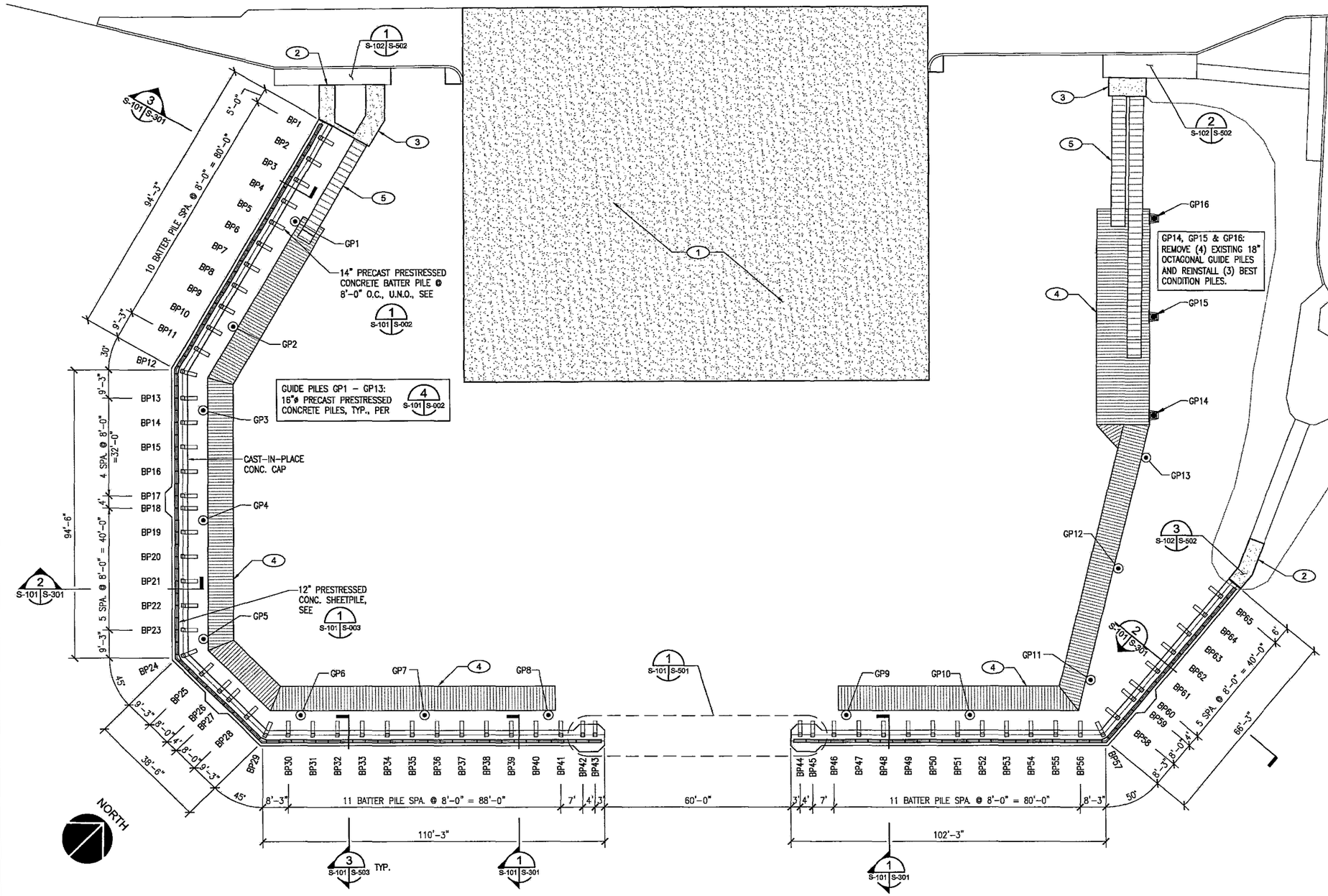
* DATUM * MEAN LOWER LOW WATER

DATE APRIL 15, 2013

SHEET 19 OF 29

DRAWING NO. 2277 REV.

S-003.dwg



BREAKWATER LAYOUT PLAN

SCALE: 1/16" = 1'-0"

SHEET NOTES:

1. SEE SHEET S-001 FOR GENERAL NOTES.
2. SEE SHEET S-201 FOR SHEET PILE LAYOUT PLAN.
3. DIMENSIONS TAKEN TO CENTERLINE OF SHEET PILES.

KEY NOTES:

1. BOAT LAUNCH RAMP. SEE SHEET S-502 & CIVIL DRAWINGS.
2. C.I.P. CONCRETE WALL ABUTMENT. SEE SHEET S-502.
3. C.I.P. CONCRETE GANGWAY ABUTMENT. SEE SHEET S-502.
4. FLOATING DOCK. SEE CIVIL DRAWINGS
5. GANGWAY. SEE CIVIL DRAWINGS

BP – BATTER PILE REFERENCE

GP – GUIDE PILE REFERENCE

GRAPHIC SCALES:

0 8 16 32
SCALE FEET
1/16" = 1'-0"

NOTE:
THIS DRAWING MAY BE A REDUCED SCALE PRINT OF THE ORIGINAL DRAWING. UTILIZE GRAPHIC SCALES TO VERIFY IF THE DRAWING IS A REDUCTION AND ADJUST DRAWING SCALES ACCORDING TO THE GRAPHIC SCALES SHOWN.

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* * * 60% SUBMITTAL SET * * *

SPEC NO.	2012-06
WBS. NO.	P03331.3
REFERENCES	
PROJECT ENGINEER	WILLIAM MELTON, P.E.
CONTRACTOR	
CONSTRUCTION STARTED	
CONSTRUCTION COMPLETED	
COST	
INSPECTOR	

REVISIONS	DATE	APPROVED

San Diego Unified Port District

San Diego, California

DESIGNED	C. D. DUNCAN
DRAWN	E. S. NEWMAN
CHECKED	W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

SAN DIEGO, CALIFORNIA

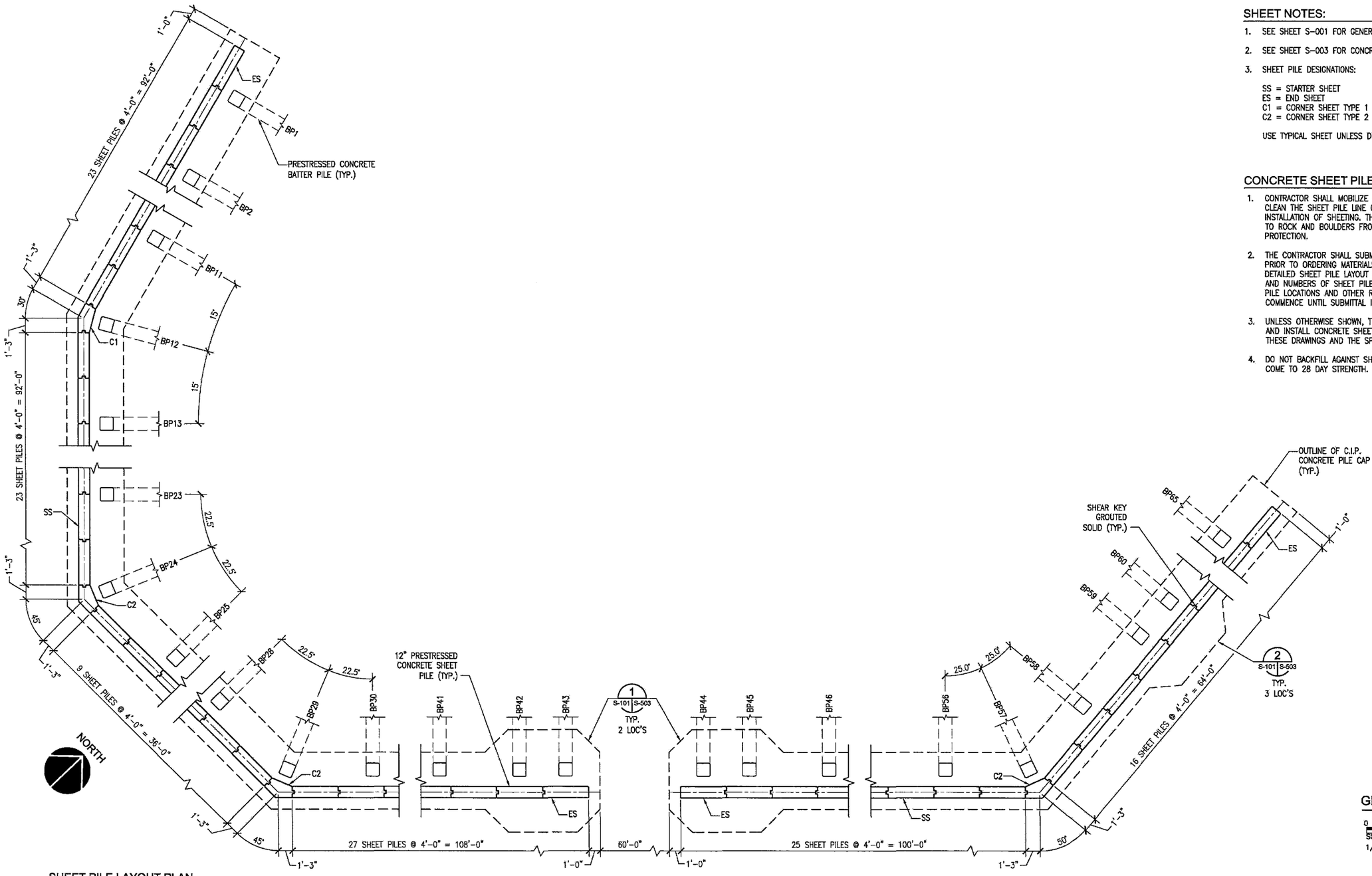
SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

BREAKWATER LAYOUT PLAN

"DATUM"	MEAN LOWER LOW WATER
DATE	APRIL 15, 2013
SHEET	20 OF 29
DRAWING NO.	2277
REV.	

S-101

S-101.dwg



SHEET PILE LAYOUT PLAN

SCALE: 1/4" = 1'-0"

SHEET NOTES:

1. SEE SHEET S-001 FOR GENERAL NOTES.
2. SEE SHEET S-003 FOR CONCRETE SHEET PILE DETAILS.
3. SHEET PILE DESIGNATIONS:

   SS = STARTER SHEET
   ES = END SHEET
   C1 = CORNER SHEET TYPE 1
   C2 = CORNER SHEET TYPE 2

   USE TYPICAL SHEET UNLESS DESIGNATED OTHERWISE.

CONCRETE SHEET PILE NOTES

1. CONTRACTOR SHALL MOBILIZE ALL EQUIPMENT NECESSARY TO CLEAN THE SHEET PILE LINE OF OBSTRUCTIONS TO FACILITATE INSTALLATION OF SHEETING. THIS INCLUDES BUT IS NOT LIMITED TO ROCK AND BOULDERS FROM SURROUNDING SHORELINE PROTECTION.
2. THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIALS AND COMMENCING WORK A DETAILED SHEET PILE LAYOUT PLAN INDICATING TYPES, LENGTHS AND NUMBERS OF SHEET PILES, DETAILS AT CORNERS, BATTER PILE LOCATIONS AND OTHER RELATED WORK. NO WORK SHALL COMMENCE UNTIL SUBMITTAL IS APPROVED.
3. UNLESS OTHERWISE SHOWN, THE CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE SHEET PILES IN ACCORDANCE WITH THESE DRAWINGS AND THE SPECIFICATIONS.
4. DO NOT BACKFILL AGAINST SHEET PILES UNTIL PILE CAP HAS COME TO 28 DAY STRENGTH.

GRAPHIC SCALES:

0 4 8
SCALE FEET
1/4" = 1'-0"

NOTE:
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* * * 60% SUBMITTAL SET * * *

S-201

SPEC NO. 2012-06 WBS NO. P03331.3
REFERENCES
PROJECT ENGINEER WILLIAM MELTON, P.E.
CONTRACTOR
CONSTRUCTION STARTED
CONSTRUCTION COMPLETED
COST INSPECTOR

REVISIONS	DATE	APPROVED

San Diego Unified Port District

San Diego, California

DESIGNED C. D. DUNCAN
DRAWN E. S. NEWMAN
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

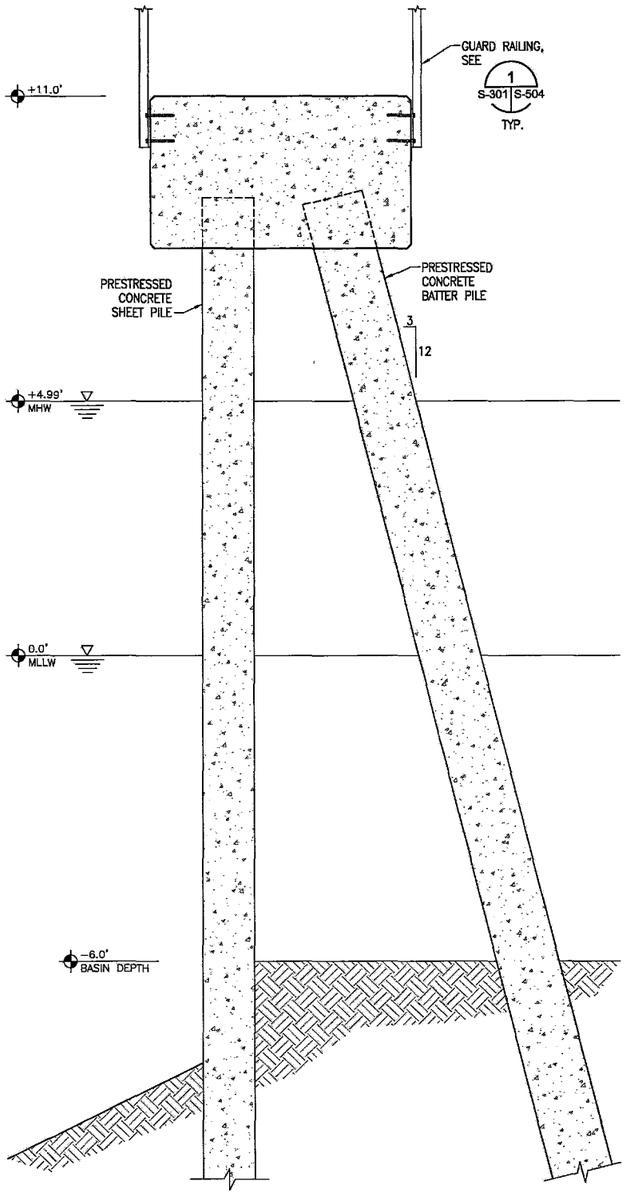
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

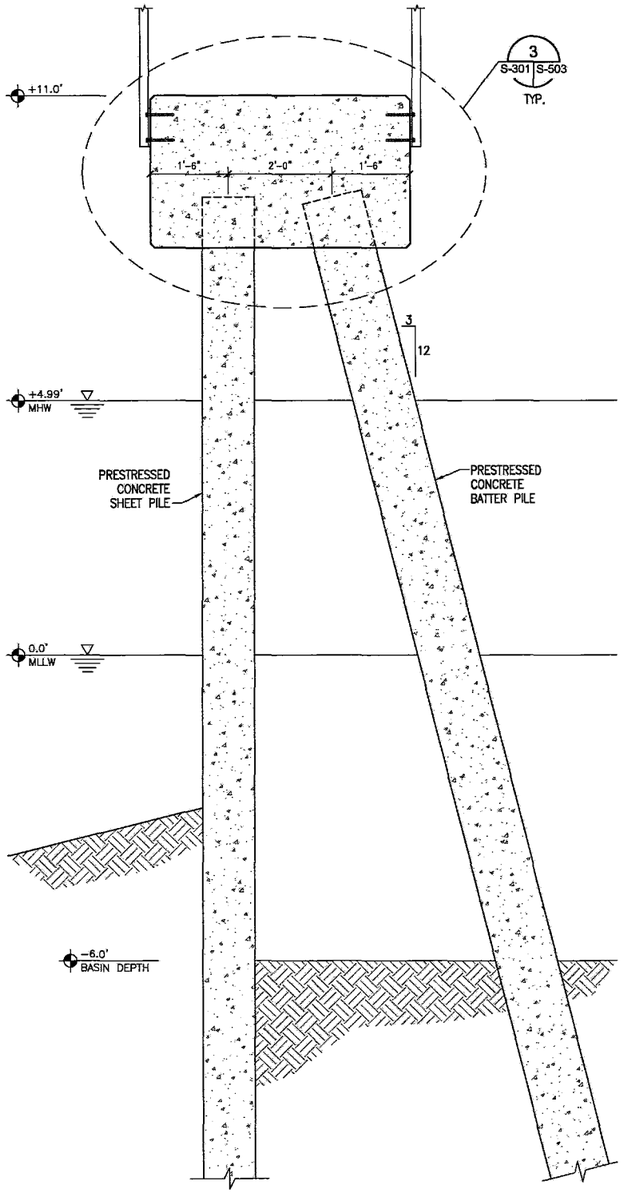
SHEET PILE LAYOUT PLAN

* DATUM * MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 21 OF 29
DRAWING NO. 2277
REV

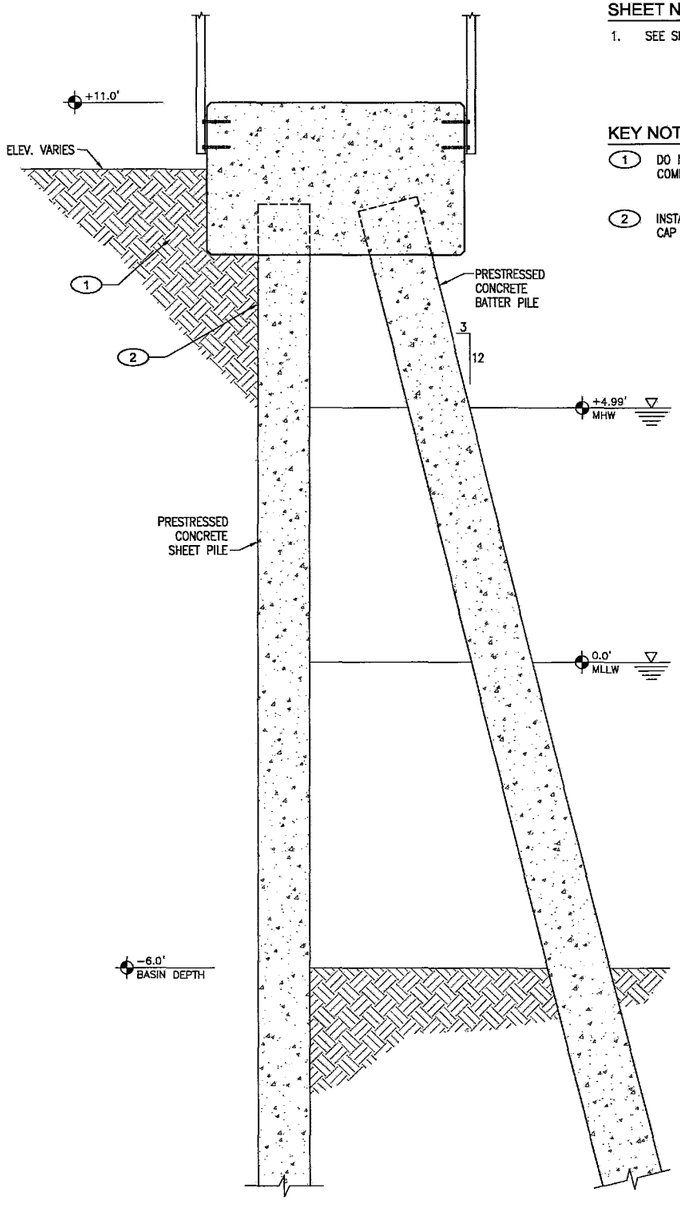
S-201.dwg



1 S-101 S-301 BREAKWATER CROSS SECTION
SCALE: 3/4" = 1'-0"



2 S-101 S-301 BREAKWATER CROSS SECTION
SCALE: 3/4" = 1'-0"



3 S-101 S-301 BREAKWATER CROSS SECTION
SCALE: 3/4" = 1'-0"

SHEET NOTES:

1. SEE SHEET S-001 FOR GENERAL NOTES.

KEY NOTES:

(1) DO NOT BACKFILL AGAINST SHEET PILES UNTIL PILE CAP HAS COME TO 28 DAY STRENGTH.

(2) INSTALL FILTER FABRIC FROM DREDGE DEPTH TO BOTTOM OF CAP PRIOR TO BACKFILING AGAINST SHEETPILES.

GRAPHIC SCALES:

0 1 2 3
SCALE FEET
3/4" = 1'-0"

NOTE:
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* * * 60% SUBMITTAL SET * * *

S-301

SPEC NO. 2012-05	WBS NO. P03331.3		
REFERENCES			
PROJECT ENGINEER WILLIAM MELTON, P.E.			
CONTRACTOR			
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST	INSPECTOR	REVISIONS	DATE / APPROVED

San Diego Unified Port District

San Diego, California

DESIGNED	C. D. DUNCAN
DRAWN	E. S. NEWMAN
CHECKED	W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

BREAKWATER CROSS SECTIONS

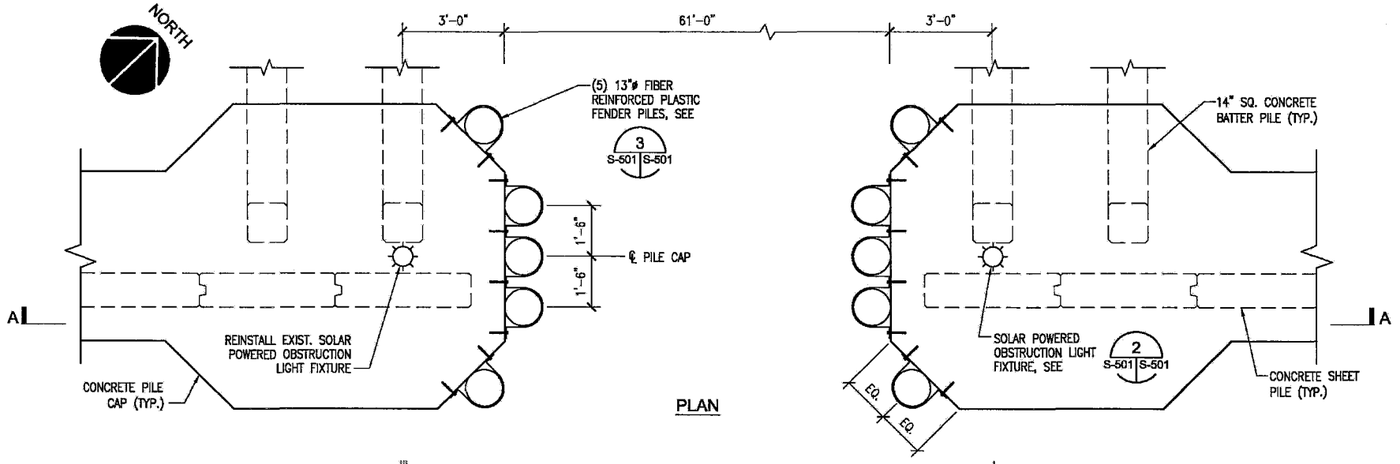
* DATUM * MEAN LOWER LOW WATER

DATE APRIL 15, 2013

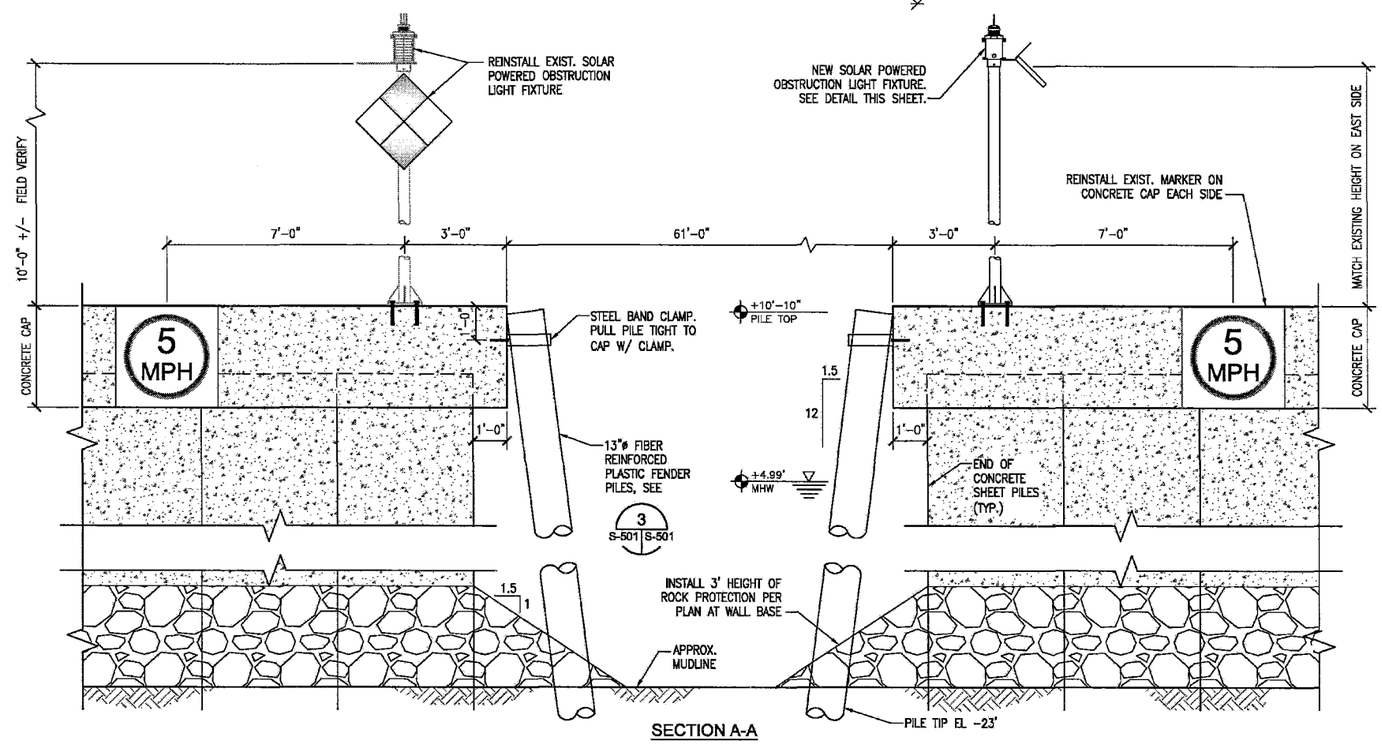
SHEET 22 OF 29

DRAWING NO. 2277 REV.

S-301.dwg



PLAN

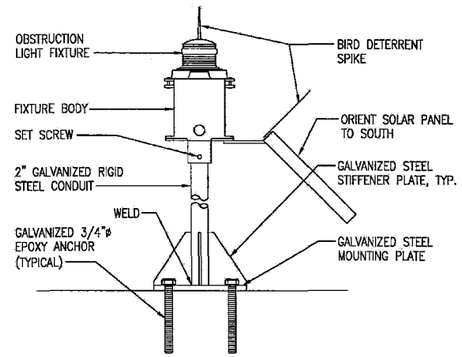


SECTION A-A

1 S-101 S-501 **CORNER PROTECTION DETAIL** SCALE: 1/2" = 1'-0"

SHEET NOTES:

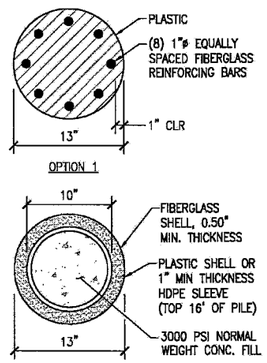
1. SEE SHEET S-001 FOR GENERAL NOTES.



REQUIREMENTS

1. HOUSING – IMPACT RESISTANT, POWDER COATED ALUMINUM BODY.
2. LENS – LEXAN POLYCARBONATE – UV STABALIZED.
3. LAMPS – 20 ULTRA–HIGH INTENSITY LED's RED IN COLOR.
4. REFLECTOR – 360° LED REFLECTOR.
5. POWER SUPPLY – 5 WATT SOLAR PANEL AND 4.5Ah, 12V SEALED LEAD ACID BATTERY.
6. OPTIONS – INTEGRAL PHOTOCELL NIGHT ACTIVATION. BIRD DETERRANT SPIKES.

2 S-501 S-501 **SOLAR POWERED OBSTRUCTION LIGHT DETAIL** NOT TO SCALE



3 S-501 S-501 **FENDER PILE SECTION** SCALE: 1 1/2" = 1'-0"

GRAPHIC SCALES:

0 1/2 1 2
SCALE FEET
1 1/2" = 1'-0"

0 1 2 3 4
SCALE FEET
1/2" = 1'-0"

NOTE:
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*** 60% SUBMITTAL SET ***

SPEC NO. 2012-06	WBS NO. P03331.3		
REFERENCES			
PROJECT ENGINEER WILLIAM MELTON, P.E.			
CONTRACTOR			
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST INSPECTOR	REVISIONS	DATE	APPROVED

San Diego Unified Port District

San Diego, California

DESIGNED C. D. DUNCAN	APPROVAL RECOMMENDED ____ PROJECT ENGINEER
DRAWN E. S. NEWMAN	APPROVED ____ PROJECT MANAGER
CHECKED W. D. WOOD	

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

BREAKWATER ENTRANCE PROTECTION DETAILS

"DATUM" MEAN LOWER LOW WATER

DATE APRIL 15, 2013

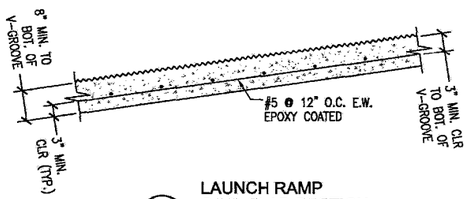
SHEET 23 OF 29

DRAWING NO. 2277

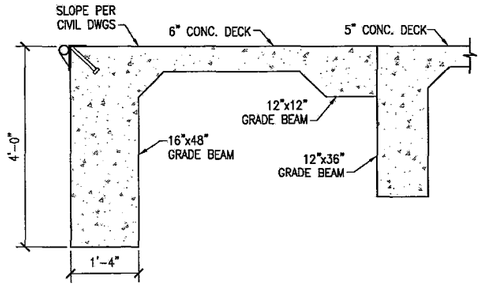
REV.

S-501

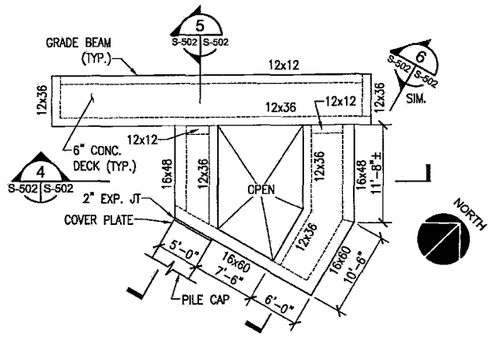
S-501.dwg



7 LAUNCH RAMP C.I.P. SLAB SECTION
CS-401 | S-502 SCALE: 3/4" = 1'-0"



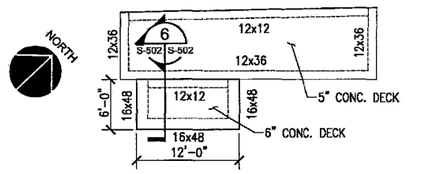
6 EAST GANGWAY ABUTMENT SECTION
S-502 | S-502 SCALE: 3/4" = 1'-0"



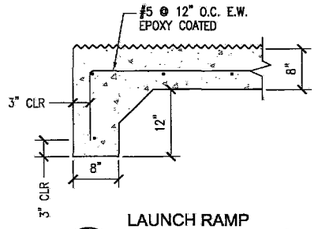
1 WEST ABUTMENT - DECK PLAN
S-101 | S-502 SCALE: 1/8" = 1'-0"

SHEET NOTES:

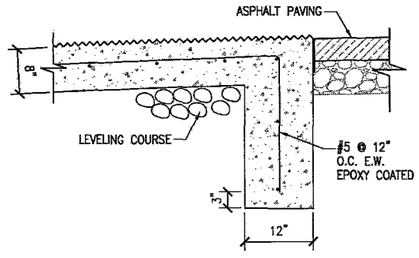
1. SEE SHEET S-001 FOR GENERAL NOTES.
2. SEE SHEET C-401 FOR LAUNCH RAMP PLAN.



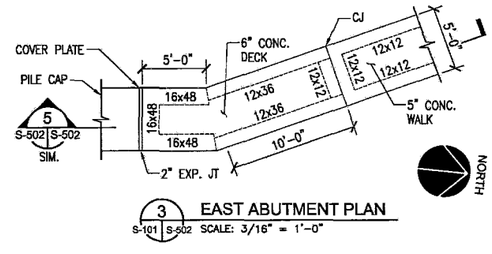
2 EAST GANGWAY ABUTMENT - DECK PLAN
S-101 | S-502 SCALE: 1/8" = 1'-0"



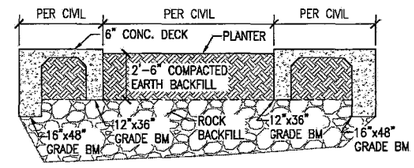
9 LAUNCH RAMP C.I.P. EDGE SECTION
CS-401 | S-502 SCALE: 1" = 1'-0"



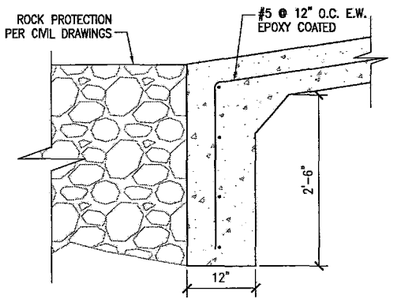
8 LAUNCH RAMP TOP OF RAMP SECTION
CS-401 | S-502 SCALE: 1" = 1'-0"



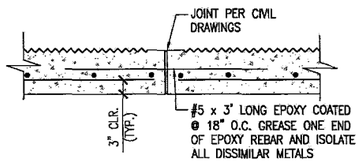
3 EAST ABUTMENT PLAN
S-101 | S-502 SCALE: 3/16" = 1'-0"



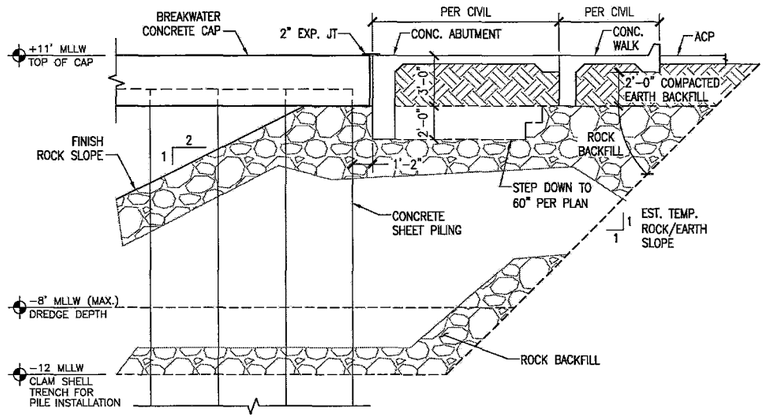
4 WEST ABUTMENT SECTION
S-502 | S-502 SCALE: 1/4" = 1'-0"



11 LAUNCH RAMP BOT. OF RAMP SECTION
CS-401 | S-502 SCALE: 1" = 1'-0"



10 LAUNCH RAMP C.I.P. SLAB JOINT DETAIL
CS-401 | S-502 SCALE: 1" = 1'-0"



5 ROCK SLOPE RESTORATION AT ABUTMENTS
S-502 | S-502 SCALE: 1/4" = 1'-0"

GRAPHIC SCALES:

0 1 2 SCALE FEET
1" = 1'-0"

0 1 2 3 SCALE FEET
3/4" = 1'-0"

0 4 8 SCALE FEET
1/4" = 1'-0"

0 6 12 SCALE FEET
3/16" = 1'-0"

0 4 8 16 SCALE FEET
1/8" = 1'-0"

NOTE:
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*** 60% SUBMITTAL SET ***

SPEC NO.	2012-06
WBS. NO.	P03331.3
REFERENCES	
PROJECT ENGINEER	WILLIAM MELTON, P.E.
CONTRACTOR	
CONSTRUCTION STARTED	
CONSTRUCTION COMPLETED	
COST	
INSPECTOR	

REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED C. D. DUNCAN
DRAWN E. S. NEWMAN
CHECKED W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

S-502

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

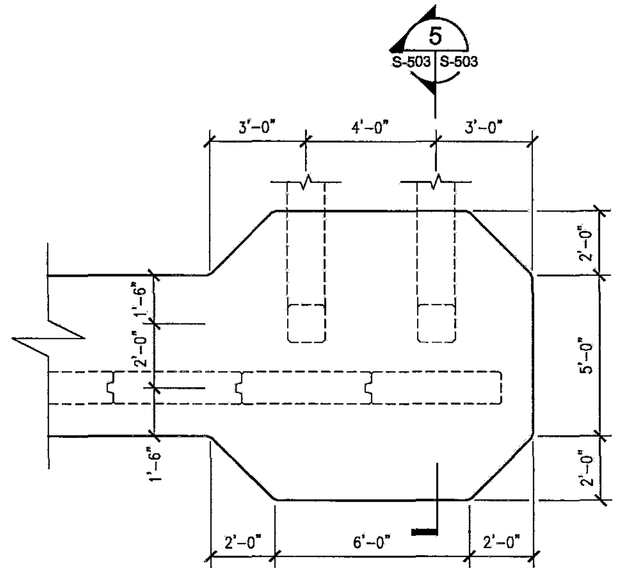
LAUNCH RAMP AND GANGWAY ABUTMENT DETAILS

DATUM: MEAN LOWER LOW WATER
DATE: APRIL 15, 2013
SHEET 24 OF 29
DRAWING NO. 2277
REV.

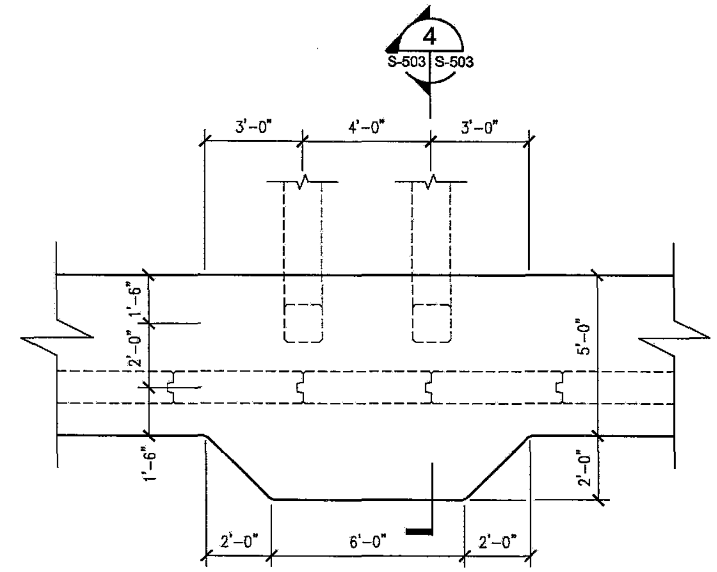
S-502.dwg

SHEET NOTES:

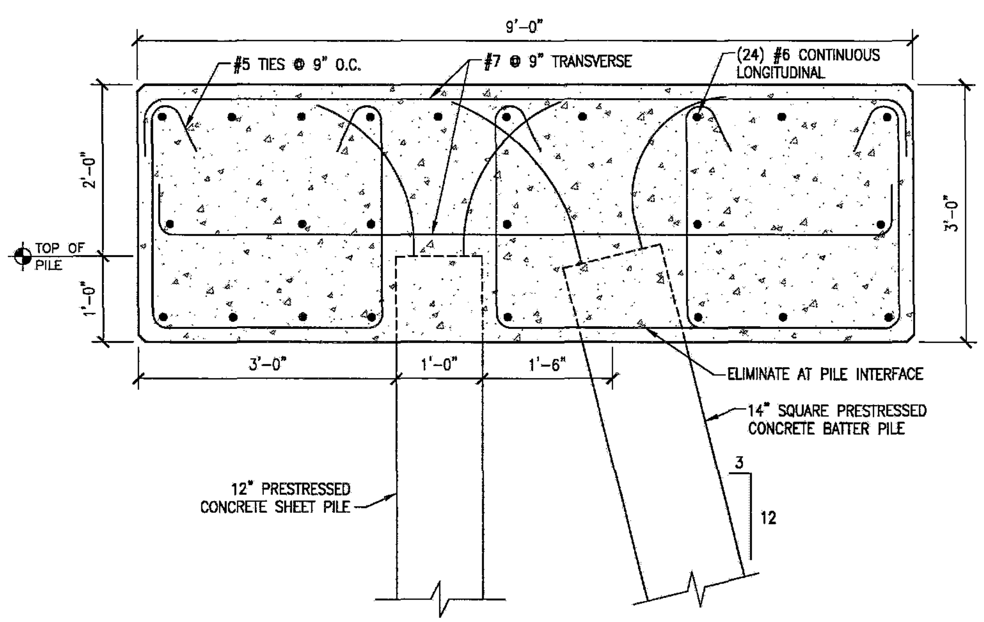
1. SEE SHEET S-001 FOR GENERAL NOTES.
2. PILE CAP REINFORCING BARS SHALL BE EPOXY COATED.



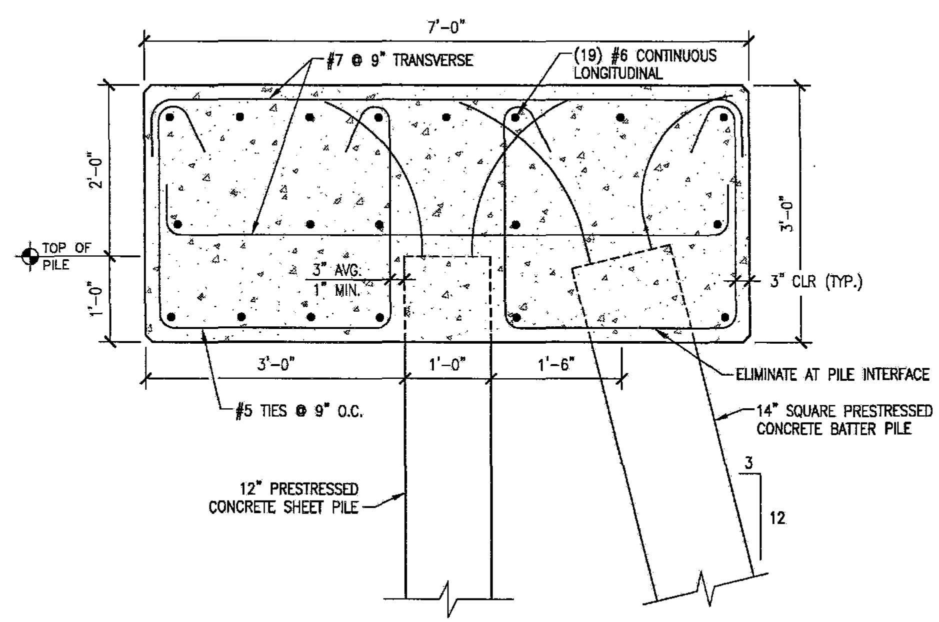
1 S-101 S-503 TYPICAL DOUBLE POPOUT DIMENSIONS
SCALE: 3/8" = 1'-0"



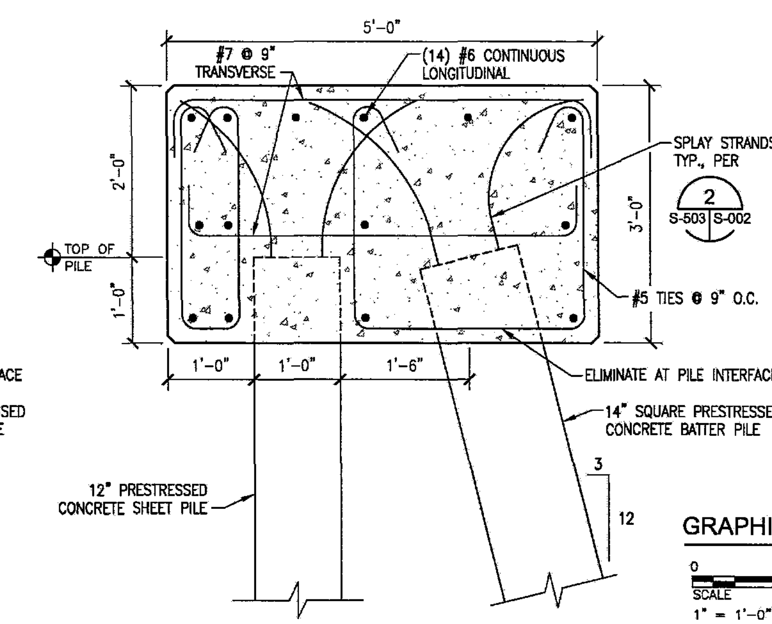
2 S-101 S-503 TYPICAL SINGLE POPOUT DIMENSIONS
SCALE: 3/8" = 1'-0"



5 S-101 S-503 DOUBLE POPOUT
C.I.P. CONCRETE PILE CAP SECTION
SCALE: 1" = 1'-0"

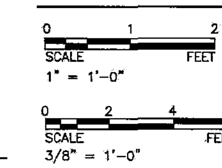


4 S-101 S-503 SINGLE POPOUT
C.I.P. CONCRETE PILE CAP SECTION
SCALE: 1" = 1'-0"



3 S-101, S-301 S-503 C.I.P. CONCRETE PILE CAP SECTION
SCALE: 1" = 1'-0"

GRAPHIC SCALES:



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SPEC NO. 2012-05	WBS NO. P03331.3
REFERENCES	
PROJECT ENGINEER	WILLIAM MELTON, P.E.
CONTRACTOR	
CONSTRUCTION STARTED	
CONSTRUCTION COMPLETED	
COST	INSPECTOR

REVISIONS | DATE | APPROVED

San Diego Unified Port District

San Diego, California

DESIGNED	C. D. DUNCAN
DRAWN	E. S. NEWMAN
CHECKED	W. D. WOOD

APPROVAL RECOMMENDED — PROJECT ENGINEER
APPROVED — PROJECT MANAGER

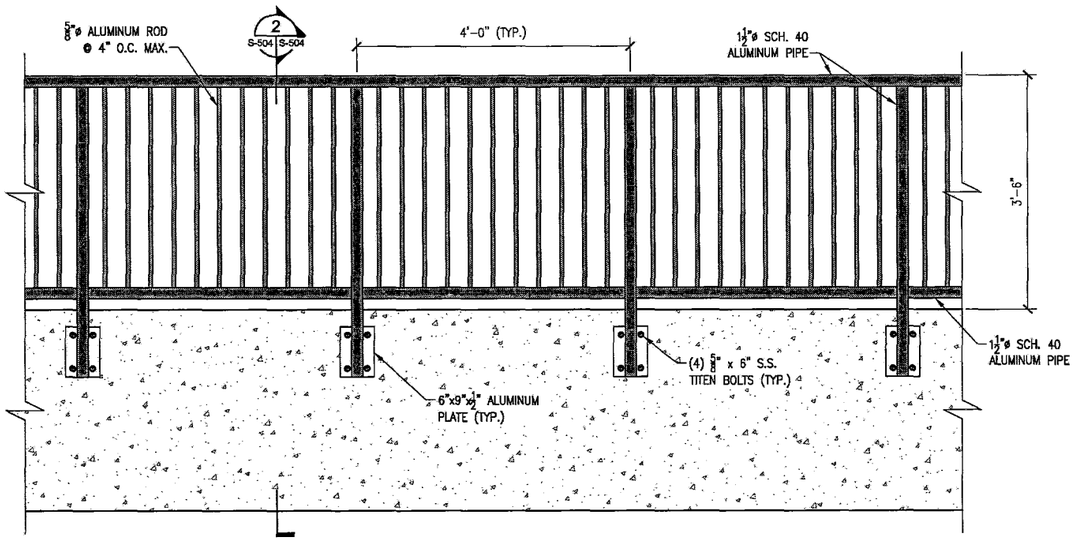
SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

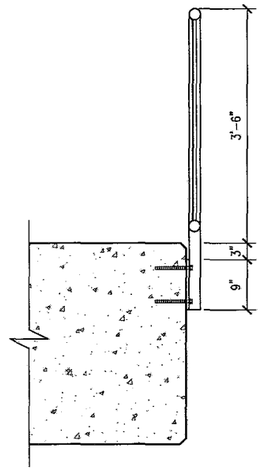
BREAKWATER PILE CAP DETAILS

S-503
"DATUM" MEAN LOWER LOW WATER
DATE APRIL 15, 2013
SHEET 25 OF 29
DRAWING NO. 2277
REV.

S-503.dwg



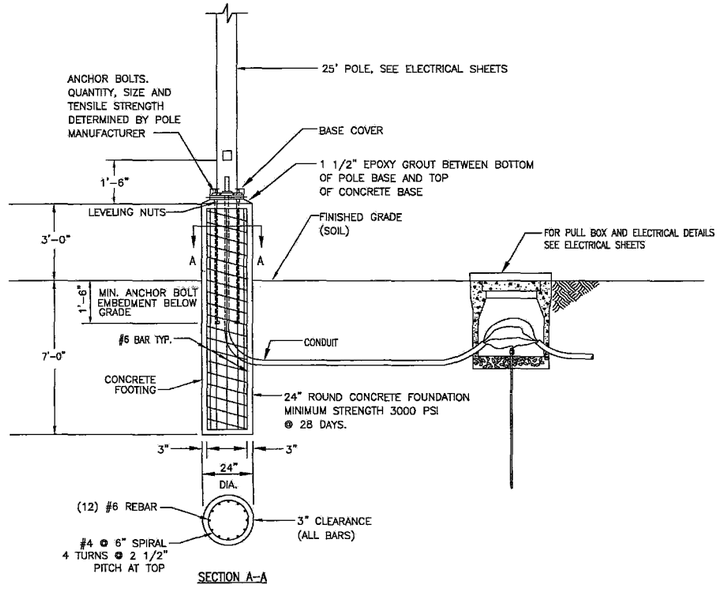
1 S-301 S-504 GUARD RAILING ELEVATION
SCALE: 1" = 1'-0"



2 S-504 S-504 GUARD RAILING SECTION
SCALE: 1" = 1'-0"

SHEET NOTES:

1. SEE SHEET S-001 FOR GENERAL NOTES.



3 E-102 S-504 LIGHT FIXTURE POLE BASE
SCALE: N.T.S.

GRAPHIC SCALES:

0 1 2
SCALE FEET
1" = 1'-0"

NOTE:
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*** 60% SUBMITTAL SET ***

SPEC NO. 2012-06	WBS NO. P03331.3		
REFERENCES			
PROJECT ENGINEER WILLIAM MELTON, P.E.			
CONTRACTOR			
CONSTRUCTION STARTED			
CONSTRUCTION COMPLETED			
COST INSPECTOR	REVISIONS	DATE	APPROVED

San Diego Unified Port District
San Diego, California

DESIGNED	C. C. DUNCAN
DRAWN	E. S. NEWMAN
CHECKED	W. D. WOOD

APPROVAL RECOMMENDED
PROJECT ENGINEER
APPROVED
PROJECT MANAGER

SAN DIEGO, CALIFORNIA

SHELTER ISLAND
BOAT LAUNCHING RAMP AND BASIN IMPROVEMENTS

GUARD RAILING AND MISCELLANEOUS DETAILS

S-504

"DATUM" MEAN LOWER LOW WATER

DATE APRIL 15, 2013

SHEET 26 OF 29

DRAWING NO. 2277 REV.

S-504.dwg

ATTACHMENT 4
CEQA MITIGATION MONITORING AND REPORTING PROGRAM

Final Mitigated Negative Declaration for the Shelter Island Boat Launch Facility Improvements Project and Port Master Plan Amendment, Section V. *Mitigation Monitoring and Reporting Program*

parking would be restored. Also, the addition of traffic from haul trucks would result in a significant impact at the Rosecrans Street/Lytton intersection because there would be an increase of delay of more than 1.0 second in the AM peak period when the intersection operates at LOS F and an increase in delay of more than 2.0 seconds in the PM peak period when the intersection operates at LOS E (see Appendix E of Attachment A). This delay could also affect emergency response times when haul trucks are used in the AM peak hour. Implementation of Mitigation Measure T-1 would reduce this impact to a less-than-significant level.

Mitigation Measures

T-1 Construction truck traffic hauling sediment or materials to or from the Project site shall not occur between the AM peak hours of 7 a.m. and 9 a.m, and shall be limited to no more than five loads per hour during the PM hours of 4 p.m. to 6 p.m. The Project Applicant shall include this restriction in the construction specification documents for the Project. Prior to issuance of the construction specification documents for bid, the Project Applicant shall submit a copy of the construction specification documents to the District's Environmental and Land Use Management department for approval. The contractor shall maintain hauling/delivery logs on the site for the District's review, and the Project Applicant shall submit a copy of the contractor's hauling/delivery logs to the District's Environmental and Land Use Management department for review.

B. Effects Found Not To Be Significant

Based on the Initial Study conducted for the Project (see Attachment A), the following effects were found not to be significant: aesthetics, agriculture and forestry resources, air quality, cultural resources, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, mineral and energy resources, population and housing, and utilities and service systems. A full analysis/ discussion of these issue areas is provided in the attached Initial Study.

V. ~~DRAFT~~ MITIGATION MONITORING AND REPORTING PROGRAM

Potential impacts associated with biological resources, hazards and hazardous materials, noise, public services, recreation, and transportation/traffic were identified in the Initial Study and MND, but were found to be reduced to less-than-significant levels through the application of those mitigation measures described above and in Table 2 below.

Table 2. Shelter Island Boat Launch Facility Improvements Project and Port Master Plan Amendment MND ~~Draft~~ Mitigation Monitoring and Reporting Program			
Mitigation Measure(s)	**Responsible Party**	**Mitigation Timing**	**Monitoring and Reporting Procedures**
Biological Resources			
B-1 Impacts from effects to eelgrass shall be mitigated according to the California Eelgrass Mitigation Policy (CEMP), with replanting of eelgrass at a 1.2:1 ratio (NMFS 2014). Pursuant to the CEMP, pre- and post-construction surveys shall determine the exact amount of eelgrass affected by Project activities. Prior to the commencement of construction, the Project Applicant shall retain a qualified biologist to conduct a pre-construction eelgrass survey per the CEMP to quantify the amount of existing eelgrass within the Project area. The name of the retained contractor and proposed survey plan, including a schedule, shall be submitted to the District before initiation of survey work. A monitoring program consisting of a pre-construction eelgrass survey and three post-construction eelgrass surveys at the impact site and appropriate reference site(s) will be performed (NMFS 2014). The first post-construction eelgrass survey will be completed within 30 days following completion of construction to evaluate any immediate effects to eelgrass habitat. The second post-construction survey will be performed approximately one year after the first post-construction survey during the appropriate growing season. The third post-construction survey will be performed approximately two years after the first post-construction survey during the appropriate growing season. The second and third post-construction surveys will be used to evaluate if indirect effects resulted later in time due to altered physical conditions; the time frames identified above are aligned with growing season (attempting a survey outside of the growing season would show inaccurate results). A final determination regarding the actual impact and amount of mitigation needed at the above-stated ratio, if any, to offset impacts should be made based upon the results of two annual post-construction	District	Pre- and Post-Project construction	District shall conduct surveys and implement the mitigation plan. District shall maintain survey reports in Project files.

Table 2. Shelter Island Boat Launch Facility Improvements Project and Port Master Plan Amendment MND ~~Draft~~ Mitigation Monitoring and Reporting Program			
Mitigation Measure(s)	**Responsible Party**	**Mitigation Timing**	**Monitoring and Reporting Procedures**
surveys, which document the changes in the eelgrass habitat (areal extent, bottom coverage, and shoot density within eelgrass) in the vicinity of the action, compared to eelgrass habitat change at the reference site(s). Any impacts determined by these monitoring surveys would be mitigated. Two possible areas for on-site mitigation of eelgrass have been identified generally between the new east dock and the existing east jetty. Before implementation of the mitigation, the Project Applicant shall submit a mitigation plan to the District's Environmental and Land Use Management department and resource agencies for review and approval.			
B-2 To mitigate potentially significant impacts to sensitive fish species, bird species, eastern Pacific green sea turtles, and marine mammals to less than significant, the following measures shall be implemented: 1. An on-site biological observer shall be present during pile driving activities with the authority to stop construction if a sensitive fish species, green sea turtle, or marine mammal approaches or enters the shutdown zone. The shutdown zone is the area within 10 meters of construction activities or inside the 190 dB rms isopleths for green sea turtle, and marine mammal cetaceans or 180 dB rms for marine mammal pinnipeds. Prior to the start of pile-driving activities, the biological observer shall monitor the shutdown zone for 15 minutes to ensure that sensitive fish species, green sea turtles, and marine mammals are not present. If a sensitive fish species, green sea turtle, or marine mammal approaches or enters the shutdown zone during the pile-driving activities, the biological observer shall notify the construction contractor to stop the activity. The pile-driving activities shall be stopped and delayed until the biological observer visually confirms either that the animal has voluntarily left the shutdown zone	District	During Project construction	District shall implement the mitigation plan. District shall maintain monitoring reports in Project files.

Table 2. Shelter Island Boat Launch Facility Improvements Project and Port Master Plan Amendment MND ~~Draft~~ Mitigation Monitoring and Reporting Program			
Mitigation Measure(s)	**Responsible Party**	**Mitigation Timing**	**Monitoring and Reporting Procedures**
and is beyond the shutdown zone, or 15 minutes have passed without re-detection of the animal. If the on-site biological observer determines that weather conditions prevent the visual detection of sensitive fish species, green sea turtles or marine mammals in the shutdown zone, such as heavy fog, in-water construction activities with the potential to result in Level A Harassment (injury) shall not be conducted until conditions change. 2. Biological monitoring shall be conducted by qualified observers. The observer shall be placed in the best vantage point practicable to monitor, and when applicable, shall communicate directly with the construction superintendent and/or hammer operator. 3. During all observation periods, observers shall use binoculars and the naked eye to scan continuously for sensitive fish species, green sea turtles, and marine mammals. As part of the monitoring process the observer shall collect sighting data and behavioral responses to construction from sensitive fish species, green sea turtles, and marine mammals observed in the Project area of activity during the period of construction. The observer shall record any sensitive fish species, marine mammal, green sea turtle, or California least tern sightings, and submit the sighting records to the District within 60 days of the completion of the mitigation monitoring with a summary of observations.			
Hazards and Hazardous Materials			
T-1 Construction truck traffic hauling sediment or materials to or from the Project site shall not occur between the AM peak hours of 7 a.m. and 9 a.m, and shall be limited to no more than five loads per hour during the PM hours of 4 p.m. to 6 p.m. The Project Applicant shall include this restriction in the construction specification documents for the Project. Prior to issuance of the	District and Contractor	During Project construction	District shall place truck hauling restrictions in bid specifications. Contractor shall maintain hauling/delivery logs on the site.

Table 2. Shelter Island Boat Launch Facility Improvements Project and Port Master Plan Amendment MND ~~Draft~~ Mitigation Monitoring and Reporting Program			
Mitigation Measure(s)	**Responsible Party**	**Mitigation Timing**	**Monitoring and Reporting Procedures**
construction specification documents for bid, the Project Applicant shall submit a copy of the construction specification documents to the District's Environmental and Land Use Management department for approval. The contractor shall maintain hauling/delivery logs on the site for the District's review, and the Project Applicant shall submit a copy of the contractor's hauling/delivery logs to the District's Environmental and Land Use Management department for review.			
Noise			
N-1 To avoid noise impacts from impact-type pile driving, vibratory-type pile driving techniques or other quieter methods, such as jetting, shall be used in place of impact-type pile driving to the extent feasible. The Project Applicant shall include this measure in the construction specification documents for the Project. Prior to issuance of the construction specification documents for bid, the Project Applicant shall submit a copy of the construction specification documents to the District's Environmental and Land Use Management department for approval.	District and Contractor	During Project construction	District shall place use of alternative pile-driving methods in bid specifications. District shall review contractor construction methods.
N-2 If impact-type pile driving construction techniques cannot be avoided, the use of all passive recreational areas shall be restricted within a distance of 777 feet from the pile driving activity during all impact-type pile driving activities. Prior to the commencement of impact-type pile driving activities, the Project Applicant shall cordon off and post public notices informing of the construction activity in all public recreational areas within a distance of 777 feet from the pile driving activity. The Project Applicant shall include this measure in the construction specification documents for the Project. Prior to issuance of the construction specification documents for bid, the Project Applicant shall submit a copy of the construction specification documents to the District's Environmental and Land Use Management department for approval. Prior to the commencement of impact-type pile driving	District and Contractor	During Project construction	District shall place recreational use restrictions in bid specifications. Project Applicant shall submit documentation demonstrating compliance with this measure.

Table 2. Shelter Island Boat Launch Facility Improvements Project and Port Master Plan Amendment MND ~~Draft~~ Mitigation Monitoring and Reporting Program			
Mitigation Measure(s)	**Responsible Party**	**Mitigation Timing**	**Monitoring and Reporting Procedures**
activities, the Project Applicant shall submit documentation to the District's Environmental and Land Use Management department demonstrating compliance with this measure.			
Public Services			
See Mitigation Measures B-1, B-2, N-1, N-2, and T-1	See Mitigation Measures B-1, B-2, N-1, N-2, and T-1	See Mitigation Measures B-1, B-2, N-1, N-2, and T-1	See Mitigation Measures B-1, B-2, N-1, N-2, and T-1
Recreation			
See Mitigation Measures B-1, B-2, N-1, N-2, and T-1	See Mitigation Measures B-1, B-2, N-1, N-2, and T-1	See Mitigation Measures B-1, B-2, N-1, N-2, and T-1	See Mitigation Measures B-1, B-2, N-1, N-2, and T-1
Transportation/Traffic			
T-1 Construction truck traffic hauling sediment or materials to or from the Project site shall not occur between the AM peak hours of 7 a.m. and 9 a.m, and shall be limited to no more than five loads per hour during the PM hours of 4 p.m. to 6 p.m. The Project Applicant shall include this restriction in the construction specification documents for the Project. Prior to issuance of the construction specification documents for bid, the Project Applicant shall submit a copy of the construction specification documents to the District's Environmental and Land Use Management department for approval. The contractor shall maintain hauling/delivery logs on the site for the District's review, and the Project Applicant shall submit a copy of the contractor's hauling/delivery logs to the District's Environmental and Land Use Management department for review.	District and Contractor	During Project construction	District shall place truck hauling restrictions in bid specifications. Contractor shall maintain hauling/delivery logs on the site.