

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

2375 Northside Drive, Suite.100, San Diego, CA 92108
Phone (619) 516-1990 • Fax (619) 516-1994
<http://www.waterboards.ca.gov/sandiego/>

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

PROJECT: City of San Clemente Municipal Pier Repair Project
Certification Number R9-2017-0112
WDID: 900002914

Reg. Meas. ID: 414344
Place ID: 836664
Party ID: 39595
Person ID: 495942

APPLICANT: City of San Clemente
910 Calle Negocio Suite 100
San Clemente, CA 92672

ACTION:

<input checked="" type="checkbox"/> Order for Low Impact Certification	<input type="checkbox"/> Order for Denial of Certification
<input type="checkbox"/> Order for Technically-conditioned Certification	<input type="checkbox"/> Waiver of Waste Discharge Requirements
<input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	<input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004-DWQ

PROJECT DESCRIPTION

An application dated June 5, 2017 was submitted by the City of San Clemente (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (33 U.S.C. § 1341) for the proposed City of San Clemente Municipal Pier Repair (Project). The Applicant has also applied for authorization under Rivers and Harbors Act section 10 and Clean Water Act section 404 from the United States Army Corps of Engineers for the Project (USACE File Nos. SPL-2017-00387).

The Project is located within the City of San Clemente, Orange County, California at 615 Avenida Victoria. The Project center reading is located at latitude 33.41872 and longitude -117.62175.

The Applicant has paid all required fees for this Certification in the amount of \$720.00. On an annual basis, the Applicant must also pay all active discharge fees and post discharge monitoring fees, as appropriate¹. On July 13, 2017, the San Diego Water Board provided

¹ The Applicant shall pay an annual active discharge fee each fiscal year or portion of a fiscal year during which discharges occur until the regional water board or the State Water Resources Control Board (State Water Board) issues a Notice of Completion of Discharges Letter to the discharger. Dischargers shall pay an annual post-discharge monitoring fee each fiscal year or portion of a fiscal year commencing with the first fiscal year following the fiscal year in which the regional water board or State Water Board issued a Notice of Completion of Discharges Letter to the discharger, but continued water quality monitoring or compensatory mitigation monitoring is required. Dischargers shall pay the annual post-discharge monitoring fee each fiscal year until the regional water board or the State Water Board issues a Notice of Project Complete Letter to the discharger. Additional information regarding Water Quality Fees, Waste Discharge Requirement Fees, and Water Quality
(footnote continued on next page)

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.

As part of a routine five-year interval repairs and maintenance program, the Applicant proposes to: Timber Decking Replacements (36 square foot); Timber Guardrails Replacements (88 LF); Timber Piles Replacements and Repairs (25); Timber Bracing Replacements (7); Steel Piles Repairs (21); Cathodic Protection (CP) System Repairs; and Utility (i.e. Gas, Water & Sewer) Repairs.

Project construction will permanently impact 0.018 acre of ocean waters of the United States and/or State. The permanent impacts are shown in attachment 2 (Detail 1, Sheet S-502), which shows concrete repairs to existing steel piles. Removal of the existing steel piles is not feasible and would result in greater impacts than the proposed concrete repairs. Pile jackets shown in attachment 2 (Detail 3, Sheet S-501) and pile wraps (Detail 2, Sheet S-501) were also included in the calculation of permanent impacts. The pile jackets extend 2" around the existing piles and the pile wraps are tight against the existing piles. No compensatory mitigation is required because the project will largely repair and replace the existing structures in essentially the same locations.

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

(footnote continued from previous page)

Certification Dredge and Fill Application Fee Calculator can be found electronically at the following location:
http://www.waterboards.ca.gov/resources/fees/water_quality/#wqfees.

TABLE OF CONTENTS

I.	STANDARD CONDITIONS	4
II.	GENERAL CONDITIONS.....	4
III.	PROJECT IMPACTS AND COMPENSATORY MITIGATION	7
IV.	MONITORING AND REPORTING REQUIREMENTS.....	8
V.	NOTIFICATION REQUIREMENTS	10
VI.	CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE	11
VII.	SAN DIEGO WATER BOARD CONTACT PERSON.....	11
VIII.	WATER QUALITY CERTIFICATION	12

Attachments:

1. Definitions
2. Project Figures and Plans

The San Diego Water Board has independently reviewed the record of the Project to analyze the extent and nature of proposed Project impacts to the water quality and beneficial uses of waters of the United States and/or State and associated compensatory mitigation required to offset impacts attributed to the Project. In accordance with this Certification, the Applicant may proceed with the Project under the following terms and conditions:

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. R9-2017-0112 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 U.S.C. §1344) 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/gowdr401regulated_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 *Water Quality Control Plan, Ocean Waters of California (Ocean Plan)*, *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 U.S.C §1313.). The Basin Plan is accessible on-line at:
- http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml
!
- F. **Beneficial Use Protection.** The Applicant must take all necessary measures to protect the beneficial uses of waters of the Pacific Ocean. 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 VI.A of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.
- G. **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 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
- H. **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.
- I. **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.

J. 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.

K. 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 the Pacific Ocean;
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.

- L. **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.
- M. **Property Rights.** This Certification does not convey any property rights of any sort, or any exclusive privilege.
- N. **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.
- O. **Silt Curtain Deployment.** The Applicant shall deploy and maintain a continuous length of silt curtain to trap sediment that may become suspended outside of the immediate Project work area. 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. 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. The silt curtain must restrict any resulting surface visible turbidity plume to the Project work area and must control and contain the migration of re-suspended sediments at the water surface and at depth. If turbidity is observed outside the silt curtain, the Applicant will stop, slow, or modify the work effort to reduce turbidity levels and repair or correct the dislocation of gaps in the silt curtain before re-commencing work.

III. PROJECT IMPACTS AND COMPENSATORY MITIGATION

- A. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to Dana Point Harbor within the San Juan Watershed must not exceed 0.018 acre.
- B. **Eelgrass Impacts and Mitigation.** 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.

- C. **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.

IV. MONITORING AND REPORTING REQUIREMENTS

- A. **Annual Project Progress Reports.** The Applicant must submit annual Project progress reports describing 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. 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. The names, qualifications, and affiliations of the persons contributing to the report;
 2. The status, progress, and anticipated schedule for completion of Project construction activities;
 3. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion; and
 4. 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.
- B. **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:
1. Date of construction initiation;
 2. Date of construction completion; and

3. As-built drawings of the Project, no larger than 11”X17.”

C. 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.

D. 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. R9-2017-0112:836664:dbradford
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. R9-2017-0112: 836664:dbradford.

E. 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.

- F. **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."

V. 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. **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.
- C. **Discharge Commencement.** The Applicant must notify the San Diego Water Board in writing **at least 5 days prior to** the start of Project construction.
- D. **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.**

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 this Certification in the event that a transferee fails to comply.

VI. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

- A. The City of San Clemente 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 determined that the Project is categorically exempt.²
- 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 independently determined that the project is categorically exempt because the project replaces existing structures located on the same site and the replacement structures will have substantially the same purpose and capacity as the structures being replaced.³
- C. As a Responsible Agency under CEQA, the San Diego Water Board will file a Notice of Exemption in accordance with CEQA Guidelines section 15062.

VII. SAN DIEGO WATER BOARD CONTACT PERSON

Darren Bradford, Environmental Scientist
California Regional Water Quality Control Board, San Diego Region
2375 Northside Drive, Suite 100
San Diego, California 92108
Telephone: 619-521-3356
Email: darren.bradford@waterboards.ca.gov

² 14 CCR section 15302

³ 14 CCR section 15302

VIII. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **City of San Clemente Municipal Pier Repair Project** (Certification No. R9-2017-0112) 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. R9-2017-0112 issued on August 8, 2017.



DAVID W. GIBSON
Executive Officer
San Diego Water Board

8 August 2017
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.

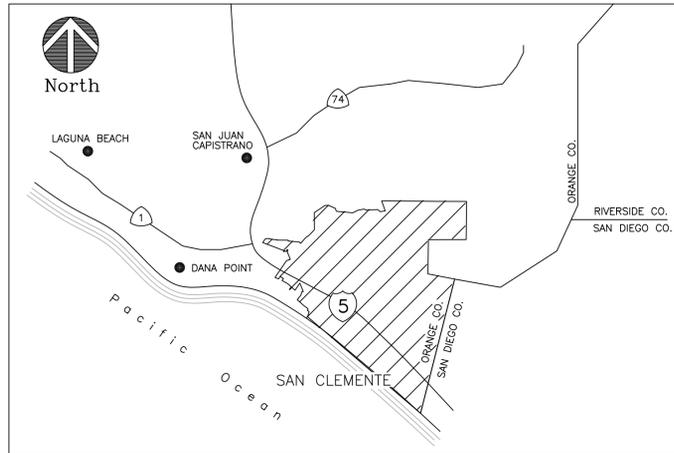
Start of Project Construction - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically 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.

City of San Clemente
City of San Clemente Municipal Pier Repair Project
Certification No. R9-2017-0112

**ATTACHMENT 2
PROJECT FIGURES AND PLANS**



VICINITY MAP
NOT TO SCALE

CITY OF SAN CLEMENTE

SAN CLEMENTE MUNICIPAL PIER REPAIR

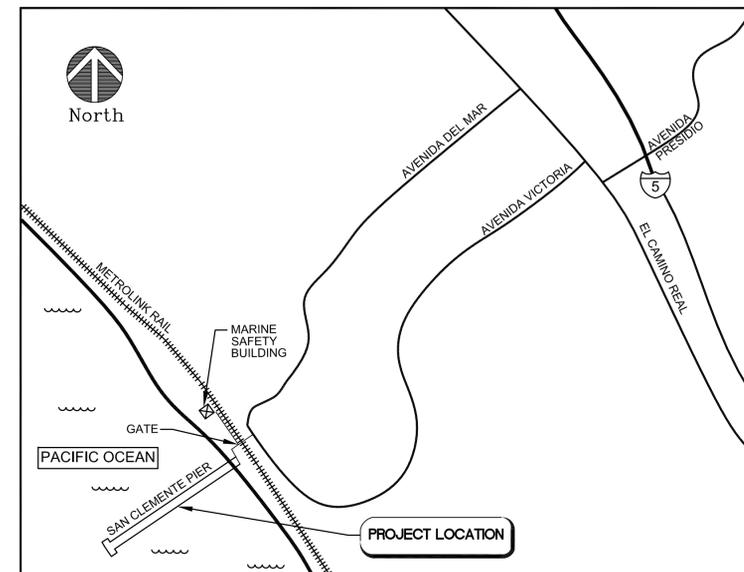
PROJECT No. 16811



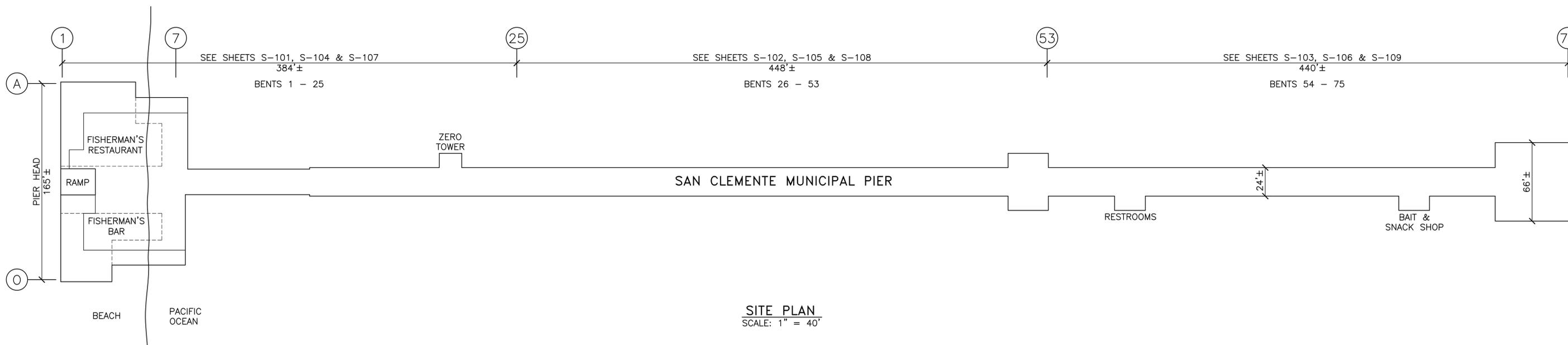
May 2017

PROJECT ADDRESS:
INTERSECTION OF AVENIDA DEL MAR & AVENIDA VICTORIA
SAN CLEMENTE, CA 92672

PROJECT OWNER:
CITY OF SAN CLEMENTE
CONTACT: AMIR ILKHANIPOUR, PE
910 CALLE NEGOCIO, SUITE 100
SAN CLEMENTE, CA 92672
(949) 361-6140



LOCATION MAP
NOT TO SCALE



SITE PLAN
SCALE: 1" = 40'

AGENCY INDEX	
AT&T	(714) 618-9141
CONTACT : CARL JOHNSON	
SAN DIEGO GAS & ELECTRIC	(949) 361-8080
CONTACT : STEVE CAMPBELL	
SO. CALIF. GAS COMPANY	(714) 634-3061
CONTACT : BRAD MORRISON	
COX COMMUNICATIONS	(949) 546-2818
CONTACT : LESLIE BRIESCH	
CITY OF SAN CLEMENTE	(949) 361-8253
WATER & SEWER DEPTS.	
CONTACT : LARRY BROTMAN	

DIGALERT
Call Toll Free
1-800-227-2600
2 Working Days Before You Dig

UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 1(800)227-2600.



100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

TranSystems
6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



TITLE SHEET
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:
G-001
SHEET 1
OF 33

Remember: The ocean begins at your front door!



BMPs: Easy Solutions for Keeping Our Ocean Waters Clean

Best Management Practices (BMPs) are activities such as good housekeeping practices, pollution prevention techniques, educational practices and maintenance procedures. Many BMPs are easy and inexpensive. Construction sites should follow the tips below to prevent pollutants from entering storm drains in the first place, and help protect our environment, our families' health and safety and our local economy.

Stockpile Management:

- Protect all stockpiles from storm water run-on using temporary perimeter sediment barriers such as berms, dikes, fiber rolls, silt fences, sand or gravel bags, or straw bale barriers.
- During the rainy season, stock piles must be covered and have a temporary sediment barrier at all times.
- During the non rainy season, stockpiles must be covered at the end of each work day and have a temporary sediment barrier at all times. Implement wind control practices as appropriate.

Concrete Waste Management:

- When obtaining ready mix concrete from a supplier, discuss their BMP procedures such as handling of concrete waste and washout before deliveries are made.
- Avoid mixing excess amounts of fresh concrete on-site.
- Perform washout of concrete trucks off site or in designated areas only and never wash out concrete trucks on the street or into storm drains, open ditches, or streams.
- Never wash any concrete products including dust and silt down into the gutter or storm drain. Always monitor on-site concrete tasks, such as saw cutting, coring, grinding, and grooving to ensure proper methods are implemented.
- Concrete cutting residue should be vacuumed and never allowed to flow across pavement or left on the surface of pavement.
- A sign should be installed adjacent to each wash out facility to inform concrete equipment operators to utilize the proper facilities.
- Wash out only from mixer truck shoots into concrete washout.
- Concrete washout from concrete pumper bins can be washed out into pumper trucks and discharged into designated washout area or properly disposed of off site.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and properly disposed of.

Solid Waste Management:

- Select designated waste collection areas on site and locate containers in a covered area and / or in a secondary containment. Be sure to have enough conveniently located containers throughout the project.
- Collect site refuse daily, especially during rainy / windy conditions and plan for an adequate number of pickups. Never overfill a dumpster.
- Remove refuse promptly from all erosion and sediment control devices as well as storm drains.
- Always make sure that toxic liquids and chemicals are never disposed of in dumpsters designated for construction debris. Liquid and hazardous wastes must always be disposed of properly.
- Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the refuse hauler.
- Recycle or salvage as much construction and demolition debris as possible.

Sanitary / Septic Waste Management

- Use only reputable, licensed sanitary / septic waste haulers.
- Temporary sanitary facilities must be located in a convenient location away from drainage facilities, watercourses, as well as traffic and should always have secondary containment.
- Untreated raw wastewater must never overflow, be discharged or buried within the project site.
- Be sure to have enough restrooms conveniently located throughout the project.

Hazardous Material Delivery and Storage:

- Minimize storage of hazardous materials onsite, and consider storage in a covered area.
- Store materials in a designated area on pallets with secondary containment (Earth Dikes, Drainage Swales, or Lined Ditches) away from traffic, waterways, and storm drains.
- Keep ample supply of appropriate spill clean up material near storage areas.
- Conduct regular weekly inspections as well as before and after any rain events. Train employees and subcontractors.
- Be able to supply Material Safety Data Sheets (MSDS) for all materials stored and keep an accurate, up to date inventory of materials delivered and stored on site.
- Storage of reactive, ignitable or flammable liquids must comply with fire codes.
- Those trained in emergency spill cleanups must be present when dangerous materials are unloaded.
- Contain and clean up any spill immediately.
- Clean spills on dirt areas by digging up and properly disposing of the contaminated soil.

Hazardous Material Use:

- Minimize use as much as possible.
- Follow manufacture instructions regarding uses, mixing, conditions, and warnings of chemicals.
- Never over apply and prepare only the amount needed.
- Never apply any chemicals immediately before a rain event, and always use the entire product before disposing the container.
- Never clean tools, paintbrushes, or rinse containers into a street, gutter, storm drain, or watercourse and always dispose of any hazardous chemicals / materials as hazardous waste.
- Use recycled and less hazardous products whenever practical.
- Non-toxic liquid wastes such as latex paints may be collected in a lined collection area. This area must be properly bermed and kept covered during rain events and at the end of every work day and must never be allowed to overflow or to be disposed of to uncovered ground.
- Liquid and hazardous wastes must always be disposed of appropriately.
- Immediately report any significant spills to the County's 24-hour water pollution reporting hotline at 714-567-6363 or the City of San Clemente's 24 hour hot line at 949-366-1553.

Routinely train all employees and require any contractors / sub-contractors to follow these BMPs.

Acknowledgement:

I, _____ (print name) certify that I have read the preceding document regarding construction site Best Management Practices (BMPs). I have been informed that these basic BMPs must be implemented and maintained on all construction sites, and that the City may impose fines or other civil or criminal sanctions against me or my business for allowing runoff and construction debris to enter the storm drain system. I take full responsibility for maintaining basic BMPs on construction sites for which I am accountable.

Contractor Signature _____ Date _____

3.2 Minimum Requirements

All construction projects regardless of size are required, at a minimum, to implement an effective combination of erosion and sediment controls and waste and materials management Best Management Practices. These minimum requirements are summarized in Table 3-2 and must be conveyed to construction contractors as part of the plan notes or on a separate erosion control plan as required by the agency.

Table 3-2
Minimum Requirements for All Construction Sites

Category	Minimum Requirements
Erosion and Sediment Control	Sediments from areas disturbed by construction shall be retained on site using an effective combination of erosion and stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
Waste and Materials Management Control	Construction-related materials, wastes, spills or residues shall be retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.

CONTRACTOR RESPONSIBILITIES, DEBRIS REMOVAL & WORK RESTRICTIONS.

THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING CONSTRUCTION-RELATED REQUIREMENTS:

- NO CONSTRUCTION MATERIALS, DEBRIS, OR WASTE SHALL BE PLACED OR STORED WHERE IT MAY BE SUBJECT TO WAVE EROSION AND DISPERSION;
- ANY AND ALL DEBRIS RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REMOVED FROM THE BEACH AND PIER AREA ON A DAILY BASIS;
- STAGING AND STORAGE OF CONSTRUCTION MACHINERY AND STORAGE OF DEBRIS SHALL ONLY TAKE PLACE IN THE APPROVED STAGING AREA AND TRASH BIN LOCATION.
- ANY ACCIDENTAL SPILLS OF CONSTRUCTION EQUIPMENT FLUIDS SHALL BE IMMEDIATELY CONTAINED ON-SITE AND DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AS SOON AS POSSIBLE;
- ANY CONSTRUCTION MATERIALS, OILS OR LIQUID CHEMICALS OR OTHER WASTE SHALL NOT BE STORED WHERE IT IS SUBJECT TO WAVE EROSION AND DISPERSION INTO COASTAL WATERS;
- MACHINERY OR CONSTRUCTION MATERIALS NOT ESSENTIAL FOR PROJECT IMPROVEMENTS WILL NOT BE ALLOWED AT ANY TIME ON THE PIER;
- CONSTRUCTION EQUIPMENT SHALL NOT OVERLOAD OR DAMAGE THE PIER;
- THE TIMBER PIER DECK HAS LIMITED LOAD CAPACITY AND IS CURRENTLY RESTRICTED TO LIGHTER WEIGHT PASSENGER VEHICLES TRAVELING AT 3 MPH MAX. IT WILL BE CONTRACTOR'S RESPONSIBILITY TO DISTRIBUTE LOADS AND SIZE EQUIPMENT TO NOT EXCEED THE PIER CAPACITY. ALL EQUIPMENT IN EXCESS OF 8,000 LBS GWWT SHALL BE SUBJECT TO LOAD REVIEW BY ENGINEER AND APPROVAL PRIOR TO ACCESSING THE PIER.
- CONTRACTOR SHALL NOTIFY PIER TENANTS A MINIMUM 48 HOURS PRIOR TO A UTILITY INTERRUPTION.

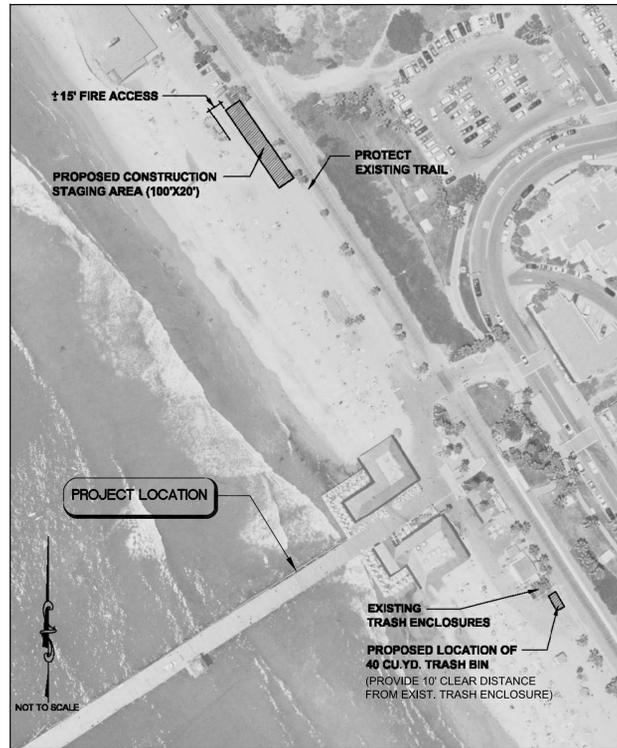
DAILY SITE MAINTENANCE AND OPERATIONS

- TRASH, DEBRIS, PAINT CHIPS, CUTTINGS, ETC. SHALL BE IMMEDIATELY REMOVED AFTER ANY REPAIR ACTIVITY TO PREVENT THEIR BEING BLOWN OR WASHED INTO THE OCEAN.
- THE STORING AND MIXING OF CHEMICALS, PAINTS AND COATINGS, AND EQUIPMENT CLEANING OPERATIONS SHALL BE CARRIED OUT ON LAND WHENEVER POSSIBLE.
- KEEP ALL MATERIALS SECURELY LOCKED UP, TO AVOID VANDALISM AND ACCIDENTAL SPILLS INTO THE OCEAN.

STEEL REPAIRS -- REPAIRS TO EXISTING COATING

- ABRASIVE BLASTING WILL BE USED TO PREPARE THE STEEL SURFACE FOR REPAIR. POLLUTION CONTROL MEASURES (CONTAINMENT TENTING) IS REQUIRED TO PREVENT RESIDUE FROM THE BLASTING FROM COMING IN CONTACT WITH THE OCEAN. TARPS SHOULD BE CLOSELY MONITORED FOR TEARS & SEPARATIONS BY THE CONTRACTOR ON WINDY DAYS.

STAGING AREA AND TRASH BIN LOCATION MAP



PROJECT TEAM

PROJECT OWNER
CITY OF SAN CLEMENTE
910 CALLE NEGOCIO, SUITE 100
SAN CLEMENTE, CA 92672
(949) 361-6140
CONTACT: AMIR ILKHANPOUR, PE

PRIME CONSULTANT -- STRUCTURAL
TRANSYSTEMS CORPORATION
6 HUTTON CENTRE DRIVE, SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890
CONTACT: ERIC NEWMAN, PE

CATHODIC PROTECTION CONSULTANT
HDR ENGINEERING, INC.
8690 BALBOA AVENUE, SUITE 200
SAN DIEGO, CA 92123
(858) 712-8400
CONTACT: RICHARD VEIHL, PE

PLUMBING CONSULTANT
DEC ENGINEERS, INC.
7360 CARROLL ROAD, SUITE 100
SAN DIEGO, CA 92121
(858) 578-3270
CONTACT: TIM HERMANN, PE

CONTRACTOR TO VISIT THE SITE PRIOR TO SUBMITTING BID TO REVIEW EXISTING CONDITIONS

DRAWING INDEX		
SHEET NO.	REF. NO.	SHEET TITLE
GENERAL		
1	G-001	TITLE SHEET
2	G-002	DRAWING INDEX & GENERAL NOTES
STRUCTURAL		
3	S-001	STRUCTURAL NOTES
4	S-002	SPECIAL INSPECTION
5	S-101	PILE PLAN: BENTS 1 - 25
6	S-102	PILE PLAN: BENTS 26 - 53
7	S-103	PILE PLAN: BENTS 54 - 75
8	S-104	FRAMING PLAN: BENTS 1 - 25
9	S-105	FRAMING PLAN: BENTS 26 - 53
10	S-106	FRAMING PLAN: BENTS 54 - 75
11	S-107	DECK PLAN: BENTS 1 - 25
12	S-108	DECK PLAN: BENTS 26 - 53
13	S-109	DECK PLAN: BENTS 54 - 75
14	S-301	TYPICAL PIER SECTIONS
15	S-302	TYPICAL PIER SECTIONS
16	S-501	TIMBER PILE REPAIR DETAILS
17	S-502	STEEL PILE REPAIR DETAILS
18	S-503	FRAMING REPAIR DETAILS
19	S-504	DECKING & RAILING REPAIR DETAILS
CATHODIC PROTECTION		
20	CP-1	CATHODIC PROTECTION REPAIR PLAN: BENTS 54 - 75
21	CP-2	DETAILS 1
22	CP-3	DETAILS 2
23	CP-4	DETAILS 3
24	CP-5	DETAILS 4
PLUMBING		
25	P0.1	LEGEND, NOTES, SCHEDULES AND DETAILS
26	P0.2	PLUMBING DETAILS
27	P1.0	PLUMBING OVERALL PLAN
28	P1.1	PLUMBING DEMOLITION WATER PLAN
29	P1.2	PLUMBING DEMOLITION NATURAL GAS PLAN
30	P1.3	PLUMBING DEMOLITION WASTE PLAN
31	P2.1	PLUMBING NEW WORK WATER PLAN
32	P2.2	PLUMBING NEW WORK NATURAL GAS PLAN
33	P2.3	PLUMBING NEW WORK WASTE PLAN

100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

R E F E R E N C E S

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



DRAWING INDEX & GENERAL NOTES
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:
G-002
SHEET 2
OF 33

SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811

STRUCTURAL NOTES

A. GENERAL

- NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER THESE GENERAL NOTES AND TYPICAL DETAILS. TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK, AND SHALL RESOLVE CONFLICTS ON THE PLANS WITH THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. IN NO CASE SHALL DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THE STRUCTURAL DRAWINGS.
- WHERE A CONSTRUCTION DETAIL IS NOT SHOWN OR NOTED, THE DETAIL SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
- THE CONTRACTOR SHALL DETERMINE THE LOCATION OF UTILITY SERVICES IN THE AREA TO BE EXCAVATED, BEFORE BEGINNING EXCAVATION.
- NO PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL BE PLACED IN FOOTINGS, NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE 2016 CALIFORNIA BUILDING CODE (CBC), 2016 CALIFORNIA PLUMBING CODE, 2016 CALIFORNIA ELECTRICAL CODE AND THE CITY OF SAN CLEMENTE CODES & ORDINANCES.
- THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND JOB SITE SAFETY.
- EACH SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS RELATING TO HIS WORK BEFORE BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE CONTRACTOR IMMEDIATELY. FAILURE TO REPORT SUCH DISCREPANCIES INDICATES THE SUBCONTRACTOR'S ACCEPTANCE OF SUCH CONDITIONS.

B. FOUNDATION

- PILES SHALL EXTEND A MINIMUM OF 5 FEET INTO FORMATIONAL MATERIAL.
- PILE EXCAVATIONS REQUIRING CONCRETE PLACEMENT SHALL BE KEPT FREE OF LOOSE MATERIAL AND STANDING WATER.

C. REINFORCED CONCRETE

- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THESE NOTES.
- CEMENT SHALL CONFORM TO ASTM C150, TYPE V.
- AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33.
- READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:
 PEDESTALS: 4000 PSI
 STEEL PILE FILL: 3000 PSI
 UNDERWATER GROUT: 7000 PSI
 TROWEL GRADE EPOXY: 5000 PSI @ 7 DAYS
- 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).
- WATER/CEMENT RATIO SHALL NOT EXCEED 0.45 FOR 4,000 PSI CONCRETE & 0.50 FOR 3,000 PSI CONCRETE.
- ENGINEER SHALL REVIEW AND APPROVE MIX DESIGNS BEFORE INSTALLATION.
- BAR REINFORCEMENT SHALL BE ASTM A615, GRADE 60. EPOXY COATED REBAR SHALL CONFORM TO ASTM A934.
- ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE WELL SECURED IN POSITION WITH WIRE POSITIONERS BEFORE PLACING CONCRETE OR GROUT.

D. STRUCTURAL STEEL

- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE 2016 EDITION OF CBC CHAPTER 22.
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 FOR PLATES, CHANNELS & ANGLES.
- MACHINE BOLTS AND ANCHOR BOLTS SHALL BE GRADE A CONFORMING TO ASTM A307, GALVANIZED U.N.O.
- NUTS SHALL CONFORM TO ASTM A563, HEX GRADE A, GALVANIZED, U.N.O.
- THREADED ROD SHALL CONFORM TO ASTM F1554 GRADE 36, GALV. U.N.O.
- GALVANIZED HARDWARE SHALL MEET THE REQUIREMENTS OF ASTM A153 AND GALVANIZED STEEL SHAPES SHALL MEET THE REQUIREMENTS OF ASTM A123.
- STAINLESS STEEL BOLTS & THREADED ROD SHALL CONFORM TO ASTM F593 A316.
- STAINLESS STEEL NUTS & WASHERS SHALL CONFORM TO ASTM F594 A316.
- ALL WELDING SHALL BE DONE BY THE SHIELDED ARC PROCESS USING APPROVED ELECTRODES PER AWS SPECIFICATION E70XX (LOW HYDROGEN ELECTRODES). WELDING SHALL CONFORM TO THE LATEST EDITION OF AWS D1.1 AND SHALL BE PERFORMED BY CERTIFIED WELDERS QUALIFIED UNDER THE PROCEDURES CONTAINED THEREIN.
- STRUCTURAL STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER BEFORE FABRICATION.

E. TIMBER

- ALL WOOD MEMBERS SHALL BE DOUGLAS-FIR (DF) GRADE MARKED BY A RECOGNIZED GRADING AGENCY (WCLIB OR WWPA).
- WOOD GRADES:
 DECKING - "SELECT" GRADE
 GUARDRAIL POSTS & RAILS - GRADE No. 1
 JOISTS & STRINGERS - GRADE No. 1
 BRACING - GRADE No. 1
 BLOCKING & STUDS - GRADE No. 1
 TIMBER PILES: MIN. 14" DIA. BUTT - GRADE No. 1
- CUTTING, NOTCHING, OR DRILLING OF BEAMS OR JOISTS SHALL BE PERMITTED ONLY AS DETAILED OR APPROVED BY THE ENGINEER AND/OR PER CBC SECTION 2320.12.4.
- ALL BOLT HEADS AND NUTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS. ALL BOLT HOLES IN WOOD SHALL BE DRILLED 1/32" TO 1/16" DIAMETER LARGER THAN NOMINAL BOLT DIAMETERS. BOLTS BEARING ON CROSS BRACING OR TIMBER PILES SHALL HAVE OVERSIZED MALLEABLE IRON OR Ogee WASHERS.
- BOLTS IN WOOD SHALL NOT BE LESS THAN 7 DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE OF THE MEMBER.
- MOISTURE CONTENT OF WOOD AT TIME OF INSTALLATION SHALL NOT EXCEED 19%.
- LAG SCREWS: PREDRILL WITH A BIT SIZE OF 65% OF THE SHANK DIAMETER FOR THE THREADED PORTION. LEAD HOLES SHALL BE THE SAME LENGTH AND DIAMETER AS THE UNTHREADED PORTION. PROVIDE CUT WASHERS UNDER HEADS WHICH BEAR ON WOOD.
- ALL FRAMING ANCHORS, POST CAPS, BASES, HANGERS, STRAPS, ETC., SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE OR ENGINEER APPROVED EQUAL.
- ALL NAILING SHALL CONFORM TO CBC TABLE 2304.9.1 EXCEPT AS NOTED ON PLANS AND DETAILS.
- PRESERVATIVE PRESSURE TREATED LUMBER SHALL BE TREATED IN ACCORDANCE WITH CURRENT AWPA STANDARDS WITH ACZA, ACA, CCA OR OTHER APPROVED TREATMENT FOR AWPA U1 USE CATEGORY 5 - SALTWATER CONTACT. MINIMUM RETENTION BY ASSAY SHALL BE 0.5 PCF.
- LUMBER SHALL BE FABRICATED TO LENGTH PRIOR TO TREATMENT AS MUCH AS PRACTICABLE. FIELD TREAT CUT ENDS, NOTCHES, BOLT HOLES, ETC. OF ALL P.T. TIMBER WITH PRESERVATIVE, SUCH AS 2% COPPER NAPHTHENATE, ACCORDING TO AWPA M4.
- TIMBER PILES SHALL CONFORM TO ASTM D25.
- PILES SHALL BE DELIVERED TO THE SITE IN SATISFACTORY CONDITION AND STOCKPILED IN DESIGNATED AREA USING PROPER HANDLING EQUIPMENT. ALL PILES DAMAGED DURING TRANSIT OR HANDLING SHALL BE REJECTED. PILES SHALL NOT BE ROLLED OR DRAGGED. PILES SHALL BE COVERED, KEPT DRY & STORED OFF OF THE GROUND.

F. DESIGN CRITERIA

- DESIGN CODES:
 a. 2016 CALIFORNIA BUILDING CODE (CBC)

G. TIDAL INFORMATION

NOAA STATION: 9410580, NEWPORT BEACH, CA
 EPOCH: 1983-2001 DATUM: MLLW
 HAT: HIGHEST ASTRONOMICAL TIDE = 7.18'
 MHHW: MEAN HIGHER-HIGH WATER = 5.41'
 MHW: MEAN HIGH WATER = 4.68'
 MSL: MEAN SEA LEVEL = 2.78'
 MLW: MEAN LOW WATER = 0.92'
 MLLW: MEAN LOWER-LOW WATER = 0
 LAT: LOWEST ASTRONOMICAL TIDE = -1.92'

H. PHASING & PIER CLOSURE REQUIREMENTS

- THE PIER SHALL REMAIN OPEN TO THE PUBLIC DURING CONSTRUCTION WITH THE FOLLOWING EXCEPTIONS:
 - GUARDRAIL REPAIR WORK: ONE SIDE (NORTH OR SOUTH) OF THE PIER MAY BE TEMPORARILY CLOSED TO THE PUBLIC WHILE GUARDRAIL WORK IS ACTIVELY TAKING PLACE. THE WIDTH OF THE CLOSED PIER SECTION SHALL ALLOW A 10' MINIMUM WIDE PUBLIC ACCESS LANE TO THE OUTBOARD END OF THE PIER ON THE SIDE OF THE PIER WHERE WORK IS NOT TAKING PLACE. THE LENGTH OF THE PIER CLOSURE SHALL BE NO LONGER THAN THE LENGTH OF WORK THAT CAN BE COMPLETED IN ONE DAY. THE PIER SHALL BE FULLY OPEN TO THE PUBLIC AT THE END OF EACH WORK DAY.
 - DECK PLANK WORK: THE CONTRACTOR SHALL PROVIDE A 5' MINIMUM WIDE AREA ON ONE SIDE OF THE ACTIVE DECK PLANK WORK TO PROVIDE PUBLIC ACCESS TO THE OUTBOARD SIDE OF THE WORK AREA. WHEN A DECK PLANK IS REMOVED, A TEMPORARY STEEL COVER PLATE SHALL BE USED TO BRIDGE THE OPENING AT THE PEDESTRIAN ACCESS LANE. THE CONTRACTOR SHALL PLAN THE DECK PLANK WORK SUCH THAT EACH DAY'S EFFORT CAN BE COMPLETED BY THE END OF EACH WORK DAY SO THAT ALL DECK PLANKS ARE FASTENED BACK TO THE DECK AND NO BARRICADES OR COVER PLATES ARE NEEDED.
 - TIMBER PILE DRIVING: TEMPORARY FULL WIDTH PIER CLOSURES ARE PERMITTED AS REQUIRED TO POSITION PILE DRIVING EQUIPMENT & INSTALL PILES. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 24 HOURS IN ADVANCE OF ANY FULL WIDTH PIER CLOSURES. THE FULL WIDTH PIER CLOSURE IS ONLY PERMITTED FOR THE LENGTH OF TIME NECESSARY TO MOVE & POSITION EQUIPMENT, SET UP SAFETY BARRICADES AND ACTIVELY OPERATE THE CRANE. THE CONTRACTOR SHALL BARRICADE THE WORK AREA AROUND THE PILE DRIVING CRANE AND THE DECK OPENING AT ALL TIMES. THE PUBLIC SHALL BE BARRICADED A DISTANCE EQUAL TO THE MAXIMUM BOOM REACH FROM THE WORK AREA WHENEVER THE CRANE IS ACTIVELY WORKING (ACTIVE WORK = ANYTIME THE CRANE OPERATOR IS IN THE CAB WITH THE ENGINE RUNNING SUCH THAT THE POTENTIAL EXISTS FOR THE CRANE TO MOVE, BOOM TO MOVE, THE HAMMER IS RUNNING, A PILE IS BEING LIFTED OR IS STATIONARY IN THE CRANE LEEDS. WHENEVER THE CRANE IS NOT ACTIVELY WORKING THE PUBLIC SHALL BE ALLOWED ACCESS PAST THE WORK AREA TO THE OUTBOARD LENGTH OF THE PIER BY MEANS OF A BARRICADED CORRIDOR, MINIMUM 5' CLEAR WIDTH TO SAFELY PASS BY THE CRANE WORK AREA. ALL OPENINGS IN THE PIER DECK SHALL BE COVERED WITH STEEL COVER PLATE AT THE END OF EACH WORK DAY AND THE PIER WIDTH SHALL BE OPEN TO THE PUBLIC, AS SAFE A WIDTH AS PRACTICAL, AT THE END OF EACH WORK DAY.
 - ALL UTILITY WORK THAT INVOLVES INTERRUPTION OF SERVICE TO THE RESTAURANTS SHALL OCCUR BEFORE NOON. NOTIFY THE CITY OF SERVICE INTERRUPTIONS AT LEAST 48 HOURS IN ADVANCE.
 - NO PIER CLOSURES MAY OCCUR DURING SEAFEST ON SUNDAY, OCTOBER 1, 2017. ALL DECK PLANKS MUST BE IN PLACE WITH NO COVER PLATES OR BARRICADES REQUIRED.
- CONTRACTOR SHALL PROVIDE SAFETY FENCES TO CONTROL PUBLIC ACCESS TO ACTIVE WORK AREAS AND OPEN WATER.

100%
 SUBMITTAL
 05-12-2017

NOT FOR CONSTRUCTION

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				



6 HUTTON CENTRE DRIVE
 SUITE 1250
 SANTA ANA, CA 92707
 (714) 708-6890

R E F E R E N C E S

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



STRUCTURAL NOTES
 SAN CLEMENTE MUNICIPAL PIER REPAIR
 Project No. 16811
 CITY OF SAN CLEMENTE

DRAWING NO:
 S-001
 SHEET 3
 OF 33

SPECIAL INSPECTION & STRUCTURAL OBSERVATIONS

ABBREVIATIONS

⊙	AT
A. BOLT	ANCHOR BOLT
APPROX.	APPROXIMATE
ARCH'L	ARCHITECT/ARCHITECTURAL
AWG	AMERICAN WIRE GAUGE
AVG	AVERAGE
BLDG	BUILDING
BLK, BLK'G	BLOCK, BLOCKING
BM	BEAM
BOT.	BOTTOM
BRG.	BEARING
C/C	CENTER TO CENTER
CHK'D	CHECKERED
C.I.P.	CAST-IN-PLACE
C.J.	CONSTRUCTION JOINT
☒	CENTERLINE
CL., CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CP	CATHODIC PROTECTION
DEMO	DEMOLISH & REMOVE
DIA., ∅	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
(E)	EXISTING
EA.	EACH
E.F.	EACH FACE
EL, ELEV.	ELEVATION
ELEC.	ELECTRICAL
EMBED.	EMBEDMENT
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.S.	EACH SIDE
E.W.	EACH WAY
EXIST.	EXISTING
EXP.	EXPANSION
FTG	FOOTING
GA.	GAGE/GAUGE
G.B., GR. BM	GRADE BEAM
GALV.	GALVANIZED
G.S.M.	GALVANIZED SHEET METAL
H, HORIZ.	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
H.D.G.	HOT DIPPED GALVANIZED
HT	HEIGHT
I.D.	INSIDE DIAMETER
KSI	KIPS PER SQUARE INCH
LOC'S	LOCATIONS
MAX.	MAXIMUM
M. BOLT	MACHINE BOLT
MECH., MECH'L	MECHANICAL
MFR	MANUFACTURER
MIN.	MINIMUM
MID.	MIDDLE
ML	MUDLINE
MTL	METAL
(N)	NEW
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPN'G	OPENING
OPP.	OPPOSITE
OPT.	OPTIONAL
☒	PLATE
PE	POLYETHYLENE
PLY., PLYWD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PCF	POUNDS PER CUBIC FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST TENSIONING
P.T.	PRESSURE TREATED
PVC	POLY VINYL CHLORIDE
R&R	REMOVE & REPLACE
REINF.	REINFORCEMENT
REQ'D	REQUIRED
SCHED.	SCHEDULE
SHT	SHEET
S.O.G.	SLAB-ON-GRADE
S.S.	STAINLESS STEEL
STA.	STATION
STD	STANDARD
STL	STEEL
STRUCT.	STRUCTURAL
SQ.	SQUARE
TEMP.	TEMPERATURE, TEMPORARY
THK	THICK
T.O.S.	TOP OF SLAB
TS	TUBE STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
V, VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
W	WIDTH
W/	WITH
WWF	WELDED WIRE FABRIC
W.P.	WORKING POINT
W.P.J.	WEAKENED PLANE JOINT
UHMW	ULTRA HIGH MOLECULAR WEIGHT

A. SPECIAL INSPECTION REQUIREMENTS

- SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17 OF THE 2016 CBC AND CHAPTER N OF AISC 360 FOR FOUNDATION, CONCRETE, AND STEEL CONSTRUCTION.
- REFER TO THE MATERIAL SPECIFIC TABLES FOR ACTIVITY INSPECTION AND FREQUENCY.
- SPECIAL INSPECTIONS SHALL:
 - BE UNDER THE SUPERVISION OF A REGISTERED CIVIL ENGINEER.
 - OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DRAWINGS.
 - FURNISH INSPECTION REPORTS TO THE ENGINEER. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN, IF NOT CORRECTED, TO THE ENGINEER AND CITY ENGINEER.
 - SUBMIT TO THE ENGINEER AND CITY ENGINEER A FINAL REPORT, SIGNED BY A REGISTERED CIVIL ENGINEER, STATING THAT THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CBC.
- SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY THE CITY.
- WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED IN ACCORDANCE WITH THE PROVISIONS OF CBC SECTION 1704, IT IS THE AGENT'S RESPONSIBILITY TO EMPLOY A SUFFICIENT NUMBER OF INSPECTORS TO ASSURE THAT ALL THE WORK IS INSPECTED IN ACCORDANCE WITH THE PROVISIONS.
- SPECIAL INSPECTORS MUST BE CERTIFIED TO PERFORM THE TYPES OF INSPECTION SPECIFIED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY BEFORE PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION.

B. STRUCTURAL OBSERVATIONS

THE OWNER SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATION AND UNDERWATER SPECIAL INSPECTIONS AS DEFINED IN CBC SECTION 1704.

AT CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

STRUCTURAL OBSERVATION SHALL BE PROVIDED FOR PILE CONSTRUCTION.

CONTACT ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE OF PERFORMANCE OF WORK TO BE OBSERVED.

- OBSERVE UNDERWATER REPAIRS OF STEEL PILING

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
1. VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS.	X	---
2. OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH PILE.	X	---
3. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY DAMAGE TO PILE.	X	---

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECTION OF BARS AND ANCHORS TO BE INSTALLED IN CONCRETE PRIOR TO PLACEMENT OF CONCRETE.	X	---	ACI 318: 8.1.3, 21.2.8	1908.5, 1909.1
2. VERIFYING USE OF REQUIRED DESIGN MIX.	---	X	ACI 318: Ch.4, 5.2-5.4	1904.2, 1910.2, 1910.3
3. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	---	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1910.10
4. INSPECTION OF ABOVE WATER CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	---	ACI 318: 5.9, 5.10	1910.6, 1910.7, 1910.8
5. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	---	X	ACI 318: 6.1.1	---

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. MATERIAL VERIFICATION OF STRUCTURAL STEEL:				
a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360.	---	X	AISC 360, SECTION N	---
b. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	---	X	APPLICABLE ASTM MATERIAL STANDARDS	---
c. MANUFACTURER'S CERTIFIED MILL TEST REPORTS	---	X	---	---
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS				
a. IDENTIFICATION MARKING TO CONFORM TO AWS SPECIFICATION	---	X	AISC 360, SECTION A3.5 & APPLICABLE AWS A5 DOCUMENTS	---
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE	---	X	---	---
5. INSPECTION OF FIELD WELDING:				
a. STRUCTURAL STEEL:				
1. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	X	---	AWS D1.1	1705.2
2. MULTIPASS FILLET WELDS	X	---		
3. SINGLE-PASS WELDS > $\frac{5}{16}$ "	X	---		
4. PLUG & SLOT WELDS	X	---		
5. SINGLE-PASS WELDS < $\frac{5}{16}$ "	---	X		

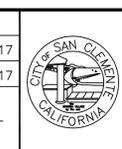
100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				

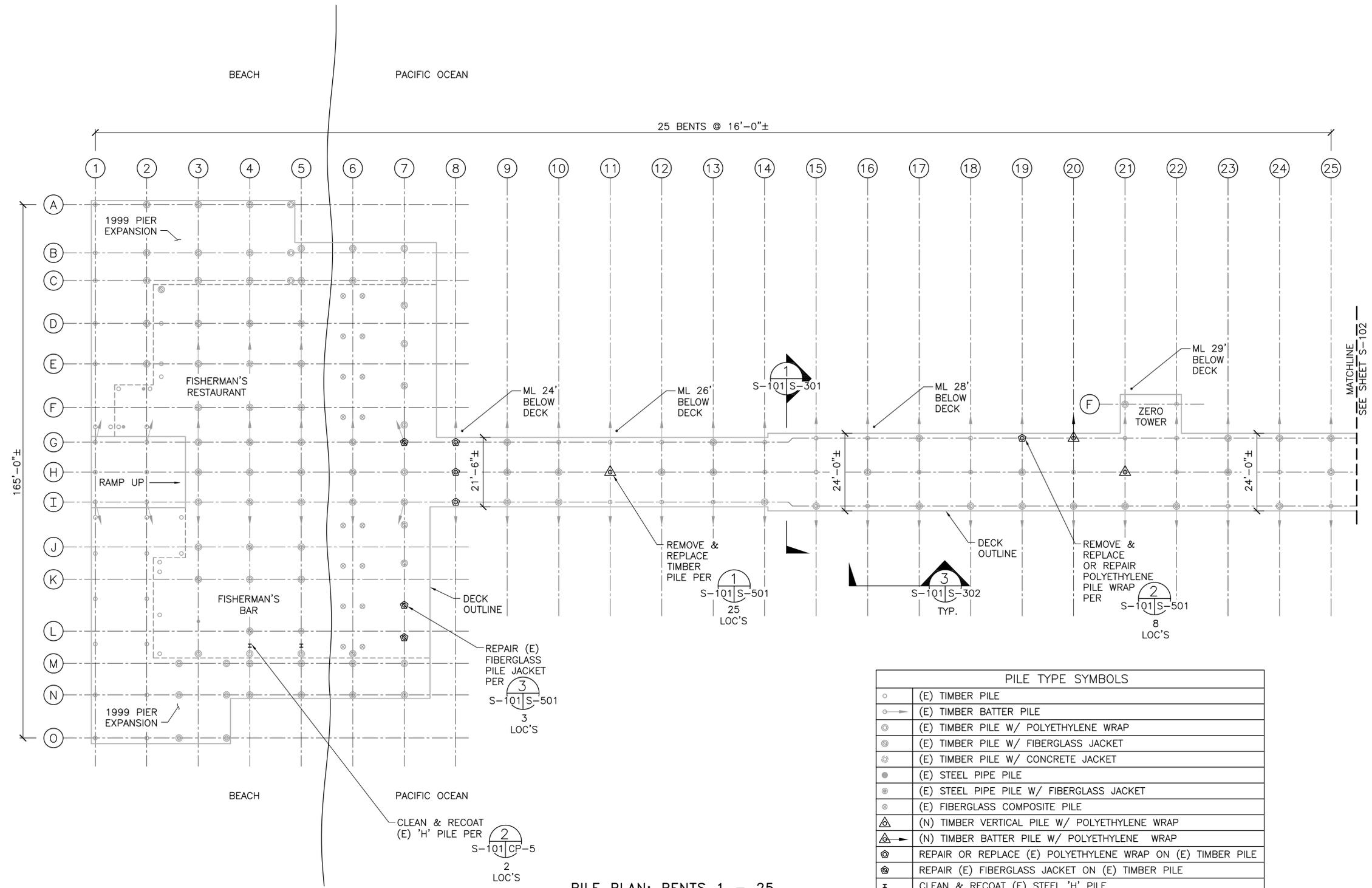
REFERENCES	
	6 HUTTON CENTRE DRIVE SUITE 1250 SANTA ANA, CA 92707 (714) 708-6890

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



SPECIAL INSPECTION SAN CLEMENTE MUNICIPAL PIER REPAIR Project No. 16811 CITY OF SAN CLEMENTE

DRAWING NO: S-002
SHEET 4
OF 33



PILE PLAN: BENTS 1 - 25
SCALE: 1/16" = 1'-0"

PILE TYPE SYMBOLS	
○	(E) TIMBER PILE
◐	(E) TIMBER BATTER PILE
⊙	(E) TIMBER PILE W/ POLYETHYLENE WRAP
⊗	(E) TIMBER PILE W/ FIBERGLASS JACKET
⊕	(E) TIMBER PILE W/ CONCRETE JACKET
●	(E) STEEL PIPE PILE
⊗	(E) STEEL PIPE PILE W/ FIBERGLASS JACKET
⊙	(E) FIBERGLASS COMPOSITE PILE
△	(N) TIMBER VERTICAL PILE W/ POLYETHYLENE WRAP
△	(N) TIMBER BATTER PILE W/ POLYETHYLENE WRAP
⊙	REPAIR OR REPLACE (E) POLYETHYLENE WRAP ON (E) TIMBER PILE
⊗	REPAIR (E) FIBERGLASS JACKET ON (E) TIMBER PILE
±	CLEAN & RECOAT (E) STEEL 'H' PILE

ML = MUDLINE
CP = CATHODIC PROTECTION



100%
SUBMITTAL
05-12-2017
NOT FOR CONSTRUCTION



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES

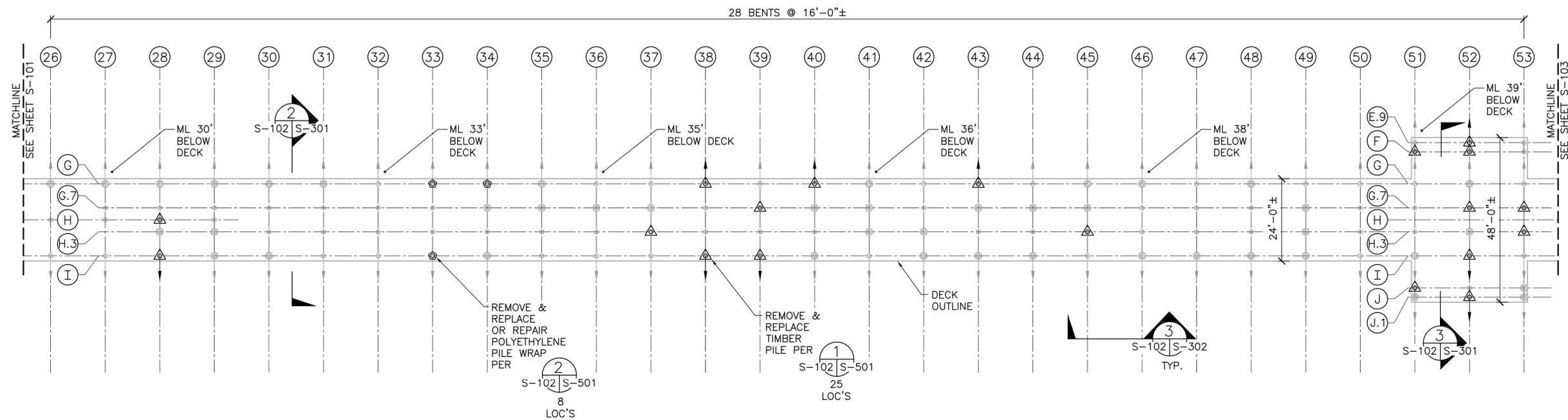
ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



PILE PLAN: BENTS 1 - 25
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	S-101
SHEET	5
OF	33

SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811



PILE TYPE SYMBOLS	
○	(E) TIMBER PILE
○→	(E) TIMBER BATTER PILE
⊙	(E) TIMBER PILE W/ POLYETHYLENE WRAP
⊗	(E) TIMBER PILE W/ FIBERGLASS JACKET
⊛	(E) TIMBER PILE W/ CONCRETE JACKET
△	(N) TIMBER VERTICAL PILE W/ POLYETHYLENE WRAP
△→	(N) TIMBER BATTER PILE W/ POLYETHYLENE WRAP
⊙	REPAIR OR REPLACE (E) POLYETHYLENE WRAP ON (E) TIMBER PILE

ML = MUDLINE

PILE PLAN: BENTS 26 - 53

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



100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

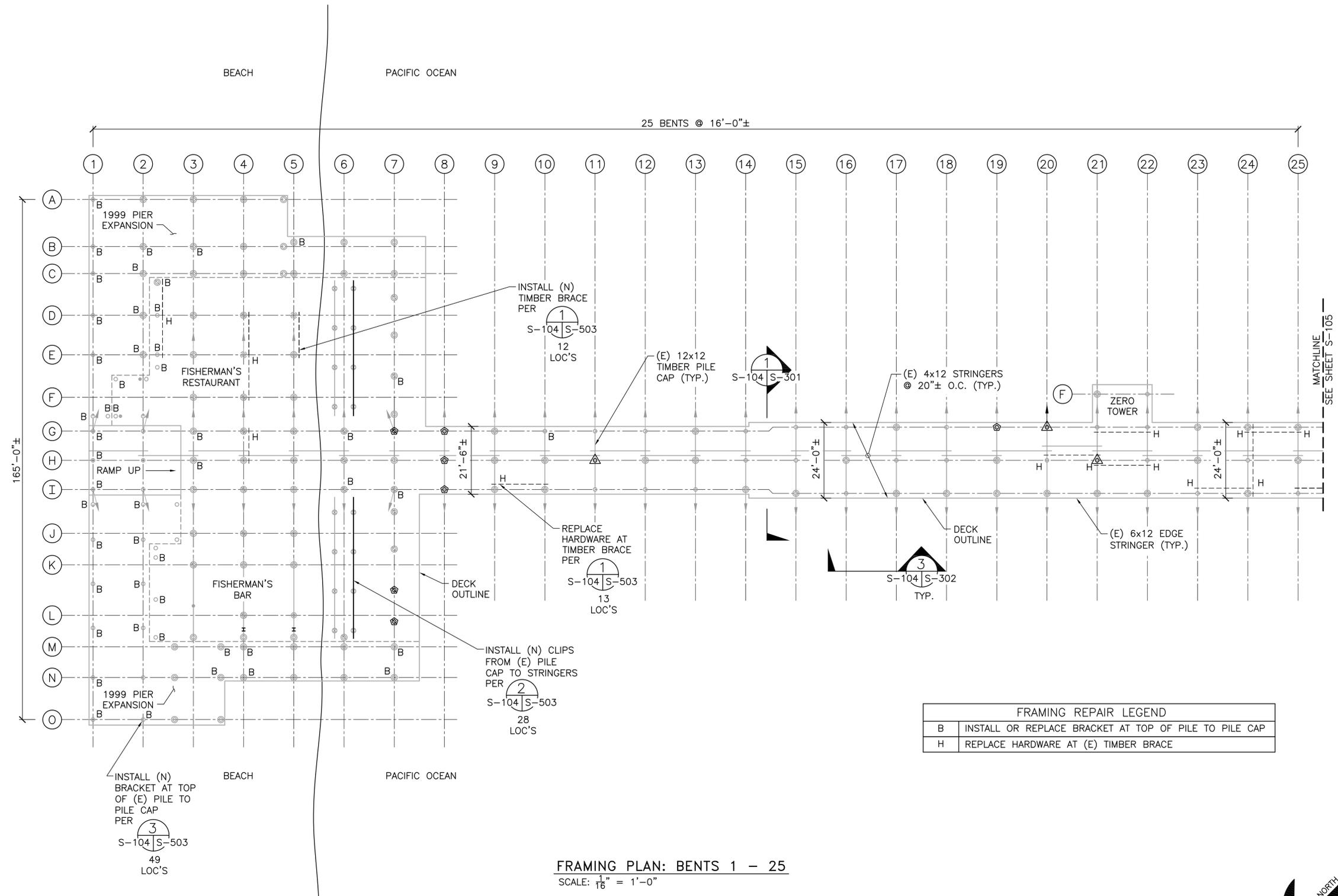
R E F E R E N C E S

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



PILE PLAN: BENTS 26 - 53
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	S-102
SHEET	6
OF	33



FRAMING REPAIR LEGEND	
B	INSTALL OR REPLACE BRACKET AT TOP OF PILE TO PILE CAP
H	REPLACE HARDWARE AT (E) TIMBER BRACE

FRAMING PLAN: BENTS 1 - 25
SCALE: 1/16" = 1'-0"



100% SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

R E F E R E N C E S

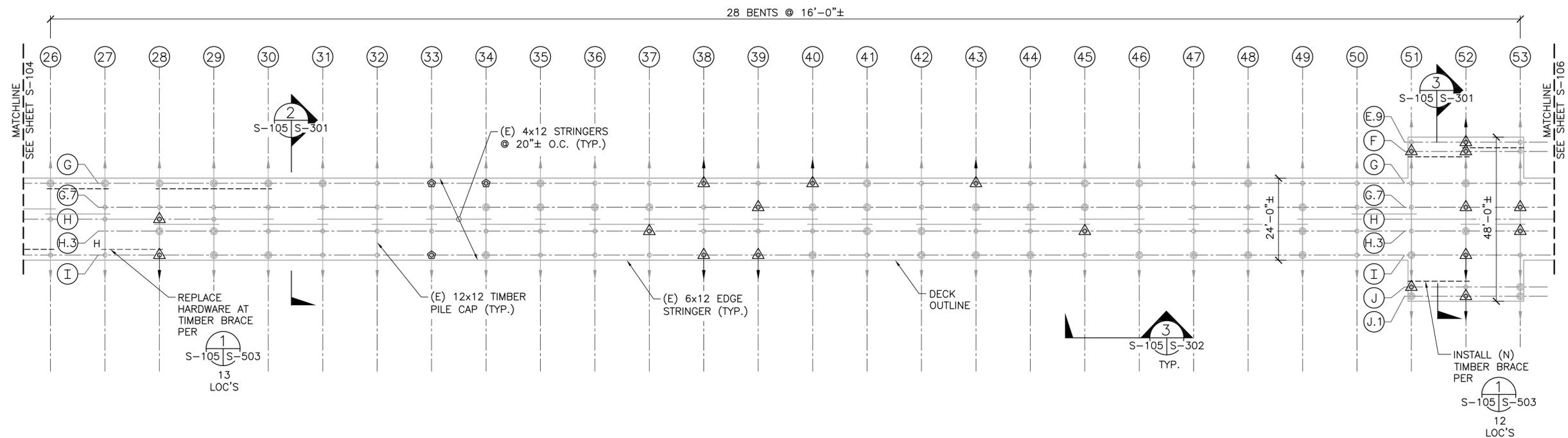
ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	DATE: 5/12/17
APPROVED:	DATE:
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	



FRAMING PLAN: BENTS 1 - 25
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	S-104
SHEET	8
OF	33

SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811



FRAMING REPAIR LEGEND	
B	INSTALL OR REPLACE BRACKET AT TOP OF PILE TO PILE CAP
H	REPLACE HARDWARE AT (E) TIMBER BRACE

FRAMING PLAN: BENTS 26 - 53
SCALE: 1/16" = 1'-0"



100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

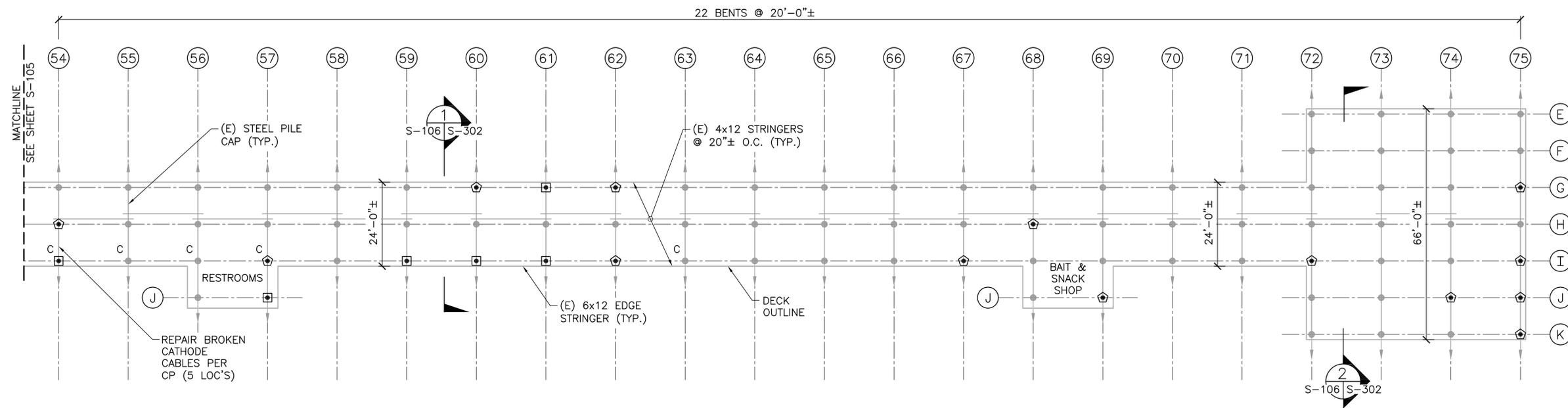
REFERENCES

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



FRAMING PLAN: BENTS 26 - 53
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	S-105
SHEET	9
OF	33



FRAMING REPAIR LEGEND	
B	INSTALL OR REPLACE BRACKET AT TOP OF PILE TO PILE CAP
C	REPAIR BROKEN CATHODE CABLES AT PILE CAPS
H	REPLACE HARDWARE AT (E) TIMBER BRACE

CP = CATHODIC PROTECTION

FRAMING PLAN: BENTS 54 - 75
SCALE: 1/16" = 1'-0"



100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE	DESCRIPTION	BY	APP'VD
REVISIONS				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

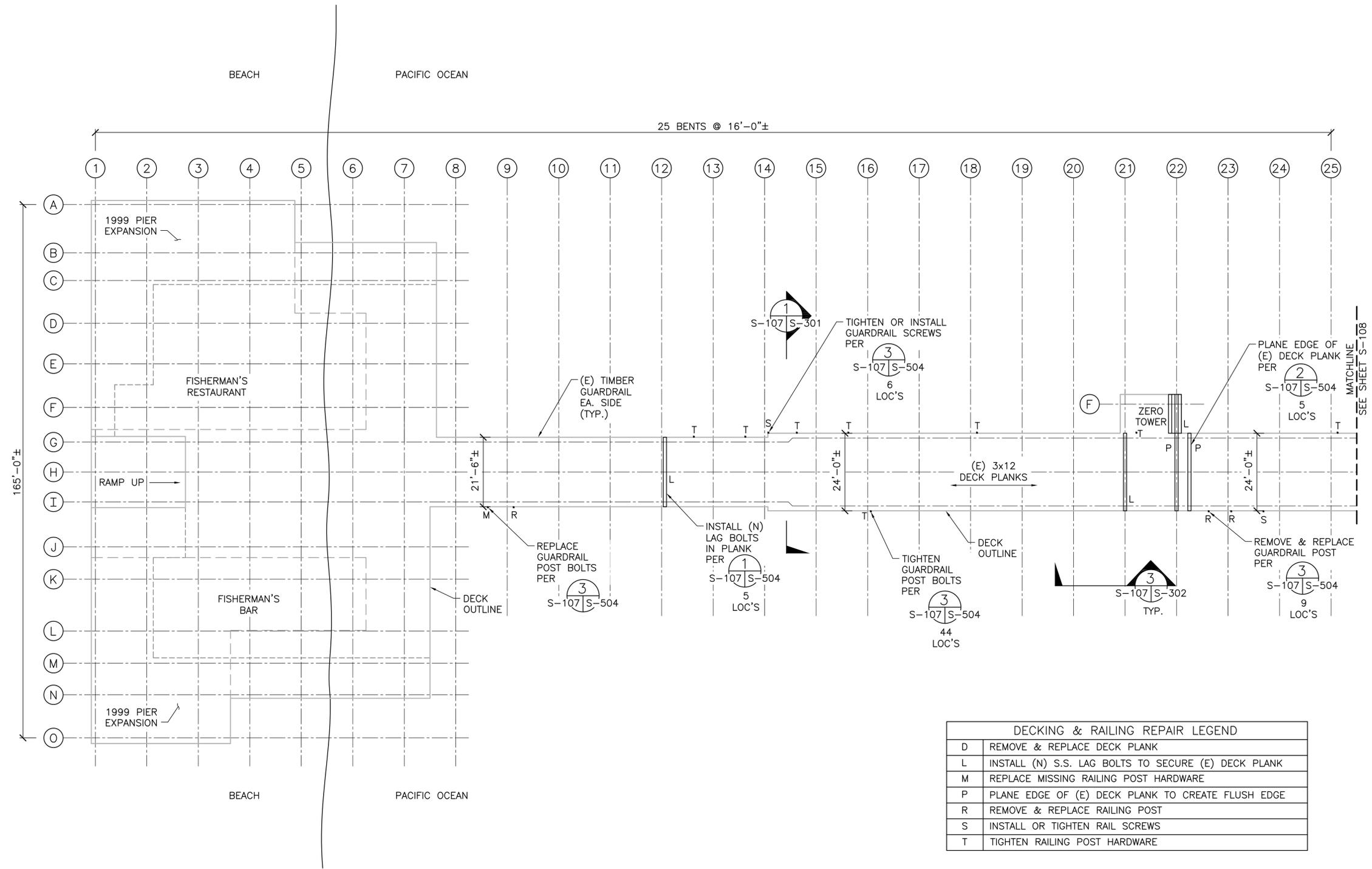
REFERENCES

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



FRAMING PLAN: BENTS 54 - 75
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	S-106
SHEET	10
OF	33



DECKING & RAILING REPAIR LEGEND	
D	REMOVE & REPLACE DECK PLANK
L	INSTALL (N) S.S. LAG BOLTS TO SECURE (E) DECK PLANK
M	REPLACE MISSING RAILING POST HARDWARE
P	PLANE EDGE OF (E) DECK PLANK TO CREATE FLUSH EDGE
R	REMOVE & REPLACE RAILING POST
S	INSTALL OR TIGHTEN RAIL SCREWS
T	TIGHTEN RAILING POST HARDWARE

DECK PLAN: BENTS 1 - 25
SCALE: 1/16" = 1'-0"



100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



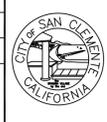
REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES

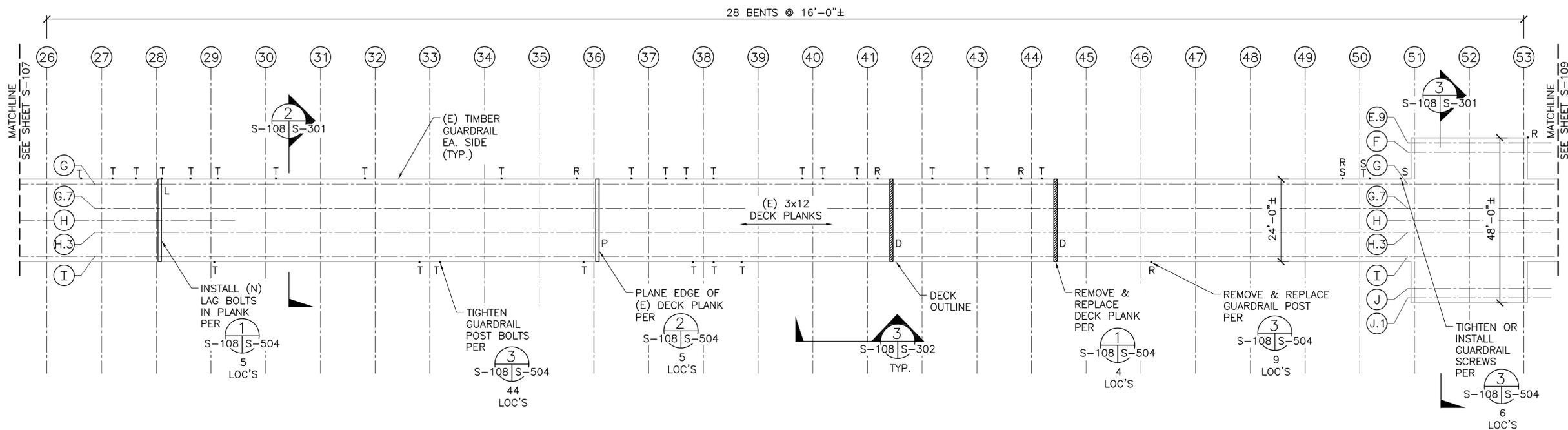
ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



DECK PLAN: BENTS 1 - 25
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	S-107
SHEET	11
OF	33

SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811



DECKING & RAILING REPAIR LEGEND	
D	REMOVE & REPLACE DECK PLANK
L	INSTALL (N) S.S. LAG BOLTS TO SECURE (E) DECK PLANK
M	REPLACE MISSING RAILING POST HARDWARE
P	PLANE EDGE OF (E) DECK PLANK TO CREATE FLUSH EDGE
R	REMOVE & REPLACE RAILING POST
S	INSTALL OR TIGHTEN RAIL SCREWS
T	TIGHTEN RAILING POST HARDWARE

DECK PLAN: BENTS 26 - 53
SCALE: 1/16" = 1'-0"



100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE	DESCRIPTION	BY	APP'VD
REVISIONS				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

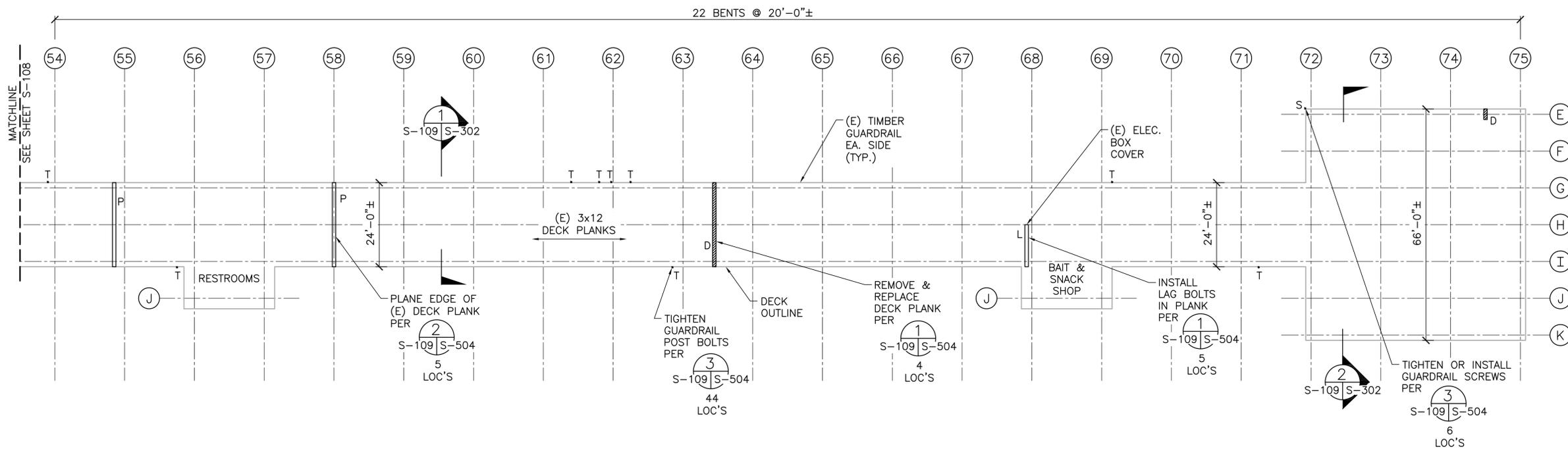
REFERENCES

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	DATE:
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	



DECK PLAN: BENTS 26 - 53
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	S-108
SHEET	12
OF	33



DECKING & RAILING REPAIR LEGEND	
D	REMOVE & REPLACE DECK PLANK
L	INSTALL (N) S.S. LAG BOLTS TO SECURE (E) DECK PLANK
M	REPLACE MISSING RAILING POST HARDWARE
P	PLANE EDGE OF (E) DECK PLANK TO CREATE FLUSH EDGE
R	REMOVE & REPLACE RAILING POST
S	INSTALL OR TIGHTEN RAIL SCREWS
T	TIGHTEN RAILING POST HARDWARE

DECK PLAN: BENTS 54 - 75
SCALE: 1/16" = 1'-0"



100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

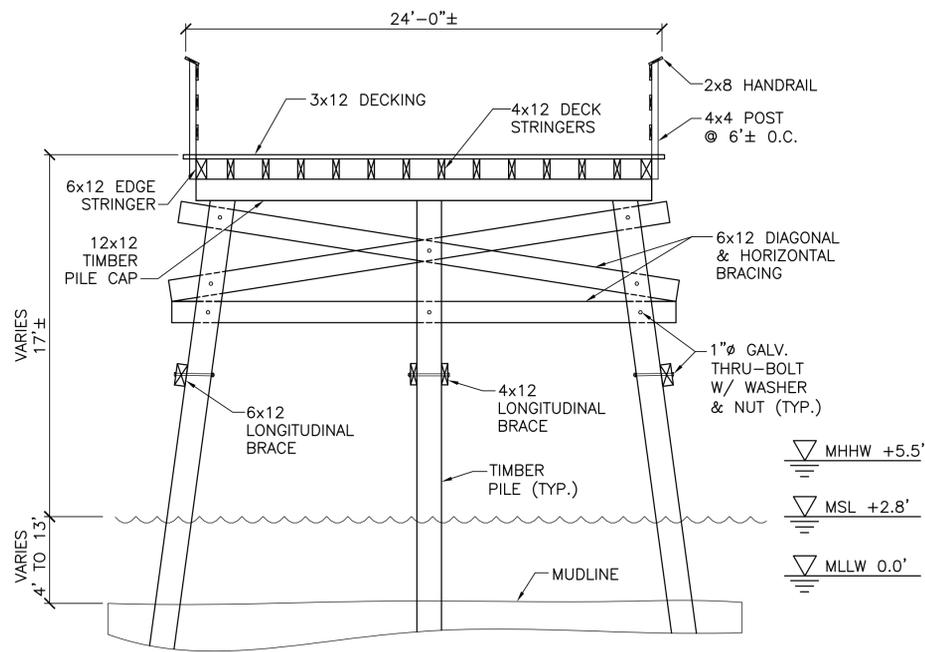
R E F E R E N C E S

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE

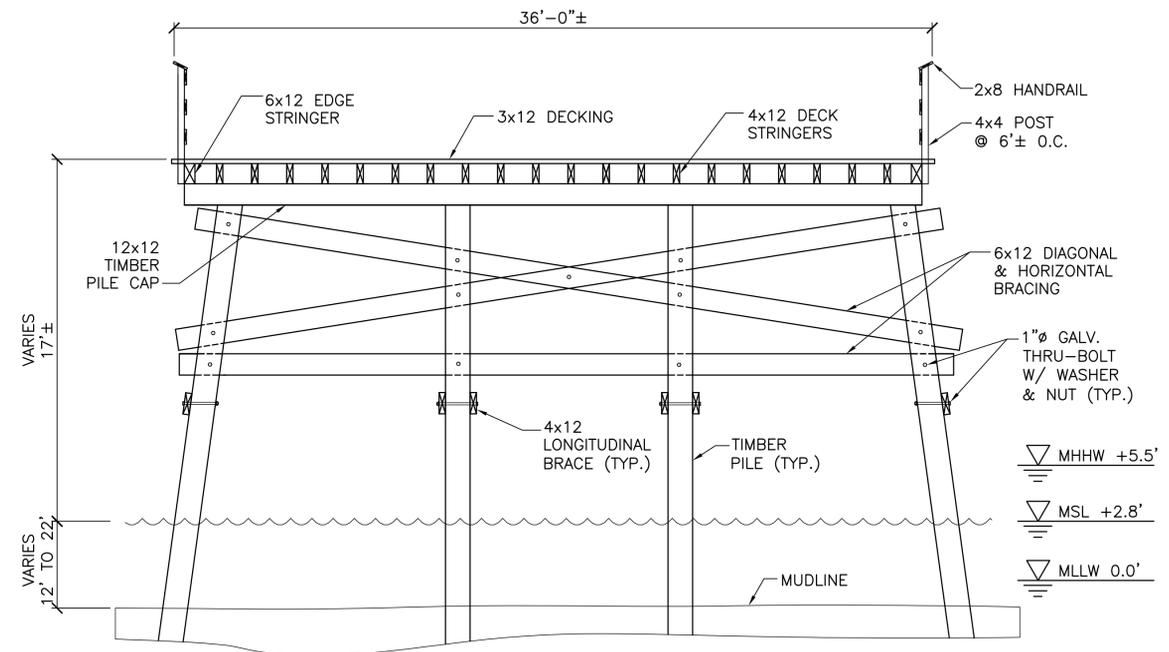


DECK PLAN: BENTS 54 - 75
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

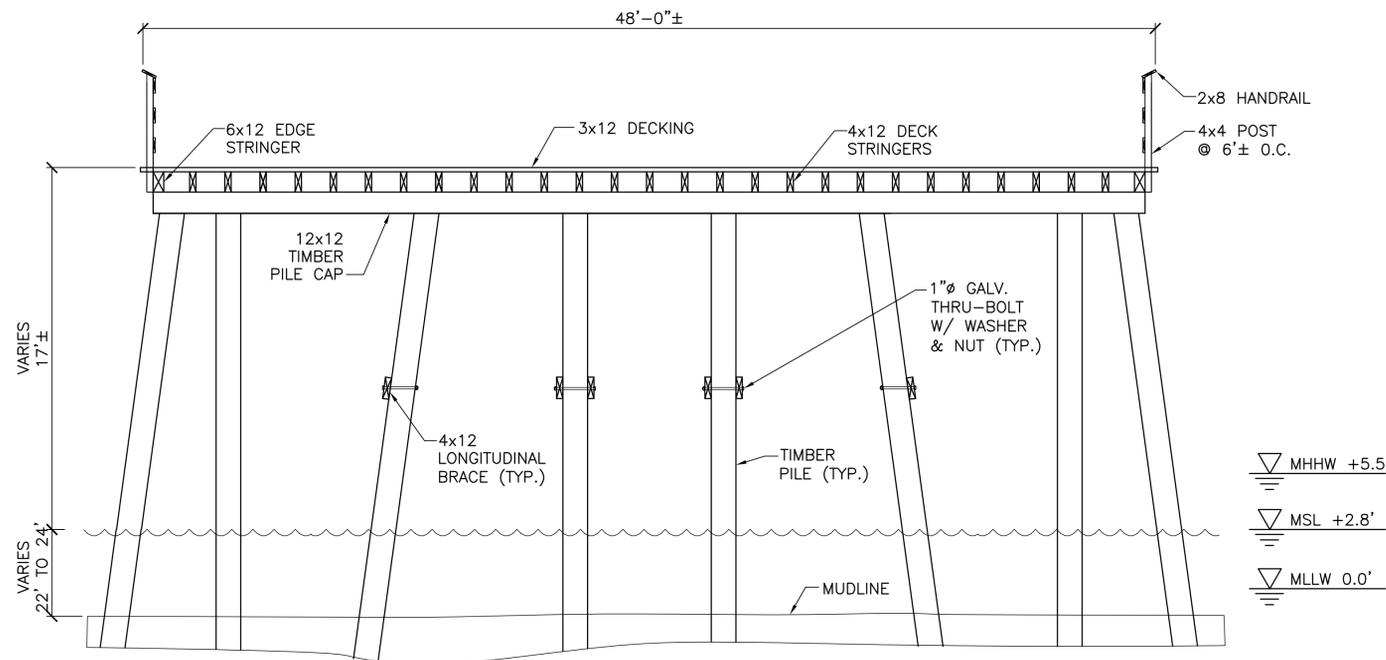
DRAWING NO:	S-109
SHEET	13
OF	33



TYPICAL TIMBER PILE BENT TRANSVERSE SECTION - 3 PILES 1
 SCALE: 1/4" = 1'-0" S-101,S-104,S-107 | S-301



TYPICAL TIMBER PILE BENT TRANSVERSE SECTION - 4 PILES 2
 SCALE: 1/4" = 1'-0" S-102,S-105,S-108 | S-301



TYPICAL TIMBER PILE BENT TRANSVERSE SECTION - 8 PILES 3
 SCALE: 1/4" = 1'-0" S-102,S-105,S-108 | S-301

NOTE: EXACT TIMBER COMPONENT CONFIGURATIONS VARY BY LOCATION

100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				



6 HUTTON CENTRE DRIVE
 SUITE 1250
 SANTA ANA, CA 92707
 (714) 708-6890

REFERENCES

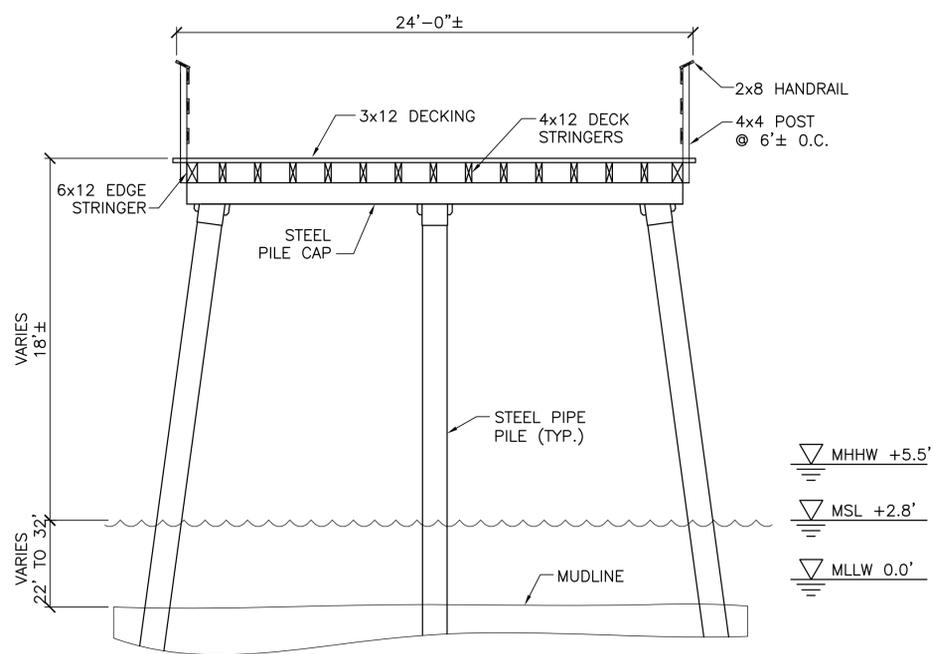
ENGINEERING SCALE: AS SHOWN		DATE:
DRAWN BY: ESN	DESIGNED BY: ESN	5/12/17
CHECKED BY: CDD		5/12/17
APPROVED:		DATE:
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR		



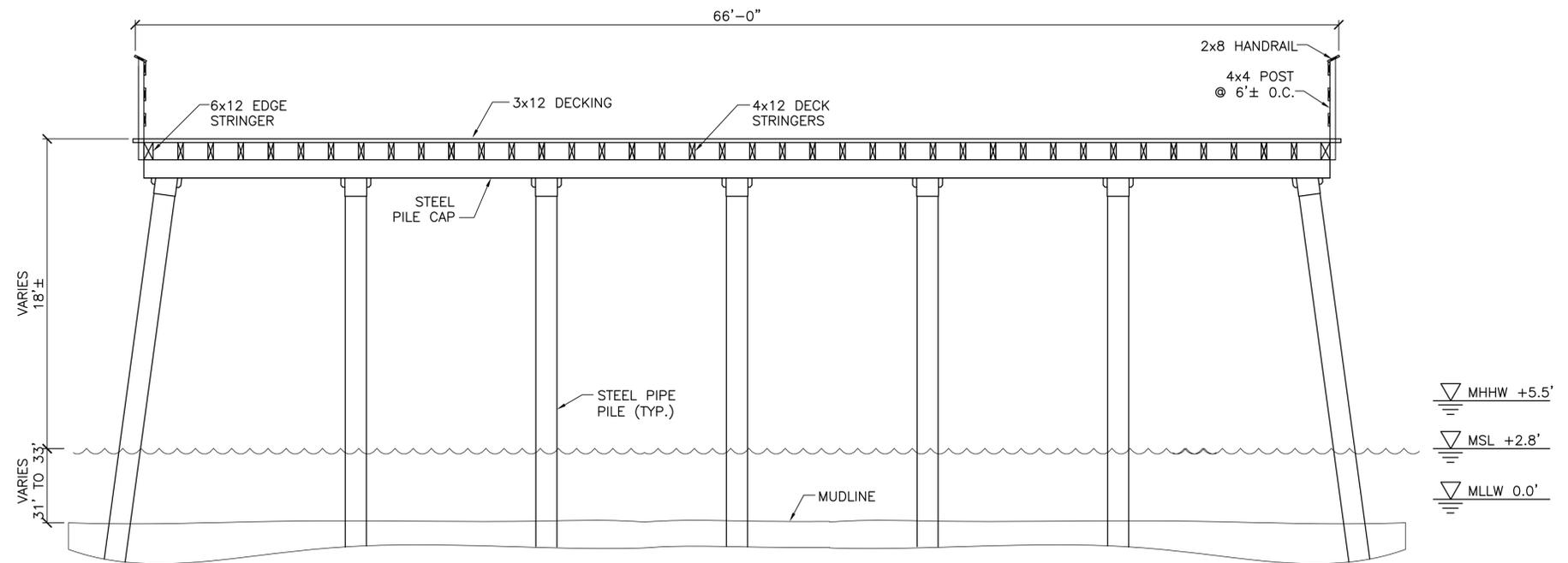
TYPICAL PIER SECTIONS
 SAN CLEMENTE MUNICIPAL PIER REPAIR
 Project No. 16811
 CITY OF SAN CLEMENTE

DRAWING NO:	S-301
SHEET	14
OF	33

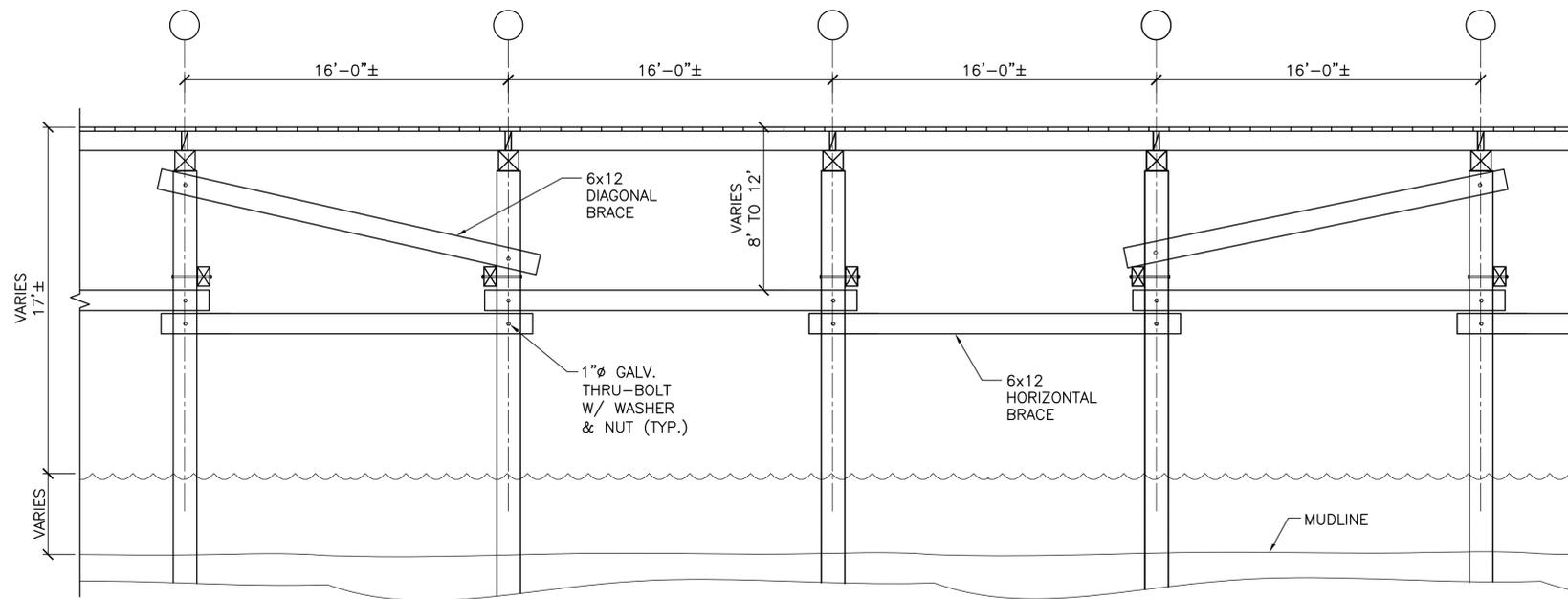
SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811



TYPICAL STEEL PILE BENT TRANSVERSE SECTION - 3 PILES (1)
 SCALE: 1/4" = 1'-0" S-103,S-106,S-109 | S-302

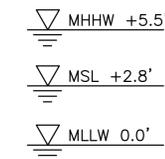


TYPICAL STEEL PILE BENT TRANSVERSE SECTION - 7 PILES (2)
 SCALE: 1/4" = 1'-0" S-103,S-106,S-109 | S-302



TYPICAL TIMBER PILE BENT LONGITUDINAL SECTION (3)
 SCALE: 1/4" = 1'-0" S-101,S-105,S-108 | S-302

NOTE: EXACT TIMBER COMPONENT CONFIGURATIONS VARY BY LOCATION



100% SUBMITTAL
 05-12-2017

NOT FOR CONSTRUCTION



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				



6 HUTTON CENTRE DRIVE
 SUITE 1250
 SANTA ANA, CA 92707
 (714) 708-6890

REFERENCES

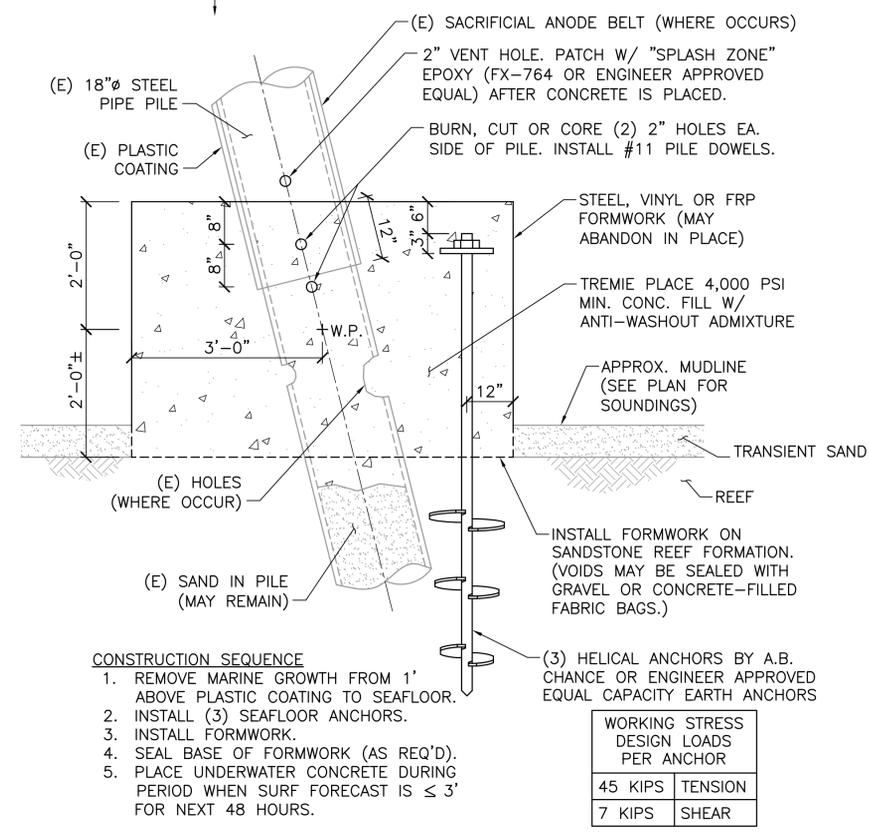
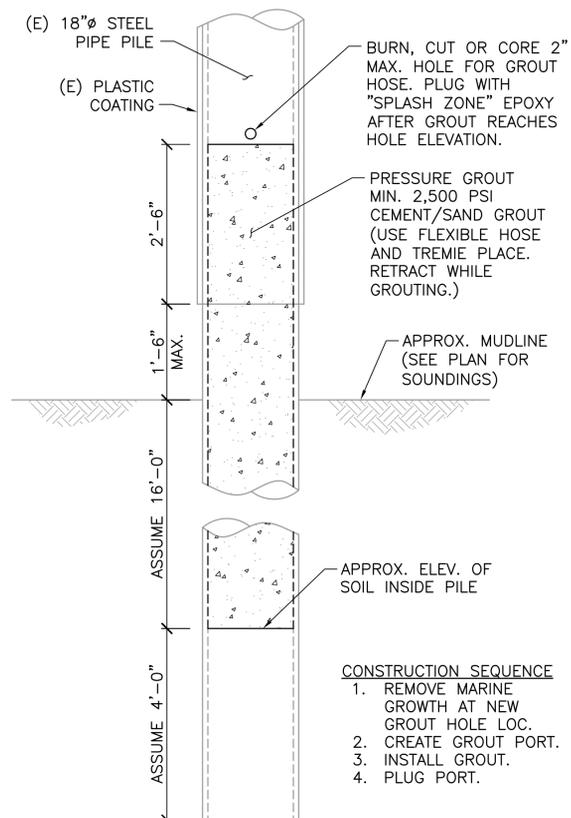
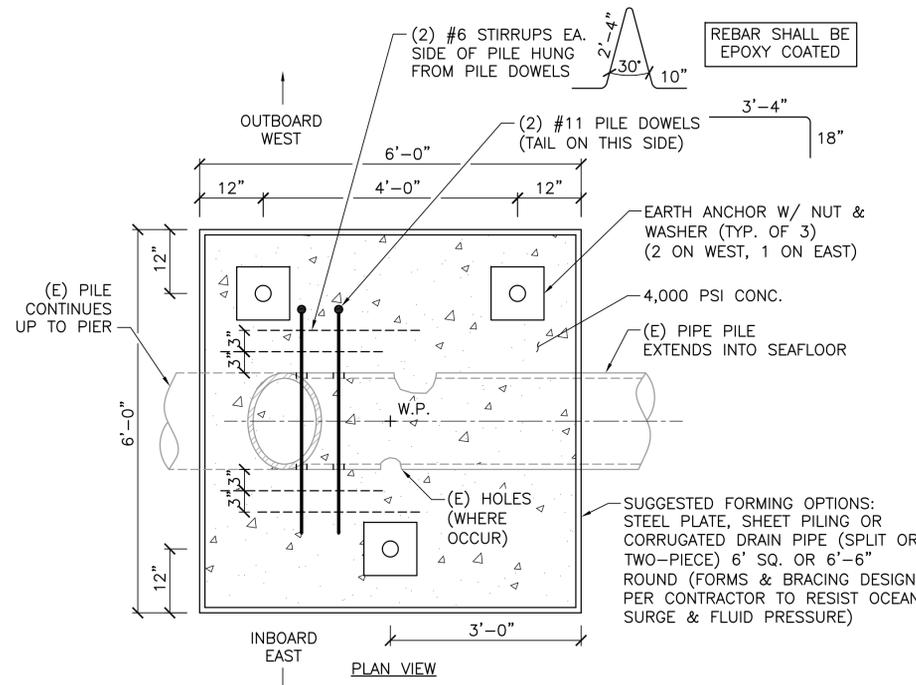
ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



TYPICAL PIER SECTIONS
 SAN CLEMENTE MUNICIPAL PIER REPAIR
 Project No. 16811
 CITY OF SAN CLEMENTE

DRAWING NO:	S-302
SHEET	15
OF	33

PIPE PILE REPAIRS		
No.	LOCATION	TYPE
1	54:I	PEDESTAL
2	57:J	PEDESTAL
3	59:I	PEDESTAL
4	60:I	PEDESTAL
5	61:G	CONC. FILL
6	61:I	CONC. FILL



CONCRETE FILL DETAIL

CONCRETE PEDESTAL DETAIL

STEEL PIPE PILE REPAIR DETAIL
SCALE: 3/8" = 1'-0"

100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

R E F E R E N C E S

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



STEEL PILE REPAIR DETAILS
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

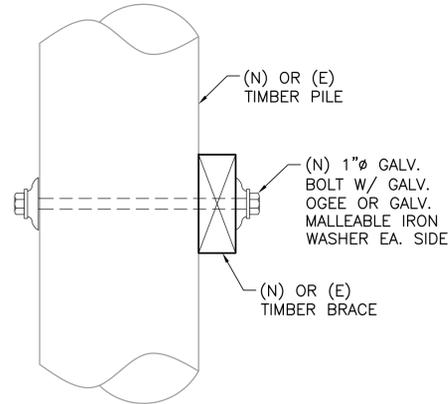
DRAWING NO:	S-502
SHEET	17
OF	33

SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811

REPLACE BRACING HARDWARE				
No.	LOCATION	TYPE	DIRECTION	DESCRIPTION
1	2.2:D	DIAG.	TRANSVERSE	REPLACE BOLT, NUT, WASHERS & BLOCK
2	4:E	HORIZ.	TRANSVERSE	REPLACE BOLT, NUT & WASHERS
3	4:G	HORIZ.	TRANSVERSE	REPLACE BOLT, NUT & WASHERS
4	9:I	HORIZ.	LONGITUDINAL	REPLACE BOLT, NUT & WASHERS
5	20:H	HORIZ.	LONGITUDINAL	REPLACE BOLT, NUT & WASHERS
6	21:H	HORIZ.	LONGITUDINAL	REPLACE BOLT, NUT & WASHERS
7	22:G	HORIZ.	LONGITUDINAL	REPLACE BOLT, NUT & WASHERS
8	22:H	HORIZ.	LONGITUDINAL	REPLACE BOLT, NUT & WASHERS
9	23:I	HORIZ.	LONGITUDINAL	REPLACE BOLT, NUT & WASHERS
10	24:G	HORIZ.	LONGITUDINAL	REPLACE BOLT, NUT & WASHERS
11	24:I	HORIZ.	TRANSVERSE	REPLACE BOLT, NUT & WASHERS
12	25:G	HORIZ.	LONGITUDINAL	TIGHTEN BOLT
13	27:I	HORIZ.	LONGITUDINAL	TIGHTEN BOLT

NEW TIMBER BRACING				
No.	LOCATION	TYPE	DIRECTION	
1	2.2:C.2-2.2:D	DIAG.*	TRANSVERSE	
2	4:D-4:E	HORIZ.	TRANSVERSE	
3	5:D-5:E	HORIZ.	TRANSVERSE	
4	26:G-27:G	HORIZ.	LONGITUDINAL	
5	28:G-29:G	HORIZ.	LONGITUDINAL	
6	29:G-30:G	HORIZ.	LONGITUDINAL	
7	51:F-52:F	HORIZ.	LONGITUDINAL	
8	51:J-52:J	DIAG.*	LONGITUDINAL	
9	52:F-53:F	DIAG.*	LONGITUDINAL	
10	T.B.D.			
11	T.B.D.			
12	T.B.D.			

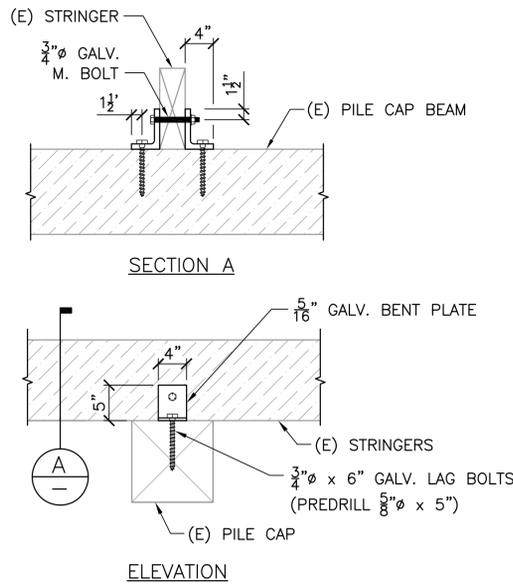
*LOW END IS LISTED FIRST



NOTE: LOCATION OF BRACING MARKED T.B.D. WILL BE DETERMINED BY THE CITY PRIOR TO 10/1/17.

TIMBER BRACE DETAIL 1
SCALE: 1 1/2" = 1'-0" S-104,S-105 | S-503

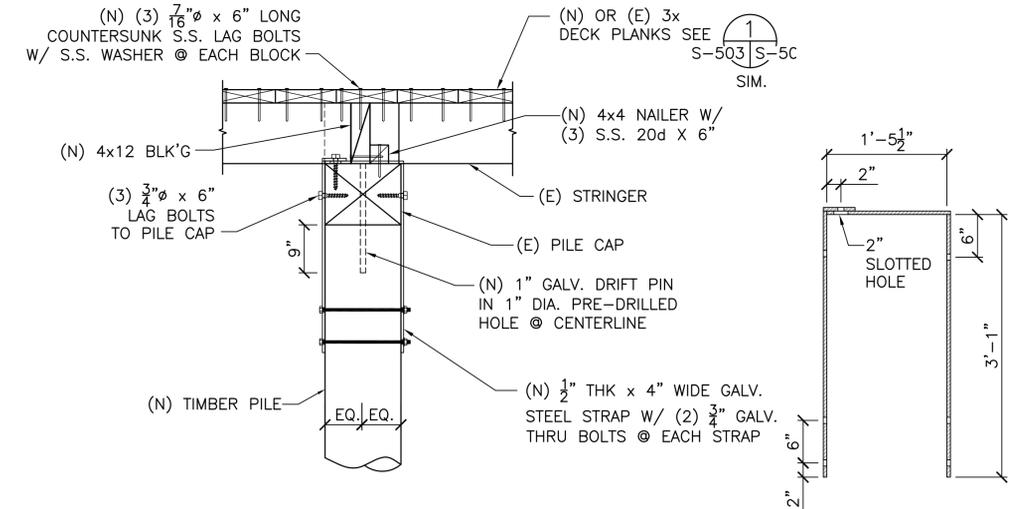
INSTALL 1 PAIR OF CLIPS AT EVERY OTHER STRINGER 32"± O.C. ON BENT 6 FROM PILES C TO G AND PILES T TO M (28 TOTAL).



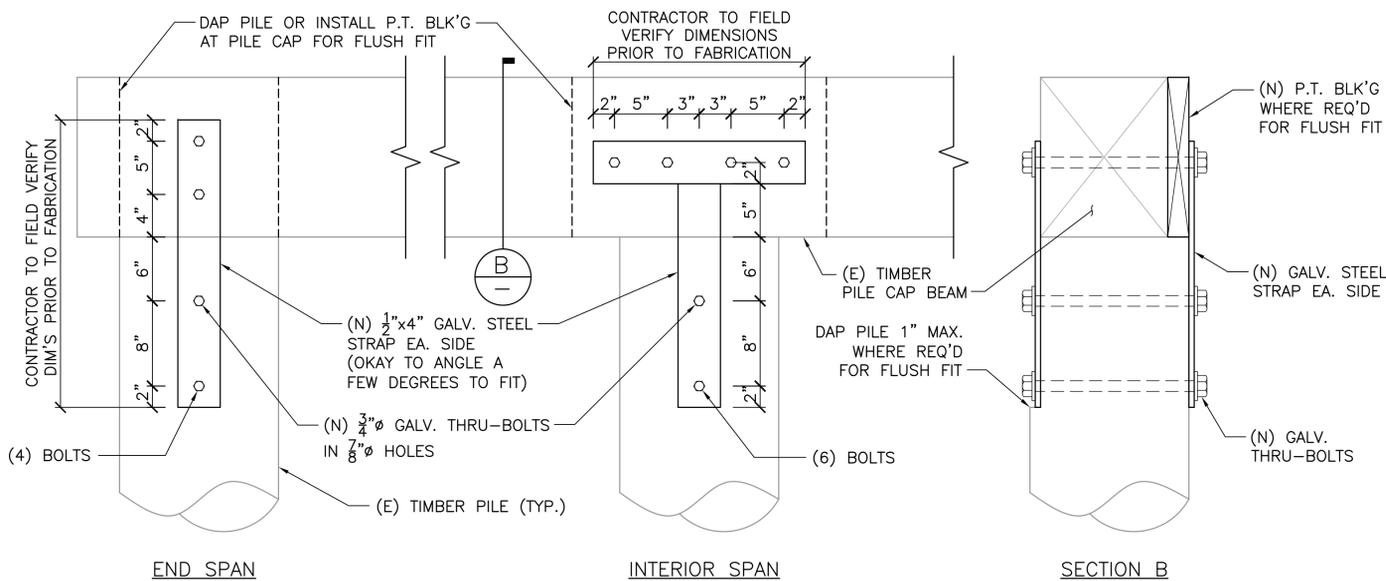
STRINGER CLIPS 2
SCALE: 1" = 1'-0" S-104 | S-503

NOTES:

1. PROVIDE 1" DIA. DRIFT PIN THROUGH EACH STRINGER INTO PILE CAP (TYP.)
2. PROVIDE 4x12 SOLID BLOCKING AS SHOWN.
3. CUT PILE TOPS TO MAINTAIN DECK LEVEL.
4. FIELD TREAT ALL CUT OR TRIMMED WOOD SURFACES.
5. TEMP. REMOVE & REINSTALL FULL LENGTH DECK PLANKS AS REQ'D TO DRIVE (N) PILES.
6. DO NOT CUT LENGTH OF PLANKS.
7. REINSTALL PLANKS WITH S.S. LAG BOLTS.



TIMBER PILE CAP CONNECTION 4
SCALE: 3/4" = 1'-0" S-501 | S-503



PILE CAP BRACKETS 3
SCALE: 1 1/2" = 1'-0" S-104,S-105 | S-503

PILE CAP BRACKETS								
No.	LOCATION	TYPE	No.	LOCATION	TYPE	No.	LOCATION	TYPE
1	1:A	NEW	17	1.5:E.5	NEW	34	2.2:L.8	R&R
2	1:B	NEW	18	1.5:F.5	NEW	35	3:B	NEW
3	1:C	NEW	19	2:B	NEW	36	3:G	NEW
4	1:D	NEW	20	2:C	NEW	37	3:H	NEW
5	1:E	NEW	21	2:D	NEW	38	3.5:M	NEW
6	1:F.5	NEW	22	2:E	NEW	39	3.5:N	NEW
7	1:G	NEW	23	2:I	NEW	40	4:M	NEW
8	1:H	NEW	24	2:J	NEW	41	4:N	NEW
9	1:I	NEW	25	2:K.5	NEW	42	5:B	NEW
10	1:I.2	NEW	26	2:L.5	NEW	43	6:G	NEW
11	1:J	NEW	27	2:O	NEW	44	6:I	NEW
12	1:K.5	NEW	28	2.2:C.2*	R&R	45	7:E.5	NEW
13	1:L.5	NEW	29	2.2:D	R&R	46	7:I	NEW
14	1:N	NEW	30	2.2:E	R&R	47	7:M	NEW
15	1:O	NEW	31	2.2:E.4	R&R	48	7:N	NEW
16	1.4:F.5	NEW	32	2.2:K	R&R	49	10:G	NEW
17	1.5:E.5	NEW	33	2.2:K.7	R&R			

*TOP OF PILE HAS SHIFTED 1"± Laterally - MAINTAIN CURRENT PILE POSITION (BRACE PILE Laterally DURING BRACKET INSTALLATION)

R&R = REMOVE & REPLACE

NOTES:

1. REMOVE EXISTING STRAPS (WHERE OCCURS).
2. RELOCATE EXISTING ELECTRICAL CONDUIT & WATER PIPES (WHERE OCCUR).
3. REMOVE & REINSTALL BRACE AS REQUIRED TO INSTALL BRACKETS.

100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				



6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

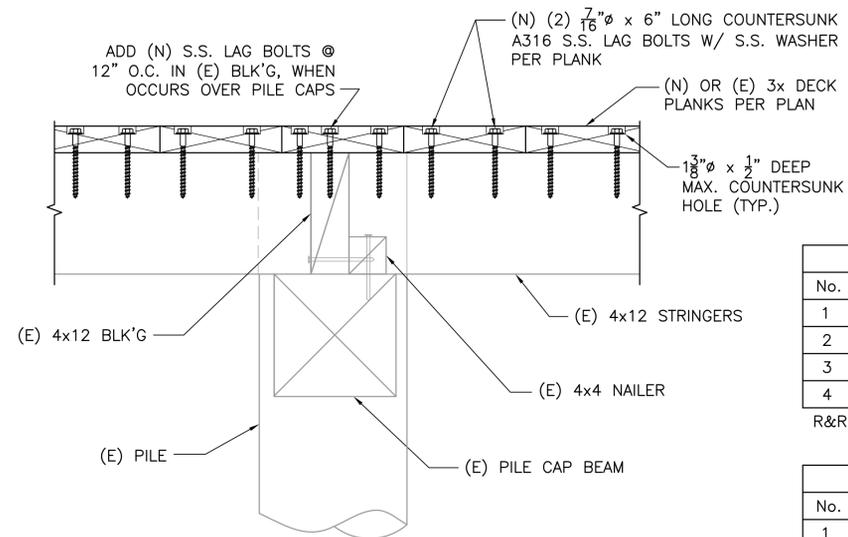
REFERENCES

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE



FRAMING REPAIR DETAILS
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	S-503
SHEET	18
OF	33



BOLT HOLES MUST BE FIELD DRILLED. DO NOT OVERDRILL COUNTERSUNK HOLES.

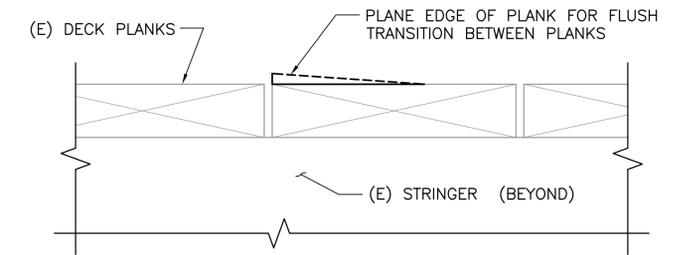
NOTES:
 1. FIELD TREAT ALL CUTS, COUNTERSUNK HOLES & TRIMMED WOOD SURFACES.
 2. PREDRILL REQUIRED FOR LAG BOLTS.

DECK PLANK CONNECTION DETAIL (1)
 SCALE: 1 1/2" = 1'-0" S-503,S-107,S-108,S-109 | S-504

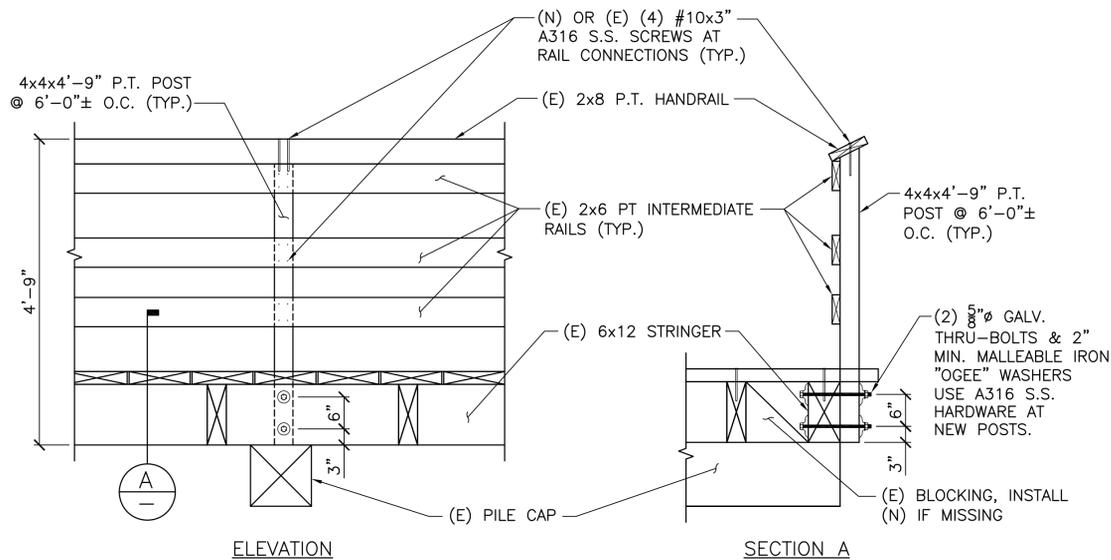
NEW DECK PLANKS		
No.	LOCATION	DESCRIPTION
1	7th PLANK WEST OF BENT 41	R&R 3x14 SHAPED x 24'-0" LONG
2	9th PLANK EAST OF BENT 45	R&R 3x12 x 24'-0" LONG
3	9th PLANK WEST OF BENT 63	R&R 3x12 x 24'-0" LONG
4	12th PLANK EAST OF BENT 75	R&R 3x12 x 2'-0" LONG

NEW FASTENERS IN DECK PLANKS		
No.	LOCATION	DESCRIPTION
1	2nd PLANK WEST OF BENT 12	INSTALL (4) S.S. LAG BOLTS @ MISSING FASTENERS
2	NORTH SIDE OF PLANK AT BENT 21	INSTALL (10) S.S. LAG BOLTS @ MISSING FASTENERS
3	NORTH SIDE OF ZERO TOWER AT BENT 22	INSTALL (5) S.S. LAG BOLTS @ MISSING FASTENERS
4	SOUTH SIDE OF 2nd PLANK WEST OF BENT 28	INSTALL (2) S.S. LAG BOLTS @ MISSING FASTENERS
5	MIDDLE OF 2nd PLANK EAST OF BENT 68	INSTALL (6) S.S. LAG BOLTS @ MISSING FASTENERS

DECK PLANK PLANING REPAIRS		
No.	LOCATION	DESCRIPTION
1	SOUTH SIDE OF PLANK AT BENT 22	PLANE EDGE OF PLANK, 4' LONG
2	SOUTH SIDE OF 4th PLANK WEST OF BENT 22	PLANE EDGE OF PLANK, 6' LONG
3	NORTH SIDE OF 2nd PLANK WEST OF BENT 36	PLANE EDGE OF PLANK, 4' LONG
4	SOUTH SIDE OF 4th PLANK EAST OF BENT 55	PLANE EDGE OF PLANK
5	SOUTH SIDE OF PLANK AT BENT 58	PLANE EDGE OF PLANK



DECK PLANK TRANSITION DETAIL (2)
 SCALE: 3" = 1'-0" S-107,S-108,S-109 | S-504



NOTE: PAINT NEW GUARDRAIL ELEMENTS TO MATCH EXISTING.

GUARDRAIL CONNECTION DETAIL (3)
 SCALE: 3/4" = 1'-0" S-107,S-108,S-109 | S-504

TIGHTEN GUARDRAIL POST BOLTS			
No.	LOCATION	No.	LOCATION
1	BENT 12.6 - SOUTH	23	BENT 37.3 - SOUTH
2	BENT 13.6 - SOUTH	24	BENT 37.7 - SOUTH
3	BENT 14.6 - SOUTH	25	BENT 37.8 - NORTH
4	BENT 15.6 - SOUTH	26	BENT 38.2 - SOUTH
5	BENT 16.1 - NORTH	27	BENT 38.2 - NORTH
6	BENT 18.1 - SOUTH	28	BENT 38.7 - NORTH
7	BENT 21.2 - SOUTH	29	BENT 39.8 - SOUTH
8	BENT 25.1 - SOUTH	30	BENT 40.2 - SOUTH
9	BENT 26.6 - SOUTH	31	BENT 40.8 - SOUTH
10	BENT 27.2 - SOUTH	32	BENT 42.2 - SOUTH
11	BENT 27.7 - SOUTH	33	BENT 43.2 - SOUTH
12	BENT 28.1 - SOUTH	34	BENT 44.2 - SOUTH
13	BENT 28.7 - SOUTH	35	BENT 50.2 - SOUTH
14	BENT 29.1 - SOUTH	36	BENT 53.9 - SOUTH
15	BENT 29.1 - NORTH	37	BENT 55.8 - NORTH
16	BENT 30.2 - SOUTH	38	BENT 61.5 - SOUTH
17	BENT 31.8 - SOUTH	39	BENT 61.8 - SOUTH
18	BENT 32.8 - NORTH	40	BENT 62 - SOUTH
19	BENT 33.2 - NORTH	41	BENT 62.3 - SOUTH
20	BENT 34.3 - SOUTH	42	BENT 62.8 - NORTH
21	BENT 35.8 - NORTH	43	BENT 69.2 - SOUTH
22	BENT 36.7 - SOUTH	44	BENT 71.3 - NORTH

NEW GUARDRAIL POSTS	
No.	LOCATION
1	BENT 9.1 - NORTH
2	BENT 22.6 - NORTH
3	BENT 23.1 - NORTH
4	BENT 35.7 - SOUTH
5	BENT 41.2 - SOUTH
6	BENT 43.8 - SOUTH
7	BENT 46.2 - NORTH
8	BENT 49.7 - SOUTH
9	BENT 53.1 - SOUTH

MISCELLANEOUS GUARDRAIL REPAIRS		
No.	LOCATION	DESCRIPTION
1	BENT 8.6 - NORTH	INSTALL NEW BOLTS AT POST BASE
2	BENT 14.1 - SOUTH	INSTALL BLOCK BETWEEN POSTS
3	BENT 14.1 - SOUTH	SCREW MID RAILS TOGETHER
4	BENT 23.6 - NORTH	SCREW MID RAILS TO POST
5	BENT 49.7 - SOUTH	TIGHTEN TOP RAIL SCREWS
6	BENT 50.2 - SOUTH	TIGHTEN TOP RAIL SCREWS
7	BENT 50.8 - SOUTH	TIGHTEN TOP RAIL SCREWS
8	BENT 72 - SOUTH	SCREW BOTTOM RAILS TOGETHER

100%
SUBMITTAL
05-12-2017

NOT FOR CONSTRUCTION

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				



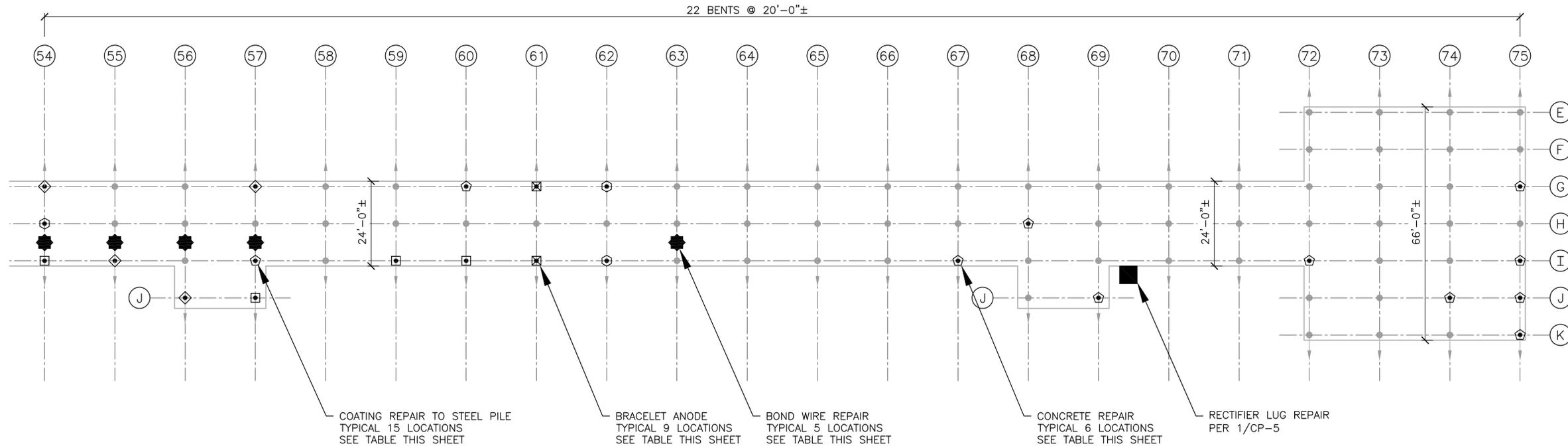
REFERENCES

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: ESN	DESIGNED BY: ESN
CHECKED BY: CDD	5/12/17
APPROVED:	5/12/17
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	



DECK & RAILING REPAIR DETAILS
 SAN CLEMENTE MUNICIPAL PIER REPAIR
 Project No. 16811
 CITY OF SAN CLEMENTE

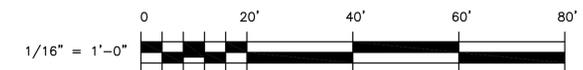
DRAWING NO:	S-504
SHEET	19
OF	33



CATHODIC PROTECTION REPAIR PLAN: BENTS 54-75	
PILE LOCATION AND EXISTING DAMAGE	REPAIR TYPE/DETAIL
57:I COATING DAMAGE EL. +14 MLLW	COATING REPAIR TYPE 1 DETAIL 1/CP-3
62:I COATING DAMAGE EL. +15 MLLW	COATING REPAIR TYPE 1 DETAIL 1/CP-3
67:I COATING DAMAGE EL. +10 MLLW	COATING REPAIR TYPE 1 DETAIL 1/CP-3
68:H COATING DAMAGE EL. +8 MLLW	COATING REPAIR TYPE 1 DETAIL 1/CP-3
74:J COATING DAMAGE EL. +14 MLLW	COATING REPAIR TYPE 1 DETAIL 1/CP-3
75:I COATING DAMAGE EL. +13 & +14 MLLW	COATING REPAIR TYPE 1 DETAIL 1/CP-3
75:J COATING DAMAGE EL. +14 MLLW	COATING REPAIR TYPE 1 DETAIL 1/CP-3
PILE CAPS 54, 55, 56, 57, & 63 BROKEN BOND WIRES	BOND WIRE REPAIR DETAIL 1/CP-2
54:H COATING DAMAGE EL. +6 MLLW	COATING REPAIR TYPE 2 DETAIL 2/CP-3
60:G COATING DAMAGE EL. +6 MLLW	COATING REPAIR TYPE 2 DETAIL 2/CP-3
62:G COATING DAMAGE EL. +6 MLLW	COATING REPAIR TYPE 2 DETAIL 2/CP-3
69:J COATING DAMAGE EL. +6 MLLW	COATING REPAIR TYPE 2 DETAIL 2/CP-3
72:I COATING DAMAGE EL. +4 MLLW	COATING REPAIR TYPE 2 DETAIL 2/CP-3
74:J COATING DAMAGE EL. +4 MLLW	COATING REPAIR TYPE 2 DETAIL 2/CP-3
75:G COATING DAMAGE EL. +2 MLLW	COATING REPAIR TYPE 2 DETAIL 2/CP-3
75:K COATING DAMAGE EL. +2 MLLW	COATING REPAIR TYPE 2 DETAIL 2/CP-3
54:G	BRACELET ANODE DETAIL 1/CP-4
54:H	BRACELET ANODE DETAIL 1/CP-4
55:I	BRACELET ANODE DETAIL 1/CP-4
56:J	BRACELET ANODE DETAIL 1/CP-4
57:J	BRACELET ANODE DETAIL 1/CP-4
61:G	BRACELET ANODE DETAIL 1/CP-4
61:I	BRACELET ANODE DETAIL 1/CP-4
62:G	BRACELET ANODE DETAIL 1/CP-4
62:I	BRACELET ANODE DETAIL 1/CP-4

LEGEND	
●	(E) STEEL PIPE PILE
●→	(E) STEEL PIPE BATTER PILE
◆	BRACELET ANODE
■	CONCRETE REPAIR TO (E) STEEL PIPE PILE
⊠	CONCRETE REPAIR TO (E) STEEL PIPE PILE W/ BRACELET ANODE
⊙	COATING REPAIR TO (E) STEEL PIPE PILE SEE TABLE
⊕	COATING REPAIR TO (E) STEEL PIPE PILE W/ BRACELET ANODE
⚡	REPAIR BROKEN CATHODE CABLE SEE TABLE

CATHODIC PROTECTION REPAIR PLAN: BENTS 54 - 75
SCALE: 1/16" = 1'-0"



FINAL DRAWINGS
06-16-2017

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				



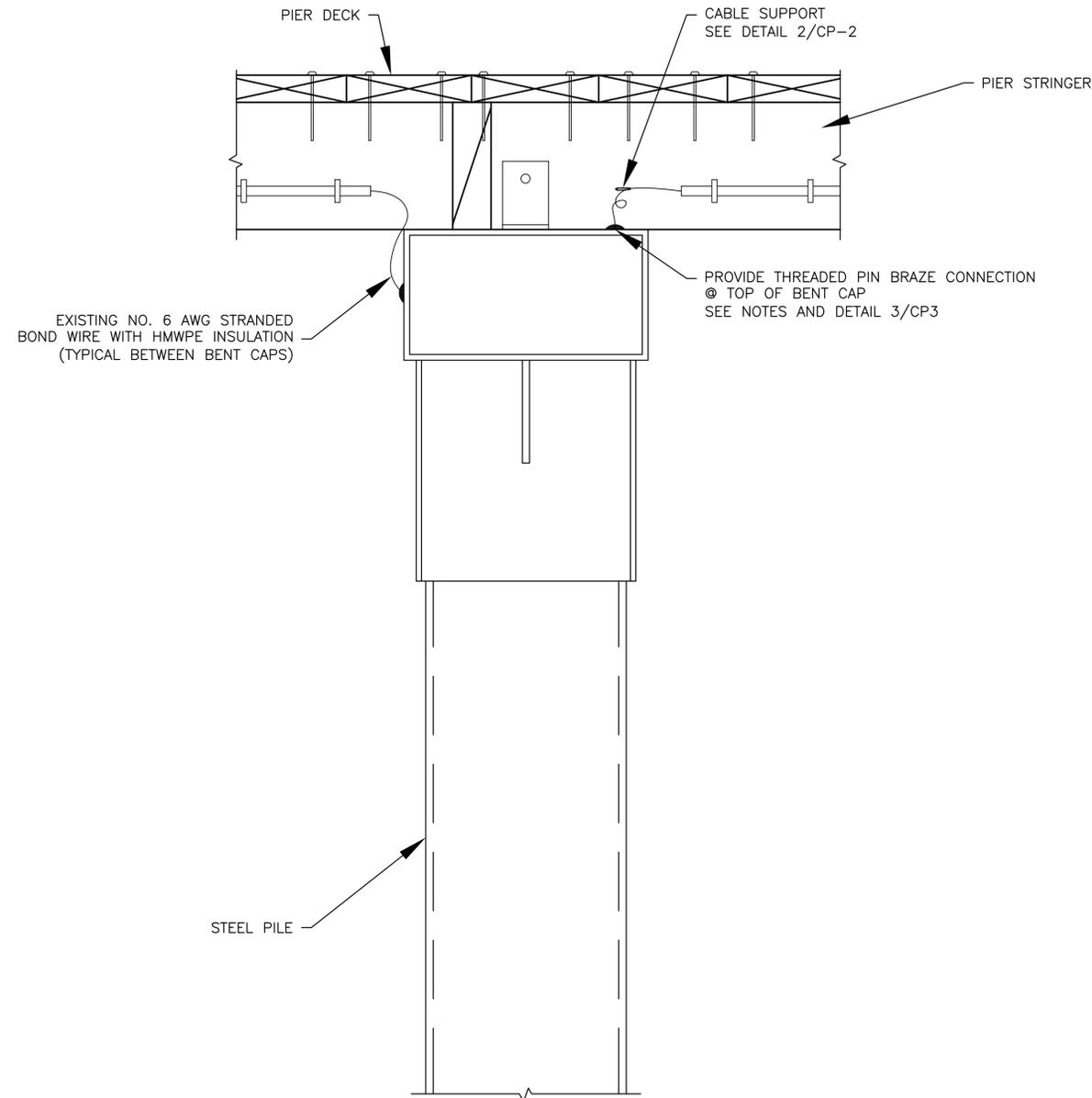
REFERENCES

ENGINEERING SCALE: AS SHOWN	DATE:	
DRAWN BY: BJD	DESIGNED BY: RV	6/16/17
CHECKED BY: RV	6/16/17	
(SEE SHEET 1 OF 33)		
APPROVALS		



CATHODIC PROTECTION REPAIR PLAN: BENTS 54 - 75
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

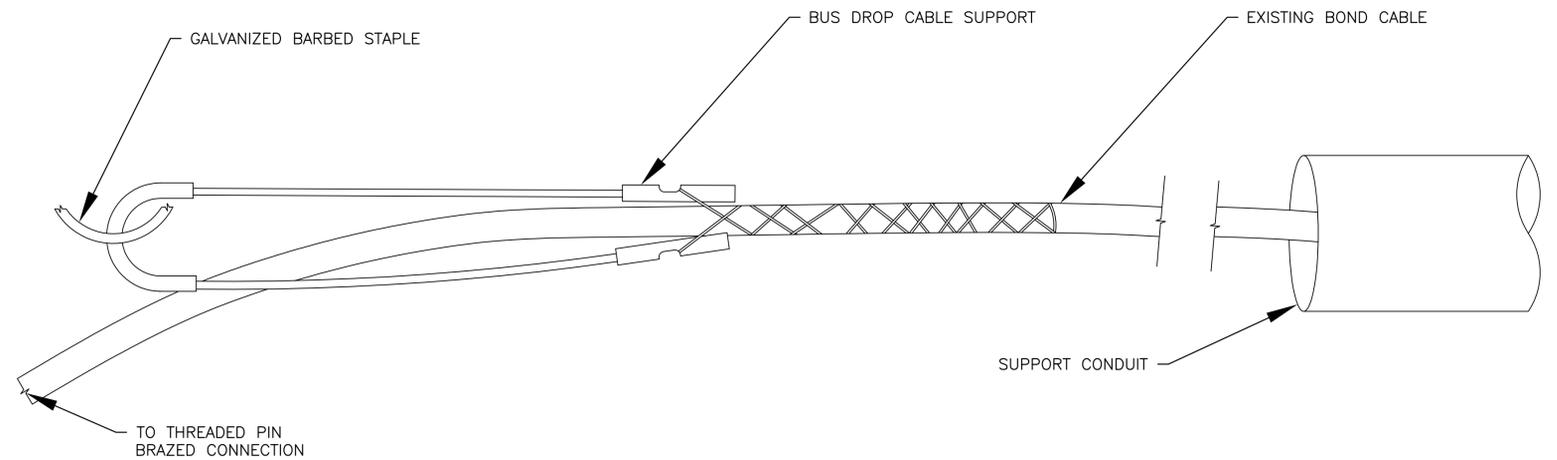
DRAWING NO:	CP-1
SHEET	20
OF	33



NOTES:

1. RELOCATE BOND WIRE--TO--PILE CAP FROM BROKEN POINT TO NEW LOCATION AT THE TOP OF THE BENT CAP.
2. PIN BRAZE A THREADED PIN PER DETAIL 3/CP-3 AT NEW CONNECTION POINT.
3. PROVIDE A MINIMUM 12-INCHES OF SLACK WIRE LOOPED AT THE NEW CONNECTION POINT. IF ADDITIONAL WIRE IS NEEDED TO ACHIEVE THE REQUIREMENT, SPLICE AN ADDITIONAL SECTION OF NO. 6 AWG STRANDED BOND WIRE WITH HMWPE INSULATION TO THE EXISTING BOND WIRE. USE PROPERLY SIZED BRASS SPLIT BOLT, AND ENCAPSULATE THE SPLICE IN A 3M SCOTCHCAST 82-A1 INLINE RESIN POWER CABLE SPLICE KIT.
4. THE LUG CONNECTION TO THE BOND WIRE WILL BE CRIMPED AND SOLDERED.
5. CONNECTION OF THE LUG TO THE THREADED PIN WILL BE COMPLETED WITH STAINLESS STEEL WASHERS AND NUTS.
6. AFTER FASTENING LUG TO THREADED PIPE, COVER ALL EXPOSED METAL IN A WAX TAPE COATING SYSTEM.

BONDING DETAIL 1
SCALE: NTS CP-1|CP-2



NOTES:

1. AS THE BOND CABLE EXITS THE SUPPORT CONDUIT, INSTALL A BUS DROP CABLE SUPPORT AROUND THE CABLE.
2. SECURE THE BUS DROP CABLE SUPPORT TO THE PIER STRINGER WITH A GALVANIZED BARBED STAPLE.

CABLE SUPPORT DETAIL 2
SCALE: NTS CP-2|CP-2

FINAL
DRAWINGS
06-16-2017



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

HDR
8690 BALBOA AVENUE SUITE 200
SAN DIEGO, CA 92123-1502
PH: (858) 712-8400 - FX: (858) 712-8333

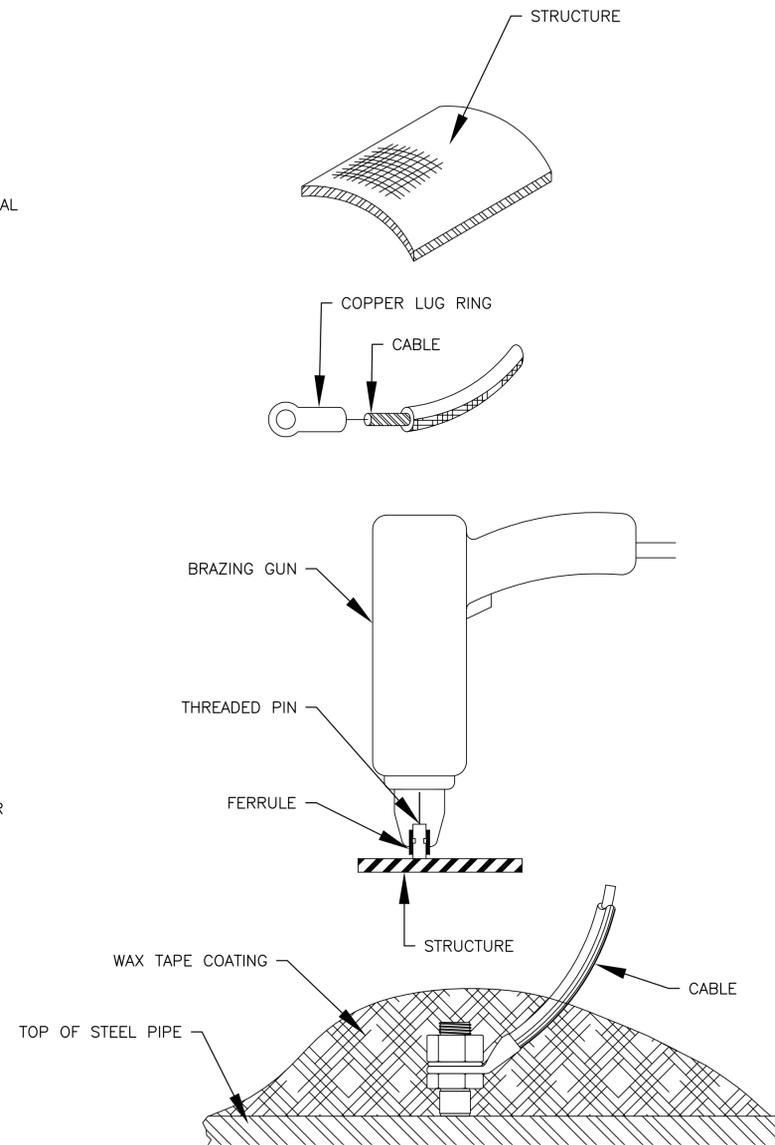
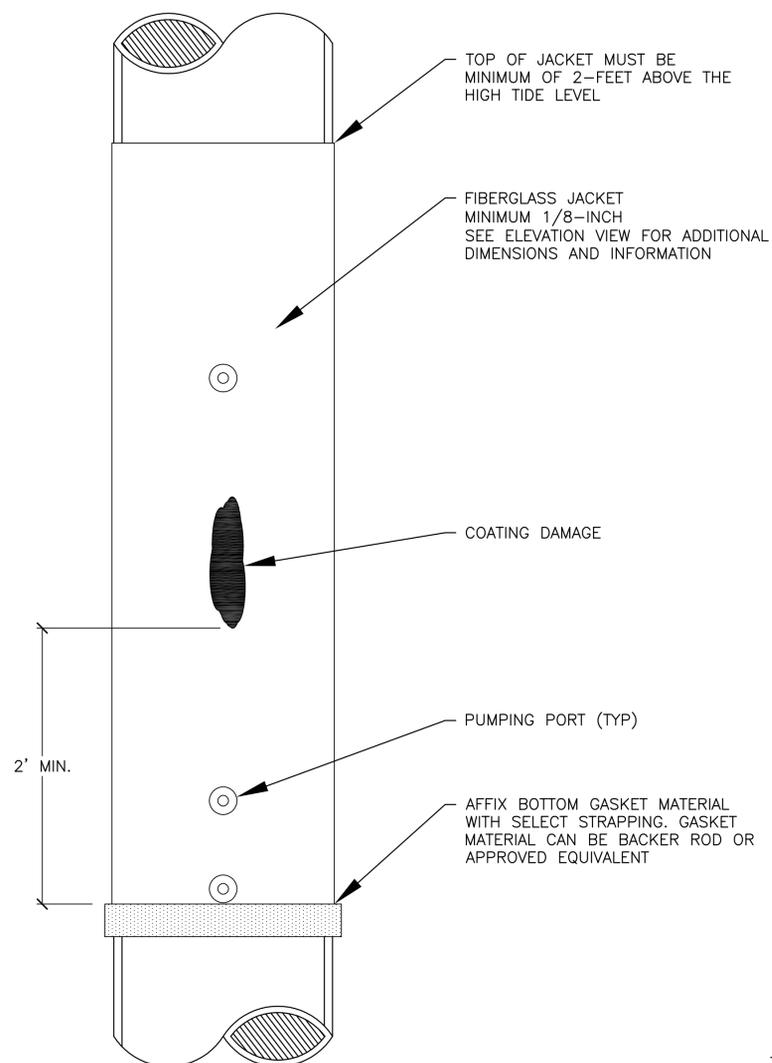
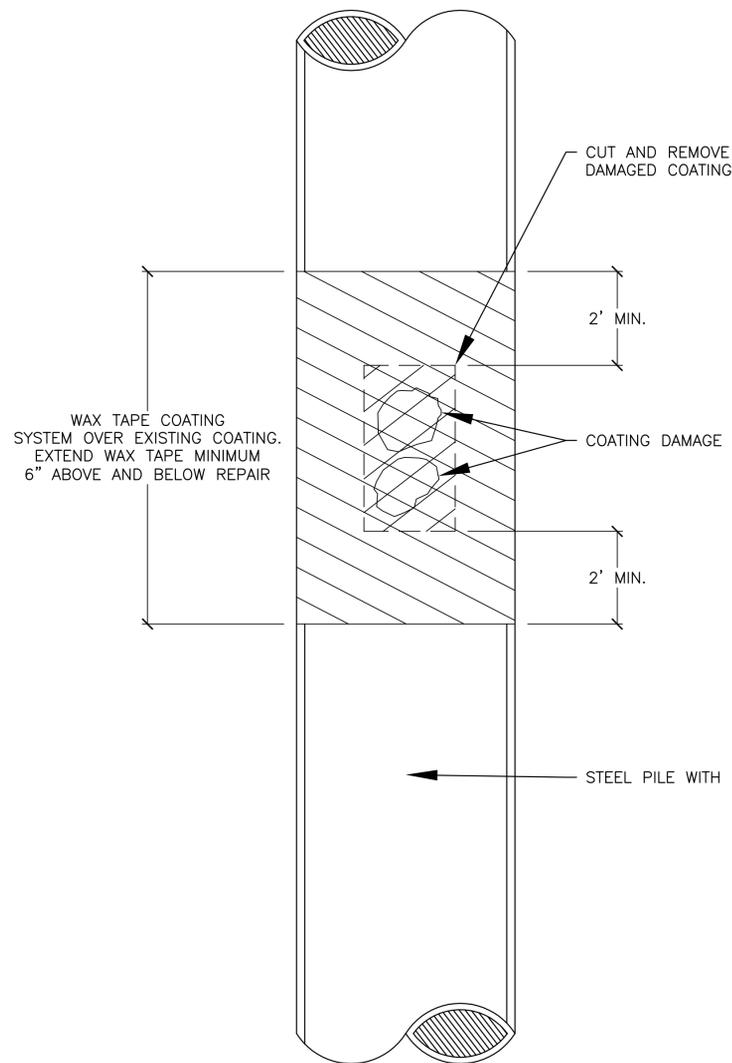
REFERENCES	
(SEE SHEET 1 OF 33)	APPROVALS

ENGINEERING SCALE: AS SHOWN		DATE:
DRAWN BY: BJD	DESIGNED BY: RV	6/16/17
CHECKED BY: RV		6/16/17



DETAILS 1
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	CP-2
SHEET	21
OF	33



NOTES:

1. REMOVE DAMAGED COATING AROUND COATING DAMAGE.
2. SAND BLAST AREA TO BARE STEEL.
3. COAT EXPOSED STEEL WITH WAX TAPE COATING SYSTEM.
4. WAX TAPE COATING SYSTEM TO HAVE 50-PERCENT OVERLAP, OVERLAP EXISTING COATING MINIMUM 6-INCHES ABOVE AND BELOW COATING DAMAGE, AND EXTEND COMPLETELY AROUND PILE.
5. TRENTON - WAX-TAPE® #2 SELF-FIRMING ANTICORROSION WRAPSYSTEM OR APPROVED EQUIVALENT SHALL BE USED.

NOTES:

1. ACCEPTABLE PRODUCT FOR THE REPAIR OF BELOW HIGH TIDE COATING DAMAGE IS DENSO - SEASHIELD MARINE SYSTEM - SERIES 500. CONTRACTOR MAY SUBMIT OTHER SYSTEM FOR APPROVAL.
2. THOROUGHLY CLEAN THE EXISTING PILE BY WATERBLASTING OR APPROVED METHODS, IN THE AREA WHERE THE REPAIR AND JACKET WILL BE INSTALLED.
3. INSTALL A WORK PLATFORM AT A HEIGHT THAT ALLOWS INSTALLATION OF THE JACKET AND EPOXY GROUT.
4. INSTALL FIBERGLASS JACKET IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION.
5. THE FIBERGLASS JACKET SHALL BE EQUIPPED WITH 1-INCH STAND OFFS ADHERED TO THE INSIDE OF THE JACKET WITH SEASHIELD STANDOFF ADHESIVE OR EQUAL AT THE MIN. 19-INCH INTERVALS.
6. TONGUE AND GROOVE CLOSURE WILL BE SEALED WITH SEASHIELD ADHESIVE AND 316 SS SCREW ON 6-INCH CENTERS STAGGERED RIGHT TO LEFT.
7. ONCE IN PLACE TEMPORARY NYLON RATCHETED STRAPS ON 18-INCH CENTERS (OR AS REQUIRED) WILL BE PLACED OVER THE STANDOFFS.
8. SEASHIELD 550 EPOXY GROUT WILL BE USED TO FILL THE ANNUAL SPACE BETWEEN THE PILE AND THE JACKET.
9. CONNECT GROUT HOSE TO LOWER INJECTION PORT AND PUMP APPROXIMATELY 6-INCHES OF SEASHIELD 550 EPOXY GROUT AND VISUALLY CHECK FOR LEAKS. IF NO LEAKS ARE DETERMINED, CONTINUE PUMPING GROUT FROM UPPER PORTS UNTIL ANNULAR SPACE IS FILLED/TOP OF JACKET.

1. DEGREASE AND CLEAN STRUCTURE TO BARE BRIGHT METAL WITH MECHANICAL DEVICES.
2. STRIP WIRE INSULATION FROM WIRE AND ATTACH A BURDY YAV HYLUG(TM) COMPRESSION TERMINAL OR APPROVED EQUAL. CRIMP AND SOLDER CONNECTION.
3. LOAD THE BRAZING GUN WITH A DIRECT-CONNECT PIN AND FERRULE.
4. BRAZE THE CABLE TO THE PIPE.
5. TEST BRAZE BY BREAKING OFF THE SHANK OF THE PLAIN PIN WITH A HAMMER.
6. CONNECT LUG TO THE THREADED PIN WITH SS WASHERS AND NUTS. COVER CONNECTION AND EXPOSED STRUCTURE WITH WAX TAPE COATING SYSTEM.
7. WAX TAPE COATING WILL OVERLAP EXISTING COATING MIN. 3-INCHES.

COATING DAMAGE REPAIR - TYPE 1 1
SCALE: NTS CP-1 CP-3

COATING DAMAGE REPAIR - TYPE 2 2
SCALE: NTS CP-1 CP-3

PIN BRAZING DETAIL 3
SCALE: NTS CP-2 CP-3

FINAL
DRAWINGS
06-16-2017



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

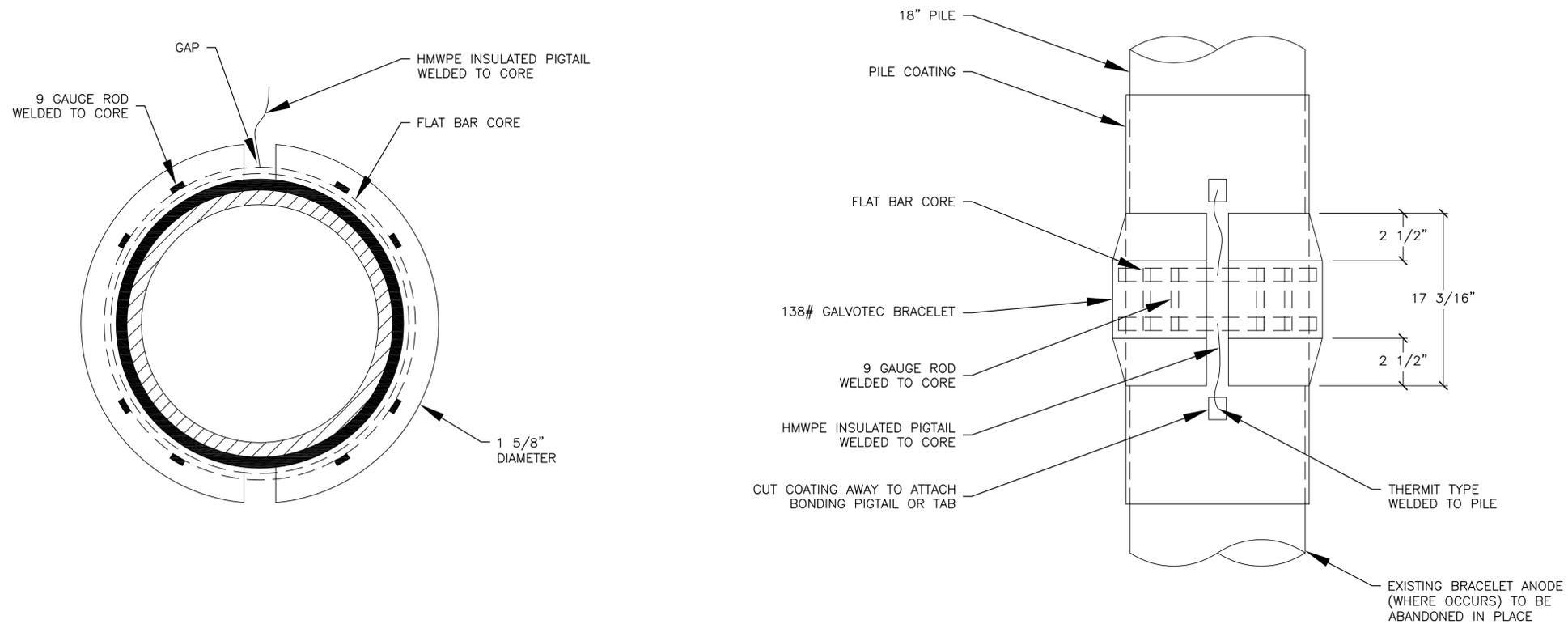
HDR
8690 BALBOA AVENUE SUITE 200
SAN DIEGO, CA 92123-1502
PH: (858) 712-8400 - FX: (858) 712-8333

ENGINEERING SCALE: AS SHOWN		DATE:
DRAWN BY: BJD	DESIGNED BY: RV	6/16/17
CHECKED BY: RV		6/16/17
(SEE SHEET 1 OF 33)		
APPROVALS		



DETAILS 2
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	CP-3
SHEET	22
OF	33



NOTES:

1. ACCEPTABLE ALUMINUM BRACELET ANODES ARE GALVOTIC'S 138# SEMI-CYLINDRICAL TAPERED ANODES. CONTRACTOR MAY SUBMIT OTHER ANODES FOR APPROVAL.
2. BRACELET ANODES ARE TO BE INSTALLED 4- FEET ABOVE THE MUD LINE. ANODE WILL BE PLACED OVER EXISTING OR NEW COATING. COATING WILL EXTEND A MINIMUM OF 6-INCHES ABOVE AND BELOW THE BRACELET ANODE. EXISTING COATING WILL BE CUT TO ALLOW THE ATTACHMENT OF THE BONDING WIRES.
3. IF BRACELET ANODE WILL BE INSTALLED OVER EXISTING COATING, INSTALL PER MANUFACTURER'S INSTRUCTIONS AND THOROUGHLY CLEAN THE EXISTING PILE BY WATERBLASTING OR APPROVED METHOD, IN THE AREA THE ANODE WILL BE INSTALLED. THEN SKIP TO NOTE 8.
4. IF BRACELET ANODE WILL BE INSTALLED OVER A NON-COATED SECTION OF PILE, INSTALL PER MANUFACTURER'S INSTRUCTION AND:
5. REMOVE ALL DIRT, LOOSE PAINT, SPALLING CONCRETE, ROTTED WOOD, MARINE GROWTH AND OTHER CONTAMINANTS BY ABRASIVE BLASTING OR HIGH PRESSURE WATER BLASTING.
6. CARBOLINE A-788 SPLASH ZONE, OR APPROVED EQUAL SHALL BE USED ON THE EXPOSED PORTION OF THE PILE AND EXTEND ABOVE AND BELOW THE BRACELET ANODE A MINIMUM OF 6-INCHES.
7. INSTALL COATING PER MANUFACTURER'S INSTRUCTIONS. APPLY BY HAND, TROWEL OR BROAD KNIFE. SPREAD MATERIAL SMOOTHLY ONTO THE SURFACE IN A 1/8" TO 1/4" (3.1 TO 6.4 MM) THICK LAYER USING ENOUGH PRESSURE TO DISPLACE WATER AND AIR BUBBLES.
8. WRAP BRACELET ANODE SECTIONS AROUND PILE 4-FOOT HEIGHT ABOVE THE MUD LINE.
9. WELD ANODE FLAT BAR CORES TOGETHER AT THE GAP, AND TO THE PILE.
10. WHERE NECESSARY, CUT THE COATING TO ENABLE THE CONNECTION OF THE BOND WIRES TO THE PILES. IF TABS ARE USED, THERMITE WELD THE BOND WIRES TO THE TABS, THEN WELD THE TABS TO THE PILES. TWO BOND WIRES PER PILE.
11. ONCE THE WELDING IS COMPLETED, COAT OVER THE WELD AND TAB WITH CARBOLINE A-788 SPLASH ZONE.

PILE BRACELET ANODE DETAIL 1
SCALE: NTS CP-1 CP-4

FINAL
DRAWINGS
06-16-2017



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

HDR
8690 BALBOA AVENUE SUITE 200
SAN DIEGO, CA 92123-1502
PH: (858) 712-8400 - FX: (858) 712-8333

REFERENCES

ENGINEERING SCALE: AS SHOWN		DATE:
DRAWN BY: BJD	DESIGNED BY: RV	6/16/17
CHECKED BY: RV		6/16/17

(SEE SHEET 1 OF 33)
APPROVALS



DETAILS 3
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	CP-4
SHEET	23
OF	33

REPLACE TWO NEGATIVE & ONE POSITIVE LUG CONNECTIONS WITH HIGH STRENGTH COPPER ALLOY LUGS, SUCH AS IISCO TYPE SLU, IISCO TYPE CP, OR EQUAL. CONNECTION LUGS SHALL NOT HAVE ANY ALUMINUM OR STEEL SUBCOMPONENTS. THIS INCLUDES THE SET-SCREW.



RECTIFIER LUG REPAIR

SCALE: NTS

1
CP-1 | CP-5



COAT TOP 10'± OF PILES
TYPICAL TWO PILES
SEE NOTES

PILE 4:L5

PILE 5:L5

EXISTING FIBERGLASS WRAP
BOTTOM 6'± OF PILE

NOTES:

1. REMOVE ALL OIL OR GREASE FROM THE SURFACE IN ACCORDANCE WITH SSPC-SP1. REMOVE ALL DIRT, LOOSE PAINT, SPALLING CONCRETE, ROTTED WOOD, MARINE GROWTH, AND OTHER CONTAMINANTS BY ABRASIVE BLASTING OR HIGH PRESSURE WATER BLASTING.
2. CARBOLINE A-788 SPLASH ZONE, OR APPROVED EQUAL SHALL BE USED ON THE EXPOSED VERTICAL PORTION OF THE PILE, FROM THE INTERFACE OF THE FIBERGLASS WRAP TO THE TOP OF THE PILE.
3. INSTALL PER MANUFACTURER'S INSTRUCTIONS. APPLY BY HAND, TROWEL OR BROAD KNIFE. SPREAD MATERIAL SMOOTHLY ONTO THE SURFACE IN A 1/8" TO 1/4" (3.1 TO 6.4 MM) THICK LAYER USING ENOUGH PRESSURE TO DISPLACE WATER AND AIR BUBBLES.

RECOATING OF PILES - Piles 4:L5 & 5:L5

SCALE: NTS

2
S-101 | CP-5

FINAL DRAWINGS
06-16-2017



REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				

HDR
8690 BALBOA AVENUE SUITE 200
SAN DIEGO, CA 92123-1502
PH: (858) 712-8400 - FX: (858) 712-8333

REFERENCES	
(SEE SHEET 1 OF 33)	APPROVALS

ENGINEERING SCALE: AS SHOWN	DATE:
DRAWN BY: BJD	DESIGNED BY: RV
CHECKED BY: RV	6/16/17



DETAILS 4
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	CP-5
SHEET	24
OF	33

PLUMBING EQUIPMENT SCHEDULE				
MARK	DESCRIPTION	MANUFACTURER & MODEL NUMBER	LOCATION	REMARKS
BP-1	BACKFLOW PREVENTER	ZURN - WILKINS #975XL	FISHERMAN'S SINKS	LEAD FREE BACKFLOW PREVENTER, 1/2" ASSEMBLY. "Y" TYPE STRAINER.
BP-2	BACKFLOW PREVENTER	ZURN - WILKINS #975XL2	RESTAURANT	LEAD FREE BACKFLOW PREVENTER, 1/2" ASSEMBLY. "Y" TYPE STRAINER.

FIXTURE CONNECTION SCHEDULE						
MARK	DESCRIPTION	MINIMUM PIPE CONNECTION				MANUFACTURER / MODEL NUMBER
		CW ROUGH-IN	HW ROUGH-IN	WASTE	VENT	
S-1	FISHERMAN'S SINK	1/2"	-	2"	-	ADVANCE TABCO #T9-3-54-18RL-(3)K-472 THREE-COMPARTMENT SINK WITH (3) FAUCET HOLES, HEAVY GAUGE STAINLESS STEEL WITH DRAINBOARDS AND BACKSPASH. PROVIDE T&S #B-0800 WASH SINK METERING FAUCET
FS-1	FLOOR SINK	-	-	2"	1-1/2"	MIFAB #FS720-30 12" X 6" PVC FLOOR SINK, LESS GRATE

PLUMBING GENERAL NOTES

- CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. CONTRACTOR SHALL ALSO REVIEW PLANS AND SPECIFICATIONS OF OTHER RELATED TRADES (INCLUDING CIVIL, STRUCTURAL AND ELECTRICAL) PRIOR TO BID TO ENSURE AN ACCURATE UNDERSTANDING OF EXACT SCOPE OF WORK. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
- CONTRACTOR SHALL VERIFY ALL EQUIPMENT MODEL NUMBERS, CAPACITIES, SIZES, VOLTAGES, AND ALL OTHER SCHEDULED INFORMATION WITH OTHER APPLICABLE TRADES AND WITH THE MANUFACTURER PRIOR TO INSTALLATION.
- CONTRACTOR SHALL VERIFY ALL LOCATIONS, SIZES, POC'S, INVERT ELEVATIONS, AND AVAILABILITY OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF ANY MATERIAL OR EQUIPMENT.
- THESE DRAWINGS ARE ESSENTIALLY DIAGRAMATIC AND ARE NOT INTENDED TO INDICATE ALL DETAILS AND NECESSARY OFFSETS OF PIPING. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS SHALL BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR INCUR ADDITIONAL COSTS. THIS NOTIFICATION SHALL BE SUBMITTED PRIOR TO INSTALLATION OF THE ITEMS CONCERNED.
- NEW AND/OR EXISTING EQUIPMENT INDICATED ON THIS DRAWING IS SHOWN IN APPROXIMATE POSITION(S). CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EQUIPMENT LOCATIONS, POC'S AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURERS RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT SHALL BE PROVIDED.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES. NOTHING SHOWN ON THE PLANS OR STATED IN THE SPECIFICATIONS IS INTENDED TO INDICATE THAT THE INSTALLATIONS OR CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO MANUFACTURERS INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE INSTALLATIONS AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORMS TO MANUFACTURERS INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.
- SUBSTITUTION OF PLUMBING EQUIPMENT WITH EFFICIENCIES LOWER THAN THOSE INDICATED ON THE PLANS MAY REQUIRE RE-CALCULATION OF TITLE 24 DOCUMENTS. IF THE CONTRACTOR CHOOSES TO UTILIZE SUCH EQUIPMENT, HE ASSUMES FULL RESPONSIBILITY FOR THE RE-CALCULATION AND JURISDICTIONAL APPROVAL OF TITLE 24 DOCUMENTS.
- IF THE CONTRACTORS' USE OF SUBSTITUTE MATERIALS, EQUIPMENT OR METHODS OF INSTALLATION REQUIRES ANY CHANGES IN OTHER TRADES WORK FROM THAT SHOWN ON THE DRAWINGS, THE EXTRA COST OF THE OTHER TRADES' WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INITIATING THE SUBSTITUTION.
- SUBMITTALS: APPROVAL OF THE SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO FULLY COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS.
- ALL PLUMBING EQUIPMENT, MATERIAL, AND ALL CONNECTIONS THERETO SHALL BE INSTALLED COMPLETE PER MANUFACTURERS INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.
- ALL INSULATING MATERIALS INSTALLED MUST BE CERTIFIED BY CALIFORNIA ENERGY COMMISSION TO MEET C.E.C. ENERGY EFFICIENCY STANDARDS (E.E.S.) SECTION 118, 123 AND 124.
- ALL NATURAL GAS PIPING LOCATED EXPOSED ABOVE GRADE, SHALL BE INSTALLED SO THAT THE INVERT ELEVATION OF SUCH PIPING SHALL BE KEPT AT LEAST 6" ABOVE GRADE OR STRUCTURE.
- ALL HOSE BIBBS INSTALLED SHALL BE EQUIPPED WITH VACUUM BREAKERS.
- SOIL, SEWER AND WASTE PIPING SHALL SLOPE AT 1/2" PER FOOT MINIMUM.
- ALL PLUMBING SOLDER SHALL BE LEAD FREE.
- ALL COMPONENTS OF POTABLE WATER SYSTEM, INCLUDING SHUT OFF VALVES, ANGLE STOPS, AND PLUMBING FIXTURE SHALL COMPLY WITH CALIFORNIA LAW AB 1953 AND SECTION 116875 OF THE CALIFORNIA HEALTH AND SAFETY CODE.

LEGEND

SYMBOL	ABBR.	DESCRIPTION
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECTION
	S	SEWER OR WASTE BELOW FLOOR OR GRADE
	S OR W	SEWER OR WASTE ABOVE FLOOR OR GRADE
	CW	COLD WATER (DOMESTIC)
	HW	HOT WATER (DOMESTIC)
	G	NATURAL GAS
	MPG	MEDIUM PRESSURE GAS
	BP	BACKFLOW PREVENTER (REDUCED PRESS. TYPE)
	GV	GATE VALVE
	BV	BALL VALVE
	PRV	PRESSURE REDUCING VALVE
	COTG	CLEAN-OUT TO GRADE
	FCO	FLOOR CLEAN OUT
	WCO	WALL CLEAN-OUT OR CLEAN-OUT BELOW FLOOR
	CL	CAPPED LINE
		DOWN OR DROP
		UP OR RISE
	HB	HOSE BIBB
		VALVE ON RISE OR DROP
		DIRECTION OF FLOW
	FS	FLOOR SINK
	FD	FLOOR DRAIN
		PIPING OR EQUIPMENT TO BE REMOVED
	CONT	CONTINUATION CONTRACTOR
	DN	DOWN
	N/S	NOT TO SCALE
	SOV	SHUT-OFF VALVE
	STRUCT	TYPICAL STRUCTURAL
	TYP	TYPICAL POLYETHYLENE

PLUMBING PLAN CHECK NOTES

- ALL SERVICE HOT WATER PIPING SHALL BE INSULATED IN ACCORDANCE WITH CEC T-24, LATEST VERSION
- ALL HOSE BIBBS SHALL HAVE PERMANENTLY MOUNTED VACUUM BREAKERS.
- CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT.
- VALVES, FIXTURES AND ALL OTHER APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF CALIFORNIA ASSEMBLY BILL AB1953, LOW LEAD CONTENT AS APPLICABLE.

PIPE MATERIALS SCHEDULE

- DOMESTIC WATER PIPING ABOVE GRADE:
- TYPE "L" COPPER TUBING, HARD DRAWN CONFORMING TO ASTM B 88, WITH WROUGHT COPPER SOLDER SWEAT FITTINGS CONFORMING TO ASTM B 16.22.
- SEWER WASTE DRAIN PIPING ABOVE GRADE:
- ABS COMPOUND WITH A CELL CLASS OF 42222 FOR PIPE AND 32222 FOR FITTINGS AS PER ASTM D 3965 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM F 628. FITTINGS SHALL CONFORM TO ASTM D 2661.
- NATURAL GAS PIPING:
- PE PIPE CONFORMING TO ASTM D 2513, SDR 11, AND PE FITTINGS CONFORMING TO ASTM D-2683, SOCKET-FUSION TYPE OR ASTM D-3261, WITH DIMENSIONS MATCHING PE PIPE. PE TRANSITION FITTINGS, FACTORY-FABRICATED FITTINGS WITH PE COMPLYING WITH ASTM D 2513, SDR 11, PROTECTIVE COATING FOR UNDERGROUND PIPING, FACTORY APPLIED, THREE-LAYER COATING OF EPOXY, ADHESIVE, AND PE.

100%
SUBMITTAL
05-19-2017

NOT FOR CONSTRUCTION

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
R E V I S I O N S				



DEC ENGINEERS
7350 CARROLL ROAD, STE. 100
SAN DIEGO, CA 92121
P: 619 578-3270 F: 619 578-3273
DEC PROJECT #4757

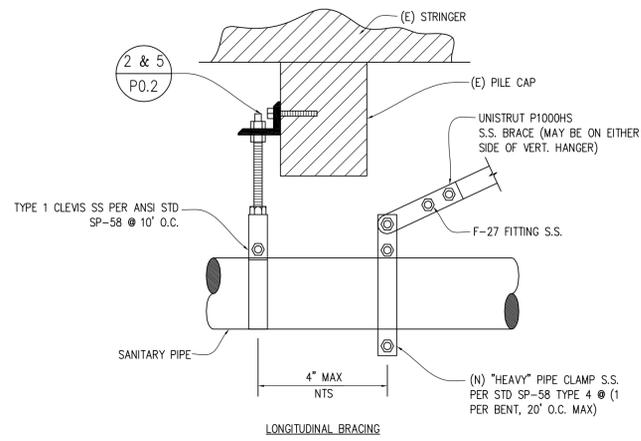
TranSystems
6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

ENGINEERING SCALE:		NO SCALE	DATE:
DRAWN BY:	SW	DESIGNED BY:	SW
CHECKED BY:	CDC		5/19/2017
APPROVED:	D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR		DATE

PLUMBING LEGEND, NOTES AND SCHEDULES	DRAWING NO:
SAN CLEMENTE MUNICIPAL PIER REPAIR	PO.1
Project No. 16811	SHEET 25
CITY OF SAN CLEMENTE	OF 33

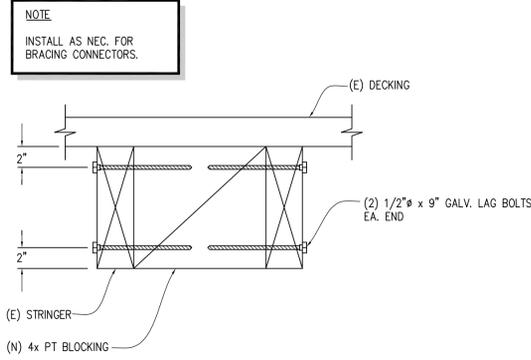


SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811



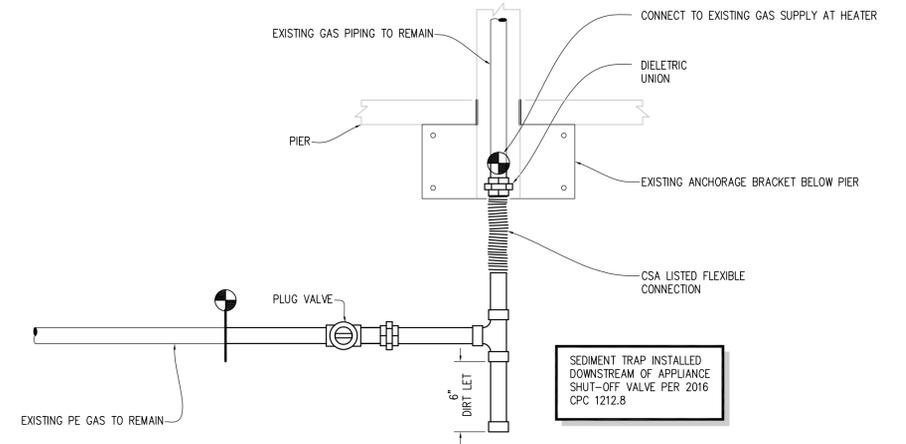
PIPE SUPPORT DETAIL

SCALE NONE 6



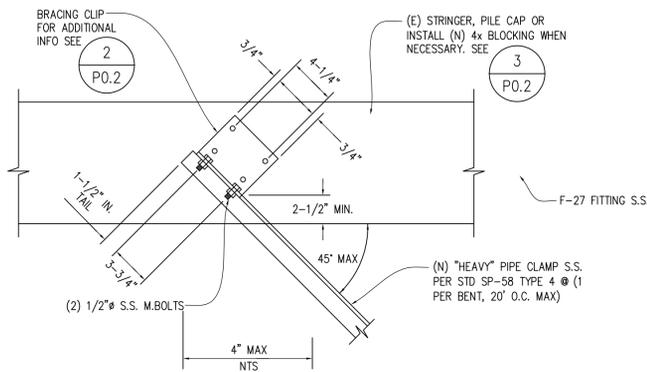
BLOCKING FOR HANGERS

SCALE NONE 3



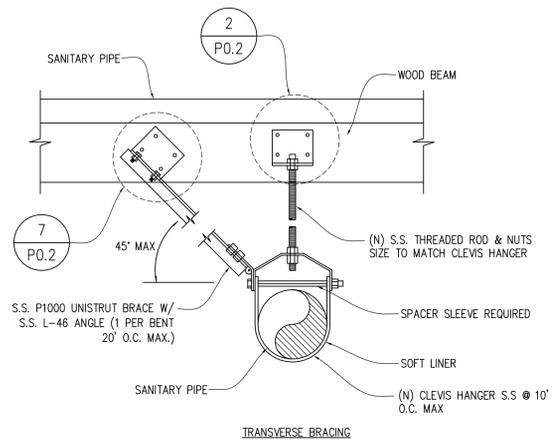
GAS CONNECTION - BID OPTION 001

SCALE NONE 1



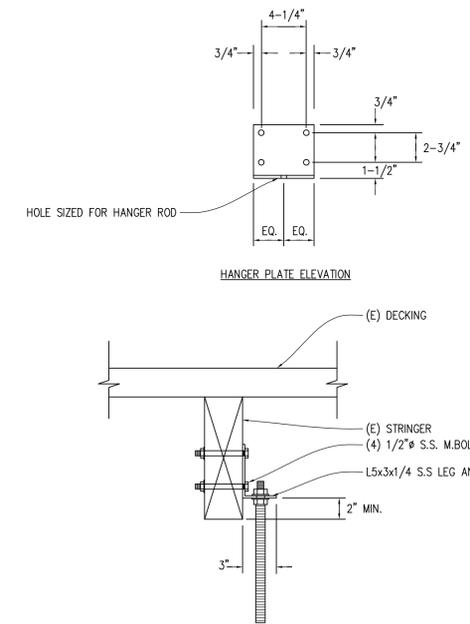
TRANS. OR LONGIT. BRACE CONNECTION TO PIER

SCALE NONE 7



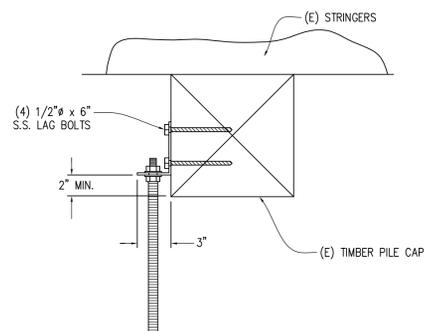
SINGLE PIPE SUPPORT DETAIL

SCALE NONE 4



VERTICAL HANGER CLIP

SCALE NONE 2



CONNECTION TO PILE CAPS

SCALE NONE 5

100% SUBMITTAL
05-19-2017
NOT FOR CONSTRUCTION

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

DEC ENGINEERS
7350 CARROLL ROAD, STE. 100
SAN DIEGO, CA 92121
PH 858 578.3270 FX 858 578.3273
DEC PROJECT #4757

TranSystems
6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES	

ENGINEERING SCALE: NO SCALE	DATE: 5/19/2017
DRAWN BY: SW	DESIGNED BY: SW
CHECKED BY: CDC	
APPROVED: D. T. REBENSORF RCE 60081 DEPUTY PUBLIC WORKS DIRECTOR	DATE:



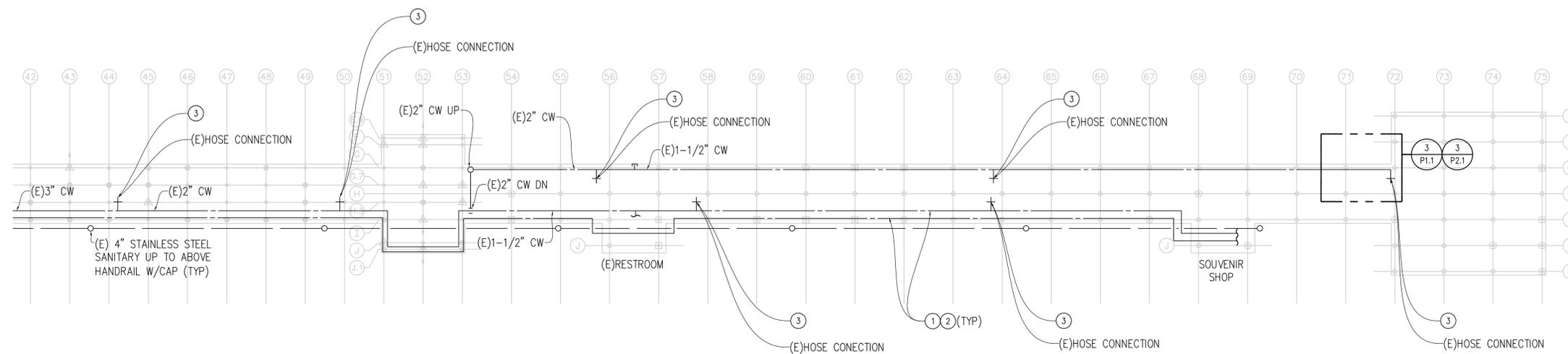
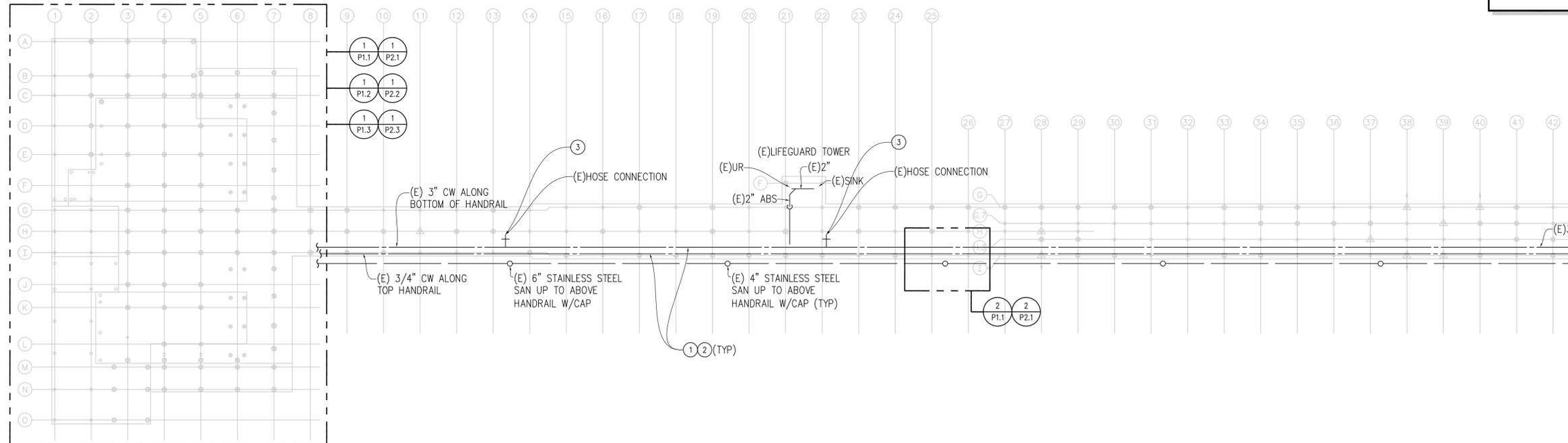
PLUMBING DETAILS
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO: P0.2
SHEET 26
OF 33

SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811

NEW WORK SHEET NOTES

- ① CLEAN AND PAINT ALL COLD WATER PIPING.
- ② PROVIDE STAINLESS STEEL SUPPORTS FOR PIPING ALONG PIER.
- ③ REPLACE EXISTING GATE VALVE AT HOSE CONNECTION. NEW GATE VALVE SHALL BE PROVIDED WITH REMOVEABLE WHEEL HANDLE. VALVE SHALL MATCH EXISTING PIPE SIZE.



**100%
SUBMITTAL
05-19-2017**
NOT FOR CONSTRUCTION

PLUMBING OVERALL PLAN

SCALE 1" = 25'-0" 1

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

DEC
REGISTERED PROFESSIONAL ENGINEER
NO. M33524
EXP. 09/30/2018
MECHANICAL
STATE OF CALIFORNIA

TranSystems
7360 CARROLL ROAD, STE. 100
SAN DIEGO, CA 92121
PH 858 578-3270 FX 858 578-3273
DEC PROJECT #4757

6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES

ENGINEERING SCALE: 1" = 25'-0"	DATE: 5/19/2017
DRAWN BY: SW	DESIGNED BY: SW
CHECKED BY: CDC	5/19/2017
APPROVED:	DATE:
D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	



**PLUMBING OVERALL PLAN
SAN CLEMENTE MUNICIPAL PIER REPAIR**
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	P1.0
SHEET	27
OF	33

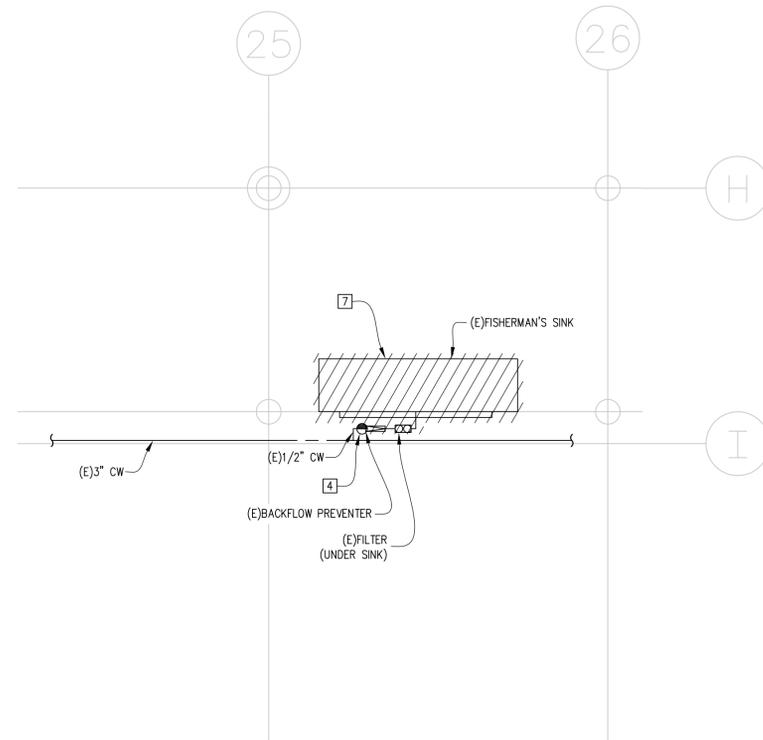
SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811

DEMOLITION SHEET NOTES

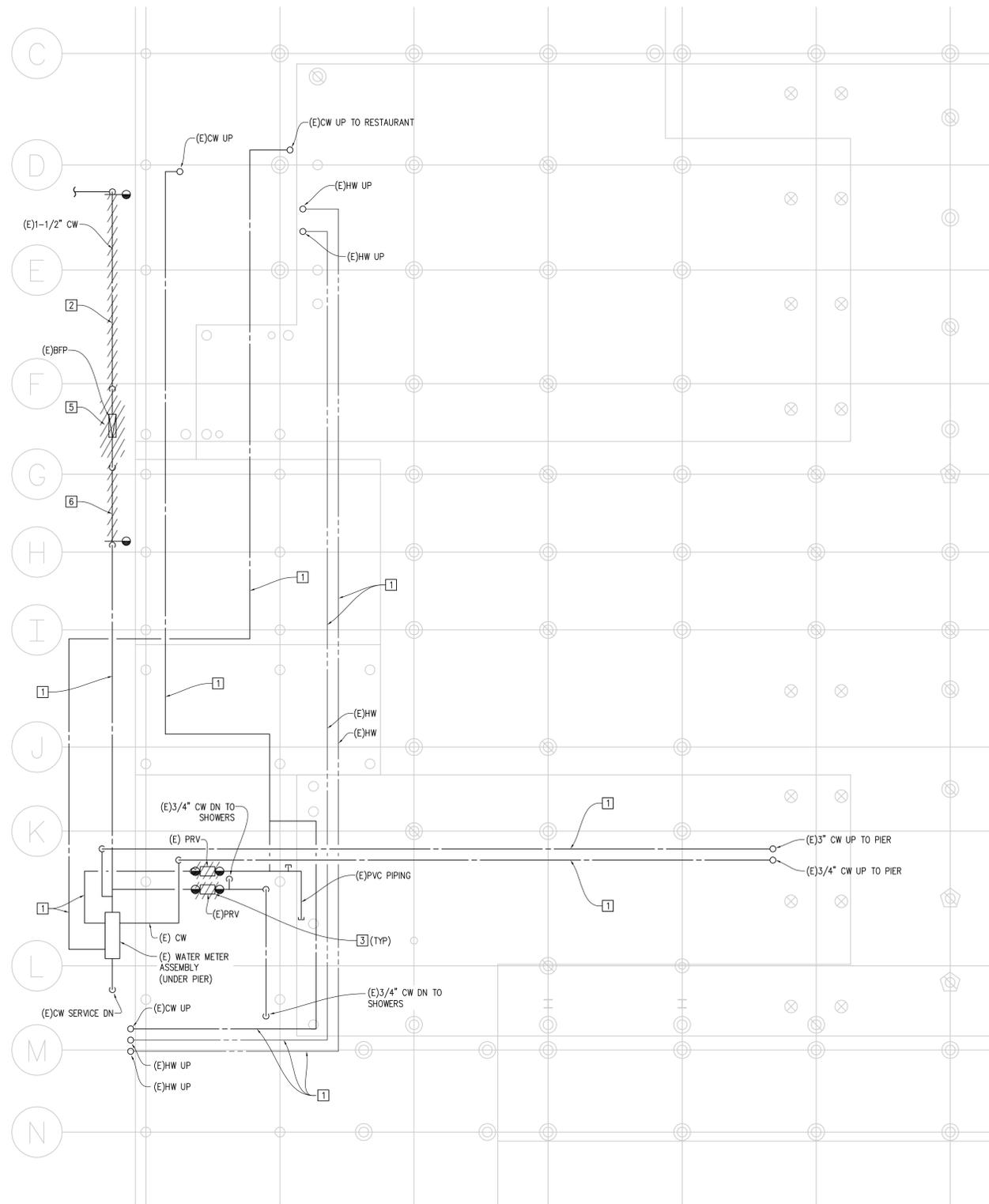
- 1 DEMOLISH ALL EXISTING CORRODED HANGERS AND SUPPORTS.
- 2 DEMOLISH ALL EXISTING CORRODED SUPPORTS ATTACHED TO CONCRETE WALL.
- 3 DEMOLISH CORRODED PRESSURE REDUCING VALVES - BID OPTION 001.
- 4 PREVENTER & FILTER ASSEMBLY AND DISCONNECT. PROTECT COLD WATER PIPING IN PLACE FOR FUTURE CONNECTION. DEMOLISH EXISTING WASTE PIPING.
- 5 DEMOLISH EXISTING BACKFLOW PREVENTER.
- 6 DEMOLISH EXISTING PIPING AT CONCRETE WALL TO POINT OF DISCONNECTS SHOWN.
- 7 REMOVE AND DISPOSE OF FISHERMAN'S SINK.

GENERAL NOTES

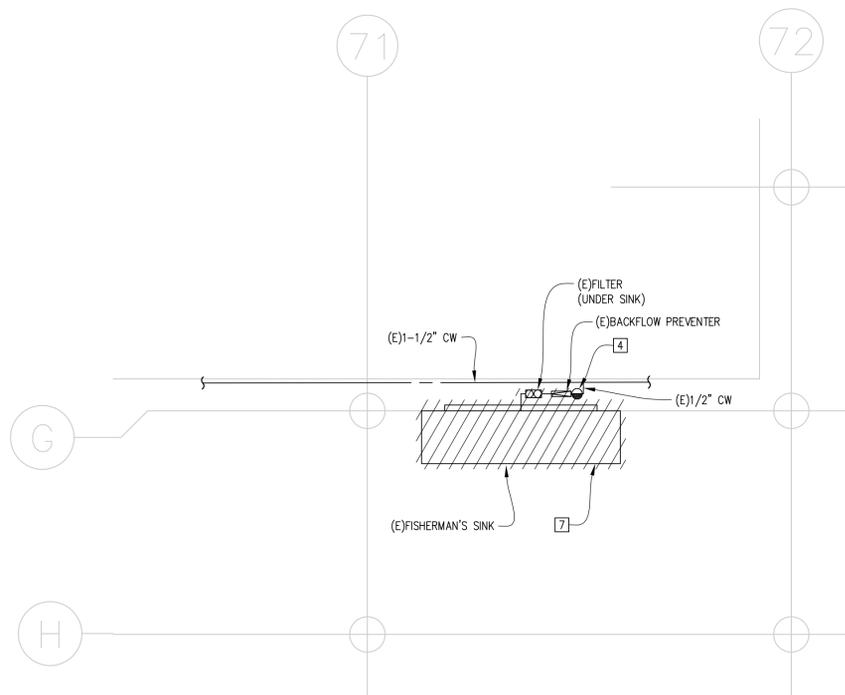
- 1. REMOVE AND REPLACE ALL STEEL PIPING WITH TYPE "L" COPPER.
- 2. REMOVE ALL CORRODED SHUT-OFF VALVES.
- 3. REMOVE ANY PVC PIPING AND CAP AS REQUIRED.
- 4. DEMOLISH EXISTING INSULATION AT HOT WATER PIPING.



ENLARGED COLD WATER SINK LOCATION SCALE 1/4" = 1'-0" 2



ENLARGED COLD WATER DEMOLITION PLAN SCALE 1/8" = 1'-0" 1



ENLARGED COLD WATER SINK LOCATION SCALE 1/4" = 1'-0" 3

100%
SUBMITTAL
05-19-2017
NOT FOR CONSTRUCTION

REV.	DATE	DESCRIPTION	BY:	APP'VD:
REVISIONS				

DEC ENGINEERS
7350 CARROLL ROAD, STE. 100
SAN DIEGO, CA 92121
PH 619 578-3270 FX 619 578-3273
DEC PROJECT #4757

TranSystems
6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES

ENGINEERING SCALE: SEE FLOOR PLANS	DATE: 5/19/2017
DRAWN BY: SW	DESIGNED BY: SW
CHECKED BY: CDC	5/19/2017
APPROVED: D. T. REBENS DORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE:



PLUMBING DEMOLITION WATER PLAN
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	P1.1
SHEET	28
OF	33

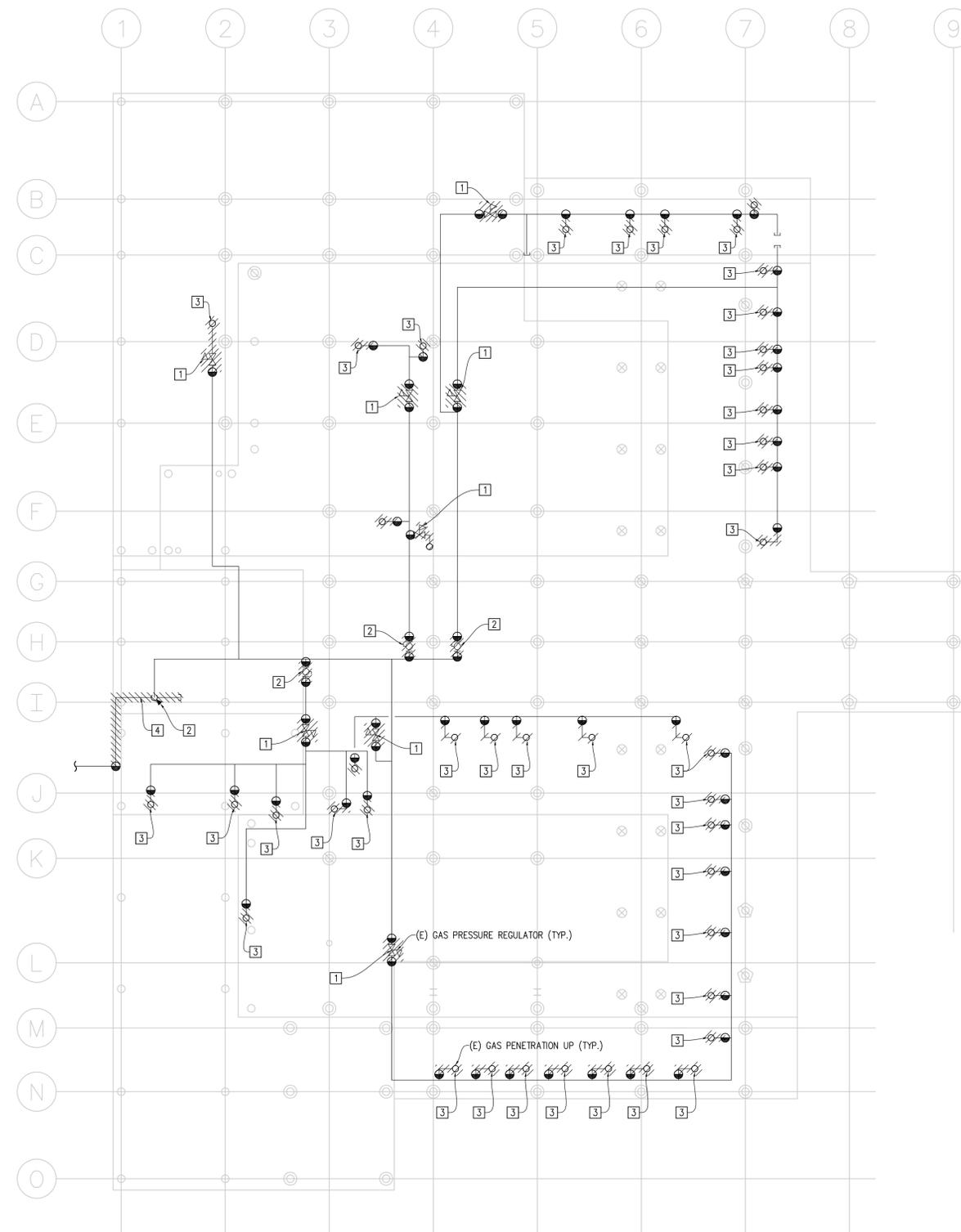
SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811

DEMOLITION SHEET NOTES

- 1 DEMOLISH ALL EXISTING GAS REGULATORS - BID OPTION 001.
- 2 DEMOLISH ALL EXISTING STEEL VALVES - BID OPTION 001.
- 3 DEMOLISH STEEL PIPING AT CONNECTION TO PATIO HEATERS - BID OPTION 001.
- 4 DEMOLISH PVC PIPING - BID OPTION 001.

GENERAL NOTES

- 1. REMOVE ALL EXISTING CORRODED HANGERS AND SUPPORTS - BID OPTION 001.



**100%
SUBMITTAL**
 05-19-2017
 NOT FOR CONSTRUCTION

ENLARGED NATURAL GAS DEMOLITION PLAN

SCALE 3/32" = 1' 1

REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

7350 CARROLL ROAD, STE. 100
SAN DIEGO, CA 92121
PH 858 578-3270 FX 858 578-3273
DEC PROJECT #4757

6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES

ENGINEERING SCALE: 3/32" = 1'-0"		DATE:
DRAWN BY: SW	DESIGNED BY: SW	5/19/2017
CHECKED BY: CDC		5/19/2017
APPROVED:		DATE:
 D. T. REFENSDORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR		



PLUMBING DEMOLITION NATURAL GAS PLAN
SAN CLEMENTE MUNICIPAL PIER REPAIR
 Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	P1.2
SHEET	29
OF	33

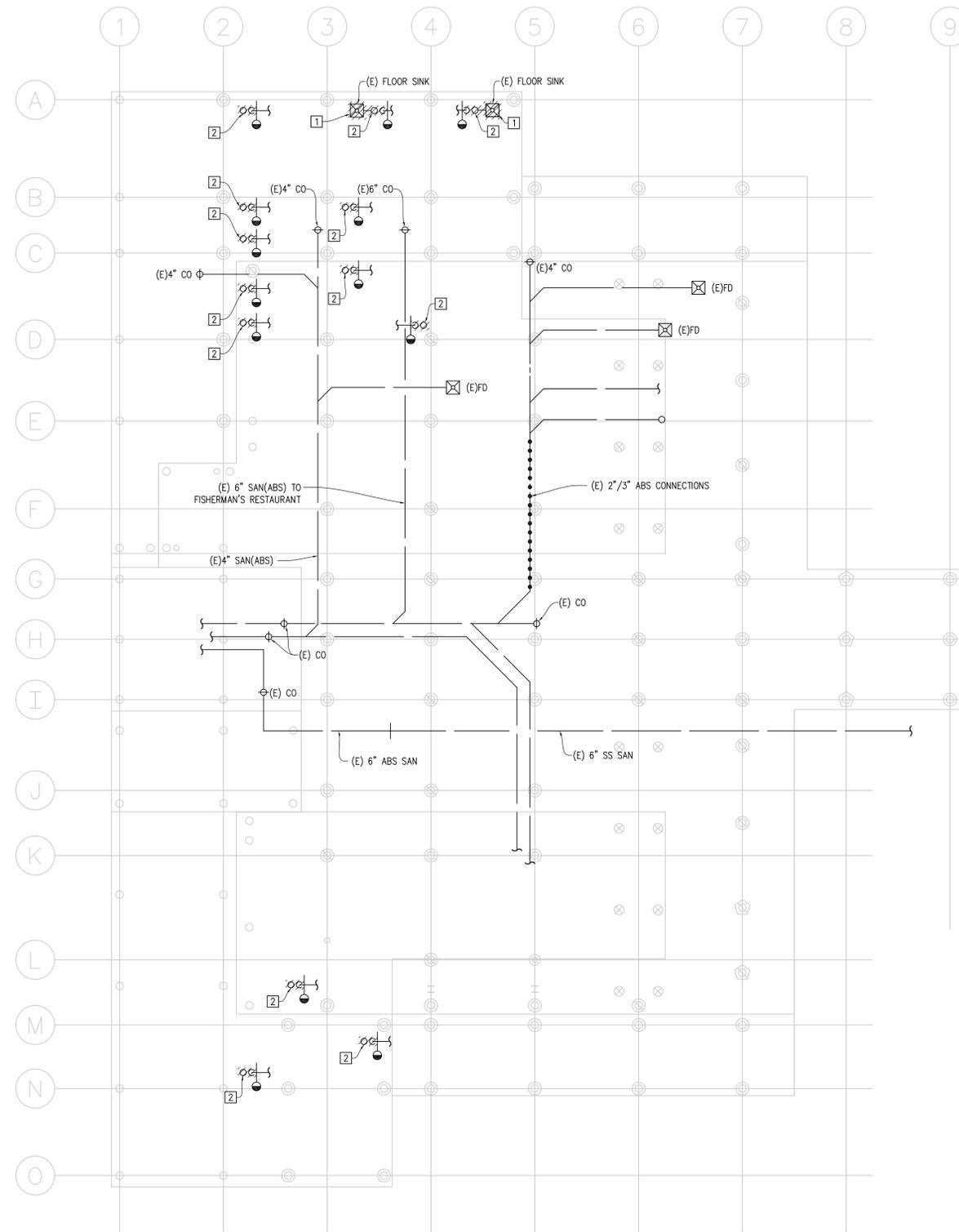
SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811

DEMOLITION SHEET NOTES

- 1 DEMOLISH ALL EXISTING STEEL FLOOR SINKS - BID OPTION 001.
- 2 DEMOLISH ALL CORRODED P-TRAPS BID OPTION 001.

GENERAL NOTES

- 1. REMOVE ALL EXISTING CORRODED HANGERS AND SUPPORTS - BID OPTION 001.



**100%
SUBMITTAL**
 05-19-2017
 NOT FOR CONSTRUCTION

ENLARGED WASTE DEMOLITION PLAN

SCALE 3/32" = 1' 1

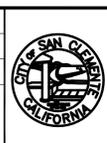
REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

7350 CARROLL ROAD, STE. 100
SAN DIEGO, CA 92121
PH 858 578-3270 FX 858 578-3273
DEC PROJECT #4757

6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES

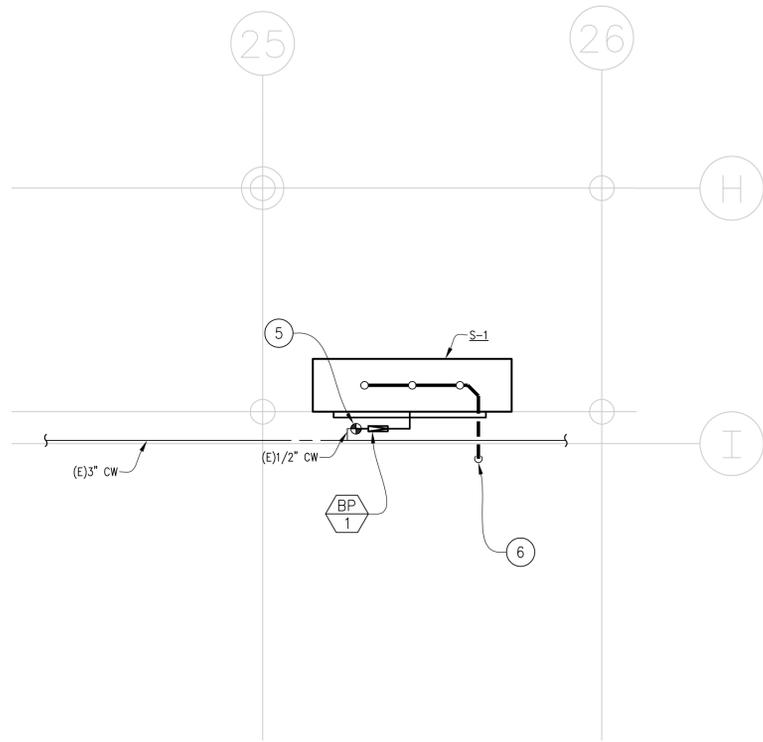
ENGINEERING SCALE: 3/32" = 1'-0"		DATE: 5/19/2017
DRAWN BY: SW	DESIGNED BY: SW	5/19/2017
CHECKED BY: CDC		5/19/2017
APPROVED:		DATE:
 D. T. REFENSDORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR		



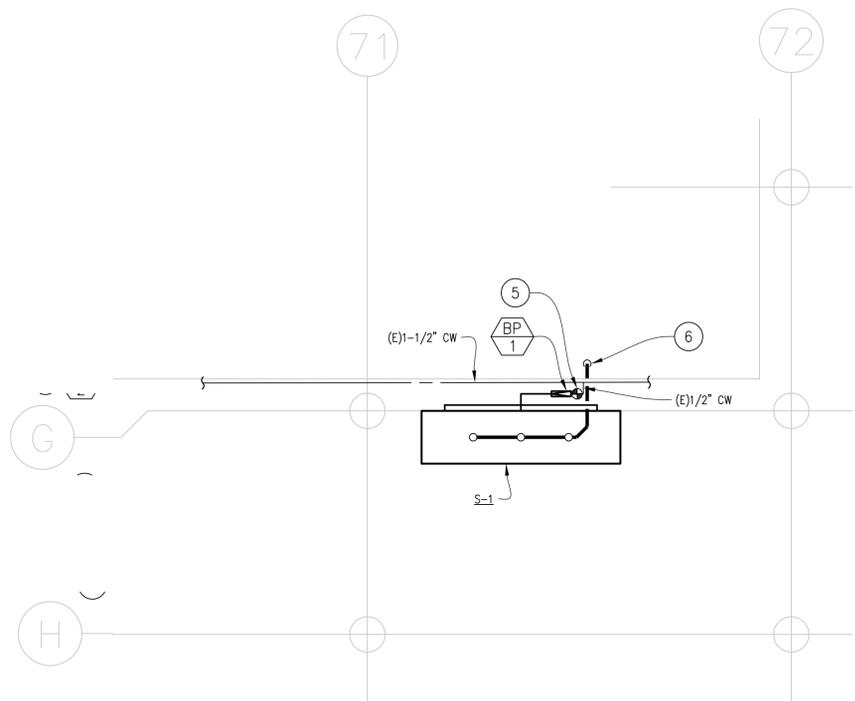
PLUMBING DEMOLITION WASTE PLAN
SAN CLEMENTE MUNICIPAL PIER REPAIR
 Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	P1.3
SHEET	30
OF	33

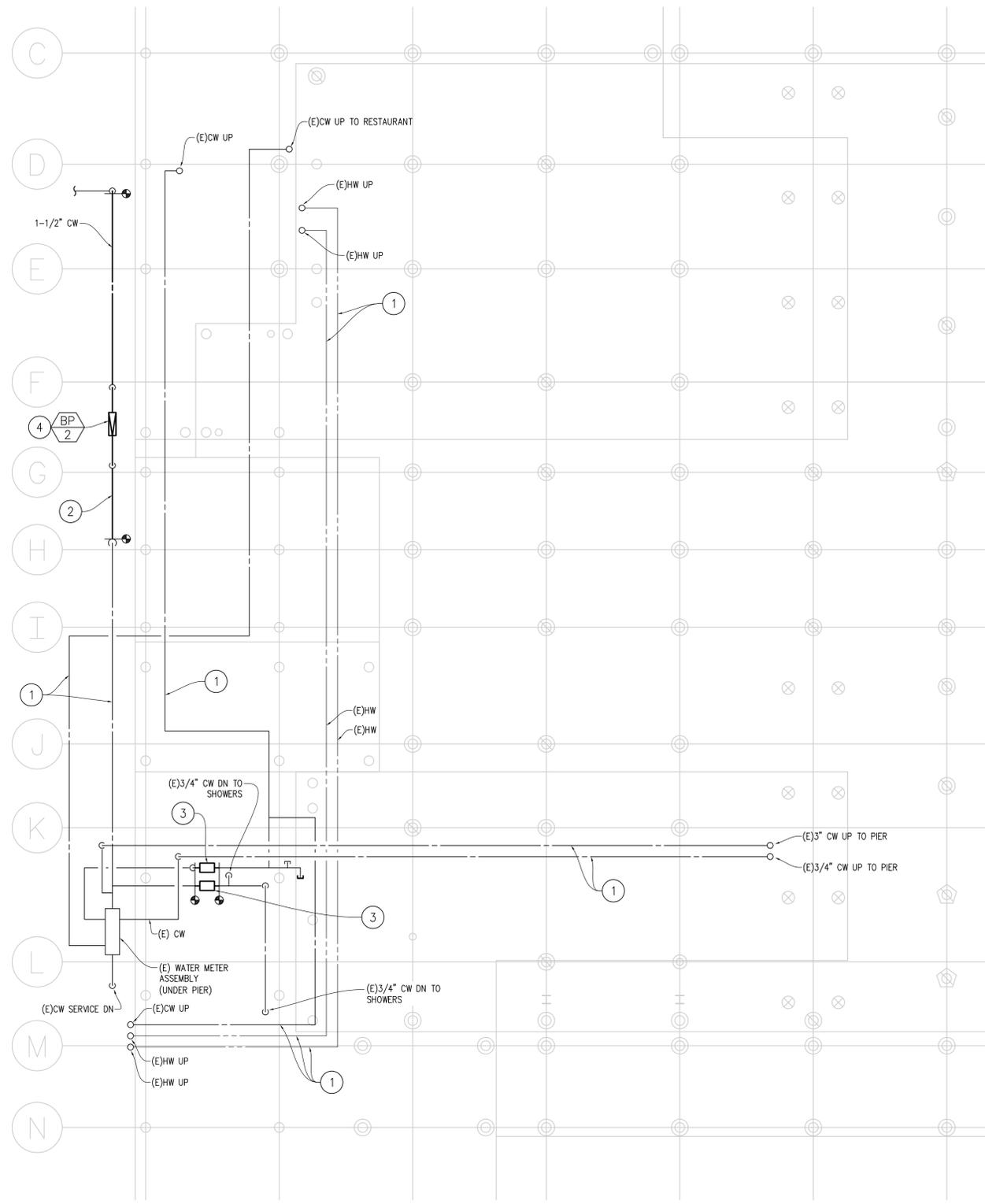
SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811



ENLARGED COLD WATER SINK LOCATION SCALE 1/4" = 1'-0" 2



ENLARGED COLD WATER SINK LOCATION SCALE 1/4" = 1'-0" 3



ENLARGED COLD WATER NEW WORK PLAN SCALE 1/8" = 1'-0" 1

- NEW WORK SHEET NOTES**
1. INSTALL NEW STAINLESS STEEL HANGERS AND SUPPORTS.
 2. PROVIDE NEW COLD WATER PIPING AND STAINLESS STEEL SUPPORTS AT CONCRETE WALL.
 3. PROVIDE NEW PRESSURE REDUCING VALVE. MATCH NEW VALVE WITH EXISTING PIPE SIZE - BID OPTION 001.
 4. PROVIDE NEW 1-1/2" BACKFLOW PREVENTER.
 5. INSTALL NEW FISHERMAN'S SINK AND CONNECT 1/2" COLD WATER PIPING TO EXISTING 1/2" COLD WATER PIPING, PROVIDE BACKFLOW PREVENTER.
 6. ROUTE 2" INDIRECT DRAIN FROM SINK TO SPILL OVER SIDE OF PIER.

- GENERAL NOTES**
1. PROVIDE NEW BRONZE SHUT-OFF VALVES WITH STAINLESS STEEL LEVER.
 2. PROVIDE INSULATION AT ALL DOMESTIC WATER PIPING BELOW PIER.

100%
SUBMITTAL
05-19-2017
NOT FOR CONSTRUCTION

REV.	DATE	DESCRIPTION	BY	APP'VD
REVISIONS				

DEC ENGINEERS
7350 CARROLL ROAD, STE. 100
SAN DIEGO, CA 92121
PH 619 578-3270 FX 619 578-3273
DEC PROJECT #4757

TranSystems
6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REGISTERED PROFESSIONAL ENGINEER
NO. M33524
EXP. 09/30/2018
MECHANICAL
STATE OF CALIFORNIA

REFERENCES

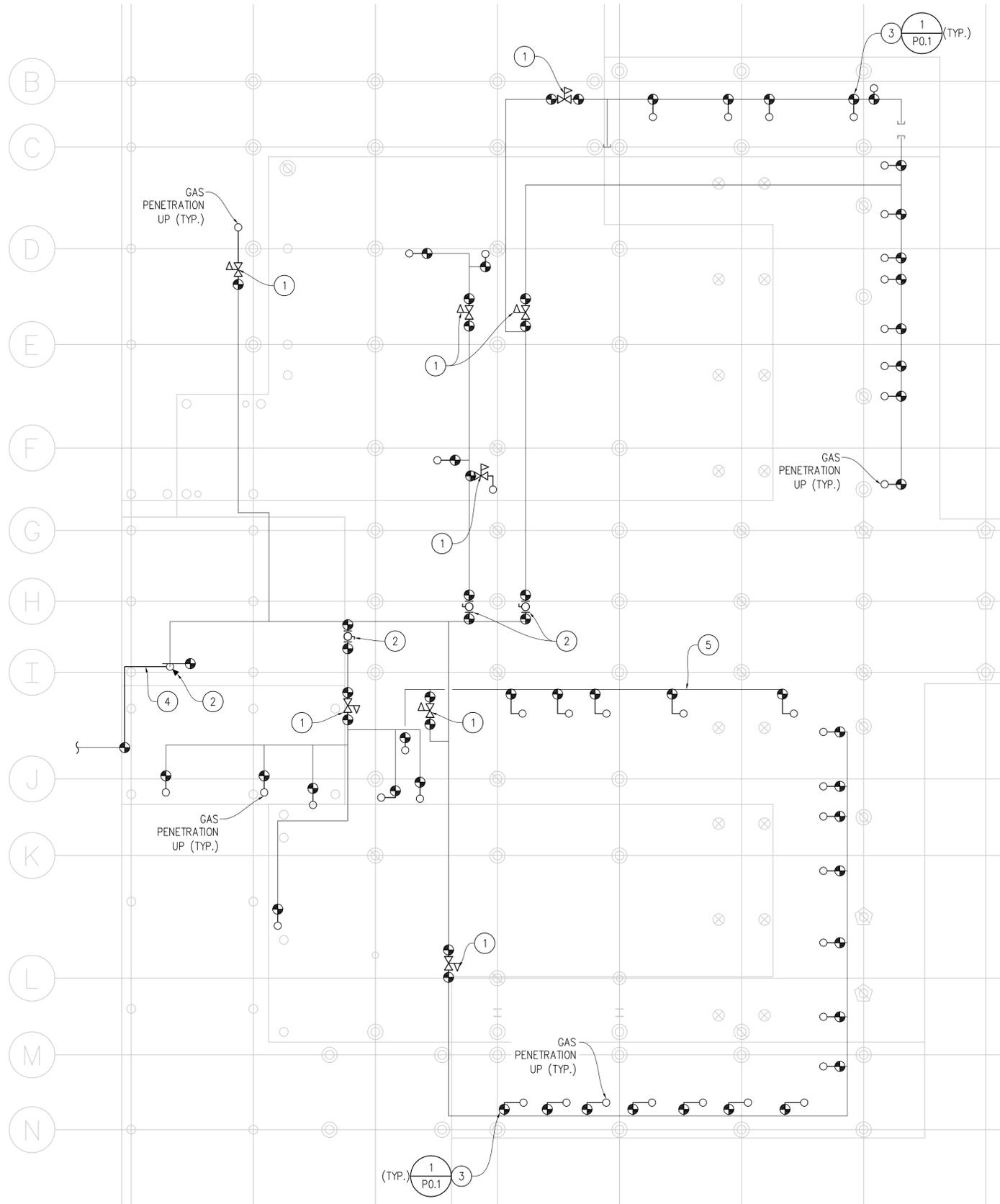
ENGINEERING SCALE: SEE FLOOR PLANS	DATE: 5/19/2017
DRAWN BY: SW	DESIGNED BY: SW
CHECKED BY: CDC	DATE: 5/19/2017
APPROVED: D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE:



PLUMBING NEW WORK WATER PLAN
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	P2.1
SHEET	31
OF	33

SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811



- NEW WORK SHEET NOTES**
- 1 PROVIDE GAS REGULATOR. CONTRACTOR SHALL MATCH EXISTING REGULATOR CAPACITY - BID OPTION 001.
 - 2 INSTALL NEW POLYETHYLENE SHUT-OFF VALVES - BID OPTION 001.
 - 3 RECONNECT EXISTING GAS TO PATIO HEATERS AND PROVIDE DIRT LEG - BID OPTION 001.
 - 4 INSTALL NEW POLYETHYLENE PIPING IN PLACE OF REMOVED PVC PIPING - BID OPTION 001.
 - 5 INSTALL STAINLESS STEEL HANGERS TO SUPPORT SAGGING PIPING - BID OPTION 001.

- GENERAL NOTES**
1. INSTALL NEW STAINLESS STEEL HANGERS AND SUPPORTS FOR GAS PIPING - BID OPTION 001.

**100%
SUBMITTAL**
05-19-2017
NOT FOR CONSTRUCTION

ENLARGED NATURAL GAS NEW WORK PLAN

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

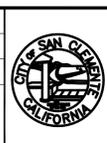
REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

DEC ENGINEERS
7350 CARROLL ROAD, STE. 100
SAN DIEGO, CA 92121
PH 619 578-3270 FX 619 578-3273
DEC PROJECT #4757

TranSystems
6 HUTTON CENTRE DRIVE
SUITE 1250
SANTA ANA, CA 92707
(714) 708-6890

REFERENCES

ENGINEERING SCALE: 1/8" = 1'-0"	DATE: 5/19/2017
DRAWN BY: SW	DESIGNED BY: SW
CHECKED BY: CDC	5/19/2017
APPROVED: D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE:



PLUMBING NEW WORK NATURAL GAS PLAN
SAN CLEMENTE MUNICIPAL PIER REPAIR
Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	P2.2
SHEET	32
OF	33

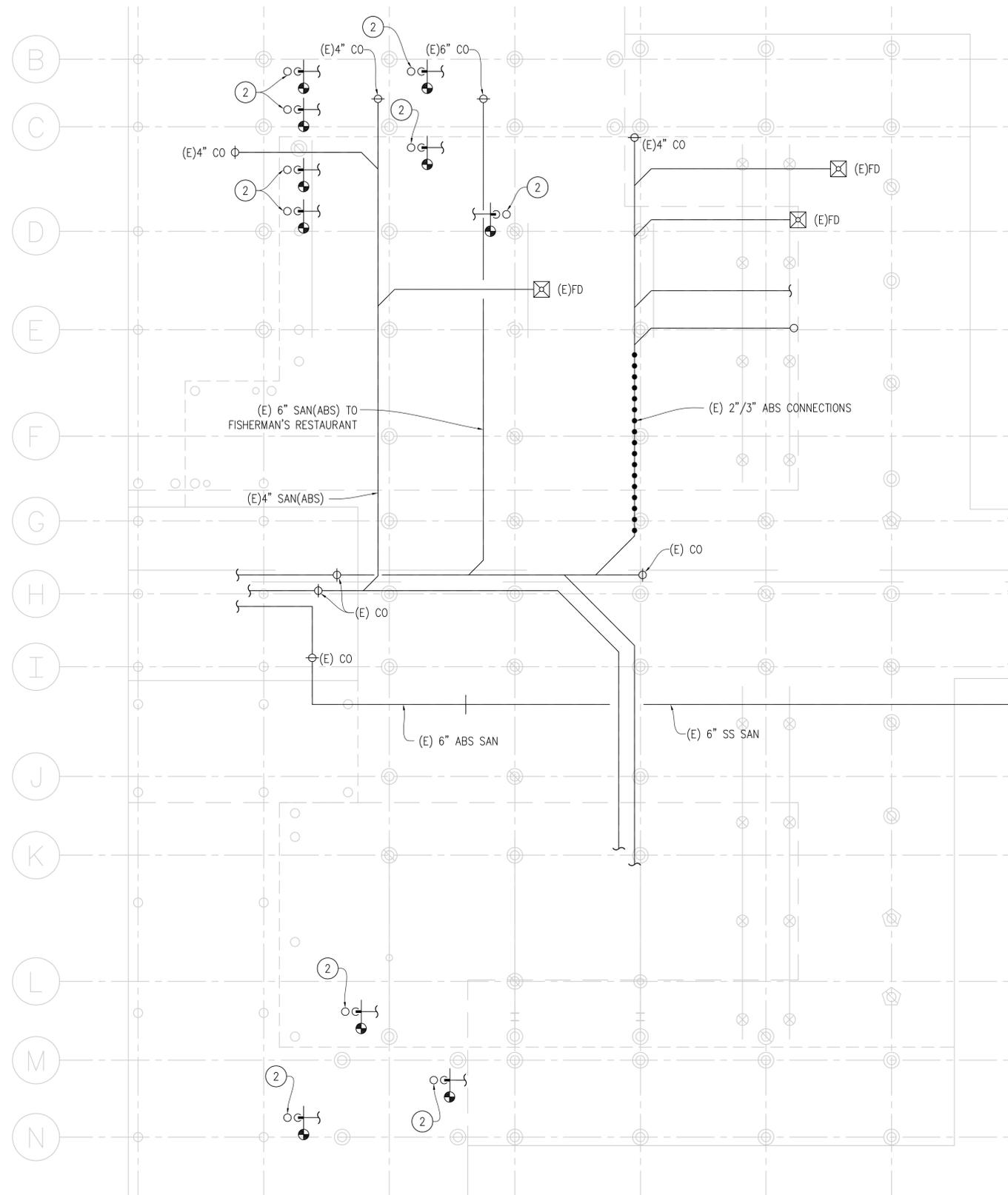
SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811

NEW WORK SHEET NOTES

- ① INSTALL NEW FLOOR SINK BELOW PIER - BID OPTION 001.
- ② INSTALL NEW ABS P-TRAPS - BID OPTION 001.

GENERAL NOTES

- 1. SLOPE SANITARY PIPE TO MAINTAIN A UNIFORM SLOPE OF 2%
- 2. INSTALL NEW STAINLESS STEEL HANGERS AND SUPPORTS WHERE REQUIRED - BID OPTION 001.



**100%
SUBMITTAL
05-19-2017**

NOT FOR CONSTRUCTION

ENLARGED WASTE NEW WORK PLAN

SCALE 1/8" = 1' 1

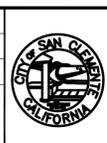
REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS				

DEC ENGINEERS
 7360 CARROLL ROAD, STE. 100
 SAN DIEGO, CA 92121
 P: 619 578-3270 F: 619 578-3273
 DEC PROJECT #4757

TranSystems
 6 HUTTON CENTRE DRIVE
 SUITE 1250
 SANTA ANA, CA 92707
 (714) 708-6890

REFERENCES

ENGINEERING SCALE: 1/8" = 1'-0"	DATE: 5/19/2017
DRAWN BY: SW	DESIGNED BY: SW
CHECKED BY: CDC	5/19/2017
APPROVED: D. T. REBENSORF RCE 60091 DEPUTY PUBLIC WORKS DIRECTOR	DATE:



**PLUMBING NEW WORK WASTE PLAN
SAN CLEMENTE MUNICIPAL PIER REPAIR**
 Project No. 16811
CITY OF SAN CLEMENTE

DRAWING NO:	P2.3
SHEET	33
OF	33

SAN CLEMENTE MUNICIPAL PIER REPAIR, Project No. 16811