City and County of San Francisco
Sourcing Event ID 0000006633 | Dept Contract ID: TC70300

Formal Request for Qualifications for:
Crane Barge

This RFQ can be viewed on the City's Supplier Portal at: https://sfcitypartner.sfgov.org/pages/index.aspx

Request for Qualifications Issuance	Friday, December 8, 2023
Pre-Response Conference	Friday, January 5, 2024 at 1:00PM Microsoft Teams meeting **Join on your computer, mobile app or room device** Click here to join the meeting Meeting ID: 225 190 269 709 Passcode: DrXbVy Download Teams | Join on the web **Or call in (audio only)** +1 415-906-4659,,606687658# United States, San Francisco Phone Conference ID: 606 687 658#
Deadline for Questions	Friday, January 12, 2024 at 5:00PM
Deadline to Submit Responses	Wednesday, January 24, 2024 at 5:00PM
Notice of Intent to Establish Prequalified Pool	Monday, February 5, 2024
Period for Protesting Notice of Intent to Establish Prequalified Pool	Within three (3) business days of the City's issuance of a Notice of Intent to Award.
Pool Administrator:	Hermilo Rodis Senior Purchaser, Office of Contract Administration City and County of San Francisco Phone: (628) 652-1628 Email: Hermilo.rodis@sfgov.org

Attachments & Exhibits

Attachment 1: Respondent Questionnaire
Attachment 2: Written Response Template
Attachment 3: City's Proposed Agreement Terms
Attachment 4: Grant Terms & Conditions
Exhibit A0: Specifications
Exhibit A1: General Arrangement
Exhibit A2: Structural Scantling Plan
Exhibit A3: Spud Pile
Exhibit A4: Outfitting
Exhibit A5: Mechanical Arrangement
Exhibit A6: Electrical One-Line Diagram

RESPONDENTS MUST SUBMIT WITH THEIR RESPONSE DOCUMENTS IN SUPPORT OF EACH MINIMUM QUALIFICATION LISTED BELOW. A RESPONSE THAT FAILS TO PROVIDE THE FOLLOWING DOCUMENTATION WILL NOT BE ELIGIBLE FOR FURTHER CONSIDERATION.

The following definitions apply to the Minimum Qualifications:

"Respondent" or "Prime Contractor": Organization awarded contract by the Port for the fabrication, assembly, integration, testing and delivery of the Crane Barge. Has ultimate responsibility for delivering the fully assembled and tested barge and equipment. Entity leading the team and will be contractually responsible for delivering the completed assembled crane barge. Presumably the Respondent will also act as the Prime Contractor for this project.

"Barge Fabricator": If not the prime contractor, Barge Fabricator (or simply "Fabricator") as referenced in the following will source materials, prepare construction drawings and specifications, provide all labor and construction facilities, cut-out, fit-up and weld steel to fabricate the barge and apply coatings Barge Fabricator may also procure and integrate all other assemblies and equipment to produce an outfitted and complete floating crane vessel. Presumably have on staff a Professional Engineer responsible for the design and engineering, and an experienced project manager responsible for the construction of the barge.

"Crane Vendor": Vendor, possibly independent from Barge Fabricator, responsible for design, construction, assembly and testing of crane. Responsible for any other tasks as defined by Prime Contractor. Presumably have Professional Engineer and responsible project manager for the design and construction of crane on staff

MQ #	Description
MQ 1	Completed Attachment 1, Respondent Questionnaire.
MQ 2	Completed Attachment 2, Written Response Template
MQ 3	If Respondent is not the Barge Fabricator, a written letter on Fabricator's letterhead stating that Respondent is the Fabricator's authorized dealer/service facility.
MQ 4	Barge Fabricator must have experience successfully fabricating and delivering at least one (1) specialty Barge in the last five (5) years, with a displacement of at least 500 long tons and a lifting capacity of at least 75,000 pounds (at a minimum radius of 25 ft) from design to commissioning. Provide detailed outline of project description, identifying barge specifications (Provide Information on Attachment 2 – see MQ 2 above).
MQ 5	Crane Vendor must have experience with providing at least one (1) crane for barge mounting, similar in size and scope to this project within the last five (5) years, and five (5) total within the last ten (10) years. Provide detailed outline of project description, identifying crane used for barge mounting. (Provide Information on Attachment 2 – see MQ 2 above).
MQ 6	The Barge Fabricator must have completed at least two (2) procurements over one million dollars for items installed on a floating structure(s) that were built in the last five years. (Provide Information on Attachment 2 - see MQ 2 above).
MQ 7	Barge Fabricator's Engineering Project Manager must be a licensed professional engineer with at least five (5) years of good standing with their state licensing agency, and with demonstrated experience in design of barges. Provide resume with project descriptions, vessels and barges, License No. and State of Registration.
MQ 8	Barge Fabricator's Fabrication Manager must have at least ten (10) years of demonstrated experience in ship or barge fabrication. Provide resume with project descriptions, vessels and barges.
MQ 9	Crane Vendor's Engineering Project Manager must be a licensed professional engineer with at least five (5) years of good standing with their state licensing agency, and with demonstrated experience in design of cranes. Provide resume with project descriptions of cranes designed, License No. and State of Registration.
MQ 10	Minimum $6 million performance bonding capacity and $6 million payment bonding capacity (Note: If bidding as a joint venture, bonding capacity requirements apply to the joint venture firm, not the individual firms) Provide statement from bonding agency on your ability to meet bonding requirements.
MQ 11	The answer must be "no" to the following questions: **Is your firm, or are individuals associated with your firm, whether as individuals or business entities, acting for or on behalf of, any country listed in any Office of Foreign Assets Control (OFAC) list of countries or any other U.S. Treasury Sanctions Program?**

Table of Contents

I. INTRODUCTION

A. General

This Request for Qualifications (hereinafter "Phase 1 RFQ") is being issued as the first phase of a multi-phase procurement process, by The Office of Contract Administration (hereinafter, "OCA" or "City"). OCA, on behalf of the Port of San Francisco, is seeking qualified suppliers ("Respondents") to provide responses ("Responses") for the fabrication and delivery of a Crane Barge as specified in this and the attached documents.

In accordance with Section 21.4 of the San Francisco Administrative Code, the Purchaser may issue a request for qualifications to determine the qualifications of prospective Contractors for particular types of Commodities and/or Services to the City. The City shall evaluate submitted qualifications to create a Prequalified Pool of Respondents ("Prequalified Pool"). The City expects to use the Prequalified Pool to issue a further Request for Proposals ("Phase 2 RFP") that will result in a contract for the fabrication and delivery of a Crane Barge. Respondents prequalified under this Phase 1 RFQ are not guaranteed a contract.

The City reserves the right to reopen this Phase 1 RFQ, or issue an RFP independent of the results of this Phase 1 RFQ, if the City, in its sole and absolute discretion, determines that i) there is not a sufficient number of qualified respondents to this Phase 1 RFQ and/or ii) doing so is in the best interest of the City.

When applicable and practical, Respondents are encouraged to engage contracting teams that reflect the diversity of the City and include participation of businesses and residents from the City's most disadvantaged communities including, but not limited to the Bayview/Hunters Point, Chinatown, Mission, South of Market, Tenderloin, Visitacion Valley and Western Addition neighborhoods.

The not to exceed ("NTE") amount for a contract awarded pursuant to the Phase 2 RFP **cannot be anticipated** at the time of this Phase 1 RFQ. The City expects that the NTE amount of a Resulting Contract awarded to the Prequalified Pool shall be determined at the time of Contract award following the Phase 2 RFP based on the awarding Department's business needs. The City's engineer's estimate is $6,000,000. City may in its sole discretion increase the contract NTE for the initial term, pursuant to approved change orders as required per the contract. Should City exercise its options to extend the contract beyond the initial term, City, in its sole discretion, may also elect to increase the NTE as warranted.

NOTE: The City expects that this contract will require delivery and acceptance of a crane barge that meets the specifications set forth herein on or before October 31, 2025. This contract is grant funded, and time is of the essence. Liquidated damages for delayed delivery will be set as part of the phase 2 RFP process.

B. Creation and Duration of the Prequalified Pool

Responsive and Responsible Respondents that meet the Minimum Qualifications for the fabrication of a Crane Barge as specified in this and the attached documents may be added to the Prequalified Pool and be eligible for participation in the resulting Phase 2 RFP. A Prequalified Pool list is valid for 2 years, but may be extended for up to 2 additional years if re-opened by City in accordance with Section 21.4 of the San Francisco Administrative Code. Responses will be solely evaluated on responsiveness, responsibility, and Minimum Qualifications.

At the City's sole discretion, this Prequalified Pool may be reopened after the original deadline to increase the number of pre-qualified pool participants for future solicitations. After the

new deadline, the RFQ will be closed and the final prequalified pool established at least two weeks prior to advertising a Request for Proposals.

The City expects to limit proposers in the Phase 2 RFP to those qualified under this Phase 1 RFQ. However, the City reserves the right to open competition through an RFP to any participant should the City, in its sole and absolute discretion, determine that 1) there is not a sufficient number of qualified respondents to this RFQ and/or 2) doing so is in the best interest of the City.

C. Resulting Contracts Awarded to Contractors Selected from the Prequalified Pool

1. Selection of Contractors from the Prequalified Pool

Pursuant to Section 21.4 of the San Francisco Administrative Code, the City expects to apply the Chapter 14B Rating Bonus as part of the Phase 2 RFP proposal evaluation stage to all eligible firms from within the pre-qualified pool.

2. Reserved (Notice of Intent to Award a Resulting Contract to the Prequalified Pool)

3. Anticipated Term of Resulting Contracts

The City expects that resulting Contract(s) awarded to the Prequalified Pool shall be non-exclusive, with an original term to be determined at the time of Contract award following the Phase 2 RFP based on the awarding Department's business needs, but shall not exceed ten (10) years.

4. Anticipated Not to Exceed Amount of Resulting Contracts

The City expects that the Not-to-Exceed (NTE) amount of a Resulting Contract awarded to the Prequalified Pool shall be determined at the time of Contract award following the Phase 2 RFP based on the awarding Department's business needs.

D. Cooperative Agreement

Any other City department, public entity or non-profit made up of multiple public entities, may use the results of this Phase 1 RFQ to select Contractors from the Prequalified Pool under the same terms and conditions of this RFQ.

E. RFQ Schedule

The anticipated schedule for this Phase 1 RFQ is set forth below. These dates are tentative and subject to change. It is the responsibility of the Respondent to check for any Addenda to this Phase 1 RFQ or other pertinent information posted in the City's Supplier Portal.

Response Phase	Tentative Date
Request for Qualifications Issued	Friday, December 8, 2023
Pre-Response Conference	Friday, January 5, 2024 at 1:00PM Microsoft Teams meeting **Join on your computer, mobile app or room device** Click here to join the meeting Meeting ID: 225 190 269 709 Passcode: DrXbVy Download Teams | Join on the web **Or call in (audio only)** +1 415-906-4659,,606687658# United States, San Francisco Phone Conference ID: 606 687 658#

Deadline for Written Questions	Friday, January 12, 2024 at 5:00PM
Deadline to Submit Responses	Wednesday, January 24, 2024 at 5:00PM
Notice of Intent to Establish Prequalified Pool	Monday, February 5, 2024
Period for Protesting Notice of Intent to Place in Prequalified Pool	Within three (3) business days of the City's issuance of a Notice of Intent to Place in Prequalified Pool.
The Pre-Response Conference Details: The Pre-Response Conference will begin at the time specified. Respondents' representatives are urged to arrive on time. Topics already covered will not be repeated for the benefit of late arrivals. **Failure to attend the Pre-Response Conference shall not excuse the awarded Respondent from any obligations of a Resulting Contract awarded pursuant to this RFQ**. Any change or addition to the requirements contained in this RFQ as a result of the Pre-Response Conference will be executed by a written Addendum to this RFQ. It is the responsibility of the Respondent to check for any Addendum to this RFQ or other pertinent information posted on the City's Supplier Portal https://sfcitypartner.sfgov.org/pages/index.aspx..	

F. Contract Terms and Negotiations

The successful Respondent to the Phase 2 RFP will be required to enter into a contract substantially in the form attached hereto as Attachment 3, City's Proposed Agreement Terms. If Respondent to the RFQ is unable to accept City's Proposed Agreement Terms substantially in the form presented, it is recommended that the Respondent include a redlined copy of City's Proposed Agreement Terms with its Response to the RFQ. The revised copy of City's Proposed Agreement Terms should clearly:

1. Mark those sections to which it objects;
2. Set forth Respondent's alternative terms with respect to each such section; and
3. Explain the basis for each proposed change.

The City expects to, during the Phase 2 RFP stage, add or modify clauses to the Agreement, including but not limited to insurance requirements, delivery and acceptance procedures, and change order work.

II. GOODS AND SERVICES REQUESTED

A. Goods and/or Services Requested

The City expects that the eventual Contract will require the provision of a crane barge as specified in the following Exhibits. The City may, however, in its sole and absolute discretion, revise the following exhibits prior to issuance of the Phase 2 RFP, or as part of the Phase 2 RFP.

Attachment 3: Proposed Contract
Attachment 4: Grant Terms & Conditions
Exhibit A0: Specifications
Exhibit A1: General Arrangement
Exhibit A2: Structural Scantling Plan
Exhibit A3: Spud Pile
Exhibit A4: Outfitting
Exhibit A5: Mechanical Arrangement
Exhibit A6: Electrical One-Line Diagram

B. Regulatory and Compliance Requirements Specific to the Goods/Services Solicited

Prior to submitting a Response in response to this RFQ, Respondents must ensure they have fully read and understood the "Regulatory and Compliance Requirements" set forth in Appendix C to Attachment 3.

C. Green Purchasing Requirements

In preparation for any Response submitted in response to this RFQ, Respondents are required to review the City Mandatory Green Purchasing Requirements to ensure all goods and services offered to City in response to this RFQ comply with the City's Green Purchasing Requirements.

III. LOCAL BUSINESS ENTERPRISE (LBE) PROGRAM REQUIREMENTS

A. CMD Compliance Officer

The CMD Compliance Officer (CCO) for this RFQ and any Contract awarded to a Contractor selected from the resulting Prequalified Pool is:

Melinda Kanios
Contract Monitoring Division
City and County of San Francisco
SF Port: Tues, Wed, Thurs (415) 274-0511
Remote: Mon, Fri (415) 480-4512 Google Voice
Email: melinda.kanios@sfgov.org
Website: www.sfgov.org/cmd.

B. Application of LBE Rating Bonuses and/or Bid Discounts in Follow-on RFP

LBE Rating Bonuses and/or Bid Discounts shall be applicable to at each phase of the RFP evaluation and selection process, in accordance with the values shown below. LBE Rating Bonuses and/or Bid Discounts shall also be applicable when selecting a Contractor from the resulting Prequalified Pool.

1. Commodities

Estimated Contract Value	Small/Micro LBEs Rating Bonus	SBA LBEs Rating Bonus
Greater than $10,000 but less than or equal to $400,000.	10%	0%
Greater than $400,000 but less than or equal to $10,000,000.	10%	5% *So long as it does not adversely affect a Small or Micro-LBE Respondent's participation.*
Greater than $10,000,000.	0%	0%

2. Reserved (General and Professional Services)

3. Reserved (Professional Services by Joint Ventures)

C. LBE Subcontracting Participation Requirements

There shall be no LBE Subcontracting Requirement for any Contract awarded to a Contractor selected from the Prequalified Pool because this is a contract primarily for Commodities.

IV. RESERVED (RESPONSE EVALUATION CRITERIA)

V. MINIMUM QUALIFICATIONS DOCUMENTATION REQUIRED WITH RESPONSE (PASS/FAIL)

Respondents must submit a fully completed Attachment 2 and supporting documentation that clearly demonstrates each Minimum Qualification (MQ) listed below has been met. Minimum Qualification documentation should be clearly marked as "MQ1", MQ2", etc.… to indicate which MQ it supports. Each Response will be reviewed for initial determination on whether Respondent meets the MQs referenced in this section. **This screening is a pass or fail determination and a Response that fails to meet the Minimum Qualifications will not be eligible for further consideration in the evaluation process**. The City reserves the right to request clarifications from Respondents prior to rejecting a Response for failure to meet the Minimum Qualifications. See Attachment 2 to this Phase 1 RFQ for more information.

The following definitions apply to the Minimum Qualifications:

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MQ 11	The answer must be "no" to the following questions: **Is your firm, or are individuals associated with your firm, whether as individuals or business entities, acting for or on behalf of, any country listed in any Office of Foreign Assets Control (OFAC) list of countries or any other U.S. Treasury Sanctions Program?**

VI. WRITTEN RESPONSE EVALUATION CRITERIA

In addition to submitting documents supporting each Minimum Qualification as required by this RFQ, Respondents shall also submit a complete Response consisting of each item set forth in Attachment 2, Written Response Template. A complete Response will have a relevant response where requested. A Response that leaves responses blank or does not provide the requested information may be deemed non-responsive for failure to meet Minimum Qualifications 1 and or 2.

VII. RESERVED (ORAL INTERVIEWS)

VIII. RESERVED (SUPPORTING DOCUMENTATION REQUIRED PRIOR TO CONTRACT EXECUTION)

IX. CITY'S SOCIAL AND ECONOMIC POLICY REQUIREMENTS

The San Francisco Municipal Code establishes a number of requirements for people seeking to do business with the City ("Social and Economic Policy Requirements"). The Social and Economic Policy Requirements set forth below are not intended to be a complete list of all Social Policy Requirements applicable to this RFQ and any contracts awarded from it.

Evidence of compliance with the below will be required for the award of any contract awarded through the pre-qualified pool resulting from this RFQ.

A. Respondents Unable to do Business with the City

1. Generally

Respondents that do not comply with laws set forth in San Francisco's Municipal Codes may be unable to enter into a contract with the City.

2. Administrative Code Chapter 12B

If awarded a Resulting Contract when selected from the Prequalified Pool, Respondent may not, during the term of the Contract, in any of its operations in San Francisco, on real property owned by San Francisco, or where work is being performed for the City elsewhere in the United States, discriminate in the provision of bereavement leave, family medical leave, health benefits, membership or membership discounts, moving expenses, pension and retirement benefits or travel benefits, as well as any benefits other than the benefits specified above, between employees with domestic partners and employees with spouses, and/or between the domestic partners and spouses of such employees, where the domestic partnership has been registered with a governmental entity pursuant to state or local law authorizing such registration, subject to the conditions set forth in §12B.2(b) of the San Francisco Administrative Code.

B. Reserved (Prevailing Wage Ordinance).

C. Health Care Accountability Ordinance

If awarded a Resulting Contract when selected from the Prequalified Pool, Respondent may be required to comply with the requirements of Chapter 12Q. For more information, visit: http://sfgov.org/olse/hcao.

D. Minimum Compensation Ordinance

If awarded a Resulting Contract when selected from the Prequalified Pool, Respondent may be required to comply with Administrative Code Chapter 12P. For more information, visit: http://sfgov.org/olse/mco.

E. First Source Hiring Program

If awarded a Resulting Contract when selected from the Prequalified Pool, Respondent may be required to comply with all of the applicable provisions of the First Source Hiring Program, Chapter 83 of the San Francisco Administrative Code. For more information, visit https://oewd.org/first-source

F. Reserved (Sweatfree Procurement)

G. Non-Profit Entities

If awarded a Resulting Contract under this Phase 1 RFQ, any nonprofit Respondent must be in good standing with the California Attorney General's Registry of Charitable Trusts by the time of contract execution and must remain in good standing during the term of the agreement. Upon request, Respondent must provide documentation to the City demonstrating its good standing with applicable legal requirements. If Respondent will use any nonprofit subcontractors to perform the agreement, Respondent will be responsible for ensuring they are also in compliance with all requirements of the Attorney General's Registry of Charitable Trusts at the time of Contract execution and for the duration of the agreement.

X. TERMS AND CONDITIONS FOR RECEIPT OF RESPONSES

A. How to Register as a City Supplier

All respondents to this RFQ must be registered as a City Bidder in order to participate in at this phase of the solicitation (Phase 1).

Respondents do not need to become a fully compliant City Supplier at this state of this stage of the solicitation (Phase 1).

The following requirements pertain only to Respondents not currently registered with the City as a Supplier.

Step 1: Register as a BIDDER at City's Supplier Portal:

https://sfcitypartner.sfgov.org/pages/index.aspx

Step 2: Follow instructions for converting your BIDDER ID to a SUPPLIER ID. This will require you to register with the City Tax Collector's Office and submit Chapter 12B and 12C forms through the Supplier portal. Once these forms have been completed, submitted, and processed, you will be notified via email with your organization's new Supplier ID. That email will also provide instructions for completing your Supplier registration.

- **City Business Tax Registration Inquiries:** For questions regarding business tax registration procedures and requirements, contact the Tax Collector's Office at (415) 554-4400 or, if calling from within the City and County of San Francisco, 311.
- **Chapter 12(B) and 12(C) Inquiries:** For questions concerning the City's Chapter 12(B) and 12(C) Equal Benefits and Non-Discrimination in Contracting requirements, go to: www.sfgov.org/cmd.

B. Response Questions and Submissions

1. Respondents Questions and Requests for Clarification

Respondents shall address any questions regarding this RFQ to the Contract Administrator whose name and contact information appears on the cover page of this RFQ. Respondents who fail to submit questions concerning this RFQ and its requirements will waive all further rights to protest based on the specifications and conditions herein. **Questions must be submitted by email to the Contract Administrator whose name and contact information appears on the cover page of this RFQ no later than Written Questions Due Date.** A written Addendum will be executed addressing each question and answer and posted publicly. It is the responsibility of the Respondent to check for any Addenda and other updates that will be posted on the City's Supplier Portal: https://sfcitypartner.sfgov.org/pages/Events-BS3/event-search.aspx.

2. Response Format

Responses shall respond on the templates provided. Information must be provided at a level of detail that enables effective evaluation and comparison between Responses. Failure to follow directions, as well as page limit restrictions (if any), may negatively impact the evaluation of your Response.

3. Time and Place for Submission of Responses

Prior to the Response submission deadline, Respondents must upload their complete Responses into the City's Supplier Portal: https://sfcitypartner.sfgov.org/pages/index.aspx. Late submissions will not be considered. Each original Response received will be screened to ensure that all content required by this RFQ is included. Partial or complete omission of any required content may disqualify Responses from further consideration. Late Response submissions will not be considered and failure to adhere to the above requirements may result in the complete rejection of your Response.

Respondents are encouraged to upload their Responses to the SF Supplier Portal as early as possible to address any technical issues that may arise during the submission process. In the event a Respondent is unable to upload its complete Response into the SF Supplier Portal, Respondent must email its Response to the Contract Administrator whose name and contact information appears on the cover page of this RFQ prior to the Response submission deadline and

request confirmation of receipt. Respondent must include in its email: (a) documentation (e.g. screenshots) verifying its inability to upload its Response into the SF Supplier Portal and (b) a detailed justification explaining why it was not able to have the issue addressed prior to the submission deadline.

C. Response Addenda

The City may modify this RFQ, prior to the Response Due Date, by issuing an Addendum to the RFQ, which will be posted on the San Francisco Supplier Portal. Every Addendum will create a new version of the Sourcing Event and Respondents must monitor the event for new versions. **The Respondent shall be responsible for ensuring that its Response reflects any and all Addenda issued by the City prior to the Response Due Date regardless of when the Response is submitted**. Therefore, the City recommends that the Respondent consult the website frequently, including shortly before the Response Due Date, to determine if the Respondent has downloaded all RFQ Addenda. It is the responsibility of the Respondent to check for any Addenda, Questions and Answers documents, and updates, which may be posted to the subject RFQ.

THE SUBMITTAL OF A RESPONSE TO THIS RFQ SHALL EXPLICITLY STIPULATE ACCEPTANCE BY RESPONDENTS OF THE TERMS FOUND IN THIS RFQ, ANY AND ALL ADDENDA ISSUED TO THIS RFQ, AND THE PROPOSED CONTRACT TERMS.

D. Public Disclosure

All documents under this Phase 1 RFQ process are subject to public disclosure per the California Public Records Act (California Government Code Section §6250 et. Seq) and the San Francisco Sunshine Ordinance (San Francisco Administrative Code Chapter 67). Contracts, Responses, responses, and all other records of communications between the City and Respondents shall be open to inspection immediately after a contract has been executed following the completion of the Phase 2 RFP process, or cancellation. Nothing in this Administrative Code provision requires the disclosure of a private person's or organization's net worth or other proprietary financial data submitted for qualification for a contract or other benefit until and unless that person or organization is awarded the contract or benefit.

If the City receives a Public Records Request ("Request") pertaining to this Phase 1 RFQ, City will use its best efforts to notify the affected Respondent(s) of the Request and to provide the Respondent with a description of the material that the City deems responsive and the due date for disclosure ("Response Date"). If the Respondent asserts that some or all of the material requested contains or reveals valuable trade secret or other information belonging to the Respondent that is exempt from disclosure and directs the City in writing to withhold such material from production ("Withholding Directive"), then the City will comply with the Withholding Directive on the condition that the Respondent seeks judicial relief on or before the Response Date. Should Respondent fail to seek judicial relief on or before the Response Date, the City shall proceed with the disclosure of responsive documents.

E. Limitation on Communications During RFQ

From the date this RFQ is issued until the date the competitive process of this Phase 1 RFQ is completed (either by cancelation or notice of establishment of a prequalified pool), Respondents and their subcontractors, vendors, representatives and/or other parties under Respondent's control, shall communicate solely with the Contract Administrator whose name appears in this Phase 1 RFQ. Any attempt to communicate with any party other than the Contract Administrator whose name appears in this Phase 1 RFQ – including any City official, representative or employee – is strictly prohibited. Failure to comply with this communications protocol may, at the sole discretion

of City, result in the disqualification of the Respondent or potential Respondent from the competitive process. This protocol does not apply to communications with the City regarding business not related to this Phase 1 RFQ.

F. Response Selection Shall Not Imply Acceptance

The acceptance and/or selection of any Response(s) shall not imply acceptance by the City of all terms of the Response(s), which may be subject to further approvals before the City may be legally bound thereby.

G. RESERVED (Cybersecurity Risk Assessment)

H. RFQ Errors and Omissions

Respondents are responsible for reviewing all portions of this RFQ. Respondents are to promptly notify the City, in writing and to the RFQ contact person if the Respondent discovers any ambiguity, discrepancy, omission, or other error in the RFQ. Any such notification should be directed to the City promptly after discovery, but in no event later than the deadline for questions. Modifications and clarifications will be made by Addenda as provided below.

I. Objections to RFQ Terms

Should a Respondent object on any ground to any provision or legal requirement set forth in this RFQ, the Respondent must, no later than the deadline for questions, provide written notice to the City setting forth with specificity the grounds for the objection. The failure of a Respondent to object in the manner set forth in this paragraph shall constitute a complete and irrevocable waiver of any such objection.

J. Protest Procedures

1. Protest of Non-Responsiveness Determination

Within three (3) business days of the City's issuance of a Notice of Non-Responsiveness, a Respondent may submit a written Notice of Protest of Non-Responsiveness. The Notice of Protest must include a written statement specifying in detail each and every one of the grounds asserted for the protest. The Notice of Protest must be signed by an individual authorized to represent the Respondent, and must cite the law, rule, local ordinance, procedure or RFQ provision on which the protest is based. In addition, the Notice of Protest must specify facts and evidence sufficient for the City to determine the validity of the protest.

2. Protest of Non-Responsible Determination

Within three (3) business days of the City's issuance of a Notice of Non-Responsibility, a Respondent may submit a written Notice of Protest of Non-Responsibility. The Notice of Protest must include a written statement specifying in detail each and every one of the grounds asserted for the protest. The Notice of Protest must be signed by an individual authorized to represent the Respondent, and must cite the law, rule, local ordinance, procedure or RFQ provision on which the protest is based. In addition, the Notice of Protest must specify facts and evidence sufficient for the City to determine the validity of the protest.

3. Protest of Prequalified Pool Creation

Within three (3) business days of the City's issuance of a Notice of Intent to Establish a Prequalified Pool, a Respondent may submit a written Notice of Protest to Intent to Establish a Prequalified Pool. The Notice of Protest must include a written statement specifying in detail each and every one of the grounds asserted for the protest. The Notice of Protest must be signed by an individual authorized to represent the Respondent, and must cite the law, rule, local ordinance,

procedure or RFQ provision on which the protest is based. In addition, the Notice of Protest must specify facts and evidence sufficient for the City to determine the validity of the protest.

4. Delivery of Protests

A Notice of Protest must be written. Protests made orally (e.g., by telephone) will not be considered. A Notice of Protest must be delivered by mail or email to the Contract Administrator whose name and contact information appears on the cover page to this RFQ and received by the due dates stated above. A Notice of Protest shall be transmitted by a means that will objectively establish the date the City received the Notice of Protest. If a Notice of Protest is mailed, the protestor bears the risk of non-delivery within the deadlines specified herein.

K. Response Term

Submission of a Response signifies that the proposed products, and services are valid for 180 calendar days from the Response Due Date and that the response is genuine and not the result of collusion or any other anti-competitive activity. At Respondent's election, the Response may remain valid beyond the 180-day period in the circumstance of extended negotiations.

L. Revision to Response

A Respondent may revise a Response on the Respondent's own initiative at any time before the deadline for submission of Responses. The Respondent must submit the revised Response in the same manner as the original. A revised Response must be received on or before, but no later than the Response Due Date and time. In no case will a statement of intent to submit a revised Response, or commencement of a revision process, extend the Response Due Date for any Respondent. At any time during the Response evaluation process, the City may require a Respondent to provide oral or written clarification of its Response. The City reserves the right to make an award without further clarifications of Responses received.

M. Response Errors and Omissions

Failure by the City to object to an error, omission, or deviation in the Response will in no way modify the RFQ or excuse the Respondent from full compliance with the specifications of this RFQ or any contract awarded pursuant to this RFQ.

N. Financial Responsibility

The City accepts no financial responsibility for any costs incurred by a Respondent in responding to this RFQ. Respondents acknowledge and agree that their submissions in response to this RFQ will become the property of the City and may be used by the City in any way deemed appropriate.

O. Respondent's Obligations under the Campaign Reform Ordinance

If a Resulting Contract awarded to a Contractor from the Prequalified Pool has (A) a value of $100,000 or more in a fiscal year and (B) requires the approval of an elected City official, Respondents are hereby advised:

1. Submission of a Response in response to this RFQ may subject the Respondents to restrictions under Campaign and Governmental Conduct Code Section 1.126, which prohibits City contractors, Respondents, and their affiliates from making political contributions to certain City elective officers and candidates; and

2. Before submitting a Response in response to this RFQ, Respondents are required to notify their affiliates and subcontractors listed in the awarded contract or Response of the political contribution restrictions set forth in Campaign and Governmental Conduct Code section 1.126.

This restriction applies to the party seeking the contract, the party's board of directors, chairperson, chief executive officer, chief financial officer, chief operating officer, any person with an ownership interest greater than ten percent, and any political committees controlled or sponsored by the party, as well as any subcontractors listed in the awarded contract or Response. The law both prohibits the donor from giving contributions and prohibits the elected official from soliciting or accepting them.

The people and entities listed in the preceding paragraph may not make a campaign contribution to the elected official at any time from the submission of a Response for a contract until either: (1) negotiations are terminated and no contract is awarded; or (2) twelve months have elapsed since the award of the contract.

A violation of Section 1.126 may result in criminal, civil, or administrative penalties. For further information, Respondents should contact the San Francisco Ethics Commission at (415) 252-3100 or go to https://sfethics.org/compliance/city-officers/city-contracts/city-departments/notifying-bidders-and-potential-bidders.

P. Reservations of Rights by the City

The issuance of this RFQ does not constitute a guarantee by the City that a contract will be awarded or executed by the City. The City expressly reserves the right at any time to:

1. Waive or correct any defect or informality in any response, Response, or Response procedure;

2. Reject any or all Responses;

3. Reissue the RFQ;

4. Prior to submission deadline for Responses, modify all or any portion of the selection procedures, including deadlines for accepting responses, the specifications or requirements for any materials, equipment or services to be provided under this RFQ, or the requirements for contents or format of the Responses;

5. Procure any materials, equipment or services specified in this RFQ by any other means; or

6. Determine that the subject goods or services are no longer necessary.

Q. No Waiver

No waiver by the City of any provision of this RFQ shall be implied from the City's failure to recognize or take action on account of a Respondent's failure to comply with this RFQ.

R. Other

1. The City may make such investigation, as it deems necessary, prior to the award of this contract to determine the conditions under which the goods are to be delivered or the work is to be performed. Factors considered by the City shall include, but not be limited to:

a. Any condition set forth in this RFQ;

b. Adequacy of Respondent's plant facilities and/or equipment, location and personnel location to properly perform all services called for under the Purchase Order; and

c. Delivery time(s).

2. City reserves the right to inspect an awarded Respondent's place of business prior to award of and/or at any time during the contract term (or any extension thereof) to aid City in determining an awarded Respondent's capabilities and qualifications.

3. Failure to timely execute a contract, or to furnish any and all insurance certificates and policy endorsements, surety bonds or other materials required in the contract, shall be deemed an abandonment of a contract offer. The City, in its sole discretion, may select another Respondent and may proceed against the original selectee for damages.

4. City reserves the right to reject any Response on which the information submitted by Respondent fails to satisfy City and/or if Respondent is unable to supply the information and documentation required by this RFQ within the period of time requested.

5. Any false statements made by a Respondent or any related communication/clarification may result in the disqualification of its Response from receiving further evaluation and a contract award.

Sourcing Event 0000006633
Attachment 1
Respondent Questionnaire

Part I
Respondent Information

Name of Firm:	
Headquarter Address:	
Phone No.:	
Contact Name & Title:	
E-mail:	
Person Preparing Bid:	

Part II

Respondent Questionnaire

Required Questions: Respondents must answer each question below in order to be considered Responsive to this Phase 1 RFQ.	**Yes**	**No**
1. Do you certify that you have complied with and will continue to comply with Section X (E) of this Solicitation entitled "Limitation on Communications During RFQ"?		
2. Have you registered as a Bidder or Supplier, through the Supplier Portal (*https://sfcitypartner.sfgov.org/*)? If yes, what is your Bidder ID or Supplier ID? _____		
3. Have you submitted with your Response <u>ALL</u> of the <u>Minimum Qualification Documentation</u> outlined in the accompanying RFQ document? If you reply NO to any document, please explain.		
4. Have you completed and submitted your Response using the Attachment 2 - <u>Written Response</u> template that complies with the requirements of the accompanying solicitation document? If you reply NO to any document, please explain.		

Optional Questions:
Respondents may provide the following additional information for consideration by the City. Responses to these questions is not required to qualify under this Phase 1 RFQ.

5. Crane Vendor – Identify crane vendor(s) your entity is considering.

Crane Vendor Name:	
Address:	
Phone #:	
Location where fabricated:	

6. Team Organization Chart. Attach or include on the next page an Organizational Chart that illustrates the team structure (include the integration/interaction with City project team staff). Note the Responder name and title/role for each team member.

Org. Chart

Respondent Certification of Truth, Accuracy, and Completeness

I certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this document are true, accurate, and complete. **By submitting this Response, I certify that neither me, my firm, nor any individuals or firms associated with my firm, whether as individuals or business entities, is acting for or on behalf of, any country listed in any Office of Foreign Assets Control (OFAC) list of countries or any other U.S. Treasury Sanctions Program.** Additionally, by submitting this Response, I attest that I have reviewed and accepted all terms found in this solicitation, and any and all addenda issued to this solicitation.

Company Name

Signature of Authorized Representative of Company

Date

Print Name and Title

Sourcing Event 0000006633
Attachment 2
Written Response Template

Instruction to Respondents

Respondents shall use this document as a template on which to establish the Minimum Qualifications set forth in the Phase 1 RFQ for the fabrication of a Crane Barge for the Port of San Francisco. Questions in this Written Response Template address MQ Nos. 4-11. Responses that fail to address each of the requested items in this document in a sufficient and complete manner may be deemed Non-Responsive. Responders shall not leave responses to questions blank and may not respond to questions with "To be provided upon request," "To be determined," or the like. The City reserves the right to accept an incomplete form if the City finds, in its sole discretion, that the incompletion resulted from excusable error, and that the Respondent provided sufficient information to determine that the Respondent meets the Minimum Qualifications. The City has the sole authority to determine whether the error is excusable.

Respondents may attach to this form additional information regarding past projects and proposed project teams, although attachments may not replace full and complete responses to specific questions.

All documents submitted in response to this Solicitation may be subject to public disclosure once a contract has been executed. Therefore, please exclude or otherwise identify confidential or proprietary information, as appropriate.

****

PART I. RECENT PROJECTS COMPLETED

MQ 4: Barge Fabricator must have experience successfully fabricating and delivering at least **one (1) specialty Barge** in the last five (5) years, with a displacement of at least 500 long tons and a lifting capacity of at least 75,000 pounds (at a minimum radius of 25 ft) from design to commissioning. Provide detailed outline of project description, identifying barge specifications. Respondent may provide information regarding additional vessels.

Names and references must be current and verifiable. References may be contacted. Please use the following form for all projects:

BARGE FABRICATOR: PROJECT 1 OF 2 (MQ 4 Response)					
1	Vessel Name				
2	Owner Type			Public Entity	Private
3	Owner				
4	Owner Contact (name, phone number, email)				
5	Engineering or Naval Architect Company				
6	Engineering or Naval Architect Contact (name, phone number, email)				
7	Construction Manager				
8	Construction Manager Contact (name, phone number, email)				
9	Original Contract Value				
10	Final Contract Value (including Change Orders)				
11	Original Scheduled Completion Date				
12	Actual Completion Date				

13	Please check any of the following attributes that the project included: ___ Load lifting or handling capability greater than 50 kips ___ Electrical Generation ___ Hydraulic Power Distribution System ___ Spud Pile Rigging or Handling System ___ Spread Mooring System ___ Steel hull ___ Spud Piles and Wells ___ Crane Pedestal or similar critical structure ___ Length overall greater than 100 feet ___ Integrated machinery/alarm/control systems ___ Vessel built to classification society rules ___ displacement of at least 500 long tons ___ lifting capacity of at least 75,000 pounds (at a minimum radius of 25 ft)
14	Project Description: Please include principal particulars (length, beam, depth, draft, displacement), type of crane or specialized equipment, lifting capacity at reach, specialized equipment installed, area of operations, and other information of interest to the Port of San Francisco.

PROJECT 2 OF 2 (MQ 4 Optional Response)			
1	Vessel Name		
2	Owner Type	☐ Public Entity	☐ Private
3	Owner		
4	Owner Contact (name, phone number, email)		
5	Engineering or Naval Architect Company		
6	Engineering or Naval Architect Contact (name, phone number, email)		

7	Construction Manager	
8	Construction Manager Contact (name, phone number, email)	
9	Original Contract Value	
10	Final Contract Value (including Change Orders)	
11	Original Scheduled Completion Date	
12	Actual Completion Date	
13	Please check any of the following attributes that the project included: ___ Load lifting or handling capability greater than 50 kips ___ Electrical Generation ___ Hydraulic Power Distribution System ___ Spud Pile Rigging or Handling System ___ Spread Mooring System ___Steel hull ___ Spud Piles and Wells ___ Crane Pedestal or similar critical structure ___ Length overall greater than 100 feet ___ Integrated machinery/alarm/control systems ___ Vessel built to classification society rules ___displacement of at least 500 long tons ___lifting capacity of at least 75,000 pounds (at a minimum radius of 25 ft)	
14	Project Description: Please include principal particulars (length, beam, depth, draft, displacement), type of crane or specialized equipment, lifting capacity at reach, specialized equipment installed, area of operations, and other information of interest to the Port of San Francisco.	

PROJECT EXPERIENCE

MQ 5: Crane Vendor must have experience with providing at least one (1) crane for barge mounting, similar in size and scope to this project within the last five (5) years, and five (5) total within the last ten (10) years. Provide detailed outline of project description, identifying crane used for barge mounting. Provide Information below. Add rows as needed.

Role in the Procurement (manufacturer, integrator, etc.)	Year Completed	Client	Boom Length	Lifting Capacity and reach	Were cranes mounted on a floating structure? (yes or no)

MQ 6: The **Barge Fabricator** must have completed at least two (2) procurements over one million dollars for items installed on a floating structure(s) that were built in the last five years. Provide information below. Add rows as needed.

Item Description	Equipment Type	Year Procured	Manufacturer	Dollar of Item	Name of Procurement staff still employed if listed in Part II below (Project Team)

PART II PROJECT TEAM, BONDING, AND OFAC CERTIFICATION

1. **MQ Nos. 7-9: Key/Lead Team Members.** Identify Barge Fabricator Engineering Manager, Barge Fabricator Manager, and Crane Vendor Engineering Manager. For Engineering Managers provide state professional license number, state of registration and a resume for the person. For the Construction Manager(s) provide resume showing construction management experience.

   MQ 7: Barge Fabricator's Engineering Project Manager must be a licensed professional engineer with at least ten (10) years of good standing with their state licensing agency, and with demonstrated experience in design of barges. Please list name(s) and employer(s) of individual(s) who will meet this MQ below. Attach resume(s) with project descriptions, vessels and barges, License No. and State of Registration.

   MQ 8: Barge Fabricator's Fabrication Manager must have at least ten (10) years of demonstrated experience in ship or barge fabrication. Please list name(s) and employer(s) of individual(s) who will meet this MQ below. Attach resume with project descriptions, vessels and barges.

   MQ 9: Crane Vendor's Engineering Project Manager must be a licensed professional engineer with at least ten (10) years of good standing with their state licensing agency, and with demonstrated experience in design of cranes. Please list name(s) and employer(s) of individual(s) who will meet this MQ below. Attach resume with project descriptions of cranes designed, License No. and State of Registration.

2. **MQ 10: Please attach documentation confirming that your firm is able to obtain a $6 million performance bond and $6 million payment bonding capacity. Provide any explanation of these documents below.**

3. **MQ 11: By submitting this Response, Respondent certifies that neither Respondent, nor any individuals or firms associated with Respondent, whether as individuals or business entities, is acting for or on behalf of, any country listed in any Office of Foreign Assets Control (OFAC) list of countries or any other U.S. Treasury Sanctions Program.**

Sourcing Event 0000006633
Attachment 3
City's Proposed Agreement Terms

The City expects that the successful Respondent to the Phase 2 RFP will be required to enter into a contract substantially in the form attached hereto as Attachment 3, City's Proposed Agreement Terms. If Respondent to the RFQ is unable to accept City's Proposed Agreement Terms substantially in the form presented, it is recommended that the Respondent include a redlined copy of City's Proposed Agreement Terms with its Response to the RFQ. The revised copy of City's Proposed Agreement Terms should clearly:

1. Mark those sections to which it objects;
2. Set forth Respondent's alternative terms with respect to each such section; and
3. Explain the basis for each proposed change.

The City expects to, during the Phase 2 RFP stage, add or modify clauses to the agreement, including but not limited to clauses setting forth warranties, insurance requirements, delivery and acceptance procedures, and change order work.

City and County of San Francisco
Office of Contract Administration
Purchasing Division
City Hall, Room 430
1 Dr. Carlton B. Goodlett Place
San Francisco, California 94102-4685

Agreement between the City and County of San Francisco

and
[Insert name of contractor]
[Insert agreement number (if applicable)]

AGREEMENT

This Agreement is made this [insert day] day of [insert month], [insert year], in the City and County of San Francisco ("City"), State of California, by and between [name and address of Contractor] ("Contractor") and City.

Recitals

WHEREAS, the Port of San Francisco ("Department") wishes to procure a Crane/Barge from Contractor; and

WHEREAS, Contractor represents and warrants that it is qualified to deliver the Goods required by City as set forth under this Agreement; and

WHEREAS, Contractor was competitively selected pursuant to Sourcing Event ID 000000XXXX and

WHEREAS, this Contract is primarily for Commodities and, as such, deemed exempt from the Subcontracting Requirements of Chapter 14B of the San Francisco Administrative Code; and

Now, THEREFORE, the parties agree as follows:

Article 1 Definitions

The following definitions apply to this Agreement:

1.1 "Agreement" means this contract document, including all attached appendices, and all applicable City Ordinances and Mandatory City Requirements specifically incorporated into this Agreement by reference as provided herein.

1.2 "City" or "the City" means the City and County of San Francisco, a municipal corporation, acting by and through both its Director of the Office of Contract Administration or the Director's designated agent, hereinafter referred to as "Purchasing" and all City Departments authorized to utilize this Agreement for the purpose of securing the Goods described herein.

1.3 "City Data" means that data as described in Article 13 of this Agreement which includes, without limitation, all data collected, used, maintained, processed, stored, or generated by or on behalf of the City in connection with this Agreement. City Data includes, without limitation, Confidential Information.

1.4 "CMD" means the Contract Monitoring Division of the City.

1.5 "Confidential Information" means confidential City information including, but not limited to, personally-identifiable information ("PII"), protected health information ("PHI"), or individual financial information (collectively, "Proprietary or Confidential Information") that is subject to local, state or federal laws restricting the use and disclosure of such information, including, but not limited to, Article 1, Section 1 of the California Constitution; the California Information Practices Act (Civil Code § 1798 et seq.); the California Confidentiality of Medical Information Act (Civil Code § 56 et seq.); the federal Gramm-Leach-Bliley Act (15 U.S.C. §§ 6801(b) and 6805(b)(2)); the privacy and information security aspects of the Administrative Simplification provisions of the federal Health Insurance Portability and Accountability Act (45 CFR Part 160 and Subparts A, C, and E of part 164); and San Francisco Administrative Code Chapter 12M (Chapter 12M).

1.6 "Contractor" or "Consultant" means [insert name and address of contractor].

1.7 The "Contract Documents" form the entire Contract for performance of the Work and provision of the Goods, and consist of the following:

(a) the Agreement and other documents listed in the Agreement;

(b) all appendices and exhibits attached to the Agreement and all addenda thereto; and

(c) Change Orders issued after execution of the Contract in accordance with Appendix G.

Nothing in the Contract Documents shall be construed to create a contractual relationship between the City and a Subcontractor, Supplier, Lower Tier Subcontractor or Supplier or a person or entity other than the City and Contractor.

1.8 Reserved ("Deliverables").

1.9 "Goods" or "Commodities" means the products, materials, equipment or supplies to be provided by Contractor under the Contract Documents.

1.10 "Mandatory City Requirements" means those City laws set forth in the San Francisco Municipal Code, including the duly authorized rules, regulations, and guidelines implementing such laws that impose specific duties and obligations upon Contractor.

1.11 "Party" and "Parties" means the City and Contractor either collectively or individually.

1.12 Reserved ("Services").

1.13 Work: The performance by Contractor of all its responsibilities and obligations set forth in the Contract Documents.

Article 2 Term of the Agreement

2.1 The term of this Agreement shall commence on [insert Contractor's start date] and expire on [insert expiration date], unless earlier terminated as otherwise provided herein.

2.2 **Options.** The City has the option to renew the Agreement for a period of two (2) additional years, for a total contract term of four (4) years. The City may extend this Agreement beyond the expiration date by exercising an option at the City's sole and absolute discretion and by modifying this Agreement as provided in Section 11.5, "Modification of this Agreement."

Article 3 Financial Matters

3.1 **Certification of Funds; Budget and Fiscal Provisions; Termination in the Event of Non-Appropriation.** This Agreement is subject to the budget and fiscal provisions of the City's Charter. Charges will accrue only after prior written authorization certified by the Controller, and the amount of City's obligation hereunder shall not at any time exceed the amount certified for the purpose and period stated in such advance authorization. This Agreement will terminate without penalty, liability or expense of any kind to City at the end of any fiscal year if funds are not appropriated for the next succeeding fiscal year. If funds are appropriated for a portion of the fiscal year, this Agreement will terminate, without penalty, liability or expense of any kind at the end of the term for which funds are appropriated. City has no obligation to make appropriations for this Agreement in lieu of appropriations for new or other agreements. City budget decisions are subject to the discretion of the Mayor and the Board of Supervisors. Contractor's assumption of risk of possible non-appropriation is part of the consideration for this Agreement.

THIS SECTION CONTROLS AGAINST ANY AND ALL OTHER PROVISIONS OF THIS AGREEMENT.

3.2 **Guaranteed Maximum Costs.** The City's payment obligation to Contractor cannot at any time exceed the amount certified by City's Controller for the purpose and period stated in such certification. Absent an authorized Emergency per the City Charter or applicable Code, no City representative is authorized to offer or promise, nor is the City required to honor, any offered or promised payments to Contractor under this Agreement in excess of the certified maximum amount without the Controller having first certified the additional promised amount and the Parties having modified this Agreement as provided in Section 11.5, "Modification of this Agreement."

3.3 **Compensation.**

3.3.1 **Calculation of Charges.** Contractor shall provide an invoice to the City for Goods delivered in accordance with Appendix B, "Calculation of Charges." Compensation shall be made for Goods identified in the invoice that the City, in its sole discretion, concludes has been satisfactorily delivered. In no event shall the amount of this Agreement exceed **[insert whole dollar amount in numbers and words -- no pennies and no ".00"]**. The breakdown of charges associated with this Agreement appears in Appendix B, "Calculation of Charges." In no event shall City be liable for interest or late charges for any late payments. City will not honor minimum service order charges under this Agreement.

3.3.2 **Payment Limited to Satisfactory Delivery of Goods.** Contractor is not entitled to any payments from City until City approves the Goods delivered pursuant to this Agreement. Payments to Contractor by City shall not excuse Contractor from its obligation to replace unsatisfactory Goods, even if the unsatisfactory character may have been apparent or detected at the time such payment was made. Goods delivered pursuant to this Agreement that do

not conform to the requirements of this Agreement may be rejected by City and in such case must be replaced by Contractor without delay at no cost to the City.

3.3.3 **Withhold Payments.** If Contractor fails to provide Goods in accordance with Contractor's obligations under this Agreement, the City may withhold any and all payments due Contractor until such failure to perform is cured. Contractor shall not stop providing Goods as a result of City's withholding of payments, as provided herein.

3.3.4 **Invoice Format**. Invoices furnished by Contractor under this Agreement must be in a form acceptable to the Controller and City and include a unique invoice number and a specific invoice date. Payment shall be made by City as specified in Section 3.3.8, or in such alternate manner as the Parties have mutually agreed upon in writing. All invoices must show the PeopleSoft Purchase Order ID Number, PeopleSoft Supplier Name and ID, Item numbers (if applicable), complete description of Goods delivered, sales/use tax (if applicable), contract payment terms and contract price. Invoices that do not include all required information or contain inaccurate information may not be processed for payment.

3.3.5 **Reserved (LBE Payment and Utilization Tracking System).**

3.3.6 **Getting paid by the City for Goods.**

(a) The City and County of San Francisco utilizes the Paymode-X® service offered by Bank of America Merrill Lynch to pay City contractors. Contractor must sign up to receive electronic payments to be paid under this Agreement. To sign up for electronic payments, visit http://portal.paymode.com/city_countyofsanfrancisco.

(b) At the option of the City, Contractor may be required to submit invoices directly in the City's financial and procurement system (PeopleSoft) via eSettlement. Refer to https://sfcitypartner.sfgov.org/pages/training.aspx for more information on eSettlement. For access to PeopleSoft eSettlement, submit a request through sfemployeeportalsupport@sfgov.org.

3.3.7 **Reserved (Grant Funded Contracts).**

3.3.8 **Payment Terms.**

(a) **Payment Due Dates**: See Appendix A for Payment terms. Unless City notifies the Contractor that a dispute exists, milestone Payments shall be made within 30 calendar days of City's written confirmation that relevant milestones have been achieved (such confirmation not to be unreasonably delayed or denied). Payment is deemed to be made on the date on which City has issued a check to Contractor or, if Contractor has agreed to electronic payment, the date on which City has posted electronic payment to Contractor.

(b) **Reserved (Payment Discount Terms).**

3.4 **Audit and Inspection of Records**. Contractor agrees to maintain and make available to the City, during regular business hours, accurate books and accounting records relating to the Goods. Contractor will permit City to audit, examine, copy, and make excerpts and transcripts from such books and records, and to make audits of all invoices, materials, payrolls, records or personnel and other data related to all other matters covered by this Agreement, whether funded in whole or in part under this Agreement. Contractor shall maintain such data and records in an accessible location and condition for a period of not less than five years, unless required for a longer duration due to Federal, State, or local

requirements of which the City will notify Contractor in writing, after final payment under this Agreement or until after final audit has been resolved, whichever is later. The State of California or any Federal agency having an interest in the subject matter of this Agreement shall have the same rights as conferred upon City by this Section. Contractor shall include the same audit and inspection rights and record retention requirements in all subcontracts.

3.5 **Submitting False Claims**. The full text of San Francisco Administrative Code Chapter 21, Section 21.35, including the enforcement and penalty provisions, is incorporated into this Agreement. Pursuant to San Francisco Administrative Code §21.35, any contractor or subcontractor who submits a false claim shall be liable to the City for the statutory penalties set forth in that section. A contractor or subcontractor will be deemed to have submitted a false claim to the City if the contractor or subcontractor: (a) knowingly presents or causes to be presented to an officer or employee of the City a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by the City; (c) conspires to defraud the City by getting a false claim allowed or paid by the City; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property to the City; or (e) is a beneficiary of an inadvertent submission of a false claim to the City, subsequently discovers the falsity of the claim, and fails to disclose the false claim to the City within a reasonable time after discovery of the false claim.

3.6 **Reserved (Payment of Prevailing Wages).**

3.7 **Reserved (Displaced Worker Protection Act).**

Article 4 Goods

4.1 **Reserved (Primary and Secondary Contractors).**

4.2 **Reserved (Term Agreement – Indefinite Quantities).**

4.3 **Personnel.**

4.3.1 **Qualified Personnel** Qualified Personnel. Contractor shall utilize only competent personnel under the supervision of, and in the employment of, Contractor (or Contractor's authorized subcontractors) to complete the Work specified herein. Contractor will comply with City's reasonable requests regarding assignment and/or removal of personnel, but all personnel, including those assigned at City's request, must be supervised by Contractor. Contractor shall commit adequate resources to allow timely completion within the project schedule specified in this Agreement.

4.3.2 **Reserved (Contractor Vaccination Policy)**.

4.4 **Goods.**

4.4.1 **Place of Manufacture.** No article furnished hereunder shall have been made in prison or by convict labor, except Goods purchased for use by City's detention facilities. The City may require Contractor to provide within seven (7) working business days from the date they are requested to do so, information and documentation requested by Purchaser, including but not limited to: sources of supply, distribution, dealership or agency agreements and authorizations from manufacturer(s) they claim to represent, lines of credit with financial institutions for manufacturer(s) they claim to represent, lines of credit with financial institutions

and suppliers, numbers of employees, trade references and any other information to determine the Contractor's fitness to supply the Agreement requirements.

4.4.2 **Electrical Products.** Goods must comply with all applicable laws, ordinances and other legal requirements, including (among others) the Cal-OSHA regulations in Title 8 of the Code of Regulations and, for electrical products, Sections 110.2 and 110.3 (B) of the S.F. Electrical Code.

4.4.3 **Condition of Goods.** Goods offered and furnished must be new and previously unused, and of manufacturer's latest model, unless otherwise specified herein. Contractor shall establish quality control measures, as applicable to department's operations, and promptly provide documented reports to City of any product defects or premature failures.

4.4.4 **Inspection.** All Goods supplied shall be subject to inspection and acceptance or rejection by Purchasing or any department official responsible for inspection. Non-conforming or rejected Goods may be subject to reasonable storage fees.

4.4.5 **F.O.B. Delivery.** The Contractor shall deliver a crane barge that meets the specifications of the Port on or before October 31, 2025. Refer to Appendix A and Exhibit A-0 to Appendix F for delivery and acceptance procedures.

4.4.6 **Failure to Deliver.** If Contractor fails to deliver Goods of the quality, in the manner or within the time called for by this Agreement, such Goods may be bought from any source by Purchasing. If City is required to pay a price that exceeds the price agreed upon by this Agreement, the excess price will be charged to and collected from Contractor (or sureties on its bond, if bond has been required); or, the City may terminate the Agreement for default; or, the City may return deliveries already made and receive a refund.

4.4.7 **Safety Data Sheets.** Where required by law or by City, Contractor will include Safety Data Sheets (SDSs) with delivery for applicable items. Failure to include the SDSs for such items will constitute a material breach of contract and may result in refusal to accept delivery.

4.4.8 **Awarded Goods.** If during the term of the Agreement, a contract item is determined to be unacceptable for a particular use, and such is documented by a City Department and as determined by Purchasing, it is understood and agreed that the item will be canceled and removed from the Agreement without penalty to the City. The City's sole obligation to the supplier is payment of deliveries made prior to the cancellation date. City shall give the supplier ten days' notice prior to any cancellation. The City will purchase the required replacement item from any source and in the manner as determined by Purchasing. If a contracted item has been discontinued by the manufacturer or is deemed temporarily unavailable, it will be the responsibility of the Contractor to search the marketplace and find an acceptable equal substitute in the time required for delivery and at the Agreement price. Contractor must notify Purchasing in writing, which can include email, certified mail, registered mail, or other trackable mail, of any changes in the description of article, brand, product code or packaging. Any changes made without the approval of City will constitute a Default.

4.4.9 **Warranty.** In addition to all requirements set forth in Exhibit A0, Contractor warrants to City that the manufacturer's warranty and service will be passed on to the City at the time of delivery.

4.5 **Work.** Contractor agrees to complete the Work necessary to furnish the Goods as specified in Appendix A, "Scope of Work". Officers and employees of the City are not authorized to request, and the City is not required to reimburse the Contractor for, Work beyond the Scope of Work listed in Appendix A, unless Appendix A is modified as provided in Section 11.5, "Modification of this Agreement" and Appendix G, "Clarification and Changes to Work."

4.6 **Assignment.** Neither this Agreement, nor any duties or obligations hereunder, may be directly or indirectly assigned, novated, hypothecated, transferred, or delegated by Contractor, or, where the Contractor is a joint venture, a joint venture partner, (collectively referred to as an "Assignment") unless first approved by City by written instrument executed and approved in the same manner as this Agreement in accordance with the Administrative Code. The City's approval of any such Assignment is subject to the Contractor demonstrating to City's reasonable satisfaction that the proposed transferee is: (i) reputable and capable, financially and otherwise, of performing each of Contractor's obligations under this Agreement and any other documents to be assigned, (ii) not forbidden by applicable law from transacting business or entering into contracts with City; and (iii) subject to the jurisdiction of the courts of the State of California. A change of ownership or control of Contractor or a sale or transfer of substantially all of the assets of Contractor shall be deemed an Assignment for purposes of this Agreement. Contractor shall immediately notify City about any Assignment. Any purported Assignment made in violation of this provision shall be null and void.

4.7 **Liquidated Damages.** By entering into this Agreement, Contractor agrees that in the event the delivery of the Goods are delayed beyond the scheduled milestones and timelines as provided in any Authorization Document issued pursuant to this Agreement, City will suffer actual damages that will be impractical or extremely difficult to determine. Contractor agrees that the sum of **[insert whole dollar amount in words and numbers -- no pennies and no ".00"]** per calendar day for each day of delay beyond scheduled milestones and timelines is not a penalty, but is a reasonable estimate of the loss that City will incur based on the delay, established in light of the circumstances existing at the time this Agreement was awarded. City may deduct a sum representing the liquidated damages from any money due to Contractor under this Agreement or any other contract between City and Contractor. Such deductions shall not be considered a penalty, but rather agreed upon monetary damages sustained by City because of Contractor's failure to furnish deliverables to City within the time fixed or such extensions of time permitted in writing by City. [***NOTE: BECAUSE OF GRANT FUNDING REQUIREMENTS, TIME IS OF THE ESSENCE FOR DELIVERY AND ACCEPTANCE OF THE VESSEL. SPECIFIC LIQUIDATED DAMAGES PROVISIONS WILL BE DETERMINED AT THE RFP STAGE (PHASE II)***]

4.8 **Bond Requirements**: The following Bonds are required for the performance of this Agreement:

4.8.1 **Performance Bond.** Contractor is required to furnish a performance bond, in a form acceptable to the City, in a sum of not less than 100% of the amount of the Agreement to guarantee the faithful performance of this Agreement. The bond must be approved as to sufficiency and qualifications of the surety by the Controller.

4.8.2 **Payment Bond.** A Payment (Labor and Materials) Bond, in a form acceptable to the City, in the amount of 100% of the contract to guarantee the payment of wages

for services engaged and of bills contracted for materials, supplies and equipment used in the performance of this Agreement. Each bond must be approved as to form by the City Attorney, and approved as to sufficiency and qualifications of the surety by the Controller. The bonds must be renewed annually.

4.8.1 **Bond Obligation — Duration**. The term of the Performance Bond and the Labor and Materials Bond of this Agreement shall begin on the date that the contract is awarded and shall extend for until Acceptance of the Vessel. If bonds are required by the City after Acceptance, the bond amount may be decreased by Contractor to 10% of the purchase price and will remain in effect for a period not less than one (1) year following the date of Acceptance or the time required to resolve any items of incomplete work under this Agreement and the payment of any disputed amounts under this Agreement (including any disputed warranty claims remaining after one year), whichever time period is longer.

4.9 **Emergency - Priority 1 Service.** In case of an emergency that affects any part of the San Francisco Bay Area, Contractor will give the City and County of San Francisco Priority 1 service with regard to the Goods procured under this Agreement unless preempted by State and/or Federal laws. Contractor will make every good faith effort in attempting to deliver products using all modes of transportation available. Contractor shall provide a 24-hour emergency telephone number of a company representative who is able to receive and process orders for immediate delivery or will call in the event of an emergency. In addition, the Contractor shall charge fair and competitive prices for Goods ordered during an emergency and not covered under the awarded Agreement.

4.10 **Usage Reports by Contractor.**

4.10.1 Each year, no later than February 15, Contractor shall prepare and submit to City an electronic report of the total Goods delivered under this Agreement during the preceding calendar year (January 1 – December 31). The report must list by City department the following: (1) all Goods ordered ("Order") (2) all Goods delivered; (3) the date on which each Order was placed; (4) the date on which each Order was delivered; and (5) total quantity and unit price of the Goods contained within each Order. Contractor must also furnish a separate similar report for the total of all items ordered by City which are not part of this Agreement. Contractor shall email reports to OCAVendor.Reports@sfgov.org.

4.10.2 Any report files larger than 10MB must be submitted in electronic format on USB drive and mailed to the address shown below with the term Agreement number and "Annual Supplier Reporting" clearly marked on the envelope/packaging. Contractor shall mail the reports to:

OCA Supplier Reporting
Re: Term Contract No. TC70300
City and County of San Francisco
Office of Contract Administration – Purchasing
City Hall, Room 430
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4685

4.10.3 City reserves the right to terminate this Agreement if information requested from and submitted by Contractor fails to satisfy City and/or Contractor is unable to provide the information and/or documentation within the period requested.

Article 5 Insurance and Indemnity

5.1 **Insurance.**

[SPECIFIC INSURANCE REQUIREMENTS TO BE DETERMINED IN PHASE II RFP.]

5.1.1 **Additional Insured Endorsements**

(a) The Commercial General Liability policy must be endorsed to name as Additional Insured the City and County of San Francisco, its Officers, Agents, and Employees.

(b) The Commercial Automobile Liability Insurance policy must be endorsed to name as Additional Insured the City and County of San Francisco, its Officers, Agents, and Employees.

(c) Reserved (Pollution Auto Liability Insurance Endorsement).

5.1.2 **Waiver of Subrogation Endorsements**

(a) The Workers' Compensation policy(ies) shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Contractor, its employees, agents and subcontractors.

5.1.3 **Primary Insurance Endorsements**

(a) The Commercial General Liability policy shall provide that such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that the insurance applies separately to each insured against whom claim is made or suit is brought.

(b) The Commercial Automobile Liability Insurance policy shall provide that such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that the insurance applies separately to each insured against whom claim is made or suit is brought.

(c) The Pollution Liability Insurance policy shall provide that such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that the insurance applies separately to each insured against whom claim is made or suit is brought.

5.1.4 **Other Insurance Requirements**

(a) Thirty (30) days' advance written notice shall be provided to the City of cancellation, intended non-renewal, or reduction in coverages, except for non-payment for which no less than ten (10) days' notice shall be provided to City. Notices shall be sent to the City address set forth in Section 11.1 entitled "Notices to the Parties."

(b) Should any of the required insurance be provided under a claims-made form, Contractor shall maintain such coverage continuously throughout the term of this Agreement and, without lapse, for a period of three years beyond the expiration of this Agreement, to the effect that, should occurrences during the Agreement term give rise to claims

made after expiration of the Agreement, such claims shall be covered by such claims-made policies.

(c) Should any of the required insurance be provided under a form of coverage that includes a general annual aggregate limit or provides that claims investigation or legal defense costs be included in such general annual aggregate limit, such general annual aggregate limit shall be double the occurrence or claims limits specified above.

(d) Should any required insurance lapse during the term of this Agreement, requests for payments originating after such lapse shall not be processed until the City receives satisfactory evidence of reinstated coverage as required by this Agreement, effective as of the lapse date. If insurance is not reinstated, the City may, at its sole option, terminate this Agreement effective on the date of such lapse of insurance.

(e) Before delivering any Goods, Contractor shall furnish to City certificates of insurance and additional insured policy endorsements with insurers with ratings comparable to A-, VIII or higher, that are authorized to do business in the State of California, and that are satisfactory to City, in form evidencing all coverages set forth above. Approval of the insurance by City shall not relieve or decrease Contractor's liability hereunder.

(f) If Contractor will use any subcontractor(s) to deliver Goods, Contractor shall require the subcontractor(s) to provide all necessary insurance and to name the City and County of San Francisco, its officers, agents and employees and the Contractor as additional insureds.

5.2 **Indemnification.**

5.2.1 Contractor shall indemnify and hold harmless City and its officers, agents and employees from, and, if requested, shall defend them from and against any and all claims, demands, losses, damages, costs, expenses, and liability (legal, contractual, or otherwise) arising from or in any way connected with any: (i) injury to or death of a person, including employees of City or Contractor; (ii) loss of or damage to property; (iii) violation of local, state, or federal common law, statute or regulation, including but not limited to privacy or personally identifiable information, health information, disability and labor laws or regulations; (iv) strict liability imposed by any law or regulation; or (v) losses arising from Contractor's execution of subcontracts not in accordance with the requirements of this Agreement applicable to subcontractors; so long as such injury, violation, loss, or strict liability (as set forth in subsections (i) – (v) above) arises directly or indirectly from Contractor's performance of this Agreement, including, but not limited to, Contractor's use of facilities or equipment provided by City or others, regardless of the negligence of, and regardless of whether liability without fault is imposed or sought to be imposed on City, except to the extent that such indemnity is void or otherwise unenforceable under applicable law, and except where such loss, damage, injury, liability or claim is the result of the active negligence or willful misconduct of City and is not contributed to by any act of, or by any omission to perform some duty imposed by law or agreement on Contractor, its subcontractors, or either's agent or employee. The foregoing indemnity shall include, without limitation, reasonable fees of attorneys, consultants and experts and related costs and City's costs of investigating any claims against the City.

5.2.2 In addition to Contractor's obligation to indemnify City, Contractor specifically acknowledges and agrees that it has an immediate and independent obligation to

defend City from any claim which actually or potentially falls within this indemnification provision, even if the allegations are or may be groundless, false or fraudulent, which obligation arises at the time such claim is tendered to Contractor by City and continues at all times thereafter.

5.2.3 Contractor shall indemnify and hold City harmless from all loss and liability, including attorneys' fees, court costs and all other litigation expenses for any infringement of the patent rights, copyright, trade secret or any other proprietary right or trademark, and all other intellectual property claims of any person or persons arising directly or indirectly from the receipt by City, or any of its officers or agents, of Contractor's delivery of Goods pursuant to this Agreement.

Article 6 Liability of the Parties

6.1 **Liability of City.** CITY'S PAYMENT OBLIGATIONS UNDER THIS AGREEMENT SHALL BE LIMITED TO THE PAYMENT OF THE COMPENSATION PROVIDED FOR IN SECTION 3.3.1, "PAYMENT," OF THIS AGREEMENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, IN NO EVENT SHALL CITY BE LIABLE, REGARDLESS OF WHETHER ANY CLAIM IS BASED ON CONTRACT OR TORT, FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR GOODS DELIVERED IN CONNECTION WITH THIS AGREEMENT

6.2 **Liability for Use of Equipment.** City shall not be liable for any damage to persons or property as a result of the use, misuse or failure of any equipment used by Contractor, or any of its subcontractors, or by any of their employees, even though such equipment is furnished, rented or loaned by City.

6.3 **Liability for Incidental and Consequential Damages.** Contractor shall be responsible for incidental and consequential damages resulting in whole or in part from Contractor's acts or omissions.

Article 7 Payment of Taxes

7.1 **Contractor to Pay All Taxes.** Except for any applicable California sales and use taxes charged by Contractor to City, Contractor shall pay all taxes, including possessory interest taxes levied upon or as a result of this Agreement, or the Goods delivered pursuant hereto. Contractor shall remit to the State of California any sales or use taxes paid by City to Contractor under this Agreement. Contractor agrees to promptly provide information requested by the City to verify Contractor's compliance with any State requirements for reporting sales and use tax paid by City under this Agreement.

7.2 **Possessory Interest Taxes.** Contractor acknowledges that this Agreement may create a "possessory interest" for property tax purposes. Generally, such a possessory interest is not created unless the Agreement entitles the Contractor to possession, occupancy, or use of City property for private gain. If such a possessory interest is created, then the following shall apply.

7.2.1 Contractor, on behalf of itself and any permitted successors and assigns, recognizes and understands that Contractor, and any permitted successors and assigns, may be subject to real property tax assessments on the possessory interest.

7.2.2 Contractor, on behalf of itself and any permitted successors and assigns, recognizes and understands that the creation, extension, renewal, or assignment of this Agreement may result in a "change in ownership" for purposes of real property taxes, and therefore may result in a revaluation of any possessory interest created by this Agreement. Contractor accordingly agrees on behalf of itself and its permitted successors and assigns to report on behalf of the City to the County Assessor the information required by Revenue and Taxation Code section 480.5, as amended from time to time, and any successor provision.

7.2.3 Contractor, on behalf of itself and any permitted successors and assigns, recognizes and understands that other events also may cause a change of ownership of the possessory interest and result in the revaluation of the possessory interest. (see, e.g., Rev. & Tax. Code section 64, as amended from time to time). Contractor accordingly agrees on behalf of itself and its permitted successors and assigns to report any change in ownership to the County Assessor, the State Board of Equalization or other public agency as required by law.

7.2.4 Contractor further agrees to provide such other information as may be requested by the City to enable the City to comply with any reporting requirements for possessory interests that are imposed by applicable law.

7.3 **Withholding.** Contractor agrees that it is obligated to pay all amounts due to the City under the San Francisco Business and Tax Regulations Code during the term of this Agreement. Pursuant to Section 6.10-2 of the San Francisco Business and Tax Regulations Code, Contractor further acknowledges and agrees that City may withhold any payments due to Contractor under this Agreement if Contractor is delinquent in the payment of any amount required to be paid to the City under the San Francisco Business and Tax Regulations Code. Any payments withheld under this paragraph shall be made to Contractor, without interest, upon Contractor coming back into compliance with its obligations.

Article 8 Termination and Default

8.1 Termination for Convenience

8.1.1 City shall have the option, in its sole discretion, to terminate this Agreement, at any time during the term hereof, for convenience and without cause. City shall exercise this option by giving Contractor written notice of termination. The notice shall specify the date on which termination shall become effective.

8.1.2 Upon receipt of the notice of termination, Contractor shall commence and perform, with diligence, all actions necessary on the part of Contractor to effect the termination of this Agreement on the date specified by City and to minimize the liability of Contractor and City to third parties as a result of termination. All such actions shall be subject to the prior approval of City. Such actions may include any or all of the following, without limitation:

(a) Halting the performance of all obligations under this Agreement on the date(s) and in the manner specified by City.

(b) Terminating all existing orders and subcontracts, and not placing any further orders or subcontracts for Goods, materials, equipment or other items.

(c) At City's direction, assigning to City any or all of Contractor's right, title, and interest under the orders and subcontracts terminated. Upon such assignment,

City shall have the right, in its sole discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

(d) Subject to City's approval, settling all outstanding liabilities and all claims arising out of the termination of orders and subcontracts.

(e) Completing performance of any obligations that City designates to be completed prior to the date of termination specified by City.

(f) Taking such action as may be necessary, or as the City may direct, for the protection and preservation of any property related to this Agreement which is in the possession of Contractor and in which City has or may acquire an interest.

8.1.3 Within 30 days after the specified termination date, Contractor shall submit to City an invoice, which shall set forth the cost of all Goods delivered prior to City's notice of termination. City's payment obligation pursuant to this Subsection 8.1.3 shall be subject to Section 3.3.2 of this Agreement.

8.1.4 In no event shall City be liable for costs incurred by Contractor or any of its subcontractors after the termination date specified by City, except for those costs specifically listed in Section 8.1.2. Such non-recoverable costs include, but are not limited to, anticipated profits on the Goods delivered by Contractor under this Agreement, post-termination employee salaries, post-termination administrative expenses, post-termination overhead or unabsorbed overhead, attorneys' fees or other costs relating to the prosecution of a claim or lawsuit, prejudgment interest, or any other expense which is not reasonable or authorized under Section 8.1.2.

8.1.5 In arriving at the amount due to Contractor under this Section, City may deduct: (i) all payments previously made by City for the Goods delivered by Contractor's final invoice; (ii) any claim which City may have against Contractor in connection with this Agreement; (iii) any invoiced costs or expenses excluded pursuant to the immediately preceding subsection 8.1.4; and (iv) in instances in which, in the opinion of the City, the cost of any Goods delivered by Contractor under this Agreement is excessively high due to costs incurred to remedy or replace defective or rejected Goods, the difference between the invoiced amount and City's estimate of the reasonable cost of delivering the invoiced Goods in compliance with the requirements of this Agreement.

8.1.6 City's payment obligation under this Section shall survive termination of this Agreement

8.2 **Termination for Default; Remedies.**

8.2.1 Each of the following shall constitute an immediate event of default ("Event of Default") under this Agreement:

(a) Contractor fails or refuses to perform or observe any term, covenant or condition contained in any of the following Sections of this Agreement:

3.5	Submitting False Claims.	10.10	Alcohol and Drug-Free Workplace
4.6	Assignment	10.13	Reserved (Working with Minors).
Article 5	Insurance and Indemnity	11.10	Compliance with Laws

Article 7	Payment of Taxes	Article 13	Data and Security

(b) Contractor fails or refuses to perform or observe any other term, covenant or condition contained in this Agreement, including any obligation imposed by ordinance or statute and incorporated by reference herein, and such default is not cured within ten days after written notice thereof from City to Contractor. If Contractor defaults a second time in the same manner as a prior default cured by Contractor, City may in its sole discretion immediately terminate the Agreement for default or grant an additional period not to exceed five days for Contractor to cure the default.

(c) Contractor (i) is generally not paying its debts as they become due; (ii) files, or consents by answer or otherwise to the filing against it of a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction; (iii) makes an assignment for the benefit of its creditors; (iv) consents to the appointment of a custodian, receiver, trustee or other officer with similar powers of Contractor or of any substantial part of Contractor's property; or (v) takes action for the purpose of any of the foregoing.

(d) A court or government authority enters an order (i) appointing a custodian, receiver, trustee or other officer with similar powers with respect to Contractor or with respect to any substantial part of Contractor's property, (ii) constituting an order for relief or approving a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction or (iii) ordering the dissolution, winding-up or liquidation of Contractor.

8.2.2 On and after any Event of Default, City shall have the right to exercise its legal and equitable remedies, including, without limitation, the right to terminate this Agreement or to seek specific performance of all or any part of this Agreement. In addition, where applicable, City shall have the right (but no obligation) to cure (or cause to be cured) on behalf of Contractor any Event of Default; Contractor shall pay to City on demand all costs and expenses incurred by City in effecting such cure, with interest thereon from the date of incurrence at the maximum rate then permitted by law. City shall have the right to offset from any amounts due to Contractor under this Agreement or any other agreement between City and Contractor: (i) all damages, losses, costs or expenses incurred by City as a result of an Event of Default; and (ii) any liquidated damages levied upon Contractor pursuant to the terms of this Agreement; and (iii), any damages imposed by any ordinance or statute that is incorporated into this Agreement by reference, or into any other agreement with the City. This Section 8.2.2 shall survive termination of this Agreement.

8.2.3 All remedies provided for in this Agreement may be exercised individually or in combination with any other remedy available hereunder or under applicable laws, rules and regulations. The exercise of any remedy shall not preclude or in any way be deemed to waive any other remedy. Nothing in this Agreement shall constitute a waiver or limitation of any rights that City may have under applicable law.

8.2.4 Any notice of default must be sent by registered mail to the address set forth in Article 11.

8.3 **Non-Waiver of Rights.** The omission by either Party at any time to enforce any default or right reserved to it, or to require performance of any of the terms, covenants, or provisions hereof by the other Party at the time designated, shall not be a waiver of any such default or right to which the Party is entitled, nor shall it in any way affect the right of the Party to enforce such provisions thereafter.

8.4 **Rights and Duties upon Termination or Expiration.**

8.4.1 This Section and the following Sections of this Agreement listed below, shall survive termination or expiration of this Agreement:

3.3.2	Payment Limited to Satisfactory Delivery of Goods		9.2	Works for Hire
3.3.7	Grant Funded Contracts		11.6	Dispute Resolution Procedure
3.4	Audit and Inspection of Records		11.7	Agreement Made in California; Venue
3.5	Submitting False Claims		11.8	Construction
Article 5	Insurance and Indemnity		11.9	Entire Agreement
6.1	Liability of City		11.10	Compliance with Laws
6.3	Liability for Incidental and Consequential Damages		11.11	Severability
Article 7	Payment of Taxes		Article 12	Department Specific Terms
8.1.6	Payment Obligation		Article 13	Data and Security
9.1	Ownership of Results		Appendix D	Reserved (Business Associate Agreement).

8.4.2 Subject to the survival of the Sections identified in Section 8.4.1, above, if this Agreement is terminated prior to expiration of the term specified in Article 2, this Agreement shall be of no further force or effect. Contractor shall transfer title to City, and deliver in the manner, at the times, and to the extent, if any, directed by City, any work in progress, completed work, supplies, equipment, and other materials produced as a part of, or acquired in connection with the performance of this Agreement, and any completed or partially completed work which, if this Agreement had been completed, would have been required to be furnished to City.

Article 9 Rights In Deliverables

9.1 **Ownership of Results.** Any interest of Contractor or its subcontractors, in the Deliverables, including any drawings, plans, specifications, blueprints, studies, reports, memoranda, computation sheets, computer files and media or other documents prepared by Contractor or its subcontractors for the purposes of this Agreement, shall become the property of and will be transmitted to City. However, unless expressly prohibited elsewhere in this

Agreement, Contractor may retain and use copies for reference and as documentation of its experience and capabilities.

9.2 **Works for Hire.** If, in connection with Services, Contractor or its subcontractors creates Deliverables including, without limitation, artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, diagrams, surveys, blueprints, source codes, or any other original works of authorship, whether in digital or any other format, such works of authorship shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works shall be the property of the City. If any Deliverables created by Contractor or its subcontractor(s) under this Agreement are ever determined not to be works for hire under U.S. law, Contractor hereby assigns all Contractor's copyrights to such Deliverables to the City, agrees to provide any material and execute any documents necessary to effectuate such assignment, and agrees to include a clause in every subcontract imposing the same duties upon subcontractor(s). With City's prior written approval, Contractor and its subcontractor(s) may retain and use copies of such works for reference and as documentation of their respective experience and capabilities.

Article 10 Additional Requirements Incorporated by Reference

10.1 **Laws Incorporated by Reference.** The full text of the laws listed in this Article 10, including enforcement and penalty provisions, are incorporated by reference into this Agreement. The full text of the San Francisco Municipal Code provisions incorporated by reference in this Article and elsewhere in the Agreement ("Mandatory City Requirements") are available at http://www.amlegal.com/codes/client/san-francisco_ca/.

10.2 **Conflict of Interest.** By executing this Agreement, Contractor certifies that it does not know of any fact which constitutes a violation of Section 15.103 of the City's Charter; Article III, Chapter 2 of City's Campaign and Governmental Conduct Code; Title 9, Chapter 7 of the California Government Code (Section 87100 *et seq.*), or Title 1, Division 4, Chapter 1, Article 4 of the California Government Code (Section 1090 *et seq.*), and further agrees promptly to notify the City if it becomes aware of any such fact during the term of this Agreement.

10.3 **Prohibition on Use of Public Funds for Political Activity.** In delivering the Goods, Contractor shall comply with San Francisco Administrative Code Chapter 12G, which prohibits funds appropriated by the City for this Agreement from being expended to participate in, support, or attempt to influence any political campaign for a candidate or for a ballot measure. Contractor is subject to the enforcement and penalty provisions in Chapter 12G.

10.4 **Consideration of Salary History.** Contractor shall comply with San Francisco Administrative Code Chapter 12K, the Consideration of Salary History Ordinance or "Pay Parity Act." Contractor is prohibited from considering current or past salary of an applicant in determining whether to hire the applicant or what salary to offer the applicant to the extent that such applicant is applying for employment to be performed on this Agreement or in furtherance of this Agreement, and whose application, in whole or part, will be solicited, received, processed or considered, whether or not through an interview, in the City or on City property. The ordinance also prohibits employers from (1) asking such applicants about their current or past salary or (2) disclosing a current or former employee's salary history without that employee's authorization unless the salary history is publicly available. Contractor is subject to the enforcement and penalty provisions in Chapter 12K. Information about and the text of Chapter 12K is available on the web at https://sfgov.org/olse/consideration-salary-history. Contractor is

required to comply with all of the applicable provisions of 12K, irrespective of the listing of obligations in this Section.

10.5 **Nondiscrimination Requirements**

10.5.1 **Nondiscrimination in Contracts**. Contractor shall comply with the provisions of Chapters 12B and 12C of the San Francisco Administrative Code. Contractor shall incorporate by reference in all subcontracts the provisions of Sections 12B.2(a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code and shall require all subcontractors to comply with such provisions. Contractor is subject to the enforcement and penalty provisions in Chapters 12B and 12C.

10.5.2 **Nondiscrimination in the Provision of Employee Benefits**. San Francisco Administrative Code 12B.2. Contractor does not as of the date of this Agreement, and will not during the term of this Agreement, in any of its operations in San Francisco, on real property owned by San Francisco, or where work is being performed for the City elsewhere in the United States, discriminate in the provision of employee benefits between employees with domestic partners and employees with spouses and/or between the domestic partners and spouses of such employees, subject to the conditions set forth in San Francisco Administrative Code Section 12B.2.

10.6 **Local Business Enterprise and Non-Discrimination in Contracting Ordinance.** Contractor shall comply with all applicable provisions of Chapter 14B ("LBE Ordinance"). Contractor is subject to the enforcement and penalty provisions in Chapter 14B.

10.7 **Minimum Compensation Ordinance.** Administrative Code Chapter 12P applies to this Agreement. Contractor shall pay covered employees no less than the minimum compensation required by San Francisco Administrative Code Chapter 12P, including a minimum hourly gross compensation, compensated time off, and uncompensated time off. Contractor is subject to the enforcement and penalty provisions in Chapter 12P. Information about and the text of Chapter 12P is available on the web at http://sfgov.org/olse/mco. Contractor is required to comply with all of the applicable provisions of 12P, irrespective of the listing of obligations in this Section. By signing and executing this Agreement, Contractor certifies that it complies with Chapter 12P.

10.8 **Health Care Accountability Ordinance.** Administrative Code Chapter 12Q applies to this contract. Contractor shall comply with the requirements of Chapter 12Q. For each Covered Employee, Contractor shall provide the appropriate health benefit set forth in Section 12Q.3 of the HCAO. If Contractor chooses to offer the health plan option, such health plan shall meet the minimum standards set forth by the San Francisco Health Commission. Information about and the text of Chapter 12Q, as well as the Health Commission's minimum standards, is available on the web at http://sfgov.org/olse/hcao. Contractor is subject to the enforcement and penalty provisions in Chapter 12Q. Any Subcontract entered into by Contractor shall require any Subcontractor with 20 or more employees to comply with the requirements of the HCAO and shall contain contractual obligations substantially the same as those set forth in this Section.

10.9 **First Source Hiring Program.** Contractor must comply with all of the provisions of the First Source Hiring Program, Chapter 83 of the San Francisco Administrative Code, that apply to this Agreement, and Contractor is subject to the enforcement and penalty provisions in Chapter 83.

10.10 **Alcohol and Drug-Free Workplace.** City reserves the right to deny access to, or require Contractor to remove from, City facilities personnel of any Contractor or subcontractor who City has reasonable grounds to believe has engaged in alcohol abuse or illegal drug activity which in any way impairs City's ability to maintain safe work facilities or to protect the health and well-being of City employees and the general public. City shall have the right of final approval for the entry or re-entry of any such person previously denied access to, or removed from, City facilities. Illegal drug activity means possessing, furnishing, selling, offering, purchasing, using or being under the influence of illegal drugs or other controlled substances for which the individual lacks a valid prescription. Alcohol abuse means possessing, furnishing, selling, offering, or using alcoholic beverages, or being under the influence of alcohol.

10.11 **Limitations on Contributions.** By executing this Agreement, Contractor acknowledges its obligations under Section 1.126 of the City's Campaign and Governmental Conduct Code, which prohibits any person who contracts with, or is seeking a contract with, any department of the City for the rendition of personal services, for the furnishing of any material, supplies or equipment, for the sale or lease of any land or building, for a grant, loan or loan guarantee, or for a development agreement, from making any campaign contribution to (i) a City elected official if the contract must be approved by that official, a board on which that official serves, or the board of a state agency on which an appointee of that official serves, (ii) a candidate for that City elective office, or (iii) a committee controlled by such elected official or a candidate for that office, at any time from the submission of a proposal for the contract until the later of either the termination of negotiations for such contract or twelve months after the date the City approves the contract. The prohibition on contributions applies to each prospective party to the contract; each member of Contractor's board of directors; Contractor's chairperson, chief executive officer, chief financial officer and chief operating officer; any person with an ownership interest of more than 10% in Contractor; any subcontractor listed in the bid, proposal or contract; and any committee that is sponsored or controlled by Contractor. Contractor certifies that it has informed each such person of the limitation on contributions imposed by Section 1.126 by the time it submitted a proposal for the contract, and has provided the names of the persons required to be informed to the City department with whom it is contracting.

10.12 **Reserved (Slavery Era Disclosure).**

10.13 **Reserved (Working with Minors).**

10.14 **Consideration of Criminal History in Hiring and Employment Decisions.**

10.14.1 Contractor agrees to comply fully with and be bound by all of the provisions of Chapter 12T, "City Contractor/Subcontractor Consideration of Criminal History in Hiring and Employment Decisions," of the San Francisco Administrative Code ("Chapter 12T"), including the remedies provided, and implementing regulations, as may be amended from time to time. The provisions of Chapter 12T are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the Chapter 12T is available on the web at http://sfgov.org/olse/fco. Contractor is required to comply with all of the applicable provisions of 12T, irrespective of the listing of obligations in this Section. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12T.

10.14.2 The requirements of Chapter 12T shall only apply to a Contractor's or Subcontractor's operations to the extent those operations are in furtherance of the performance of

this Agreement, shall apply only to applicants and employees who would be or are performing work in furtherance of this Agreement, and shall apply when the physical location of the employment or prospective employment of an individual is wholly or substantially within the City of San Francisco. Chapter 12T shall not apply when the application in a particular context would conflict with federal or state law or with a requirement of a government agency implementing federal or state law.

10.15 **Reserved (Public Access to Nonprofit Records and Meetings).**

10.16 **Food Service Waste Reduction Requirements.** Contractor shall comply with the Food Service Waste Reduction Ordinance, as set forth in San Francisco Environment Code Chapter 16, including but not limited to the remedies for noncompliance provided therein.

10.17 **Reserved (Distribution of Beverages and Water).**

10.17.1 **Sugar-Sweetened Beverage Prohibition**. Contractor agrees that it shall not sell, provide, or otherwise distribute Sugar-Sweetened Beverages, as defined by San Francisco Administrative Code Chapter 101, as part of its performance of this Agreement.

10.17.2 **Packaged Water Prohibition.** Contractor agrees that it shall not sell, provide, or otherwise distribute Packaged Water, as defined by San Francisco Environment Code Chapter 24, as part of its performance of this Agreement.

10.18 **Tropical Hardwood and Virgin Redwood Ban.** Pursuant to San Francisco Environment Code Section 804(b), the City urges Contractor not to import, purchase, obtain, or use for any purpose, any tropical hardwood, tropical hardwood wood product, virgin redwood or virgin redwood wood product.

10.19 **Reserved (Preservative Treated Wood Products).**

10.20 **Reserved (Sweat Free Procurement)**.

10.21 **Environment Code Chapter 5, Resource Conservation Ordinance.**

10.21.1 **Reserved** (**Printing Services and/or Writing Paper Products).**

10.21.2 **Reserved (Collection of Recyclable Materials).**

10.22 **Reserved (Prop J Approval).**

10.23 **Use of City Opinion.** Contractor shall not quote, paraphrase, or otherwise refer to or use any opinion of City, its officers or agents, regarding Contractor or Contractor's performance under this Agreement without prior written permission of Purchasing.

Article 11 General Provisions

11.1 **Notices to the Parties.** Unless otherwise indicated in this Agreement, all written communications sent by the Parties may be by U.S. mail or e-mail, and shall be addressed as follows:

To City:	Director of Purchasing City and County of San Francisco Office of Contract Administration Purchasing Division City Hall, Room 430 1 Dr. Carlton B. Goodlett Place

	San Francisco, CA 94102-4685 Email: OCA@sfgov.org Phone: (415) 554-6743 Fax: (415) 554-6717
To Contractor:	Name Title Company Address Email Phone

Any notice of default must be sent by registered mail or other trackable overnight mail. Either Party may change the address to which notice is to be sent by giving written notice thereof to the other Party. If email notification is used, the sender must specify a receipt notice.

11.2 **Compliance with Americans with Disabilities Act.** Contractor shall provide the Goods in a manner that complies with the Americans with Disabilities Act (ADA), including but not limited to Title II's program access requirements, and all other applicable federal, state and local disability rights legislation.

11.3 **Incorporation of Recitals.** The matters recited above are hereby incorporated into and made part of this Agreement.

11.4 **Sunshine Ordinance.** Contractor acknowledges that this Agreement and all records related to its formation, Contractor's delivery of the Goods, and City's payment are subject to the California Public Records Act, (California Government Code §6250 et. seq.), and the San Francisco Sunshine Ordinance, (San Francisco Administrative Code Chapter 67). Such records are subject to public inspection and copying unless exempt from disclosure under federal, state or local law.

11.5 **Modification of this Agreement.** This Agreement may not be modified, nor may compliance with any of its terms be waived, except as noted in Section 11.1, "Notices to Parties," regarding change in personnel or place, and except by written instrument executed and approved in the same manner as this Agreement.

11.5.1 **Change Orders.** From the date of this Agreement onward, the Parties shall endeavor to minimize their initiation of Change Orders to fullest extent practicable. To expedite the resolution of Change Order issues, notwithstanding any provisions in the contract to the contrary, the Parties agree to the Change Order procedure set forth in Appendix H: Clarifications and Changes to Work.

11.6 **Dispute Resolution Procedure.**

11.6.1 **Negotiation; Alternative Dispute Resolution.** The Parties will attempt in good faith to resolve any dispute or controversy arising out of or relating to the delivery of the Goods under this Agreement. If the Parties are unable to resolve the dispute, then, pursuant to San Francisco Administrative Code Section 21.36, Contractor may submit to the Contracting Officer a written request for administrative review and documentation of the Contractor's claim(s). Upon such request, the Contracting Officer shall promptly issue an administrative decision in writing, stating the reasons for the action taken and informing the Contractor of its right to judicial review. If agreed by both Parties in writing, disputes may be resolved by a

mutually agreed-upon alternative dispute resolution process. If the Parties do not mutually agree to an alternative dispute resolution process or such efforts do not resolve the dispute, then either Party may pursue any remedy available under California law. The status of any dispute or controversy notwithstanding, Contractor shall proceed diligently with the performance of its obligations under this Agreement in accordance with the Agreement and the written directions of the City. Neither Party will be entitled to legal fees or costs for matters resolved under this section. ***Timely compliance with the Change Order provisions set forth in Appendix H shall be a condition precedent to submission of a request for administrative review or a Government Code Claim.***

11.6.2 **Government Code Claim Requirement.** No suit for money or damages may be brought against the City until a written claim therefor has been presented to and rejected by the City in conformity with the provisions of San Francisco Administrative Code Chapter 10 and California Government Code Section 900, et seq. Nothing set forth in this Agreement shall operate to toll, waive or excuse Contractor's compliance with the California Government Code Claim requirements set forth in San Francisco Administrative Code Chapter 10 and California Government Code Section 900, et seq.

11.6.3 **Reserved (Health and Human Service Contract Dispute Resolution Procedure).**

11.7 **Agreement Made in California; Venue.** The formation, interpretation and performance of this Agreement shall be governed by the laws of the State of California. Venue for all litigation relative to the formation, interpretation and performance of this Agreement shall be in San Francisco.

11.8 **Construction.** All paragraph captions are for reference only and shall not be considered in construing this Agreement.

11.9 **Entire Agreement.** This Contract Documents set forth the entire Agreement between the Parties, and supersedes all other oral or written provisions. This Agreement may be modified only as provided in Section 11.5, "Modification of this Agreement."

11.10 **Compliance with Laws.** Contractor shall keep itself fully informed of the City's Charter, codes, ordinances and duly adopted rules and regulations of the City and of all state, and federal laws in any manner affecting the performance of this Agreement, and must at all times comply with such local codes, ordinances, and regulations and all applicable laws as they may be amended from time to time.

11.11 **Severability.** Should the application of any provision of this Agreement to any particular facts or circumstances be found by a court of competent jurisdiction to be invalid or unenforceable, then (i) the validity of other provisions of this Agreement shall not be affected or impaired thereby, and (ii) such provision shall be enforced to the maximum extent possible so as to effect the intent of the Parties and shall be reformed without further action by the Parties to the extent necessary to make such provision valid and enforceable.

11.12 **Cooperative Drafting.** This Agreement has been drafted through a cooperative effort of City and Contractor, and both Parties have had an opportunity to have the Agreement reviewed and revised by legal counsel. No Party shall be considered the drafter of this Agreement, and no presumption or rule that an ambiguity shall be construed against the Party drafting the clause shall apply to the interpretation or enforcement of this Agreement.

11.13 **Order of Precedence.** Contractor agrees to furnish the Goods described herein in accordance with the terms and conditions of this Agreement. If the Appendices to this Agreement include any standard printed terms from the Contractor, Contractor agrees that in the event of discrepancy, inconsistency, gap, ambiguity, or conflicting language between the City's terms and Contractor's printed terms attached, the City's terms shall take precedence, followed by the procurement issued by the department, Contractor's bid and/or proposal, and Contractor's printed terms, respectively.

11.14 **Notification of Legal Requests.** Contractor shall immediately notify City upon receipt of any subpoenas, service of process, litigation holds, discovery requests and other legal requests ("Legal Requests") related to all data given to Contractor by City in the performance of this Agreement ("City Data" or "Data"), or which in any way might reasonably require access to City's Data, and in no event later than 24 hours after it receives the request. Contractor shall not respond to Legal Requests related to City without first notifying City other than to notify the requestor that the information sought is potentially covered under a non-disclosure agreement. Contractor shall retain and preserve City Data in accordance with the City's instruction and requests, including, without limitation, any retention schedules and/or litigation hold orders provided by the City to Contractor, independent of where the City Data is stored.

11.15 **Cooperative Agreement.** Contractor agrees that during the term of this Agreement and any authorized extension, the Director of Purchasing may allow other public agencies or non-profits made up of multiple public agencies to utilize this Agreement to obtain some or all of the Goods to be provided by Contractor under the same terms and conditions as the City.

Article 12 Department Specific Terms

12.1 **Third Party Beneficiaries.**

No third parties are intended by the Parties hereto to be third party beneficiaries under this Agreement, and no action to enforce the terms of this Agreement may be brought against either Party by any person who is not a party hereto.

12.2 **Exclusion Lists and Employee Verification.**

12.2.1 Contractor acknowledges that some or all of the Commodities that Contractor furnishes to City under this Agreement may be included, directly or indirectly, in whole or in part, in claims submitted by City to Federal or State health care programs. By executing this Agreement Contractor certifies that it is not currently, and shall not during the term of this Agreement become, excluded, directed to be excluded, suspended, ineligible or otherwise sanctioned from participation in any Federal or State assistance programs. Contractor shall notify City, as provided in Section 11.1 ("Notices to the Parties"), within thirty (30) days of any such exclusion, suspension, ineligibility, or other sanction. This is a material term of this Agreement. Contractor agrees to indemnify and hold harmless City and City's officers, directors, employees, agents, successors and permitted assigns from and against any and all (including but not limited to Federal, State, or third party) civil monetary penalties, assessments, repayment obligations, losses, damages, settlement agreements and expenses (including reasonable attorneys' fees) arising from the exclusion, suspension, ineligibility, or other sanction of Contractor and/or Contractor's workforce (including those who oversee Contractor's workforce,

supervisors and governing body members) from participation in any Federal or State assistance program.

Article 13 Data and Security

13.1 Nondisclosure of Private, Proprietary or Confidential Information.

13.1.1 **Protection of Private Information.** If this Agreement requires City to disclose "Private Information" to Contractor within the meaning of San Francisco Administrative Code Chapter 12M, Contractor and subcontractor shall use such information only in accordance with the restrictions stated in Chapter 12M and in this Agreement and only as necessary in delivery of the Goods under this Agreement. Contractor is subject to the enforcement and penalty provisions in Chapter 12M.

13.1.2 **Confidential Information.** In the delivery of the Goods pursuant to this Agreement, Contractor may have access to City's proprietary or Confidential Information, the disclosure of which to third parties may damage City. If City discloses proprietary or Confidential Information to Contractor, or Contractor collects such information on City's behalf, such information must be held by Contractor in confidence and used only in performing the Agreement. Contractor shall exercise the same standard of care to protect such information as a reasonably prudent contractor would use to protect its own proprietary or Confidential Information.

13.2 Reserved (Payment Card Industry ("PCI") Requirements).

13.3 Business Associate Agreement.

The Parties acknowledge that CITY is a Covered Entity as defined in the Healthcare Insurance Portability and Accountability Act of 1996 ("HIPAA") and is required to comply with the HIPAA Privacy Rule governing the access, use, disclosure, transmission, and storage of protected health information (PHI) and the Security Rule under the Health Information Technology for Economic and Clinical Health Act, Public Law 111-005 ("the HITECH Act").

The Parties acknowledge that CONTRACTOR will:

1. ☐ Do **at least one** or more of the following:
A. Create, receive, maintain, or transmit PHI for or on behalf of City (including storage of PHI, digital or hard copy, even if Contractor does not view the PHI or only does so on a random or infrequent basis); or

B. Receive PHI, or access to PHI, from City or another Business Associate of City, as part of providing a Goods to or for City including legal, actuarial, accounting, consulting, data aggregation, management, administrative, accreditation, or financial; or

C. Transmit PHI data for City and require access on a regular basis to such PHI. (Such as health information exchanges (HIEs), e-prescribing gateways, or electronic health record vendors)

For purposes of this Agreement, Contractor is a Business Associate of CITY, as defined under HIPAA. Contractor must comply with and complete the Business Associate Agreement and attestations attached to this Agreement.

2. ☒ **NOT do any of the activities listed above in subsection 1;**

Contractor is not a Business Associate of CITY. A Business Associate Agreement and Attestations are not required for the purposes of this Agreement.

13.4 **Protected Health Information.** Where applicable, Contractor, all subcontractors, all agents and employees of Contractor and any subcontractor shall comply with all federal and state laws regarding the transmission, storage and protection of all private health information, if any, disclosed to Contractor by City in the performance of this Agreement. Contractor agrees that any failure of Contractor to comply with the requirements of federal and/or state and/or local privacy laws shall be a material breach of the Agreement. In the event that City pays a regulatory fine, and/or is assessed civil penalties or damages through private rights of action, based on an impermissible use or disclosure of protected health information given to Contractor or its subcontractors or agents by City, Contractor shall indemnify City for the amount of such fine or penalties or damages, including costs of notification. In such an event, in addition to any other remedies available to it under equity or law, the City may terminate the Agreement.

13.5 **Management of City Data and Confidential Information**

13.5.1 **Use of City Data and Confidential Information.** Contractor agrees to hold City's Confidential Information received from or created on behalf of the City in strictest confidence. Contractor shall not use or disclose City's Data or Confidential Information except as permitted or required by the Agreement or as otherwise authorized in writing by the City. Any work using, or sharing or storage of, City's Confidential Information outside the United States is subject to prior written authorization by the City. Access to City's Confidential Information must be strictly controlled and limited to Contractor's staff assigned to this project on a need-to-know basis only. Contractor is provided a limited non-exclusive license to use the City Data or Confidential Information solely for performing its obligations under the Agreement and not for Contractor's own purposes or later use. Nothing herein shall be construed to confer any license or right to the City Data or Confidential Information, by implication, estoppel or otherwise, under copyright or other intellectual property rights, to any third-party. Unauthorized use of City Data or Confidential Information by Contractor, subcontractors or other third parties is prohibited. For purpose of this requirement, the phrase "unauthorized use" means the data mining or processing of data, stored or transmitted by the service, for commercial purposes, advertising or advertising-related purposes, or for any purpose other than security or service delivery analysis that is not explicitly authorized.

13.6 **Disposition of Confidential Information**. Upon request of City or termination or expiration of this Agreement, and pursuant to any document retention period required by this Agreement, Contractor shall promptly, but in no event later than thirty (30) calendar days, return all data given to or collected by Contractor on City's behalf, which includes all original media. Once Contractor has received written confirmation from City that City's Data has been successfully transferred to City, Contractor shall within ten (10) business days clear or purge all

City Data from its servers, any hosted environment Contractor has used in performance of this Agreement, including its subcontractors environment(s), work stations that were used to process the data or for production of the data, and any other work files stored by Contractor in whatever medium. Contractor shall provide City with written certification that such purge occurred within five (5) business days of the purge. Secure disposal shall be accomplished by "clearing," "purging" or "physical destruction," in accordance with National Institute of Standards and Technology (NIST) Special Publication 800-88 or most current industry standard.

13.7 **Ownership of City Data.** The Parties agree that as between them, all rights, including all intellectual property rights, in and to the City Data and any derivative works of the City Data is the exclusive property of the City.

Article 14 MacBride And Signature

14.1 MacBride Principles -Northern Ireland.

The provisions of San Francisco Administrative Code §12F are incorporated herein by this reference and made part of this Agreement. By signing this Agreement, Contractor confirms that Contractor has read and understood that the City urges companies doing business in Northern Ireland to resolve employment inequities and to abide by the MacBride Principles, and urges San Francisco companies to do business with corporations that abide by the MacBride Principles.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the day first mentioned above.

CITY

Recommended by:

_____

[Name of OCA Supervising Purchaser]
Supervising Purchaser
Office of Contract Administration

Approved as to Form:

David Chiu
City Attorney

By: _____
[name of Deputy City Attorney]
Deputy City Attorney

Approved:

_____
Sailaja Kurella
Director of the Office of Contract Administration,
and Purchaser

By: [name of Purchaser:_____]

SIGNATURE INSTRUCTIONS FOR CITY: *OCA HAS DELEGATED STAFF TO SIGN ON BEHALF OF OCA DIRECTOR. ROUTE CONTRACTFOR SIGNATURE TO THE OCA PURCHASER WHOSE NAME IS PROVIDED TO YOU UPON OCA'S COMPLETED REVIEW OF YOUR CONTRACT. DO NOT REMOVE DIRECTOR'S NAME FROM ABOVE SIGNATORY LINE*

CONTRACTOR

[company name]

_____

[name of authorized representative]
[title]
[optional: address]
[optional: city, state, ZIP]

City Supplier Number: **[Supplier Number]**

Appendices:

A:	Scope of Work

B:	Calculation of Charges
C:	Regulatory and Compliance Requirements
D:	Reserved (BAA)
E:	Reserved (Forms P-12U-C and 12U-I)
F:	Design Specifications and Drawings
G	Schedule
H:	Clarifications and Changes to Work

Appendix A

Scope of Work and Specifications

Summary Scope of Work – Crane Barge

Project Summary

The Port of San Francisco intends to purchase a crane barge to perform maintenance and repair works of marine structures along the City of San Francisco waterfront. Primarily the Port needs the ability to handle and drive piles at existing piers, but this design will have the capability to support some new construction as well. The barge shall be designed for ocean passage, of rectangular shape with square stern and partially raked bow. The pedestal will support a fully rotating pedestal crane for construction works. The crane barge shall be delivered and accepted per the Contract Documents by October 31, 2025.

The crane barge will operate inside San Francisco Bay year-round, primarily during daytime under relatively calm conditions. The crane will be a permanently mounted pedestal type crane, for reasons of reach and capacity, reliability, readily available service and parts, and availability of the crane itself.

Description of Barge

The barge hull shall be fabricated of steel plate, longitudinally stiffened, with the internal volume subdivided by both longitudinal and transverse watertight bulkheads. Several of the internal compartments will function as ballast tanks (treated fresh water) but the remainder shall be voids. The barge will support a pedestal mounted crane that can rotate 360 degrees and lift loads at any orientation. The primary working radius of the crane is 60 ft from the centerline of the crane at which radius it can lift piles up to 135 ft long by 4 ft in diameter, weighing 76,000 lbs.

Part of the crane pedestal will be provided with the crane and part will be built into the hull structure, with the joining butt weld made during installation of the crane.

Spud piles and mooring lines will be the primary means of positioning/mooring the barge at work locations alongside existing piers. The barge can also be spread moored away from shore with four anchors and wire lines tensioned by dedicated winches.

For this contract, the barge will be outfitted with the following vendor-supplied equipment:

1. Diesel powered electrical generator
2. Shore power receiving station
3. Diesel powered hydraulic power unit
4. Hydraulic powered winches for lifting spud piles
5. Hydraulic powered winches for spread mooring lines plus anchors
6. Hydraulic tugger winches
7. Electric-powered air compressor with air receiver
8. Double wall fuel tank with electric pump

All equipment and associated piping, electrical, and foundation structure shall be procured, installed, and tested in accordance with the project specifications.

Various outfitting including deckhouses for enclosing and securing the equipment and tools on board shall be designed by the Contractor, constructed, and installed onboard. Other outfitting includes foundations for equipment to be installed, pipe supports for deck piping and protective structures, control/operator station for the spud pile winches, boom rest for the crane boom and foundations for the mooring fittings, fendering and other appurtenances as defined in the project specifications and drawings.

Permits

All necessary permits required to perform the Work are to be supplied by the Contractor at no additional cost to the City.

Security Interest.

Contractor grants to City a first priority purchase money security interest in all of Contractor's right, title and interest in and to the following, whether now owned or hereafter acquired:

1) The Vessel construction project being undertaken pursuant to this Agreement, as amended from time to time, the Vessels, and all equipment, outfit and appurtenances, including all accessions and additions thereto, and all parts, equipment and materials specifically identified for permanent installation on the Vessel wherever located, whether on board the Vessel or not, all of which the parties acknowledge constitute "purchase-money collateral" as such term is defined in Section 9-103(a)(1) of the Uniform Commercial Code;

2) this Agreement, as amended from time to time; and

3) all proceeds of the foregoing, including insurance proceeds.

The foregoing security interest secures the performance of all obligations of Contractor outstanding from time to time under this Agreement and all other agreements, instruments and documents relating thereto, now or hereafter in effect as amended from time to time (collectively, the "Obligations"). The parties acknowledge that the Obligations constitute a "purchase money obligation" as such term is defined in Section 9-103(a)(2) of the Uniform Commercial Code. Contractor expressly authorizes City to file such U.C.C-1 financing statements as City may deem necessary to perfect and continue City's security interest in the aforementioned collateral. From time to time at City's request Contractor shall execute and deliver all further instruments and documents and take all further action as may be reasonably necessary to perfect and provide first priority for any security interest granted or purported to be granted in this Agreement or to enable City to exercise and enforce its rights and remedies with respect to the aforementioned collateral. Contractor shall not register the Vessel under the vessel registration or titling laws of the United States or any state, or document the Vessel with the USCG, except as may be required during the construction or the delivery of the Vessel provided that such documents do not adversely affect the security interest of City. The security interest

granted to City hereunder is inferior only to Contractor ’s lien rights in the Vessel in the event of default by City, which lien rights are acknowledged by City.

Design Specifications and Contract Drawings

Refer to Appendix D to find the following Design Specifications and Contract Drawings.

Design Specifications and Contract Drawings may be modified by mutual agreement of the Parties to be documented via written Amendment or Change Order to this Agreement:

Exhibit A-0	Specifications
Exhibit A-1:	General Arrangement
Exhibit A-2:	Structural Scantling Plan
Exhibit A-3:	Spud Pile
Exhibit A-4:	Outfitting
Exhibit A-5:	Mechanical Arrangement
Exhibit A-6:	Electrical One-Line Diagram

Regulatory Oversight

The barge is designed in accordance with the American Bureau of Shipping Rules for Building and Classing Steel Barges, and as such shall be built for ocean transport. The barge shall be built in accordance with these rules including the purchase of materials, workmanship, and welding consumables and procedures but will not be classed by ABS. Because the barge will be owned and operated by a municipal entity, it will be uninspected by the USGS.

Scope of Work

The Contractor shall deliver a crane barge that meets the specifications of the Port and that the Port accepts as meeting XXXXXX on or before October 31, 2025. On delivery, all aspects of fabrication, inspection, supply of equipment and testing of all operations of the barge shall be complete. Note: “Contractor” herein shall denote the entity accepting the contract to deliver the completed barge and may include a Shipyard or General Contractor or other qualified entity awarded the contract.

The scope of work for the Contractor contracted to build the barge comprises the following:

1. Contractor shall prepare inspection and testing procedures and acceptance criteria to meet the requirements of the specifications, for approval of Owner’s representative
2. Contractor shall provide the Owner’s representative with access to all parts of their yard where fabrication activities occur and provide any documentation requested. Further, the Contractor shall provide the Owner’s representative with temporary workspace during their inspection visits. The owner’s representative will not need full time workspace.

3. Contractor constructing the barge shall be the initial purchaser of the crane to be installed on the barge, and shall ensure it is procured, fabricated, tested, delivered to Contractor, and installed in accordance with Port and crane manufacturer's specifications. Crane shall be new (i.e. not previously used elsewhere and refurbished for this project). Contractor shall confer with the ultimate Owner (Port) on technical questions, but commercial communications shall be between Crane Supplier and Purchaser (Contractor).
4. Contractor shall review the design of the barge provided with the specifications and shall update the design to provide the form and function required by the specifications.
5. Contractor shall provide updated sizing specification and provide design calculations for review and approval by the Port at 35%, 65% and 100% completion.
6. Contractor shall provide final arrangement and scantling drawings based on these final calculations for review and approval by the Port at 35%, 65%, and 100% completion.
7. Contractor shall provide shop (detailed construction) drawings for review and approval by the Port at 35%, 65%, and 100% completion, prior to commencing construction of components and blocks.
8. Contractor shall construct the barge in accordance with the agreed upon specifications and referenced marine industry standards.
9. Contractor shall construct spud piles in accordance with the agreed upon specifications and drawings
10. Contractor shall respond to and correct any design and fabrication concerns identified at inspections by the Owner's representatives.
11. Contractor shall procure all vendor-furnished equipment in accordance with project specifications and install and test in accordance with vendor instructions to verify proper operation.
12. Contractor shall design, procure, install and test all electrical equipment to verify proper operation.
13. Contractor shall prepare hull documentation and provide to the Owner upon delivery of the barge. Documentation shall include vendor-furnished operating and maintenance manuals, drawings and calculations for each piece of equipment and each component installed on the barge. A construction portfolio shall be prepared and delivered that documents all materials and consumable used in the construction of the hull including steel, welding consumables, coatings, anodes, connectors (bolts, etc), piping, etc. Progress photographs taken during the course of construction and at milestone construction events (such as key hold points) shall be provided to the Port.
14. Contractor shall deliver the crane barge to (location in San Francisco Bay to be agreed upon at kick-off meeting) at the Port of San Francisco.

Inspection of Work

Contractor shall prepare and follow an inspection test plan with key hold points defined in agreement with the Owner. The Owner will make regular in-person inspections of the barge as construction progresses. It is envisioned that the hold points will include as a minimum:

1. Delivery of steel to visually inspect and to verify mill test reports and compliance with the specification
2. Fabrication of first block

3. At agreed-upon intermediate points in the construction of the hull, on a weekly or bi-weekly basis
4. At Completion of hull structure and tank testing
5. Prior to painting
6. Crane factory acceptance test and delivery
7. Crane installation and functional testing onboard barge
8. Substantial completion walk-through and testing of all equipment and components
9. Deadweight Survey and hull inclining experiment
10. Prior to Sail away from Contractor's facility
11. Upon arrival at San Francisco and delivery to Owner

Key Milestones

The following outlines possible milestones to be agreed upon for progress payment purposes:

1. Kickoff meeting/initial partnering session at Contractor's facility
2. Design Calculations – Review by Port at 35%, 65%, and 100% completion for weight and stability and functional lifting capacity
3. Design drawings – structure and arrangement – Port review and comments at 35%, 65%, 100% completion.
4. Shop Drawings – Port review and comments at 35%, 65%, 100% completion.
5. Material order to steel and other primary suppliers and vendors
6. Crane order issued to vendor
7. Inspections during fabrication – Owner's representative will inspect the construction on a regular basis at least at the following points:
    a. Delivery of steel
    b. Fabrication of first block
    c. At agreed-upon intermediate points in the construction of the hull
    d. Completion of hull structure and tank testing
    e. Crane factory acceptance test and delivery
    f. Crane installation and functional testing onboard barge
    g. Substantial completion walk-through and testing of all equipment and components
    h. Deadweight Survey and hull inclining experiment
8. Trials at Contractor's facility
    a. Final inspection of all fabrication when completed and accepted by Owner's representative
    b. Final inspection of all equipment and components as installed on board accepted by Owner's representative
    c. Operational testing of all equipment as installed on board
    d. Stability test (Inclining experiment) with steps a) and b) above completed
    e. Lifting capacity test for crane with barge free floating (moored to the pier)

9. Transportation.
    a. Prior to Sail away from Contractor
    b. Upon arrival at San Francisco, removal of all sea fastenings and repair of any damages, satisfactory function testing of all equipment including crane to be demonstrated
    c. Final delivery to Owner at the Port at completion of all outstanding items including transfer of custody.

Appendix B
Calculation of Charges

➔ **ENTER ACCEPTED PRICE PROPOSAL UPON CONTRACT EXECUTION.**

Appendix C

Progress Payment, Delivery, and Compliance Requirements

1. Price

Only prices that appear on Appendix B, or that are approved by City via written Change Order issued pursuant to Appendix H will be considered. No other pages with prices or attached price lists and/or catalog prices will be considered. Prices shall be exclusive of any Federal, State, local sales or use tax. In the event of a discrepancy between the unit price and the extended price, the unit price will prevail.

2. Progress Payments

[SPECIFIC INSURANCE REQUIREMENTS TO BE DETERMINED IN PHASE II RFP.]

3. Milestones

Progress Payments will be made in accordance with the following required Milestones:

Milestone Number	Milestone	Progress Payment % (of Total Cost)
3.1	Kickoff meeting/initial partnering session at Contractor's facility	n/a
3.2	Design Calculations – Review by Port at 35%, 65%, and 100% completion for weight and stability and functional lifting capacity	**5% of total** @ 100% calculations approval
3.3	Design drawings – structure and arrangement – Port review and comments at 35%, 65%, 100% completion.	**5% of total** @ 100% design drawings approval
3.4	Shop Drawings – Port review and comments at 35%, 65%, 100% completion.	**10% of total** @ 100% shop drawings approval
3.5	Material order to steel and other primary suppliers and vendors	**5% of total** @ confirmation of material order
3.6	Crane order issued to vendor	**10% of total** @ confirmation of crane order
3.7	Inspections during fabrication – Owner's representative will inspect the construction on a regular basis at least at the following points: a. Delivery of steel	 n/a

	b. Fabrication of first block	n/a
	c. At agreed-upon intermediate points in the construction of the hull	n/a
	d. Completion of hull structure and tank testing	**10% of total** @ acceptance
	e. Crane factory acceptance test and delivery	**10% of total** @ delivery
	f. Crane installation and functional testing onboard barge	**10% of total** @ acceptance
	g. Substantial completion walk-through and testing of all equipment and components	**10% of total** @ acceptance
	h. Deadweight Survey and hull inclining experiment	**5% of total** @ acceptance
3.8	Trials at Contractor's facility	
	a. Final inspection of all fabrication when completed and accepted by Owner's representative	n/a
	b. Final inspection of all equipment and components as installed on board accepted by Owner's representative	n/a
	c. Operational testing of all equipment as installed on board	**5% of total @** acceptance
	d. Stability test (Inclining experiment) with steps a) and b) above completed	n/a
	e. Lifting capacity test for crane with barge free floating (moored to the pier)	**5% of total** @ acceptance
3.9	Transportation.	
	a. Prior to Sail away from Contractor....	
	b. Upon arrival at San Francisco, removal of all sea fastenings and repair of any damages, satisfactory function testing of all equipment including crane to be demonstrated	
	c. Final delivery to Owner at the Port at completion of all outstanding items, including product warranties.	
	d. COMPLETION OF MILESTONE 3.9, INCLUDING FINAL TRIALS UPON DELIVERY	**10% of total** @acceptance

4. Delivery

Contractor must comply with the delivery requirements set forth in Appendix F, Exhibit A-0: Specifications. ***[NOTE: DELIVERY AND FINAL ACCEPTANCE TERMS MAY CHANGE BASED ON METHOD OF DELIVERY, WINNING PROPOSAL AND OTHER FACTORS.]***

Appendix D
RESERVED (BAA)

Appendix E

RESERVED (Forms P-12U-C and 12U-I)

Appendix F

Design Specifications and Construction Drawings

Exhibit A-0	Specifications
Exhibit A-1:	General Arrangement
Exhibit A-2:	Structural Scantling Plan
Exhibit A-3:	Spud Pile
Exhibit A-4:	Outfitting
Exhibit A-5:	Mechanical Arrangement
Exhibit A-6:	Electrical One-Line Diagram

Appendix G
Schedule

[INSERT APPROVED SCHEDULE]

Appendix H

Clarifications and Changes to Work

TBD

[SPECIFIC CHANGE ORDER PROVISIONS TO BE DETERMINED IN PHASE II RFP]

Sourcing Event 0000006633
Attachment 4
Grant Terms & Conditions

Second Amended and Restated

Funding Agreement

This Second Amended and Restated Funding Agreement (Agreement) is entered into by the State of California (State), acting through the State Lands Commission (Commission), and the City and County of San Francisco acting by and through the San Francisco Port Commission (Port). The Commission and Port are referred to individually as a Party and collectively as the Parties. The Parties, as consideration for, and as a condition to, the Commission awarding State Fiscal Recovery Funds, agree as follows:

1. Background.
    a. The Parties, as consideration for, and as a condition to, the Commission awarding State Fiscal Recovery Funds, entered into a Funding Agreement dated January 6, 2022 (the Original Funding Agreement) to, among other things, define federal and State conditions on the use of State Fiscal Recovery Funds.
    b. On February 9, 2022, Governor Newsom signed SB 115 (Chapter 2, Statutes of 2022), which retroactively modified the source for the Port Stimulus Funds to the State's General Fund. Because of that change, recipient ports are no longer subject to federal American Rescue Plan Act requirements and restrictions. SB 115 also set a new expenditure deadline of December 31, 2026.
    c. The Parties then entered into an Amended and Restated Funding Agreement, dated June 21, 2022 (the A&R Funding Agreement) to update the terms of the Prior Funding Agreement to be consistent with SB 115.
    d. The Parties now desire to enter into this Second Amended and Restated Funding Agreement to award additional State Fiscal Recovery Funds.

2. Purpose. The 2021 Budget Act appropriated $250 million to the Commission with instructions to allocate the funding to California ports to address negative economic impacts due to the COVID-19 pandemic. According to the Budget Act, ports shall use these funds to support their economic recovery, such as for activities that include avoiding layoffs, restoring jobs and services lost due to COVID-19, and supporting safe operations. During its August 23, 2022 Regular Meeting, the Commission approved distribution of $2,270,308 (the Funds). Entering this Agreement is a condition for disbursement of the Funds. This Agreement supersedes and replaces the Original Funding Agreement and the A&R Funding Agreement.

3. Term. The term of this Agreement begins on the date this Agreement is executed by State and terminates when the Port expends or returns all Funds.

4. Accuracy. The Port represents and warrants that all information contained in its Funding Request is true and correct to the best of the Port's knowledge and ability. The Port acknowledges that providing false information may be a felony under California Penal

Code section 115.

5. Use of Funds.
    a. *State law and guidance*. The Port must use the Funds consistent with Item 3560-162-8506 and Control Section 11.96 of the 2021 Budget Act, applicable state law, as well as related guidance from the Commission, the Department of Finance, and other state entities. These funds are available for expenditure through December 31, 2026. A recipient port must return any funds to the State that are not encumbered as of December 31, 2026.
    b. *Fully automated cargo handling equipment*. Funds must not be used for the purchase of fully automated cargo handling equipment. For the purposes of this paragraph, "fully automated" means equipment that is remotely operated or remotely monitored with or without the exercise of human intervention or control. This provision does not prohibit the use of the funds for a project that includes the purchase of human-operated zero-emission equipment, human-operated near-zero-emission equipment, and infrastructure supporting that human-operated equipment. Furthermore, this provision does not prohibit the purchase of devices that support human-operated equipment, including equipment to evaluate the utilization and environmental benefits of that human-operated equipment.
    c. Funding Request. Ports must use the funds for the purposes described in their Monitoring Plan, discussed below. Ports may amend their projects descriptions as necessary.

6. Records.
    a. *Retention*. The Port must maintain records and financial documents related to the Funds for five years after all Funds have been expended. This provision survives termination of the Agreement.
    b. *Availability*. The Port must also provide or make available such records to the Commission, the California State Auditor, Department of Finance, and any other authorized State oversight agency. The Port agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, the Port agrees to include a similar right of the State to audit records and interview staff in any contract paid for with the Funds. (Gov. Code §8546.7, Pub. Contract Code §10115 et seq., CCR Title 2, Section 1896). This provision survives termination of the Agreement.

7. Monitoring Plan.
    a. Commission staff will monitor the Port's activities to ensure that the Funds are used for authorized purposes, in compliance with state statutes, regulations, and

the terms and conditions of this Agreement as described in the Monitoring Plan, attached to this Agreement as Exhibit A and incorporated by this reference.

b. The Commission or Commission staff may modify the Monitoring Plan as necessary to ensure the Port's compliance with the ARPA, associated rules and guidance, and this Agreement. Commission staff will work with Port staff to update the Monitoring Plan to reflect cost estimates, outcomes, outputs, and performance indicators.

c. The Port must promptly provide all information requested by the Commission or its staff that is necessary or desirable, in the Commission or its staff's sole discretion, to allow Commission staff to perform the monitoring activities described in the Monitoring Plan.

d. If the Port receives notice of potential non-compliance, the Port must provide written confirmation highlighting the status of actions planned or taken to address the potential non-compliance. The Commission shall report any such notifications to the Department of Finance.

8. Reimbursement of Recouped Costs. If the State identifies any funds received by the Port for recoupment based on the Port's use, misuse, or failure to use any portion of the Funds, the Port must reimburse the State for the amount identified. Additionally, the Port must reimburse the State and the Commission for any costs, including staff costs, relating to or arising out of the State's recoupment of those funds. This provision survives termination of the Agreement.

9. Indemnity. To the extent permitted by law, the Port must indemnify, hold harmless and, at the option of the Commission or the State, defend the Commission and the State and their officers, agents, and employees, from all damages, injuries, or claims arising from the Port's use of the Funds. This provision survives termination of the Agreement.

10. Nondiscrimination. When using the Funds, the Port must meet state requirements relating to nondiscrimination and nondiscriminatory use of funds. The Port must not deny the benefits paid for with the Funds to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status, nor may the Port discriminate unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status. The Port must ensure that the evaluation and treatment of employees and applicants for employment are free of such discrimination. The Port must comply with the provisions of the Fair Employment and Housing Act (Gov. Code §12900 et seq.), the regulations promulgated thereunder (Cal. Code Regs., tit. 2, §11000 et seq.), the provisions of

Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Gov. Code §§11135-11139.5), and the regulations or standards adopted by the awarding state agency to implement such article. The Port must permit access by representatives of the Department of Fair Employment and Housing and the awarding state agency upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to such of its books, records, accounts, and all other sources of information and its facilities as said Department or Agency shall require to ascertain compliance with this clause. The Port and its subcontractors must give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement. (See Cal. Code Regs., tit. 2, §11105.)

11. Authority. The Parties represent and warrant that the individuals signing below have authority to sign this Agreement on behalf of their respective Party. The Port's acceptance of funding under this Agreement is authorized pursuant to the San Francisco Board of Supervisors Resolution 278-22 and San Francisco Port Commission Resolution 22-10.

12. Approval. This Agreement is of no force or effect until signed by both Parties.

13. Amendment. No amendment or variation of the terms of this Agreement is valid unless made in writing, signed by the Parties, and approved as required. No oral understanding or Agreement not incorporated in the Agreement is binding on any of the Parties.

14. Conflict. This Agreement does not authorize or condone any act or omission that violates federal or state law. Any conflict between this Agreement and any applicable federal or state law must be resolved in favor of the applicable law.

Signatures on following page

Second Amended and Restated

Funding Agreement

Signature Page

THE CITY AND COUNTY OF SAN FRANCISCO

ACTING BY AND THROUGH THE SAN FRANCISCO PORT COMMISSION

DocuSigned by:

By: [redacted]

Name: Elaine Forbes, Executive Director

Date: 11/3/2022

Approved as to form:

DAVID CHIU, City Attorney

By: [redacted] 10/25/2022

Name: A. Mathai-Jackson

Title: Deputy City Attorney

CALIFORNIA STATE LANDS COMMISSION

By: [redacted]

Its: Executive Officer

Date: 11/28/2022

EXHIBIT A0
Specifications

1 - GENERAL EQUIPMENT SPECIFICATIONS:

SPECIFICATION OUTLINE:

The following specifications for a Crane Barge, complete with pedestal crane, are divided into three complete sections. The first section outlines the overall specification requirement. The second details the Barge portion of the complete unit. The third section details the Pedestal Crane. The Crane Barge shall be delivered complete with all equipment and accessories necessary for safe and efficient operation, ready for immediate job site operation within the City and County of San Francisco. The Crane Barge shall comply with the project specifications, manufacturer's specifications, industry standards, and project drawings.

In general, the specifications provided in the following Sections 2 and 3 shall be adhered to. As written, these describe the barge designed by the Port that forms the basis for this request. The specifications describe the barge in terms of performance requirements as well as describing the physical layout, construction details, and numerous other aspects of the barge design including specific equipment required. As such, the performance requirements are not negotiable but the means of satisfying these could result in a variance of the design presented. Those requirements in the specifications that follow that are defined by "shall" or "will" **shall** be strictly adhered to and variation from these will not be accepted. Other requirements defined with "should" may have room for variation as long as the overall performance requirements of the barge are met.

DEFINITION OF TERMS

Port of San Francisco hereinafter **shall** be referred to as **"Port"**
City and County of San Francisco hereinafter **shall** be referred to as the "**City"** or **"CCSF".**
Contract Administrator's Office of the City and County of San Francisco hereinafter **shall** be referred to as **"Purchasing"**

The following terms are used throughout this document and are defined here to differentiate responsibility through the building of the Crane Barge.

Proposer/Prime Contractor: Organization awarded contract by the Port for the fabrication, assembly, integration, testing and delivery of the Crane Barge. Has ultimate responsibility for delivering the fully assembled and tested barge and equipment. Entity leading the team and will be contractually responsible for delivering the completed assembled crane barge. Presumably the Proposer will also act as the Prime Contractor for this project.

Fabricator: May be the Contractor or may be a subcontractor to the Contractor hired to fabricate the barge hull of steel and possibly integrate the Vendor-supplied equipment onto the barge. Depending on the relationship with the Contractor, Fabricator may have responsibility only for constructing the barge or may have much broader responsibility including procuring, integrating and testing all equipment to be installed.

EXHIBIT A0
Specifications

Manufacturer: Maker of equipment that will be installed on the barge. Equipment may be off-the-shelf or custom designed and built. Responsible for design and construction of equipment including testing prior to delivery to Vendor or Fabricator.

Vendor: Provider of equipment manufactured by others. Vendor could be a manufacturer also, but not necessarily. Responsible for provision of equipment including testing prior to installation on board.

Facility: Primary site where construction of the barge and installation and integration of the major equipment will occur. The crane manufacturer's *plant* could be a secondary *facility*.

Plant or *Factory*: Site where Vendor-supplied equipment is manufactured.

GENERAL REQUIREMENTS

The latest approved fabrication standards and practices **shall** be employed in the design and construction of the Crane Barge. The workmanship **shall** be of the highest quality in its respective field.

The contractor **shall** ensure adequate accessibility of the various systems that require periodic maintenance, ease of operation and symmetrical proportions.

Construction **shall** be rugged and ample safety factors **shall** be provided to a Crane Barge as set forth under "**Acceptance and Performance Test Requirements.**"

All components and parts **shall** be new and previously unused and of manufacturer's latest model. The use of new military surplus, used, obsolete, discontinued, or items made in prison or by convict labor, **shall** not be acceptable.

MANUFACTURING, MATERIAL AND DESIGN PRACTICES:

It is intended that the contractor, fabricator, manufacturer, and/or vendor in the selection of components, will use material and design practices that are the best available in the industry for the type of operating conditions to which the unit(s) will be subjected. Generator, Air Compressor, Mooring components including winches and fairleads, Hydraulic Power Unit, rigging and other component parts **shall** be selected to address the performance requirements of this specification. All parts, equipment and accessories **shall** conform in strength, quality of material and workmanship to recognized industry standards.

ALTERNATES:

When the name of a manufacturer, brand, or make, with or without model number, is used in describing any item in this specification, responses for similar articles will be considered unless otherwise stated. Respondents may also propose items of equivalent features or manufacturer's updated part or part number. Purchasing **shall** be the sole judge as to whether such alternate

EXHIBIT A0
Specifications

articles are acceptable. Unless respondent states to the contrary, articles offered will be assumed to be the specific article named in this specification. If not offering the specific article named, respondent should enclose full information, specifications and descriptive data on items offered with its response. Purchasing reserves, the right to permit deviations from the specifications if any article offered is substantially in accord with Purchasing's specifications and is deemed by Purchasing to be of as good quality and as fully satisfactory for its intended use. Respondent is responsible for identifying any deviations from Purchasing's specifications. Respondents should not assume an alternate offered is an approved equal. The City will evaluate the alternate and inform the respondent if the alternate is acceptable. Purchasing must approve all alternates.

CONDITIONAL MODIFICATIONS:
Potential variances of a specific manufacturer may require variances in the design to some degree. Therefore, respondents **shall** clearly and completely outline all areas needing such modifications.

GENERALITIES:
To allow for contractor's specific designs, and ensure a level of competitiveness, we have left certain areas of our specifications general by design. In such cases, the items being referred to may be general but adherence to the requested end product and/or result must be met. This is especially important in areas where critical dimensions, lifting capacities, grades of steel, etc. are specified. **In the cases where the word "shall" is used, no substitution will be allowed.**

MANUFACTURER'S SPECIFICATION:
Complete contractor's specification, published literature and photos, or illustrations of unit proposed should be furnished with response. For all vendor-furnished components. only new models in current production which are catalogued by the manufacturer, and for which printed literature and specifications are available will be accepted. Respondents should prepare and submit their own proposals addressing each section, item or component of these specifications indicating full compliance without exception or explaining in detail any exception, deviation or non-compliance. Respondents should not simply submit a copy of a contractor or manufacturer's specifications if they differ from these specifications, nor should they submit copies of fabricator or third-party quotations as a response to the City's request in this RFQ. An SDS (Safety Data Sheet) **shall** be supplied for all fluids used.

MANUFACTURER'S STANDARD EQUIPMENT:
For vendor-furnished equipment, all equipment and components listed as standard by the manufacturer for model specified **shall** be furnished whether or not such items are detailed herein, e.g., special wrenches, tool kits, etc. Optional equipment as necessary to meet the following requirements of this specification **shall** also be supplied. Should the requirements as specified not comply, the Contractor is required to re-figure and revise the specifications to meet all laws, rules and regulations where it applies to items such as the ratings of vendor supplied equipment and the City is to be notified thereof.

EXHIBIT A0
Specifications

APPLICABLE DOCUMENTS AND CERTIFICATIONS:

Specifications on the following pages are written with the intent to comply with all applicable documents and certifications, but the final responsibility to comply **shall** rest with the Contractor and not the City and County of San Francisco. The successful respondent **shall** adhere to the standards set forth by the following agencies:

- State of California General Industrial Safety Orders
- State of California Health and Safety Code, Motor Vehicle Pollution Control
- California Occupational Safety and Health Act (OSHA) and the EPA
- United States Coast Guard
- American Bureau of Shipping
- American Petroleum Institute
- American Society of Mechanical Engineers (ASME)
- American National Standards Institute (ANSI)
- An SDS (Safety Data Sheet) for all fluids used **shall** be included with the delivery of the equipment.
- Underwriters Laboratories (UL)

DEMONSTRATIONS

The City reserves the option to request, and the respondent **shall** agree to provide, an "on the job" demonstration and evaluation of a similar barge or crane for the Port personnel before acceptance of contract in the event the City is not familiar with the performance of the unit offered, at no additional cost to the City. Time required for such evaluation **shall** be as determined by the City.

OPERATIONAL NOISE STANDARD:

Noise level **shall** be in conformance with standards established by Local, State and Federal Agencies. For compliance with noise requirements City personnel may test each unit delivered before the unit is accepted.

HOSE AND WIRING ROUTING, HARDWARE REQUIREMENTS:

All hoses and wiring **shall** have adequate protective covers wherever there is a possibility of contact with any other components. Separators **shall** be used where applicable. No tape or adhesive fasteners **shall** be accepted. All hoses, wirings, and pipes **shall** be routed to be clear of all heat sources and **shall** be protected from any present or potential source of snags, abrasions or sharp edges. If any wiring for any lamps is routed through any tool compartment or canopy, these wires **shall** be enclosed in steel. All high voltage electrical **shall** be routed through armored weatherproof conduit. All fasteners (nut, bolts, rivets, etc.) **shall** be grade 5 or better with a rust inhibiting coating. Several applications may require grade 8. All hydraulic hoses, fittings and piping **shall** be manufactured specifically for high-pressure hydraulic

EXHIBIT A0
Specifications

systems. All hoses, electrical wiring and other components **shall** be specifically designed for that designated application.

SWITCHES, LABELS:
All external toggle and push button switches **shall** be marine type with additional rubber boots. All controls, warning gauges and valves **shall** be marked as to function with stamped or engraved stainless steel, aluminum, and/or UV and weather-resistant acrylic plastic labels. These labels **shall** be attached by aluminum and/or stainless-steel rivets compatible with the material to which they are attached.

WELDING:
All welding **shall** be continuous where applicable. All welding **shall** be performed in accordance with the applicable requirements of the latest codes, rules or specifications of the American Welding Society (AWS) and requirements of these specifications and special provisions and **shall** be subject to the test and examinations therein specified.

FASTENERS:
All fasteners **shall** be grade 5 or better and in some cases grade 8 must be used. Fasteners **shall** be corrosion resistant and **shall** utilize a locking nut washer or thread locker wherever possible. Fasteners that are susceptible to corrosion **shall** be coated with an anti-corrosion compound.

ISO COMPLIANCE
The Contractor should operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the "International Organization for Standardization (ISO)" specify the quality systems that **shall** be established by the Contractor for design, manufacture, installation, and service. A copy of the certificate of compliance must be included with the response. In lieu of ISO compliance, the PORT may consider documentation of codes of practices, quality control and assurance programs or procedures utilized by the Contractor.

COMPLY: ☐ **Y for YES** ☐ **E for Exception**

DELIVERY REQUIREMENTS:
Due to the fabrication design required on this unit, we understand the potential for fabricator and or manufacturing company build schedule delays. For this unit we are asking for a delivery schedule as part of the proposal submission. This unit should be delivered and be ready for service within the proposed time range.

The Crane Barge will be inspected as outlined below:

INSPECTION POINTS

For inspection during the fabrication of the barge, the port plans the following activities:

EXHIBIT A0
Specifications

Inspection of Work

Contractor shall prepare and follow an inspection test plan with key hold points defined in agreement with the Owner. The Owner will make regular in-person inspections of the barge as construction progresses.

Contractor to provide Owner's inspector yard access and daily office space with desk, lighting, electricity and other facilities as needed. Inspector to have unrestricted access to fabrication sites where work on this project is ongoing during normal business hours for the yard.

Inspection plan shall include a kickoff meeting with the Contractor and fabricator(s) (if separate entities) and the following minimum hold points for inspection. Addition inspections will be required if Owner is unable to complete inspection and/or reinspection is required.

1. Kickoff meeting (1)
2. Delivery of steel to visually inspect and to verify mill test reports and compliance with the specification at Fabricator (1) and at crane fabricator site (if different) (1)
3. Fabrication of first block (1)
4. At agreed-upon intermediate points in the construction of the hull, on a weekly or bi-weekly basis (6 points)
5. At Completion of hull structure and tank testing (1)
6. Prior to painting (1)
7. During paint application (dedicated paint inspector) (3)
8. Crane factory acceptance test and delivery (1)
9. Crane installation and functional testing onboard barge (1)
10. Substantial completion walk-through and testing of all equipment and components (1)
11. Deadweight Survey and hull inclining experiment (1)
12. Prior to Sail away from Contractor's facility (1)
13. Upon arrival at San Francisco and delivery to Owner (1)

21 inspection instances above.

COMPLY: ☐ **Y for YES** ☐ **E for Exception**

PRE-CONSTRUCTION REQUIREMENT:
The successful respondent **shall** be required to attend a pre-construction meeting with the initiators of these specifications and/or designated City representative(s) within 30 calendar days prior to the start of any construction. Port representatives working with the Contractor representatives will finalize all details and requirements needed to begin construction. Weekly update photographs (digital format) may be required of the Contractor if requested. The purpose is to ensure the proper interpretation of the City's written specifications. If necessary, the

EXHIBIT A0
Specifications

Contractor may also be required to coordinate any additional meetings prior to the fabrication or installation of equipment, painting, testing etc.

COMPLY: ☐ **Y for YES** ☐ **E for Exception**

MANUFACTURER RECALLS:
All known open recalls issued by vendors or manufacturers or other agencies with regard to equipment being supplied must be resolved prior to delivery.

INSPECTION TRIPS:
Fabrication of a Crane Barge may include Inspection Trips, a set of manuals that cover all vendor supplied equipment as well as the unit itself, respondents should understand the cost for such trips will be included in the RFP and shall include airfare (if over 125 miles from San Francisco), ground transportation, meals and lodging for two (2) factory inspection trips and one (1) factory pre-construction meeting for two (2) City representatives as part of the fabrication of the Crane Barge. The City considers Airfare to include one (1) checked bag per City representative. If flight duration is over 125 minutes, economy plus or equal class seating **shall** be provided. Flight must be the most direct, shortest duration, non-stop if available with a maximum of one (1) connection and have assigned seating. Seat choice to be selected by City representatives. Departure and arrival to be during normal business hours. The inspection trips **shall** be scheduled at times mutually agreed upon between the awarded respondent and the City representatives and should be for a minimum of two (2) nights. Meals and lodging rate **shall** comply with the current Federal Per Diem Rates for the Continental U.S.A. The rates are available from the following website:

https://www.gsa.gov/travel/plan-book/per-diem-rates

The first trip will be known as the "pre-construction" meeting trip and **shall** be arranged at a time before the fabrication is commenced. Port representatives working with the Contractor representatives will finalize all details and requirements needed to begin fabrication.

The second trip will be known as the "pre-paint" or mid-inspection, will be arranged at a time when the hull is assembled with major components installed and before final paint work is begun. If the inspection discloses any deviation from the specifications, the discrepancies, if minor, can be corrected while City inspectors remain at the facility. If the problem is not readily correctable, the inspectors can return for inspection at a mutually agreed time at the expense of the awarded respondent. Port representatives working with the fabricator representatives will finalize all details and requirements needed to begin Crane Barge assembly

The third inspection trip will be the final (pre-delivery) inspection of the completed vessel, completely finished and ready for delivery. Workmanship and finish will be inspected, and the unit will be thoroughly tested and all equipment operated before final delivery. If the inspection discloses any deviation from the specifications, the discrepancies, if minor, can be corrected

EXHIBIT A0
Specifications

while City inspectors remain at the facility. If the problem is not readily correctable, the inspectors can return for inspection at a mutually agreed time at the expense of the awarded respondent.

COMPLY: ☐ **Y for YES** ☐ **E for Exception**

RESPONDENT'S COMPLIANCE AND EXCEPTIONS:
All exceptions should be stated no matter how seemingly minor. Respondents shall indicate compliance with each section and line item specifications as required in the line spaces provided by marking with a "Y" for yes. If the respondent is offering an alternate of equal or superior status to the line item specification, respondent will indicate by marking with an "E" for exception on each line item. The respondent must then reference each item exception and explain the exception taken and the proposed alternate on the Response Exception Sheets.

FINAL DELIVERY
The contractor **shall**, at their expense, deliver (FOB destination) the completed Crane Barge to the following location:

City and County of San Francisco
Port
XXXXXX.
San Francisco, CA XXXXX
(XXX) XXX-XXXX

Prior to delivery, contractor **shall** coordinate delivery date and time with the Port.

Prior to acceptance, the Crane Barge **shall** be thoroughly checked, and include all equipment and accessories as specified in the fabrication specifications and referenced drawings, ready for use when delivered. A factory-trained and authorized instructor **shall** then remain with the Crane Barge for 5 working days to instruct Port personnel in the proper operation, care, and maintenance of the equipment delivered. Delivery does not mean acceptance of the Crane Barge.

The following documents, items, and information, as applicable must be delivered with each Crane Barge, in original form:

1) Completed "Contractor's Report of Sale,"
2) Inclining report stating the final finished weight and center of gravity of unit as determined by the inclining test. Inclining test shall be supervised by a registered professional naval architect.
3) Statement of Contractor's and Manufacturer's warranty and warranty certificates for all equipment and subsystem components.

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4) Individual stock number (identification number or manufacturer's number).
5) Any documents requiring the buyer's name and address, unless otherwise stated, must be the City and County of San Francisco at the address listed above.

COMPLY: ☐ **Y for YES** ☐ **E for Exception**

ACCEPTANCE AND PERFORMANCE TEST REQUIREMENTS

Contractor shall prepare a detailed performance test procedure to demonstrate proper operation of all equipment installed on the barge. The test procedure shall also demonstrate the lifting capacity of the crane and barge and also that the floating attitude is within the allowed trim and heel angles detailed in the specifications. The tests shall be witnessed by the Port staff.

TEST:

The test **shall** be conducted with the Crane Barge fully loaded and **shall** consist of a load test and a full function test of all installed equipment. During this test, Crane Barge and all components **shall** show no signs of permanent deformation or other damage. The Crane Barge **shall** adhere to the following parameters:

1) The Crane Barge, when fully loaded, **shall** be capable of lifting 100 kips at 60 ft radius at any rotational orientation of the boom and heel less than 5 deg maximum and trim less than 3 degrees maximum.

2) All other installed equipment and systems shall be function tested to demonstrate proper and safe operation, in accordance with the project specifications

3) The Crane Barge shall satisfy all other requirements as agreed upon during the response phase.

In event the Crane Barge fails to meet on-site delivery testing requirements, a second set of trials may be arranged within 30 days following first test failure. Such subsequent trials **shall** be final and conclusive and failure to meet these requirements **shall** be cause for rejection.

Also, failure to make changes deemed necessary by the City to make Crane Barge conform to any clause of the specifications within 30 days after notice to the fabricator **shall** also be deemed cause for rejection of the Crane Barge. Permission to keep or store the Crane Barge by the City during the testing and re-testing period, if agreeable with fabricator **shall** not constitute acceptance of the Crane Barge.

The City will accept the crane Barge when all tests have been passed, training completed, manuals, accessories and all equipment is delivered.

COMPLY: ☐ **Y for YES** ☐ **E for Exception**

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SERVICE REQUIREMENTS

When the proposer is contacted for warranty repair, said proposer **shall** have 24 hours to respond to the request with a plan of action. The proposer **shall** be required to provide this action within 3 working days after initial contact. If the Contractor does not respond within the time allowed it would be assumed AS APPROVED for the CCSF to repair the Crane Barge or obtain warranty repairs from component manufacturers or outside contractor repair facilities.

COMPLY: ☐ **Y for YES** ☐ **E for Exception**

INTENDED USE:
The unit proposed by respondents **shall** be configured to meet or exceed the following intended usage of said unit. The unit described in specifications is intended to cover the furnishing and delivery to the **Port of San Francisco** of a complete Crane Barge built to the highest level of quality and engineering excellence and equipped as hereafter specified. These specifications cover minimum requirements as to the type of construction and testing to which the Crane Barge "**shall**" conform.

The following specifications are for a Crane Barge. The Crane Barge **shall** consist of a fabricated steel barge hull, with a pedestal crane permanently installed, and other construction-support equipment including a diesel-powered electrical generator, diesel powered hydraulic power unit, electric air compressor and pressure tank, fuel tank, mooring system with hydraulic winches, spud pile system with hydraulic winches, and assorted storage containers and deck house.

It is the responsibility of the respondent to review and scrutinize all aspects of the configuration of this unit including, but not limited to, all specifications presented in this document. If necessary, the respondent **shall** recommend adjustments to the written specification so that the unit's subsystems are adequate for this Crane Barge to operate on a daily basis, fully loaded with all components, and tools needed for the unit's daily tasks along the waterfront of the City of San Francisco. This **shall** be accomplished without increasing maintenance costs, overstressing the hull structure, or adding any unnecessary and/or abnormal wear to any other components of the unit. It is the responsibility of the successful respondent to ensure this unit will comply or exceed compliance to all safety and environmental standards set forth by the City of San Francisco, State of California, and the Federal Government.

SECTION 2 - Crane Barge

The Barge to be furnished under the specifications outlined below: "Specifications for the Construction of a Crane Barge for the Port of San Francisco" **shall** meet or exceed the specification presented. This Crane Barge **shall** be new and unused. This Crane Barge is to perform operations in all weather conditions specified herein. Special attention to major components and/or specified critical capacities is mandatory. Unless a complete alternate

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design that complies with the performance specifications (i.e. those that The Crane Barge **shall** comply with standard specifications identified in the Exhibits.

NOTE: Crane Barge and component equipment to be supplied shall include all safety systems available from the Contractor and manufacturers.

ALL CAPACITIES, WEIGHTS, MEASUREMENTS, AND RATINGS ARE APPROXIMATES UNLESS OTHERWISE STATED AS A "SHALL".

1 Crane Barge

1.1 General Description

_____ Kind of barge: Crane and Deck barge for construction activities primarily within the confines of San Francisco Bay.
_____ Type of barge: Flush deck barge with pedestal-mounted rotating crane, raked bow, with spud piles.
_____ Cargo Decks: Main Deck.
_____ Classification: None, but see below
_____ Flag: None

1.2 Principal Particulars

_____ Length, overall	abt.	150.0 ft
_____ Breadth, hull, molded		55.0 ft
_____ Depth, molded to Main Deck		8.0 ft
_____ Draft, summer load line, molded	abt.	5 ft - 1 in

1.3 Classification, Rules, and Regulations

_____The barge to be designed and built-in accordance with the following Rules and Regulations:
_____ Steel Barge Rules of the Classification Society ABS
_____ IACS Rec 47, Shipbuilding and Repair Quality Standard - Rev.8 Oct 2017
_____ Rules and Regulations of the United States Coast Guard
_____ ILLC 1966 with the Protocol of 1988 and amendments
_____ 2008 Intact Stability Code
_____ It is not the intent of the owner to have the barge classed. The planned life of the barge is approximately 40 years and the design and coatings systems are to be robust to reflect this.

1.4 Plans and Drawings

Drawing No.	Title
_____ 2018-060-01-01	General Arrangement
_____ 2018-060-01-02	Hull Scantling Plan
_____ 2018-060-01-03	Spud Piles

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_____ 2018-060-01-04 Outfitting
_____ 2018-060-01-05 Mechanical Arrangement
_____ 2018-060-01-06 Electrical One Line

2 Hull Part

2.1 Hull General

_____ Barge shall be designed for ocean passage for delivery from the builder and possible future relocation. Barge is rectangular in shape with square stern and partially raked bow. All hull surfaces are flat and deck has no camber. A tubular crane pedestal shall be integrated into the hull structure at a distance equal to one-half the beam from the stern on centerline. This pedestal will support a fully rotating pedestal crane for construction works.

2.2 LOADING CAPACITIES

2.2.1 Lightweight & Deadweight

_____ Deadweight Summer load line (molded) abt. 965 T
_____ Lightship Weight abt. 350 T
_____ All tons as used in this specification shall be short tons of 2,000 lbs.

2.2.2 Crane Lifting Capacity

_____ The deadweight and stability shall be sufficient to support a hydraulic pedestal crane such as a Techcrane Model L200-150 that can be used to lift 135 ft long concrete or steel piles up to 48 inches in diameter and weighing 76 kips plus rigging from its minimum operating radius through to its operating radius of 60 ft. Expected crane capacities are to be as follows:
_____ Crane capacity at closest reach (~25 ft) abt. 180 kips (including rigging)
_____ Crane capacity at 60 ft abt. 100 kips (including rigging)
_____ Crane capacity at 100 ft abt. 65 kips (including rigging)

2.2.3 Tank Capacity (100% Full)

_____ The barge hull as designed is subdivided into a total of 14 individual compartments by two longitudinal watertight bulkheads, and five transverse watertight bulkheads, with two partial bulkheads subdividing the forward center compartment into three tanks. The arrangement results in six compartments on each side that as an option can function as ballast tanks, five center voids, and three smaller compartments in the center forward as shown on the General Arrangement. Two of the side compartments should be filled with freshwater ballast for normal operations, one each side, and in addition, the small centerline compartment forward is also designated for freshwater ballast. The wing tanks will have a minimum width of 13'-9" so that the watertight longitudinal bulkhead is inboard of B/5 for damage stability reasons. The contractor shall verify the tank arrangement provides adequate stability performance that complies with the requirements of this

specification. An alternate compartment arrangement that allows the stability requirements to be met may be acceptable.

_____ The barge shall survive any two adjacent side or end compartments flooded without submerging the deck edge. An alternative subdivision arrangement may be allowed if it can be shown that the barge can survive the two-compartment flooded requirement.

_____ Ballast and void tanks shall have hatches with watertight bolted cover plates of a size that will allow filling, venting and personnel access for inspection.

_____ Ballast water tanks (total - three) abt. 8,650 ft3

2.2.4 Area Deck Loading

_____ Strength of the main deck shall be suitable for uniform loading of 1200 lbs/ft2 over an area tributary to one transverse frame (approximately a footprint area 9-ft x 14 ft) but totaling less than 75 short tons in one such area.

2.3 Hull Structure

2.3.1 Hull Material

_____ In general, all structure should be made from mild steel (e.g. ABS Grade A, yield strength 34 ksi, or ASTM A-36, yield strength 36 ksi) except where described otherwise. Scantlings shall be as shown on the drawings. Local structure, where required but not shown on the drawings, shall be developed by the Builder. Any deviations or additions of structure from the drawings, such as addition or modification of foundations to bear mooring loads or to support equipment, shall be submitted to Owner for review and approval.

_____ Permissible loads and scantlings shall be in accordance with the rules of the Classification Society but with extra corrosion margin in the side shell (approximately 3/16 inch) and bulkheads and bottom plating (approximately 1/16 inch).

2.3.2 Structural Arrangement

_____ The hull shall be a combination of longitudinal and transverse framing and of all-welded construction. The basic structural design shall provide for full continuity of longitudinal structural members.

_____ All welding in tanks (except in dry voids and cofferdams), on outside exposed surfaces, in bilges and in all other wet spaces shall be continuous. Decks, bulkheads, shell, etc., shall have surfaces reasonably fair, without buckles, kinks, or other surface irregularities.

_____ Smooth welded steel extra heavy pipe molding or half round bars shall be fitted in way of and for a generous distance each side of mooring fittings.

_____ The transverse and longitudinal bulkheads and trusses are to be arranged as shown on the General Arrangement Plan.

_____ Pillars and stanchions shall be provided as shown on the scantling plans and where required to support local loads.

2.3.3 Crane Pedestal

_____ The pedestal that supports the crane will be provided in two parts. The lower part will be built into the barge hull by the Fabricator. The upper part will be provided by the crane manufacturer and will include the mounting flange for the crane slew bearing. The two will be joined during construction by a circumferential butt weld.

_____ The lower part of the pedestal shall be fabricated of steel plate rolled to the required diameter shown on the design drawings. This tubular member is supported by the transverse bulkhead at Frame 4 (27'-6" from stern) and by the centerline bulkhead between the stern and Frame 5. Large steel plate brackets shall support the pedestal at the deck. Internal brackets shall be installed as well, to provide additional support to the pedestal at the main deck.

_____ The upper edge of the barge-portion of the rolled plate for the pedestal shall be square and parallel to baseline in preparation for a circumferential butt-weld to accept the crane-supplier portion of the pedestal. The upper part of the pedestal will come from the crane manufacturer pre-beveled and ready for welding.

2.3.4 Spud Pile Trunks

_____ Two vertical watertight steel trunks penetrating the deck and running down through the bottom shell shall be provided to allow passage of the spud pile through the hull. These trunks are to be fabricated of steel in accordance with the Hull Scantling Plan. Similar to the spud piles, particular care shall be given to dimensional accuracy of the trunks during fabrication.

_____ Prior to delivery, the spud piles shall be run through both trunks to verify that the tolerances for the design clearance have been met.

2.4 Hull Materials

_____ The hull shall be fabricated of mild strength steel of ABS Grade A or ASTM A-36, fully welded, except where shown differently on drawings. In such cases, material shall be as noted on drawing. All welding consumables shall be in accordance with ABS requirements and applicable yard welding procedures.

_____ The crane pedestal tubular and the internal bracketing shall be ABS Grade A or A-36 steel. However, the pedestal brackets between the deck and the outside of the pedestal shall be of ABS Grade AH36 (ASTM A131 Grade AH36).

_____ All steel shall be new and from mills approved by ABS. All steel shall be furnished with mill test records.

2.5 Welding and workmanship

_____ The barge shall be of all-welded steel construction built in accordance with the ABS Rules for Steel Barges, although the barge will not be classed. ABS requirements for welding and materials shall be followed, and high-quality welding and workmanship is expected. The IACS Recommendation 47, Shipbuilding and Repair Quality Standard - Rev.8 Oct 2017 shall be the basis for acceptable quality of construction.

_____ Welders shall be qualified in accordance with ABS requirements or those of AWS D1.1 and shall work under experienced supervision. Welder's certification shall be maintained on file and available for inspection by Owner's representative upon request.

_____ Welding procedures to be ABS approved or qualified in accordance with the requirements of AWS D1.1. Procedures to be maintained on file at the yard, available for inspection by Owner's representative upon request.

_____ All fillet welds to be double continuous and wrapped at the ends except stiffeners in dry voids may be intermittent fillet welds. All faying surfaces shall be seal welded. Minimum fillet weld size shall be 3/16".

_____ During welding, slag shall be removed routinely by chipping hammer or grinding. Finished welds shall be visually inspected with deficiencies remedied or repaired and any rough edges ground smoothed.

_____ All exposed surfaces and cut edges of steel shall be ground smooth and rounded to avoid sharp edges for paint adhesion.

_____ Proper weld sequencing shall be developed and followed to avoid significant thermal distortion during welding particularly with regard to stiffened plate panels.

_____ All seams in the outer shell of the hull shall be full penetration welds subject to ultrasonic testing to verify quality. Similarly, butt welds in all longitudinal members and elsewhere as shown on the drawings shall be full penetration welds, also subject to ultrasonic testing. Welds joining parts of the crane pedestal tubular shall be full penetration, subject to ultrasonic testing.

_____ All parts of the structure shall be inspected and shall exhibit good shipbuilding practice. Parts shall be in alignment and the workmanship shall be neat and of good appearance. Welding shall be complete and inspected with non-destructive testing in accordance with the requirements of the ABS rules.

2.6 Air Tests of completed compartments

_____ The watertight compartments shall be air tested to check for leaks and to check all butt seams in the outer shell and the bulkheads, deck and bottom plate to shell and bulkhead fillet welds prior to painting. Careful attention shall be focused as well on testing the bolted manway hatches.

3 Hull Outfitting

_____ Reference drawing 2018-060-01-04 Outfitting for details for some of the following.

3.1.1 Hull Marks

_____ Hull marks shall be outlined by intermittent weld beads and to be painted white. Details of vessel's name and home port to be supplied by the Owner. Markings to be provided at bulkhead locations and tank corners as required to permit under-water survey. Draft marks to be at the bow port and starboard and at the stern, port and starboard.

3.1.2 Bottom Plug

_____ Each tank and void which is connected to the vessel's bottom to be fitted with one (1) threaded bottom plug approximately 1-½-inches in diameter at the outside of the bottom plate. The bottom plug to be of stainless steel (SUS316).

3.1.3 Corrosion Protection

_____ Corrosion protection shall be by high quality coatings of all steel inside the barge and out along with sacrificial anodes on the immersed shell. Coatings are specified in Section 5 of this specification.

_____ A total of 110 zinc anodes, to ASTM B418 Type 1, should be distributed over the bottom, sides, and ends of the immersed hull. Of these approximately 96 shall be distributed across the bottom in an array of 6 wide by 16 long, five anodes near the corner of the bilge along each side, and 2 along each end. Anode weight shall be 22 lb (10kg) each. Contractor shall perform independent cathodic protection design to verify the anode quantities presented.

_____ Anodes shall not be located adjacent to bulkheads to provide area for docking blocks during construction and subsequent drydocking.

_____ The anodes on the underwater portion of the hull shall be attached by welded studs and nuts, to allow replacement by a diver with the barge in the water.

3.1.4 Mooring Fittings

_____ Mooring chocks, fairleads, kevels and bitts should be provided in accordance with the General Arrangement. Only closed chocks shall be provided. All fittings shall have a safe working load of at least 50 kips. The safe working load shall be marked in weld bead on the top surface of the fitting.

_____ For the spread mooring, balanced sheave swiveling fairleads should be provided at each corner of the barge (See Section 8 for more discussion and specification for these).

_____ Reinforcing foundations shall be installed during the construction sequence to provide adequate strength to the deck to support the mooring fittings. The foundation structure shown on the drawings may require adjustment to accommodate the dimensions of fittings actually procured. Contractor shall be responsible for the design modifications, which shall be submitted to the Owner for approval.

3.1.5 Recessed Hull Ladder

_____ Four (4) boarding ladders shall be provided, two forward, port and starboard, and two aft, port and starboard, each comprised of rungs in cylindrical recesses in the side shell plating. Each ladder shall extend from above the bottom plating up to the main deck. The recesses shall be 8-inch schedule 80 pipe with type 316L stainless steel ¾-inch square bars.

3.1.6 Compartment Access

_____ Two flush manholes with steel covers shall be provided for each compartment as shown on the drawings, with one vertical ladder inside at each manhole. Openings shall be 24" x 18" and covers shall be flush-type bolted steel cover with gasket.

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3.1.7 Towing Fittings

_____ Two towing padeyes and corresponding chocks shall be installed at the bow, port and starboard, for connection of a towing bridle. The towing bridle shall be provided by yard and should be 3 lengths of 45 ft each of 1-inch Grade 3 studless chain of 119,500 lb. minimum breaking strength to withstand the pull from towing the barge at 6 knots. Five 1-inch bolt type anchor shackles should be provided for connecting the bridle to the barge and together. Arrangement and installation of the towing fittings shall be designed by the Contractor and submitted for approval to the owner.

_____ A chock and bitts shall be installed at the bow on centerline. This may be used for short distance tows, for instance between sites around San Francisco Bay.

_____ Foundation structure shall be installed under deck to support the towing fittings.

3.1.8 Deckhouse

_____ A steel deckhouse approximately 16 ft long by 8 ft in width at the base of the crane pedestal shall be fabricated of stiffened ¼ inch plate. The house will enclose the fuel tank on the aft side and provide additional secure storage on the forward side. The purpose of the house is to keep unauthorized people out of the fuel tank area and the storage area when the barge is untended. Contractor shall confirm that the plan area of the deckhouse as shown on the General Arrangement is sufficient to enclose the fuel tank to be purchased.

_____ The house should not be welded to the crane pedestal – rather there should be a rain-guard arrangement to prevent the entry of water into the house but avoid having the house rigidly attached to the crane pedestal. Rain guard should be fabricated in two halves, bolted together and sealed against the pedestal with rubber gasket material.

_____ At the aft side of the house, there shall be doors that can be opened to access the fuel tank and to remove it should that be required. The doors shall be provided with a securing mechanism per the Owner's design.

_____ At the sides, approximately 1 ft aft of the forward side of the house, 6-dog weathertight doors shall be installed, one port and one starboard. These shall be provided with a securing mechanism per the Owner's design as described in an addendum to be forwarded.

_____ Detailed design of the deckhouse shall be developed by Contractor and the design shall be submitted to the Owner for review and approval.

3.1.9 Crane Boom Rest

_____ A crane boom rest shall be fabricated of steel tubulars and shapes as shown on the drawings. The top of the boom rest structure comprises a horizontal section of wide-flange beam with guides each side of steel plate, and the inside of this should be lined with 4-inch thick oak boards or suitable alternative to provide cushioning and an even bearing surface for the crane boom. Note that the boom rest design must be adjusted depending on the model crane procured. Design changes to the boom rest to accommodate the actual boom shall be submitted to the Owner for approval.

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_____ The port and starboard sides of the boom rest structure shall be outfitted with a ladder to provide access to the side running lights, as described in Section 3.1.12 below entitled Navigation Light Stands.

3.1.10 Crane Access

_____ A short platform with an inclined ladder and handrails should be designed, fabricated, and installed to provide access to the crane from the main deck to starboard of the pedestal. The platform shall be of 1-inch thick and 1 ½ square mesh fiberglass grating of UV resistant composition with handrail(s) supported by steel angle or channel. The platform design including inclined ladder shall accommodate the actual crane purchased, and the design shall be submitted to the Owner for review and approval.

3.1.11 Containers and Container Securing Deck Sockets

_____ Three new standard 20 ft ISO containers shall be procured and installed on the deck to function as workshops and to provide secure onboard storage. These shall be secured to the deck with standard deck sockets and twist locks. The deck sockets shall be carefully laid out as shown on drawings to align with container corner castings. Chocks and brackets under deck of the deck sockets shall be installed to support the containers, as shown on the outfitting drawing. The doors shall be provided with a securing mechanism per the Owner's design as described in an addendum to be forwarded.

3.1.12 Navigation Light Stands

_____ Navigation lights stands (for the red and green side lights) shall be mounted to the crane boom rest. The navigation lights described in the electrical section shall be mounted per their manufacturer's instructions. The navigation lights shall be accessible by the ladder built into the legs of the boom rest, as described above under Boom Rest.

3.1.13 Timber Decking

_____ Over areas outlined on the General Arrangement and Outfitting drawings, 3x12 pressure treated timber decking shall be installed. Structural tees or angles should be welded to the deck as shown, and fully painted before fitting the timbers for decking. The inboard-most and outboard-most boards of each row of timbers shall be secured by stainless steel screws through holes in the securing tees or angles. If the contractor desires to propose an alternate means to secure the timber decking, that means shall be clearly specified and submitted with the contractor's response.

3.1.14 Hydraulic Piping Protection

_____ Hydraulic piping for powering the winches to be run on deck and shall be protected by raised fiberglass grating supported on a framework on the main deck. Fiberglass grating shall be secured to the steel framing in accordance with manufacturer's specification, including stainless steel hardware.

_____ Fiberglass grating shall be 1" deep by 1 ½" square mesh of UV resistant composition. Walking surface on grating shall be non-skid.

_____ The electrical conduit leading aft shall be run in the same protective framework as shown on the outfitting drawing.

3.1.15 Fenders

_____ Tire fenders or suitable alternative (as specified and presented in the response) shall be provided on the port and starboard side to protect the hull against material barges alongside or the pier. Tire fenders approximately 24 inches in width and 3 ft in diameter shall be spaced to align with the web frames, approximately every 9 ft. Padeyes shall be designed by the Fabricator, with design submitted to Owner for approval prior to installation.

4 Spud Piles and Rigging

4.1 Spud Pile Structure

_____ Please reference drawing 2018-060-01-03, "Spud Piles" for the description and details to follow.

_____ Two steel fabricated Spud Piles for stabilizing/holding the barge on location shall be fabricated. Each pile shall be fitted with a large-diameter sheave located near its tip for lifting and lowering. Particular attention to dimensional accuracy and squareness to be given to the spud piles during fabrication.

_____ The piles shall be fabricated of 24-inch by ¾" wall pipe rolled from steel plate with sections full-penetration welded together. Four steel equal-leg angles shall be welded longitudinally along their toes to each pipe to form a pile section that is 24-inches square. The angles are L8 x 8 x ¾ sections. All of this steel shall be ASTM A572 Gr 50 (50 ksi minimum yield strength) or similar.

_____ Each spud pile shall have a heavy-duty fabricated steel plate tip at its lower end, as shown on the drawing. The upper end of the piles shall have a heavy end plate complete with a lifting eye with capacity to withstand a pull of 100 kips.

_____ A 55-ton working-load limit (2 ½ inch nominal size) bolt-type galvanized shackle shall be provided for each spud pile. Further two synthetic (HDPE) or wire rope lifting slings, 10 ft in length and also 55-ton safe working load, shall be provided, one for each spud pile, for the purpose of lifting the spud pile with the crane, should the spuds become stuck in the mud or if the spud pile shall be lifted from barge for repair or maintenance. Each shall have eyes at each end through which the shackle may be passed.

4.2 Securing Pins

_____ Each spud pile shall have a locking pin fabricated of AISI 1018 steel round bar or similar, 3 ½ inches in diameter by 2 ft- 10 in in length, with yield strength approximately 50 ksi. The pins shall be tapered at one end and have a welded restraint at the other. A drilled hole shall be made at the tapered end to accept a ½" dia. bolt to lock the securing pin in place. When the pile is raised, the pin shall support the entire length of the pile (in air) plus an amount of entrained mud and water.

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_____ The pins shall engage the spud pile at one of three locations. These three locking pin holes shall be of 4-inch dia. Sch 80 pipe welded into the pile body. The entrance to these shall be ground smooth to aid easy entrance of the pin.

_____ A fabricated holder shall be installed at each spud pile trunk to hold the securing pin prior to engagement with the spud pile. This support shall hold the pin at the elevation above the deck to guide it into the securing hole in the spud pile at the top of the spud pile well. The support shall be fabricated of mild steel and coated.

4.3 Pile Turning Sheave

_____ The spud piles shall each be outfitted with a turning sheave for the lowering and lifting wire rope. The sheave shall be provided in a purpose-built structural steel box complete with bushing and pin and guide rollers. The sheave and all components including pin, supporting box, and bearings, shall withstand the breaking strength of 1 1/8-inch diameter IWRC EIPS wire rope with breaking strength of 130,000 lbs wrapped 180 deg around the sheave.

_____ The sheave shall be grooved for 1 1/8-inch diameter wire rope.

_____ The sheave and its steel structural box shall be of a design and construction that it can be immersed in salt water and Bay mud without detrimental effects on its performance.

_____ The sheave pin will be fitted with lubrication port and grease-tubes to enable the sheave pin to be lubricated remotely from the edge of the pile. The entire sheave unit shall be welded into the body of the spud pile during construction.

4.4 Spud Pile Rigging

_____ Each spud pile is lowered or raised using a winch on deck, from which the lowering wire then runs to a turndown sheave mounted on deck at the edge of the trunk, then down inside the trunk around the pile's turning sheave and then back up to the main deck through the trunk and terminating at a securing eye on the trunk.

_____ The lowering wire shall be 1 1/8-inch diameter EIPS IWRC wire rope (minimum breaking strength = 130,000 lbs). Approximately 500 ft of wire shall be provided on each winch.

_____ The wire end shall be fitted with a wedge socket termination, which is then connected to the termination eye at the trunk.

_____ Two vertical guide sheaves shall be installed by welding on the main deck to direct each spud pile lifting wire from the winch turning it down 90 deg into the spud pile well and then to the pile turning sheave. The units shall be designed for the breaking strength of 1-1/8-inch EIPS IWRC wire rope with minimum breaking strength of 130,000 lbs with 90 deg wrap on the sheave. The sheave grooves shall be hardened. Sheaves are to be mounted in a frame welded to the deck, and shall be fitted with grease-lubricated bushings or bearings that can be lubricated locally at the unit. The design shall allow for immersion in saltwater and Bay mud.

_____ The units shall be supplied with a 3-coat marine coating system applied, except that the area where the base of the units will be welded to the deck shall be masked with tape.

4.5 Spud Pile Winch Installation

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Two spud pile winches of 75,000 lb. pulling capacity shall be procured and installed. The specification for these winches is presented in Appendix 4.

The winches shall be mounted on a foundation as shown in the Outfitting drawing that orients the winches so that one pulls forward and one pulls aft. The winches are to be installed at a location that is midway between the spud piles near midships of the barge. One winch faces forward to the forward spud pile and the other faces aft toward the aft spud pile.

The spud pile winches shall be bolted to the foundation beams; note that the details shown may require modification based on the actual winch vendor design. Contractor shall develop the modified design and submit to the owner for approval.

The control panel provided by the winch manufacturer or vendor shall be installed inboard of but near enough winches to see the raising and lowering of the spud piles. The control panel shall be mounted on an elevated platform approximately 4'-0" above the deck to put the operator above the area of potential back lash should the lift wire break. This elevated platform shall incorporate a protective structure of 3-inch steel pipe fashioned into a protective cage. The elevated platform shall be accessed by a ladder, decking of 1" thick by 1-1/2" square mesh fiberglass grating, and have handrails around its perimeter. The Contractor shall design the platform and submit design to owner for review and approval.

5 Coatings

Fabricator shall prepare and coat all surfaces of barge when fabrication and all welding are complete. Color of barge to be black topsides from 3'-0" waterline up, red anti-fouling below 3'-0" waterline and bottom, and grey deck.

5.1 Preparation

The steel surfaces shall be cleaned of all grease or other foreign substances and prepared for coating as described. All sharp edges shall be rounded by grinding to sufficient radius for coating thickness. All welds shall be ground smooth and any arc strikes, temporary welds, or other damage shall be removed by grinding also. All steel surfaces to be coated to be cleaned and blasted to SSPC SP-10.

5.2 Coatings

The coatings listed below shall be procured and applied by Fabricator in accordance with paint manufacturer's recommendations. The coatings shown are manufactured by International Paint.

Area	Coating Description	Example Product	Color	DFT
Deck – nonskid	Two component epoxy coating containing a heavy-	Hempadur 85671 Hempadur Spray Guard 35490	Light red Grey	3 mils 100 mils

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	duty antiskid aggregate			
Deck – remainder (some with timber decking above)	High solids epoxy Abrasion resistant epoxy Polyurethane	Intershield 300HS Intergard 5377 Interthane 990	Bronze Black Grey	5 mils 5 mils 2 mils
Deckhouse and interior and three 20' Containers	Abrasion resistant epoxy Modified epoxy finish	Intershield 300HS Interfine 5703	Bronze Port Blue[1] (ext'r) White (int'r)	4 mils 3 mils
Hull topsides above waterline plus stern and bow areas	High solids epoxy	Intershield 300HS Intergard 5377 Interthane 990	Bronze Black Black	5 mils 5 mils 2 mils
Hull Wetted area (to be outfitted with zinc sacrificial anodes)	High solids epoxy High solids epoxy Antifouling	Intershield 300HS Intershield 300HS Interspeed 640 AF	Bronze Aluminum Red	5 mils 5 mils 5 mils
Interior of Voids and Fresh water ballast tanks	High solids epoxy High solids epoxy	Intershield 300HS Intershield 300HS	Bronze Light Grey	5 mills 5 mils

_____ 1. Port Blue: per PPG 1/48 point scale 96 line colorant:
_____ a. Thalo Green 8 -1/2 ounces per 5 gallons (D)
_____ b. Thalo Blue 16 -3/4 ounces per 5 gallons (E)
_____ c. Raw Umber ¼ ounce per 5 gallons (L)
_____ d. Titanium White 9 ounces per 5 gallons (W)

6 Electrical

6.1 Introduction

_____ The barge shall be powered by either an on-board 100kW 480V/3PH/60Hz diesel generator or shore power. Shore power may be either 208/3/60 three wire, 240/3/60 three wire, or 480/3/60 three wire. Depending on the source, shore power shall be converted to barge power 480/3/60 via transformers. The shore power transformer circuit breakers shall be mechanically interlocked so only one circuit may be energized at a time. Shore power shall be connected to barge circuit breakers with a portable cable whose length and size shall be determined later.

_____ The diesel generator and shore power circuits connect to an automatic transfer switch which will connect whichever source is available. If both circuits (generator and shore power) are available, the generator circuit will be connected. The automatic transfer switch shall be housed in a 316 stainless steel enclosure with its controls suitable for the environment.

_____ An additional circuit breaker shall be provided for an alternate diesel generator in case of a failure. This circuit breaker shall be mechanically interlocked with the diesel generator circuit breaker so both cannot be on at the same time.

_____ A 480/3/60 power distribution panel shall connect the power source (DG or shore power) to the air compressor, each Conex box, the deckhouse aft at the crane pedestal, and floodlights. Ground fault indicating lights and test pushbutton shall be provided.

_____ The air compressor shall be powered by 480/3/60 and shall have a dedicated circuit from the power distribution panel.

_____ 480/3/60 power shall be connected to each of the three Conex boxes and to the deckhouse aft. The interior of each box or the deckhouse shall have a 480/3/60 power panel, a 480/120v three phase transformer, and a 120/3/60 power panel. Lights, duplex GFI outlets, and switches shall be connected to the 120v panel. GFI circuits shall be provided by GFI circuit breakers in the panel. Loads on the 480v panel shall be determined later. Ground fault indicating lights and test pushbutton shall be provided for the 120v panels. Placement of panels and transformer inside containers and inside deckhouse shall be approved by Owner prior to installation.

_____ Three floodlight circuits shall be provided, each with a floodlighting contactor in 316 stainless steel enclosures, and a common floodlighting control switch near the boarding location. Additional walkway lighting is not required. Switches for the forward floodlights shall be located inside one of the three containers. Similarly, switching for aft floodlights shall be located inside the aft deckhouse, location to be approved by Owner for both installations.

_____ Floodlighting power distribution shall utilize GUA cast junction boxes with threaded hubs.

_____ All cable penetrations into enclosures shall be from below (except for the Conex boxes and the aft deckhouse which may be through the side) and shall utilize threaded bubs and metallic cable glands for watertight integrity.

_____ All cables shall have aluminum or bronze armor and shall be routed on cableways made with stainless steel cable ladders at least 12 inches above the deck and 12 inch rung spacing. Horizontal cableways along the main deck shall be covered with removable bolted sections

_____ Solar-charged battery-powered running lights meeting Coast Guard requirements shall be installed.

6.2 Generator

_____ A 100-Kw diesel generator shall be procured, installed onboard, connected to electrical system, and tested. The diesel generator shall be self-contained with integral fuel tank, radiator, starting battery and alternator. See Appendix 1 for Purchase Specification for generator.

6.3 General

_____ All recommended practices of ABS, USCG, and IEEE-45-2002 Recommended Practice for Electric Installations on Shipboard are deemed requirements of this Specification. All work shall conform to the latest U.S. Coast Guard, ABS Rules, and the Supplement.

Electrical installations and/or modifications called out in the Specification shall be made in accordance with the requirements set forth therein.

_____ All required equipment not listed as Owner furnished shall be Contractor furnished and installed.

_____ The Contractor shall provide vendor data of all Contractor-furnished equipment in the Data Book described in Section 10, Barge Documentation.

6.4 Cable & Cable Installation

_____ Cables shall be installed in Cableways in compliance with ABS, USCG, and other applicable Regulatory Body Requirements.

_____ Electrical cables shall meet ABS requirements, including flammability and bunched flammability criteria. Power cables shall have a 90°C operating temperature. All cables shall be properly selected for their intended purpose. Cables shall be run as directly as practicable, consistent with adequate ventilation of the cable wire ways, and with due care in the avoidance of hazardous or otherwise undesirable locations.

_____ Cables for controlling or monitoring analog or thermocouple signals shall be shielded. Shielding shall be connected to hull potential (PE) only at the one end.

_____ Cables, insofar as practicable, shall not be installed in locations exposed to weather. Cables for weather deck mounted fixtures and equipment shall be installed on the inside surface of house structures supporting such fixtures and equipment.

_____ Cables in crew areas shall be concealed wherever practical. Cabling shall be neatly formed and installed in a workmanlike manner, giving particular attention to appearance.

_____ All cables shall be continuous between outlet boxes, connection boxes, switchboards, panel boards, etc. They shall enter the box and shall be secured by a clamp or connector to assure a good electrical connection between the cable armor, where fitted, and the box and wiring device, or the cable armor may be electrically connected to the enclosure by means of a suitable clamp or strap.

_____ Cable entry into electrical equipment in exposed areas shall generally be from below unless otherwise noted. At specific locations, where cable entry from below is impractical, cable entry from another direction shall be the subject of approval by the Owner.

_____ The cross-sectional areas for power cables shall be dimensioned according to the load table of the classification society, assuming an ambient temperature of 40° C, and an ambient temperature of 50° C in engine spaces.

_____ The minimum cross-sectional area for single and multi-core cables and lines shall be:

_____ 1.5 mm2 or larger – power & lighting

_____ 1.0 mm2 or larger – control and monitoring

_____ 0.75 mm2 or larger–thermocouples, or shielded instrumentation

_____ Combining alternating current (AC) and low voltage DC control and monitoring signals within the same multi-core cable is prohibited as is combining control and power cabling in the wireway.

_____ Cables may be connected in parallel, when the individual conductor cross sectional area is greater than 50 mm2.

_____ Control and monitoring cables to sensors, remote distribution panels, or to main processors, shall be segregated from power and lighting cables by at least 50 mm, or as otherwise approved by the Owner.

_____ Cable splicing shall not be allowed unless specified for a particular piece of equipment. Where required, the splice shall meet the ABS requirements in 4-8-3/9.19 and 4-8-4/21.23. The splice shall stagger the connections of each conductor. The splice kit shall provide for a watertight connection that incorporates crimped conductor connections, epoxy resin, and heat shrink jackets. Taping is not an acceptable alternative.

_____ Where cables pass through areas where they may be damaged, they shall be protected by stainless steel pipe or other Owner-approved conduit. Cables running along the deck shall be run-in stainless-steel conduit along the hydraulic pipe-way.

_____ Connection of ships cables shall use crimp lugs, bolts, nuts, and lock-washers. Any sharp edges on these connections shall be filled with electrical insulation putty (such as ScotchfilTM Electrical Insulation Putty) and then taped using Scotch 33 tape or better, or equivalent.

_____ Connection of ship's cables to equipment with incoming circuit breakers shall be connected to the line side of the circuit breakers.

_____ Connection of ship's cables to 110- or 220-volt lighting fixtures or low voltage monitoring sensors, may be lugged or may employ "scotch-lock" type twist-on type connectors.

_____ Any damage to the cable outer jacket that occurs during cable installation shall be repaired by using a repair kit specifically designed for such purpose. Taping the cable jacket will not be acceptable. Where installation damage affects the conductor or conductor insulation, the entire cable shall be replaced.

_____ Connection of ship's cables by twisting together and taping is strictly prohibited. Removing strands from wire to fit a smaller lug is also prohibited.

_____ Where cables are oversized to suit voltage drop conditions and cannot easily be connected to light fixtures or convenience outlets, a jumper wire of smaller size can be used to connect the fixture or outlet to the larger cables to the fixture. The jumper must be lugged on both ends and made with a bolted splice inside of the fixture or outlet enclosure. The jumper wire must be sized to be adequately protected by the circuit breaker feeding the oversized cable.

_____ A single layer of cables shall rest on one hanger except that a second layer of smaller cables may be installed to fill in between larger cables to facilitate strapping of cables. If an additional layer of cables is required, it shall be supported on a second hanger bracketed at sufficient distance from the first to permit painting and inspection.

6.5 Cableway & Penetrations

_____ Where cables pass through watertight/gastight decks and bulkheads, the penetrations shall be through multi-cable transit devices, RISE system, or threaded stuffing tubes. RISE and stuffing tube arrangements shall have the pipe extend at least 100 mm (4") above and 50 mm (2") below deck or insulation, and may need to be extended to accommodate A-60 or other fire boundary requirements. Where multi-cable transit

devices or RISE systems are utilized, at least 20% spare space shall be provided for the future installation of cables.

_____ Where cables pass through non-watertight non-gastight bulkheads, decks, or platforms, the openings shall be fitted with collars which extend at least 100 mm (4") above/below platforms and decks, and at least 50 mm (2") from the surface of each side of bulkheads. If cables are to lay against the collar, a rubber or other softener shall be placed between the cables and the collar to prevent chafing.

_____ Where cables penetrate weather decks with kickpipes, stainless steel kick pipes and stuffing tubes shall be installed that extend at least 250 mm (10") above the deck.

_____ Where single core cables penetrate equipment enclosures, bulkheads, or decks, cables for phases A/B/C must be routed through the same penetration. If this is not possible, single core cables must pass through non-magnetic materials.

_____ All electrical cable to deck mounted motors and controls exposed on deck shall be adequately guarded the full run from deck to terminal box with pipe or other substantial protection.

_____ Cable supports shall be spaced not more than 300 mm (12") on horizontal and 500 mm (20") on vertical runs

_____ Steel hanger or flat bar not less than 5 mm (1/4") thick with corrosion resistant finish shall be used for all cable hanger material. Painting shall be acceptable as a corrosion resistant material for interior locations. Stainless steel shall be used for weather deck and other wet locations. Bolts, nuts, and washers are to be cadmium plated for interior use and are to be stainless steel or bronze for exterior use.

_____ Attachments to watertight bulkheads or decks by means of rivets or bolts penetrating the bulkhead or deck is not permitted. Studs or steel framing welded to the bulkhead or deck shall be used for mounting supports. Mounting of equipment on shell plating is prohibited.

_____ Horizontal cableways on deck shall be protected over their entire length by a removable steel cover at least 5mm thick to protect against damage.

_____ Local runs of cable between cableways and devices may be supported by weld stud hangers or minimum 25mm flat bar, with maximum spacing of 500 mm (20") between supports.

_____ Cables shall be strapped, with stainless steel band straps at least 12 mm (1/2") wide to every fourth hanger on horizontal runs and every hanger on vertical or bulkhead runs. Where cables are supported by the strapping, they shall be strapped on every hanger.

_____ Cableways in cargo spaces or where stores and spare parts are handled shall be suitably protected where mechanical injury might occur. Cableways in cargo spaces shall not interfere with the existing clear height.

6.6 Identification

_____ All electrical equipment shall be fitted with identification plaques that identify the equipment and the circuit from which it is powered. The plaques shall be lamicoid type, black phenolic plastic with white engraved lettering.

_____ All new cables shall be fitted with cable identification tags, which indicate the circuit number of each cable, at each cable end, and at each junction or terminal box. Tags shall be stamped aluminum and shall not be painted.

7 Mechanical

_____ Mechanical systems on this barge include diesel-powered electrical generator, compressed air system, hydraulic power system, and diesel fuel storage system. Contractor shall procure, install, test and commission each piece of equipment described herein. The generator is further discussed in the Electrical section.

7.1 Compressed Air

7.1.1 Air Compressor

_____ A 185 CFM electric air compressor for driving air tools shall be procured, installed, connected to electrical system, and commissioned and tested. See Appendix 2 for Purchase Specification for air compressor.

_____ The air compressor shall be installed on a structural foundation designed by Contractor for the particular equipment procured. It should be located forward of the three Conex boxes on deck as shown on the General Arrangement and the Outfitting drawings. Design of the foundation shall be submitted to the Owner for review and approval.

_____ An air receiver of specified capacity shall be installed on its foundation as required. Contractor shall design and build appropriate foundations for the equipment procured; design of foundation shall be submitted to owner for review and approval.

7.1.2 Piping

_____ Piping for compressed air shall comprise stainless steel schedule 40, type 316 piping and fittings.

7.2 Hydraulic Power

7.2.1 HPU

_____ A diesel-powered hydraulic power unit for powering the hydraulic spud and mooring winches and the tuggers shall be procured, installed, connected to hydraulic system, and commissioned and tested. The HPU shall output 145 GPM at 3000 psi or alternatively as required to power the winches supplied. See Appendix 3 for Purchase Specification.

_____ HPU shall be installed on a structural foundation designed by the Contractor for the particular equipment procured. Foundation design to be reviewed and approved by Owner. It shall be located forward of the three Conex boxes on deck as shown on the General Arrangement and the Outfitting drawings.

7.2.2 Hydraulic Piping

_____ All hydraulic power supply piping above ½" diameter for supply shall be Schedule 80 ASTM A312 type 316L. All piping fittings shall be socket welded type with minimum

working pressure of 3000 psi. Welding of pipe and fittings to be in accordance with ABS Rules for Materials and Welding, latest edition. Pipe to be made up with a minimum of welded connections.

_____ The low pressure return piping shall be Schedule 40 ASTM A312 type 316L. Fittings for return piping shall be socket welded stainless-steel type 316L Class 3000 lb.

_____ Supply and return lines may be prepared in spools joined by stainless steel (type 316) SAE flanges with buna-n rubber O-ring seals. For supply piping, Code 62 flanges shall be used. For return piping, Code 61 flanges shall be used.

_____ After completion of all welding, pipe spools shall be cleaned, pickled and passivated using a procedure suitable for the pipe and flanges procured, in accordance with ASTM A380 "Standard Practice for Cleaning, Descaling, and Passivation of Stainless-Steel Parts, Equipment, and Systems". This will remove extraneous iron or other foreign materials and restore the passive coating and resistance to corrosion.

_____ Any stainless-steel tubing required shall be Type 316 with a minimum 2.5% Mo. Fittings shall be rated for the working pressure.

_____ Piping shall be mounted on the main deck as shown in the Mechanical Arrangement drawing and secured with Heavy Duty pipe clamps with elastomeric insets to secure high-pressure pipe. The bottom plate of the clamp is to be welded to the deck or to a doubler plate in accordance with Mechanical Plan or outfitting drawing prior to paining of the hull.

_____ After installation onboard, but before connection to HPU and winches, all pipe and tubing shall be pressure tested to 1.5 times its rated pressure and held for 5 minutes or as necessary to allow complete inspection of the pipe connections for leakage. The length of the pipe shall be inspected for leaks during this time.

_____ Once the pipe passes the pressure test, it shall be connected to pumps and hydraulic fluid shall be circulated and filtered with returns monitored until Cleanliness Level 3 per SAE 4059 (less than 10 microns) or to the level required by the HPU pumps or the winches (if less than Level 3) is achieved.

_____ The HPU shall be connected to the hydraulic piping with hoses rated for 3000 psi working pressure and for flammable fluid service required by ABS Rules MVR 4-6-7/3 Hydraulic Oil Systems. Similarly, the winch controls shall be connected to the piping and to the winches by similar hoses.

_____ After the pipes are installed, protective ramps or grating shall be fit over the pipes as shown on the Outfitting plan and secured in place.

7.3 Winches

_____ Six 75,000 lb. capacity and four 4000 lb. capacity hydraulic powered winches shall be procured and installed along with their controls.

_____ Two of the 75,000 lb. capacity winches are for lifting and lowering the Spud Piles and shall be of Rapid Reverse design to facilitate spud pile installation. See Appendix 4 for the procurement specification for these. These winches shall be installed on a structural foundation on the port side between the spud well trunks.

_____ Four of the 75,000 lb. capacity winches are for tensioning the spread mooring lines and shall be of Equal Speed design for easing line out or pulling line in at the same line speed.

See Appendix 5 for the procurement specification for these winches. These winches shall be installed on structural foundations on deck located at each of the four corners of the barge.

_____The four 4,000 lb. capacity winches (tuggers) are for use in moving the barge along an existing pier or wharf. See Appendix 6 for the procurement specifications for these winches. These winches shall be installed near the four corners of the barge on structural foundations as shown in the outfitting drawing.

_____ Installation of all winches shall be as shown on the General Arrangement and the Mechanical Plan.

_____ All power supply piping will be 3000 psi. Winches shall be supplied from vendors with all controls and pressure regulation required for proper winch operation.

_____ All winch controls shall be connected to the pressure and return piping with hoses as discussed above under Hydraulic Power.

7.4 Fuel Storage and Supply Pump

_____ Diesel fuel storage shall be provided in the form of a Trans CubeTM or similar double-walled portable tank providing containment of 110% of the tank capacity. The fuel capacity shall be 1,000 gal. See Appendix 7 for purchase specification for fuel storage tank.

_____ The tank shall be installed on the main deck within the deckhouse at the crane pedestal. The tank shall be accessible through the normally-locked aft doors. A dedicated foundation for the fuel tank shall be designed and installed to support the fuel tank, including angle clips or other securing devices to capture the corners of the tank and prevent it from sliding.

_____ The fuel pump to be provided as part of the storage tank shall be connected to 115-120V electrical power at a panel located within the deckhouse. After installation the fuel tank shall be commissioned and tested to verify proper installation.

8 Mooring

_____ Mooring equipment shall be installed on the barge for the purpose of securing the vessel to piers and to allow the barge to be moved along piers for repositioning. A four-line spread mooring system will also be installed at this time. The spread mooring system comprises four wire rope mooring lines led through the fairleads, connected to stockless anchors. These lines will be tensioned by hydraulic winches mounted on deck. Note that the winches shall be of the same manufacture as the spud pile winches

8.1 Fairleads

_____ Four balanced-head deck-mounted single sheave fairleads shall be procured and installed on the main deck at each of the four corners of the barge. The fairleads shall allow +/- 90 deg rotation of the swivel head. The units shall be designed for the breaking strength of 1-1/4-inch EIPS IWRC wire rope with minimum breaking strength of 159,800 lbs with 90 deg wrap on the sheave. The sheave grooves shall be hardened. The units

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shall be supplied with a 3-coat marine coating system applied, except that the area where the units will be welded to the deck shall be masked with tape.

_____ The units shall have sealed grease-lubricated tapered roller bearings in both the sheave and the swivel head.

_____ Proper foundations to withstand full mooring loads shall be provided for each of the fairleads. The foundation design may require modification by the Contractor to accommodate the fairleads purchased. Changes shall be submitted to the owner for review and acceptance.

8.2 Tugger Winches

_____ Four hydraulic tugger winches shall be installed and connected to the hydraulic system piping. These tuggers shall be locally controlled and have a rated capacity of 4000 lb. See Appendix 6 for purchase specification for Tugger Winches.

_____ The tugger winches shall be mounted on a foundation just above the main deck to provide clearance for mooring wires (if installed in the future). The foundation design may require modification by the Contractor to accommodate the fairleads purchased. Changes shall be submitted to the owner for review and approval.

8.3 Mooring Winches

_____ Four hydraulic tugger winches shall be installed and connected to the hydraulic system piping. These winches shall be locally controlled and have a rated capacity of 75,000 lb. See Appendix 5 for purchase specification for Spread Mooring Winches.

_____ The mooring winches shall be mounted on a foundation just above the main deck to provide clearance for mooring wires (if installed in the future). The foundation design may require modification by the Contractor to accommodate the fairleads purchased. Changes shall be submitted to the owner for review and approval.

8.4 Wire Rope Mooring Lines

_____ The mooring ropes shall be 1 1/8-inch diameter IWRC EIPS of 6x37 construction, minimum breaking strength of 130,000 lb, each 500 ft long. The wires shall be installed on the winches with their bitter end secured to the winch drum in accordance with the winch manufacturer's instructions. The anchor end of the mooring lines shall be terminated with a closed spelter socket.

8.5 Anchors

_____ Four 4,000 lb Danforth or LWT type anchors shall be provided complete with anchor shackle and padeye on the crown for a pendant line. The anchor shall be supplied with the appropriate anchor shackle, swivel, and joining shackle to connect to the wire rope swage socket. All components shall be connected to verify they fit together easily before shipping.

8.6 Pendant Lines and Buoys

_____ Four pendant wires, each 60 feet in length, of 6 x 37 IWRC EIPS 1-1/8" diameter wire rope shall be provided, each with eyes swaged each end. Bolt-type shackles with securing cotter pins to connect the pendant wires to the anchor crown padeyes on each anchor shall be provided. The buoys shall be of a pull-through design that can withstand the pull to break out the anchor with the pendant line (approximately 32,000 lb). Buoys shall have 1500 lb positive net buoyancy.

8.7 Appurtenances

_____ Contractor shall design and install four padeyes on deck each corner of the barge near the fairleads for securing the anchors and the pendant buoys when not in use. The padeyes and connections shall be arranged such and of sufficient strength to withstand sea fastening loads from the anchors and buoys during ocean transit of the barge.

_____ Arrangement and design of padeyes shall be reviewed by Owner's representative before construction.

9 Crane Procurement, Installation and Testing

_____ The crane to be installed on the barge shall be procured, transported, installed commissioned, and fully function tested. Purchase specifications for the crane are presented in a separate document.

_____ The Contractor shall procure the crane, provide supervision necessary during the manufacturing process, and then transport and receive the crane for installation at its yard. Contractor shall arrange for any support from the crane manufacturer necessary for the erection and installation process.

_____ For the crane, load charts shall be prepared that present the lifting limits at each radius including the crane structural limits, the lifting wire limits or the barge stability limits. All lift cases shall include wind speed of 40 knots. Intact stability shall satisfy the basic ABS deck barge criterion, the crane barge criteria, and the USCG crane barge criteria all for sheltered water operations.

_____ After the crane is installed onboard the barge, and fully rigged and commissioned, it shall be fully tested to ensure all functions operate as specified and in accordance with manufacturer's operating procedures prior to acceptance by the owner. Crane manufacturer shall certify that crane has been installed, commissioned and tested in accordance with their procedures and performs according to their specifications after installation. As part of the testing and commissioning procedures, Contractor shall have the crane inspected and tested by a certified agent to ensure compliance with State of California Department of Industrial Relations and OSHA requirements.

10 Barge Documentation

_____ A full set of as-built documentation shall be assembled and submitted to the owner upon delivery of the barge. This documentation shall include the full set of records for the hull fabrication and integration and documentation covering all of the purchased fittings and equipment installed on the barge.

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10.1 Barge Hull Construction Documentation

_____ Barge hull documentation shall include as-built drawings with final scantlings and arrangements, final inspection reports, material certificates, coating inspection records, final test reports, final weight reports, results of the inclining experiment, trim and stability booklet, and any other relevant documentation.

10.2 Equipment and Fitting Documentation

_____ Operating and maintenance manuals shall be assembled by the Contractor covering all purchased fittings and equipment, and the crane. The documentation shall include original manufacturers' data and operating procedures and maintenance recommendations and procedures. Three volumes are envisioned, 1) a data book, 2) an installation and maintenance manual, and 3) an operating manual.

10.2.1 Data Book

_____ The Data Book shall include equipment cut sheets, dimensioned arrangement drawings, parts lists, assembly drawings, component material descriptions, securing details, and details of interfaces with the barge piping, electrical power, and structural systems for all purchased equipment and fittings. Any certifications and approval documents for each piece of equipment shall be included in the data books.

10.2.2 Installation and Maintenance Manual

_____ Installation and maintenance manual shall include instructions and procedures for installing, commissioning and maintaining each procured piece of equipment.

10.2.3 Operating Manual

_____ The operating manual shall include detailed instructions, procedures, and warnings for the safe operation of each piece of equipment installed on the barge.

10.3 Submittals

_____ Draft versions of each manual shall be submitted to the Owner for review and approval one month before delivery of the completed barge. The Owner will provide feedback two weeks prior to final acceptance testing of the barge.

_____ Four hard copies and one electronic copy of each manual shall be furnished to the Owner on final acceptance of the barge.

_____ One hard copy and one electronic copy of as-built drawings of the barge shall likewise be furnished to the Owner on final acceptance of the barge.

11 Owner Furnished Equipment

_____ No owner furnished equipment will be provided.

Appendix 1 – Generator Purchase Specification
Diesel Generator Set Requirements

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_____ A diesel-powered electrical generator shall be procured to provide electrical power for the deck lighting, workshop lighting and outlets, for the air compressor, and for other miscellaneous electrical loads on the barge. The engine and generator shall be unitized on a steel skid suitable for lifting and securely support the equipment on the deck of the barge. The unit shall be installed on deck in an area open to the elements.

_____ Vendor shall be responsible for the design, construction, testing and performance of the unit to meet the requirements and conditions, and performance functions outlined herein and obtain any approvals required for the service described.

_____ Vendor shall provide a complete unit fully tested and ready for installation on the barge.

_____ The unit shall be protected from corrosion including coatings suitable for a marine environment and other means as may be necessary including suitable material selection.

_____ The unit shall meet at least the following requirements:

_____ Engine and generator to be unitized on a structural steel skid

_____ Engine to run on Renewable Diesel fuel meeting the requirements of ASTM D975 Grade No. 2D S15.

_____ Engine to be Certified by the Environmental Protection Agency (EPA) to conform to Tier 4 non-road requirements

_____ Engine shall be four cycle

_____ Engine to have a closed fresh-water cooling system air cooled by radiator.

_____ Unit Lifting arrangement to allow lifting diesel generator or generator or both

_____ Engine shall be electric start with battery recharging.

_____ Weather protected sound enclosure.

_____ Means to lock controls and enclosure to prevent vandalism.

_____ Integral circuit breaker

_____ Skid mounted fuel tank sized for approximately one day's (8 hours) running time

_____ Skid mounted cooling expansion tank

_____ Skid mounted drip pan under the engine

_____ All controls and instrumentation integrated on the skid.

_____ All gauges are to be liquid filled for vibration considerations

Performance Data

RATINGS

_____	Output:	100 kW
_____	Duty:	S1 (Continuous)
_____	Voltage:	480 VAC
_____	Frequency:	60 Hz
_____	Phase	3
_____	Power factor:	0.8
_____	Speed:	1800 rpm
_____	Battery Voltage	12 VDC

STANDARDS

_____ Applicable standard: IEC 60034, ABS

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_____ Marine classification: ABS
_____ Hazardous area classification: None
_____ Temperature rise stator / rotor: A/A
_____ Insulation class: F (min.)

ENVIRONMENTAL CONDITIONS

_____ Ambient temperature: 104 deg F
_____ Minimum Temperature: 32 deg F
_____ Marine atmosphere

Engine Features

The prime mover shall be provided with the following:

_____ Engine to comply with requirements of ABS Steel Barge Rules Part 4
_____ Low oil pressure shutdown
_____ High engine temperature shutdown
_____ Vibration isolating mounts
_____ Personnel protection including belt guard, insulation on exhaust, and other as necessary
_____ Disposable oil filter
_____ Oil drain valve
_____ Integral drip-proof tray under engine
_____ Air heater circuit for cold starting
_____ Disposable fuel filter
_____ Overspeed air shutoff on engine

Typical engine instrumentation including at a minimum:

_____ Engine temperature
_____ Oil Pressure
_____ Engine revolutions
_____ Battery charging alternator voltage
_____ Engine operating hours

Alternator Features

The alternator shall be provided with the following:

_____ Brushless, rotating field design permits power to be obtained from stationary leads.
_____ Windings are vacuum impregnated with epoxy varnish for dependability and long life.
_____ Dynamically balanced rotors to minimize vibration.
_____ Copper windings to ensure minimal heat buildup. Insulation meets
_____ NEMA standards for class H insulation.
_____ Direct connected to the engine, the generator has sealed precision ball bearings with a precision-machined steel sleeve in the end bracket to prevent shaft misalignment and extend bearing life.
_____ Equipped with a four-lead reconnectable stator.

_____ Capable of sustained line-to-neutral short circuit current of up to 300% of the rated current for up to 2 seconds. (IEC 60092-301 short-circuit performance.)

Required Quotation Documentation

The following items are required to be included with the quotation and in the documentation to be provided on delivery:

_____ Dimensioned General Arrangement drawing showing:
_____ Plan, profile and section views
_____ Maintenance clearance envelopes
_____ Foundation mounting patterns
_____ Wet and dry weights
_____ Center of Gravity
_____ Installation, Commissioning, Operating and Maintenance Manual(s). Must include recommended maintenance interval schedule up to and beyond 120,000 hrs.
_____ Complete mechanical, electrical, and electronic technical specifications.
_____ EPA Tier 4 Certificate
_____ Bolt pattern or other detail of skid mounting to main deck foundation

Appendix 2 - Diesel HPU Purchase Specification

_____ A diesel-powered hydraulic power unit shall be procured to provide fluid power for operating the spud pile winches and the tugger winches for installation on the barge. The engine, pump(s), and hydraulic fluid reservoir shall be unitized on a steel skid suitable for lifting and to securely support the equipment on the deck of the barge.
_____ Vendor shall be responsible for the design and performance of the unit to meet the requirements and conditions, and perform the functions outlined herein and obtain any approvals required for the service described.
_____ Vendor shall provide a complete unit fully tested and ready for installation on the barge.
_____ The unit shall be protected from corrosion including coatings suitable for a marine environment and other means as may be necessary including suitable material selection.
_____ Performance specifications for each of the consumers are provided in this specification.

Diesel HPU Requirements

The overall unit shall include the following features:

_____ Engine and generator to be unitized on a structural steel skid
_____ Engine to run on Renewable Diesel fuel meeting the requirements of ASTM D975 Grade No. 2D S15.
_____ Engine to be Certified by the Environmental Protection Agency (EPA) to conform to Tier 4 non-road requirements
_____ Engine shall be four cycle, directly coupled to hydraulic pump(s)
_____ Closed cooling system/radiator cooled.
_____ Lifting arrangement for each piece of equipment and for entire skid
_____ Engine shall be electric start complete with alternator for battery recharging.
_____ Unit shall be provided with weather protected sound enclosure.

EXHIBIT A0
Specifications

_____ Skid mounted fuel tank, sized for approximately one-half day (4 hours) running time
_____ Skid mounted hydraulic fluid tank with sufficient volume for expansion and with means to cool the hydraulic fluid (if necessary).
_____ Skid shall have spill containment (with drain fitted with a ball valve) for entire hydraulic fluid reservoir. A drip pan shall also be provided for engine drips.
_____ All controls and instrumentation integrated on the skid.
_____ All gauges are to be liquid filled for vibration considerations

Performance Data

RATINGS

_____	Output:	275 HP (approximate, to be verified by vendor)
_____	Press:	3000 PSIG
_____	Flow:	145 GPM
_____	Duty:	S1 (Continuous)
_____	Battery Voltage	12 VDC

STANDARDS

_____ Marine classification: ABS

ENVIRONMENTAL CONDITIONS

_____ Ambient temperature: 104 deg F
_____ Minimum Temperature: 32 deg F
_____ Marine atmosphere

Engine Features

_____ Engine to comply with requirements of ABS Steel Barge Rules Part 4
_____ Low oil pressure shutdown
_____ High engine temperature shutdown
_____ Vibration isolating mounts
_____ Personnel protection including belt guard, insulation on exhaust, and other as necessary
_____ Disposable oil filter
_____ Oil drain valve `
_____ Mounted on a drip-proof tray
_____ Air heater circuit for cold starting
_____ Disposable fuel filter
_____ Overspeed air shutoff on engine
Typical engine instrumentation including at a minimum:
_____ Engine temperature
_____ Oil Pressure
_____ Engine revolutions
_____ Alternator voltage

EXHIBIT A0
Specifications

_____ Engine operating hours
_____ All gauges are to be liquid filled

Appendix 3 – Air Compressor Purchase Specification

_____ An electric-powered variable-speed rotary-screw air compressor shall be procured to provide compressed air to drive construction tools for the performance of Port maintenance activities from the barge. The air compressor shall be a packaged unit suitable for lifting and to securely support and contain the compressor and equipment on the deck of the barge. The unit shall be installed on deck in an area open to the elements.
_____ Vendor shall be responsible for the design, construction, testing and performance of the unit to meet the requirements and conditions, and perform the functions outlined herein and obtain any approvals required for the service described.
_____ Vendor shall provide a complete unit fully tested and ready for installation on the barge.
_____ The unit shall be protected from corrosion including coatings suitable for a marine environment and other means as may be necessary including suitable material selection.

Air Compressor Requirements

The air compressor shall meet the following requirements:

_____ Electrical power available will be 480V, 3 Phase, 60Hz AC
_____ Lifting arrangement for compressor shall be provided
_____ Unit shall be in weather protected low sound enclosure.
_____ NEMA TEFC Drive motor
_____ Flexible drive coupling
_____ Dust filter on air inlet to be provided
_____ Skid mounted storage tank (receiver) of approximately 120 gallons
_____ Unit mounted controls and instrumentation including:
_____ Start/Stop
_____ Load/Unload
_____ Emergency Stop
_____ Shutdowns for high outlet air temperature
_____ Shutdown for high inlet air temperature
_____ Delivery Air Pressure
_____ Delivery Air Temperature
_____ Oil fill level
_____ All gauges to be liquid filled

Performance Data

RATINGS

_____ Output: 185 SCFM
_____ Pressure: 125 PSIG
_____ Receiver: 120 GALLONS
_____ Duty: S1 (Continuous)

STANDARDS

EXHIBIT A0
Specifications

_____ Marine classification: ABS
_____ Hazardous area classification: None
_____ Ambient temperature: 104 deg F

Required Quotation Documentation

The following items are required to be included with the quotation:

_____ Dimensioned General Arrangement drawing showing:
_____ Plan, profile, and section views
_____ Maintenance clearance envelops
_____ Foundation mounting patterns
_____ Wet and dry weights
_____ Center of Gravity
_____ Installation, Commissioning, Operating and Maintenance Manual(s). Must include recommended maintenance interval schedule up to and beyond 120,000 hrs.
_____ Complete mechanical, electrical, and electronic technical specifications.
_____ Details for package mounting unit to main deck

Appendix 4 - Spud Pile Winches

_____ Two hydraulic winches, each with a 75,000 lb. pulling capacity on the first layer of rope, shall be procured, ready for installation on the deck of the barge. The package shall be complete with all controls to wind in or let out the cable to raise or lower each of the two spud piles independently.

_____ Vendor shall be responsible for the design and performance of the units to meet the requirements and conditions, and perform the functions outlined herein and obtain any approvals required for the service described.

_____ Vendor shall provide complete unit including control panel with all controls for both winches, fully tested and ready for installation on the barge.

_____ The unit shall be protected from corrosion including coatings suitable for a marine environment and other means as may be necessary including suitable material selection.

Features of the winches

The following outlines the Performance specifications for the spud pile winches and features with which they shall be provided.

Line pull vs speed shall be as follows:

	Line Pull	Pull in speed	Pay out
_____ Pay in line pull and speed first layer	75,000 lb.	72 ft/min	298 ft/min
_____ Pay in line pull and speed Mid Drum	58,400 lb.	100 ft/min	415 ft/min
_____ Pay in line pull and speed top layer	41,750 lb.	125 ft/min	535 ft/min

EXHIBIT A0
Specifications

Note: Payout speed shall be approximately four times the pay-in speed to facilitate rapid deployment of the spud pile.

_____ Winch Drum shall be a maximum of 20 inches wide and shall be able to hold over 700 ft of 1-1/8-inch wire rope. Drum shall have a cable anchor to secure the end to prevent slippage with 5 wraps of wire rope remaining on drum.

_____ Winch shall be supplied with 500 ft of EIPS IWRC 1 1/8-inch wire rope with minimum breaking strength of 130,000 lb.

_____ The winch shall have a hydraulically released static/dynamic brake. The brake shall support the maximum rated load when no hydraulic power is applied. Upon application of hydraulic pressure to the motor, brake shall release automatically, and reengage when pressure is released.

_____ Winch shall operate at 3000 psi supply pressure at 142 gpm flow

_____ Speed control shall be performed by throttling spool control valve

_____ 3-coat paint system for marine equipment

Controls

_____ The winch vendor shall provide a control panel complete with all necessary flow control and pressure regulation required for proper operation of the winch. Hydraulic pressure supply of 145 gpm at 3000 psi will be provided as will return to tank at approximately atmospheric pressure. Any additional hydraulic fluid supply and return functions required for the proper function of the winch shall be made at the control panel. All control valves to operate the winches shall be mounted at the panel. Pressure gauges showing supply and return pressure (at a minimum) shall also be installed on the panel.

_____ The control panel shall place the control valve levers at a comfortable operating height (approximately 30 inches, or as agreed with owner).

_____ The control panel shall be connected to the supply and return piping on deck with hoses. The connection to the supply piping shall be by Code 62 SAE-type flanges with buna-n O-rings. Both the hose flange and the counter flange to be installed on the hydraulic piping shall be provided by the winch and controls vendor. The flanges shall be as specified on the Mechanical Arrangement drawing. The hose to the supply and return deck piping shall be of sufficient length to reach the control panel mounted on a platform elevated 4 ft above the main deck and the piping connections.

_____ In addition to being manually controlled, the control valve shall be remotely controlled as well by a wireless controller allowing the operator to be positioned in a safe location with good visibility. Details of remote control to be submitted with response.

_____ Hoses required for connecting the control panel to the winches shall likewise be provided by winch vendor. Hoses included shall be suitable for flammable fluid service as required by ABS Rules MVR 4-6-7/3 Hydraulic Oil Systems.

Required Quotation Documentation

The following items are required to be included with the quotation:

_____ Dimensioned General Arrangement drawing showing:

_____ Plan, profile, and section views

EXHIBIT A0
Specifications

_____ Maintenance clearance envelops
_____ Foundation mounting details
_____ Wet and dry weights
_____ Center of Gravity
_____ Installation, Commissioning, Operating and Maintenance Manual(s). Must include recommended maintenance interval schedule up to and beyond 120,000 hrs.
_____ Complete mechanical, electrical, and electronic technical specifications.
_____ Details for package mounting unit to main deck
_____ Details of Controls including for manual controls and remote controls

Appendix 5 – Spread Mooring Winches

_____ Four hydraulic winches, each with a 75,000 lb. pulling capacity on the first layer of rope, shall be procured, ready for installation on the deck of the barge. The package shall be complete with all controls to wind in or let out the cable to raise or lower each of the two spud piles independently. Note that these mooring winches shall be of the same make and model as the spud winches with the exception that they are Equal Speed pulling in as paying out.

_____ Vendor shall be responsible for the design and performance of the units to meet the requirements and conditions, and perform the functions outlined herein and obtain any approvals required for the service described.

_____ Vendor shall provide complete unit including control panel with all controls for both winches, fully tested and ready for installation on the barge.

_____ The unit shall be protected from corrosion including coatings suitable for a marine environment and other means as may be necessary including suitable material selection.

Features of the winches

The following outlines the Performance specifications for the spud pile winches and features with which they shall be provided.

Line pull vs speed shall be as follows:

Line pull vs speed shall be as follows:

	Line Pull	**Pull in speed**	**Pay out**
_____ Pay in line pull and speed first layer	75,000 lb.	72 ft/min	Same as Pull In
_____ Pay in line pull and speed Mid Drum	58,400 lb.	100 ft/min	Same as Pull In
_____ Pay in line pull and speed top layer	41,750 lb.	125 ft/min	Same as Pull In

Note: Payout speed for the mooring winches shall be approximately the same as the pay-in speed.

_____ Winch Drum shall be a maximum of 20 inches wide and shall be able to hold over 700 ft of 1-1/8-inch wire rope. Drum shall have a cable anchor to secure the end to prevent slippage with 5 wraps of wire rope remaining on drum.

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Specifications

_____ Winch shall be supplied with 500 ft of EIPS IWRC 1 1/8-inch wire rope with minimum breaking strength of 130,000 lb.
_____ The winch shall have a hydraulically released static/dynamic brake. The brake shall support the maximum rated load when no hydraulic power is applied. Upon application of hydraulic pressure to the motor, brake shall release automatically, and reengage when pressure is released.
_____ Winch shall operate at 3000 psi supply pressure at 142 gpm flow
_____ Speed control shall be performed by throttling spool control valve
_____ 3-coat paint system for marine equipment

Controls

_____ The winch vendor shall provide a control panel complete with all necessary flow control and pressure regulation required for proper operation of the winch. Hydraulic pressure supply of 145 gpm at 3000 psi will be provided as will return to tank at approximately atmospheric pressure. Any additional hydraulic fluid supply and return functions required for the proper function of the winch shall be made at the control panel. All control valves to operate the winches shall be mounted at the panel. Pressure gauges showing supply and return pressure (at a minimum) shall also be installed on the panel.
_____ The control panel shall place the control valve levers at a comfortable operating height (approximately 30 inches, or as agreed with owner).
_____ The control panel shall be connected to the supply and return piping on deck with hoses. The connection to the supply piping shall be by Code 62 SAE-type flanges with buna-n O-rings. Both the hose flange and the counter flange to be installed on the hydraulic piping shall be provided by the winch and controls vendor. The flanges shall be as specified on the Mechanical Arrangement drawing. The hose to the supply and return deck piping shall be of sufficient length to reach the control panel mounted on a platform elevated 4 ft above the main deck and the piping connections.
_____ In addition to being manually controlled, the control valve shall be remotely controlled as well by a wireless controller allowing the operator to be positioned in a safe location with good visibility. Details of remote control to be submitted with response.
_____ Hoses required for connecting the control panel to the winches shall likewise be provided by winch vendor. Hoses included shall be suitable for flammable fluid service as required by ABS Rules MVR 4-6-7/3 Hydraulic Oil Systems.

Required Quotation Documentation

The following items are required to be included with the quotation:

_____ Dimensioned General Arrangement drawing showing:
_____ Plan, profile, and section views
_____ Maintenance clearance envelops
_____ Foundation mounting details
_____ Wet and dry weights
_____ Center of Gravity

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Specifications

_____ Installation, Commissioning, Operating and Maintenance Manual(s). Must include recommended maintenance interval schedule up to and beyond 120,000 hrs.
_____ Complete mechanical, electrical, and electronic technical specifications.
_____ Details for package mounting unit to main deck
_____ Details of Controls including for manual controls and remote controls

Appendix 6 – Tugger Winch Purchase Specification

_____ Four hydraulic winches, each of 12,000 lb. nominal pulling capacity on the first layer of rope shall be provided complete with control valve ready for installation on the deck of the barge. The winches shall be mounted in each of the four corners of the barge to provide the ability to move the barge alongside a pier, or to adjust the position of a material barge moored alongside.
_____ Vendor shall be responsible for the design and performance of the unit to meet the requirements and conditions, and perform the functions outlined herein and obtain any approvals required for the service described.
_____ Vendor shall provide complete units including control panels with all controls, fully tested and ready for installation on the barge.
_____ The units shall be protected from corrosion including coatings suitable for a marine environment and other means as may be necessary including suitable material selection.

Features of the winches

The following outlines the Performance specifications for the tugger winches and features with which they shall be provided.

Line pull vs speed shall be as follows:

	Line Pull	**Pull-in/Pay-out speed**
_____ Pay in line pull and speed first layer	12,000 lb.	104 ft/min
_____ Pay in line pull and speed Mid Drum	9,660 lb.	138 ft/min
_____ Pay in line pull and speed top layer (6th Layer)	7,319 lb.	172 ft/min

_____ Winch Drum shall be a maximum 10 inches wide and shall be able to hold a minimum of 222 ft of 5/8-inch wire rope. Drum shall have a cable anchor to secure the end to prevent slippage with 5 wraps wire rope remaining on drum.
_____ Winch shall be supplied with 222 ft of EIPS IWRC 5/8-inch wire rope with minimum breaking strength of 40,000 lb.

The winch shall have the following:

_____ Sealed high efficiency planetary reduction gearing
_____ Automatic multi-disc type brake effective only in pay-out direction at maximum load. Overrunning clutch between motor drive shaft and brake assembly free-wheels in the pay-in direction, but locks during pay out causing brake disks to rotate between divider disks. Dynamic braking is achieved modulating flow at control valve. When control valve

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Specifications

returned to neutral or center position, the brake is automatically engaged holding the rated load.

_____ Hydraulic gear motor providing reduction ratio of 41:1 with two planetary stages

_____ Optimally shall operate at 2200 psi pressure at 50 gpm flow rate. Control panel shall provide all flow control and pressure regulation for winch

_____ Speed control shall be performed by throttling spool control valve

_____ 3-coat paint system for marine equipment

Controls

_____ The winch vendor shall provide a control panel complete with all necessary flow control and pressure regulation required for proper operation of the winch. Hydraulic pressure supply of 145 gpm at 3000 psi will be provided as will return to tank at approximately atmospheric pressure. Any additional hydraulic fluid supply and return functions required for the proper function of the winch shall be made at the control panel. All control valves to operate the winches shall be mounted at the panel. Pressure gauges showing supply and return pressure (at a minimum) shall also be installed on the panel.

_____ The control panel shall place the control valve levers at a comfortable operating height (approximately 30 inches, or as agreed with owner).

_____ In addition to being manually controlled, the control valve shall be remotely controlled as well by a wireless controller allowing the operator to be positioned in a safe location with good visibility. Details of remote control to be submitted with response.

_____ The control panel shall be connected to the supply and return piping on deck with hoses. The connection to the supply piping shall be by Code 62 SAE-type flanges with buna-n O-rings. Both the hose flange and the counter flange to be installed on the hydraulic piping shall be provided by the winch and controls vendor. The flanges shall be as specified on the Mechanical Arrangement drawing. Hoses required for connecting the control panel to the winches shall likewise be provided by winch vendor. Hoses included shall be suitable for flammable fluid service as required by ABS Rules MVR 4-6-7/3 Hydraulic Oil Systems.

Required Quotation Documentation

The following items are required to be included with the quotation:

_____ Dimensioned General Arrangement drawing showing:

_____ Plan, profile, and section views

_____ Maintenance clearance envelops

_____ Foundation mounting details

_____ Wet and dry weights

_____ Center of Gravity

_____ Installation, Commissioning, Operating and Maintenance Manual(s). Must include recommended maintenance interval schedule up to and beyond 120,000 hrs.

_____ Complete mechanical, electrical, and electronic technical specifications.

_____ Details for package mounting unit to main deck

_____ Details of Controls including for manual controls and remote controls

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Appendix 7 – Double Wall Fuel Tank and Pump

_____ One double walled diesel fuel storage tank of 1000 gallons capacity shall be procured completely outfitted as described below and ready for installation on the barge.
_____ Vendor shall be responsible for the design and performance of the unit to meet the requirements and conditions, and perform the functions outlined herein and obtain any approvals required for the service described.
_____ Vendor shall provide a complete unit fully tested and ready for installation on the barge.
_____ The unit shall be protected from corrosion including coatings suitable for a marine environment and other means as may be necessary including suitable material selection.

Dimensions and weight shall be approximately:

_____ L = 91 inches
_____ W = 87 inches
_____ Height = 47 inches
_____ Weight = 2760 lb. empty, 11,239 lb. full
_____ Tank shall be easily be removable from its stowage location inside the deckhouse below the crane, aft of the deckhouse.

The tank shall be fitted with the following:

_____ Double walled with 110% containment
_____ Inner tank shall be removable for inspection cleaning and maintenance.
_____ Stackable Corner Brackets
_____ Tank shall be fitted with internal baffles to minimize surging of fuel in tank
_____ Tank shall be fabricated with a galvanized frame suitable for lifting and be fitted with four-way forklift pockets to allow it to be liftable by forklift from any side
_____ The fuel tank shall be outfitted with a pump and hose on a hose reel (50 ft hose). Pump will be electric powered 120V.
_____ Lockable Equipment Cabinet to secure the ports, controls and equipment on the tank.

Required Quotation Documentation

The following items are required to be included with the quotation:

_____ Dimensioned General Arrangement drawing showing:
_____ Plan, profile, and section views
_____ Maintenance clearance envelops
_____ Foundation mounting details
_____ Wet and dry weights
_____ Center of Gravity
_____ Installation, Commissioning, Operating and Maintenance Manual(s). Must include recommended maintenance interval schedule up to and beyond 120,000 hrs.
_____ Complete mechanical, electrical, and electronic technical specifications.

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SECTION 3 - Pedestal Crane

NOTE: Pedestal Crane Barge to be supplied shall include all safety systems available from the fabricator.

ALL CAPACITIES, WEIGHTS, MEASUREMENTS, AND RATINGS ARE APPROXIMATES UNLESS OTHERWISE STATED AS A SHALL.

1 Background

_____ The Port of San Francisco intends to build a crane barge to perform maintenance and repair works of marine structures along the City of San Francisco waterfront. Primarily the Port needs the ability to handle and drive piles at existing piers, but this design will have the capability to support some new construction as well.

_____ The crane barge will operate inside San Francisco Bay year-round, primarily during daytime under relatively protected conditions. The crane will be a permanently mounted pedestal type crane, for reasons of reach and capacity, reliability, readily available service and parts, and availability of the crane itself.

_____ The capacity of the crane shall be sufficient to upend and lift steel and concrete piles 135 ft in length, up to 48-inches in diameter, and weighing 76,000 lb, not including rigging, at a reach of 60 ft from the centerline of the pedestal. The crane will be installed on a pedestal, the top of which is 12 ft above the deck of the barge. At operating draft, the barge freeboard is minimum 4 ft. During lifting and upending operations, the tip of the pile shall clear the deck by 2 ft minimum.

_____ The crane shall be hydraulic, powered by a Tier 4 diesel engine.

_____ This specification defines the minimum requirements for the fabrication, testing, and inspection of one crane and associated ancillaries to be installed on the new floating construction barge.

_____ The scope of the package as well as initial estimates of the size of the crane are presented herein. Supplier to include updated sizing based upon their calculations and include with the package submission.

_____ The Contractor constructing the barge will be the initial purchaser of the crane, and shall ensure it is procured, fabricated, tested, delivered to Fabricator, and installed in accordance with these and crane manufacturer's specifications. Purchaser shall confer with the ultimate Owner on technical questions, but commercial communications shall be between Supplier and Purchaser (Contractor).

2 BASIS

_____ The basis for this document is construction and offshore industry codes, standards and practices and Customer experience and preferences. The following references shall apply as specified in the body of this document. The latest editions of the references, including addendums, in force at the time of the end of the response validity date shall apply. Conflicts between the requirements of the reference documents shall be brought

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Specifications

to the attention of the Purchaser and Owner for resolution. The most stringent requirement shall apply unless otherwise agreed in writing by Purchaser and Owner.

2.1 DEFINITIONS AND ACRONYMS

Within the body of this specification, the following definitions shall apply:

Term	Definitions
_____ CA	Classification Authority
_____ Purchaser	Contractor building the barge shall be initial purchaser of crane
_____ Owner	Port of San Francisco / or its assigns
_____ Facility	Supplier or subcontractor shop and/or any property owned by SUPPLIER or subcontractor where any portion of the work will be performed.
_____ Services	Any service or work performed by Supplier that must be performed to comply with the requisition requirements, or the contract, to procure, design, manufacture, and delivery of the work.
_____ Standards	Industry Codes, Standards, Guides, and Recommended Practices referenced herein. Meaning the latest issue or edition in force at the end of SUPPLIER response validity date or the contract date.
_____ Supplier	At response stage: any entity invited to provide a quotation for the equipment and/or any sub-contractors thereto.
_____	At Purchase stage: any entity contracted for the supply of the equipment and/or any sub-contractors thereto.
_____	In all cases Supplier is responsible for performance of all Work and will be the single point of contact for all Work-related issues. Neither Purchaser nor Owner will receive information from or respond directly to sub-Suppliers.
_____ Work	Any material or item or service listed in the requisition or contract as being in the Supplier's Scope of Supply
_____ NFPA	National Fire Protection Association
_____ ASME	American Society of Mechanical Engineers
_____ API	American Petroleum Institute
_____ NACE	National Association of Corrosion Engineers
_____ CFR	Code of Federal Regulations
_____ HPU	Hydraulic Power Unit

2.2 INDUSTRY CODES, STANDARDS, RULES, REGULATIONS

This section lists the owner, client, industry, regulatory references USED IN THIS DOCUMENT. If there is a conflict it shall be brought to the attention of Purchaser and Owner. Most stringent requirement applies unless specified otherwise in writing by Purchaser and Owner.

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The specifications listed below or latest edition available of the specifications shall govern all work.

Except where required by the CFR, a Letter of Compliance shall be provided by the Supplier indicating that the equipment is built in accordance with the latest publications of the following Standards including all amendments as of the date of this specification. Unless required by the CFR, Classification Certificates are not required.

	Number	Title
_____	ASME B31.1	Power Piping
_____	ASME B31.3	Process Piping
_____	API SPEC 2C	Specification for Offshore Pedestal-mounted Cranes
_____	ANS/AWS D1.1	Structural Welding Code-Steel
_____	ABS	Rules for Building and Classing Steel Barges
_____	ABS	Guide for Certification of Lifting Appliances (INFO ONLY)
_____	Title 29 CFR Part 1919	Labor, Gear Certification
_____	Title 29 CFR Part 1919	Labor, Safety and Health Regulations for Construction
_____	Title 46 CFR Subchapter F	Shipping, Marine Engineering
_____	Title 40 CFR Subchapter U	Protection of Environment, Air Pollution Controls (EPA Tier IV)
_____	California Regulation 1619.3	Floating Cranes /Derricks and Land Cranes/Derricks on Barges

3 LIMIT OF SUPPLY

_____ Services or equipment, additional to those listed in this section, required for Supplier to provide their performance and process guaranty shall be clearly indicated in writing in the Supplier's scope of supply in Supplier's quotation. The Supplier shall include in their quotation for at least the services and scope of work shown below.

3.1 DEFINITION OF SUPPLIER SERVICES

This specification and the documents listed in the requisition shall cover the following services:

_____ Process Guaranty and Mechanical Guaranty

_____ All required engineering and design work to include process, mechanical, structural, materials, corrosion, foundation, installation, lifting, transportation, Health-Safety-Environment-Human Factors, maintainability, operation, instrumentation, control, and electrical, procurement, receiving, storage, securing, and insuring of all material for fabrication of the work, including all expendables, material handling provisions as required by the contract documents.

_____ Any required interface meetings or communication, and documentation, and submission of documents to obtain Statutory / Regulatory Acceptance and CA acceptance as required.

_____ All required services to perform the work in any of Supplier's or subcontractor's facilities including transport within the facility, and loading and securing the work onto Supplier-furnished transport.

_____ Warranty Period

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Specifications

3.2 SCOPE OF SUPPLY

_____ One (1) independent, completed, fully functional, pedestal or kingpost-mounted marine crane shall be supplied consisting of all major equipment, bulks, structural steel, services, and accessories as defined herein and/or on specifications, including, but not limited to the items shown on this requisition Scope of Supply document. Owner has provided scope limitations for the system as edge of pedestal for additional utilities. Crane shall be designed to API Specification 2C latest edition and conform to requirements of this specification. Scope of supply shall consist but not to be limited to items listed below:

ITEM NO.	DESCRIPTION	UNIT	QTY
_____ 1	Crane	Each	1
_____ 2	Diesel engine / HPU	Each	1
_____ 3	Pedestal or Kingpost complete with bevel for welding to barge structure	Each	1
_____ 4	Lifting arrangements for crane	Lot	1
_____ 5	Inspection and Testing in accordance with Purchaser/Owner approved Inspection and Test Plan	Lot	1
_____ 6	Failure mode analysis	Lot	1
_____ 7	Calculations as required by API 2C	Lot	1
_____ 8	Bearing calculations as required by API 2C	Lot	1
_____ 9	Spare Parts – Commissioning and Startup as required	Lot	1
_____ 10	Spare Parts – 2 years operation (OPTION)	Lot	1
_____ 11	Special Tools	Lot	1
_____ 12	Preservation and preparation for shipment	Lot	1
_____ 13	Load out and load out appurtenances (shackles, slings, padeyes etc.)	Lot	1
_____ 14	Freight (Free Carrier (FCA) or as agreed)	Lot	1
_____ 15	Supplier Data	Lot	1
_____ 16	Commissioning Services (OPTION)	Lot	1
_____ 17	Training Services (OPTION)	Lot	1
_____ 18	Warranty	Lot	1
_____ 19	Maintenance and Operating Manuals, Data Books	4 Hard, 1 electronic	1

Note:
The following certificates shall be provided with the crane:
_____ EPA Tier 4 certificate of conformity
_____ API Monogram (API 2C)
_____ Test Certificates shall be provided for the following:
_____ Hooks, shackles, rings

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_____ Blocks
_____ Ropes
_____ Winches

3.3 SYSTEMS/ ASSEMBLIES CHARACTERISTICS AND SCOPE

Crane shall, as a minimum, meet the following requirements:

_____ Boom length max 150 ft
_____ Dynamic Rating based API values including vessel motions
_____ Dual main hoists each with the following capacities:
_____ Main Hoists – Min 100 kips @ 25 ft deck/barge lift
_____ Main Hoists – Min 100 kips @ 60 ft deck/barge lift
_____ Main hoists – Min 70 kips @ 90 ft deck lift
_____ Whip (Aux) Hoist – Min 30 kips 25 kips @ all radiuses
_____ Aux Hoist shall be suitable for personnel lifts: 150 ft/minute
_____ Pile Hammer Hose handling hoist to lift approximately 4000 lb (single part) from sheave on the boom located approximately 50 ft from heel pin
_____ Hook travel 20 ft below top of pedestal flange/adapter
_____ Anti two-block system for main and aux hoists
_____ Power lowering (no free-wheeling) by automatic fail-safe brake

Conditions for the above capacity as per below or Regulations (most stringent requirements to apply):

_____ One-Minute Wind speed: 40 knots
_____ Significant wave height: 49pprox.. 1.5 ft at 4 sec
_____ Relative velocity of cargo deck at pick point to crane boom point: 1.2 ft/sec
_____ Barge Trim: +/- 3 deg
_____ Barge Heel: +/- 5 deg
_____ Off-lead and side lead: 5-degree off-lead and 3-degree side-lead
_____ Slewing capacity: Crane shall be operable at a maximum trim/heel with light load (Supplier to advise allowable load). At 5 deg heel or trim, crane shall be able to slew with 80-kip load at 60 ft radius.
_____ The individual assemblies, system requirements are as described below:

3.3.1 Hydraulic Diesel-Driven Power Unit

Hydraulic Diesel Driven Power Unit shall meet the following

3.3.1.1 Diesel Engine

_____ Self-Contained diesel driven unit mounted on crane. Engine brand to be presented in response
_____ Engine to be certified to meet current EPA Tier 4 emissions regulations
_____ Engine shall run on Renewable diesel fuel meeting the requirements of ASTM D975 Grade No. 2D S15
_____ Engine to have weather protection enclosure

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_____ Engine shall have sufficient power to perform all primary crane motions at the same time (hoist, boom up, and slew), but not necessarily at maximum load simultaneously.
_____ Engine shall be equipped with the following:
_____ Radiator cooling system with antifreeze coolant.
_____ Spark arresting muffler
_____ Local Starter Button and Emergency Stop
_____ Thermal Insulated exhaust system components as necessary
_____ Tachometer and hour-meter.
_____ Outdoor air cleaner.
_____ Cab mounted gauges for water temperature and oil pressure.
_____ Cab mounted controls for engine shutdown.
_____ Electric starter with cab mounted push button and DC Volt gauge
_____ Batteries with Marine Battery Charger
_____ Automatic engine shutdown on over-speed.
_____ 316L Stainless Steel Fuel Tank with filler cap, clean out hatch, and drain valve.

3.3.1.2 Hydraulic oil system

The system shall have the following specifications and characteristics:
_____ Supplier to select pumps (i.e., variable vs fixed displacement) based on Intermediate Duty and longevity required.
_____ Air to oil hydraulic fluid heat exchanger shall be mounted in front of the diesel engine radiator.
_____ 10 Micron nominal return line filtration to be fitted on the Oil Conditioning circuit.
_____ 10 Micron nominal pressure line filtration to be fitted for the Control circuit
_____ 10 Micron nominal pressure line filtration to be fitted for the Slew circuit
_____ Separate High-Pressure Filters to be fitted downstream of the main/auxiliary and boom pumps with 10-micron elements. In the event of hydraulic pump failure, the filters will collect and remove contaminants before they enter the system.
_____ Individual pressure gauges for load, luff, and slew circuits.
_____ 316 Stainless Steel Hydraulic Reservoir to be located to supply positive suction head pressure to the pumps at all times. The tank is equipped with filler cap, drain valves, 100 mesh suction strainers, return line diffuser, and clean out hatch.
_____ Drip pans or enclosures around hydraulic components to be fitted.

3.3.2 Machinery Enclosure

_____ A machinery enclosure shall be supplied that forms an integral part of the crane on the Revolving Superstructure and encloses the Prime Mover, Heat Exchanger, Hydraulic Pumps, Valves, Filters, and Reservoir. This enclosure shall be constructed from heavy steel plate, 100% seal welded and equipped with solid steel floor. The following shall be fitted in the space as a minimum:
_____ Air Exhaust Louvers provide access to the Heat Exchanger and Engine Radiator.
_____ Oil Pressure Activated Exhaust Louvers normally closed, open by means of positive engine oil pressure

_____ Access to Boom Walkways with handrails.
_____ Drip Pans around/under Prime Mover and Hydraulic Components.
_____ Lockable Swinging Access Doors to access all components easily
_____ Acoustic Insulation provided on the interior walls of the Machinery Enclosure as needed to reduce the Operators Cabin noise level to 80 dBA or less at full speed.
_____ Dry Chemical Extinguishing System for Engine house includes manually operated release, located on the outside of the engine house, tanks and piping for system.

3.3.3 Hoist System

The following equipment shall be provided:

_____ Two Main Hoist winches, each with single drive motor, hydraulic dynamic braking and spring applied "Fail Safe" static external contracting spring applied Drum Brake. Hoists shall be "cascaded" i.e., one shall have sheaves located at the nominal boom tip, and sheaves for the second hoist shall be located inboard a sufficient distance to avoid clashing of the hoist blocks during lifting operations.
_____ Auxiliary Hoist winch with single drive motor, hydraulic dynamic braking and spring applied "Fail Safe" static external contracting spring applied Drum Brake.
_____ Hose Hoist winch with single drive motor, hydraulic dynamic braking and spring applied "Fail Safe" static external contracting spring applied Drum Brake, 4-kip nominal capacity on 1 fall of approximately ½-inch diameter galvanized wire rope.
_____ All wire rope shall be of the same diameter and specification if possible.
_____ Auxiliary Hoist shall be certified for Personnel Handling.

3.3.4 Boom

_____ 150 ft (nominal) Bolt-connected, Tubular Chord, Lattice Boom shall be provided with bolt on Fast Line Extension, Spring Loaded Boom Stops and mechanical pendulum type Radius Indicator.
_____ High and low angle, non-overridable, boom hoist kick-out device shall be fitted to permit reduction of the minimum operating radius.
_____ Boom tip access to be installed, consisting of a walkway along the side of the boom accessible from the side of the crane. Access shall be provided to the boom tip from which servicing of all the boom tip machinery such as Sheaves, Main Block, Auxiliary Hook, Boom Lights, and SLI sensors can take place. The walkway and platforms shall include fiberglass grating. Grating to have non-skid walking surface and of UV resistant composition.
_____ Walkways, Ladders, Access Platforms, Railings and Toe Boards to be fitted in accordance with API Spec 2C, latest edition requirements.

3.3.5 Slew Drive System

_____ Spur Gear Slewing drive, consisting of multiple pinions driving against a stationary external gear fixed to the Pedestal or Kingpost. Fixed displacement hydraulic motors driving the pinions through planetary speed reducers shall be provided.

_____ Each speed reducer shall be equipped with Manually Operated spring-applied pressure-released Parking Brake.
_____ Each pinion drive shall be equipped with a slew guard.

3.3.6 Slew Bearing/Pedestal (option)

_____ If crane has slew bearing on a fixed pedestal, a steel tubular pedestal with pre-machined and drilled flange for the slew bearing ring shall be provided and shipped separately. The Pedestal shall include the following;
_____ Lower edge of pedestal pipe to be prepared for welding to the barge structure that will be provided by barge fabricator. The lower edge of the pedestal pipe shall be beveled 45 degrees with a 1/8" nose.
_____ Pedestal height to be 7'-10" to top of flange, putting heel pin of boom at approximately 12'-6" above the deck. Pedestal tubular to be 94-inch OD with 1.5-inch wall. Note: top of barge pedestal stub is 4'-2" above the deck.
_____ Weathertight Man Way for internal access and maintenance

3.3.7 King Post (option)

_____ If crane has fixed kingpost, complete kingpost shall be provided and shipped separately with nonmetallic upper and lower bearing assemblies. King post shall include the following;
_____ Lower edge of pedestal pipe to be prepared for welding to the barge structure that will be provided by barge fabricator. The lower edge of the pedestal pipe shall be beveled 45 degrees with a 1/8" nose.
_____ Pedestal length to be 7'-10", putting heel pin of boom at approximately 12'-6" above the deck. Pedestal tubular to be 94-inch OD with 1.5-inch wall. Note: top of barge pedestal stub is 4'-2" above the deck.
_____ Weathertight Manway for internal access and maintenance

3.3.8 Operator's Cab

The operator's cab shall be mounted on vibration isolators, and equipped as follows:
_____ Fully sound insulated on walls and roof with sound and vibration absorbent floor mats. Operators Cabin noise level to be reduced to 80 dBA or less with crane machinery at full speed.
_____ Tempered Safety Glass Windows as required to provide high visibility ahead and to the sides:
_____ opening side windows
_____ High Visibility, Fixed front window
_____ Fixed floor window, protected by removable floor grating.
_____ Fixed forward sloping roof window.
_____ Two fixed front quarter panel windows.
_____ Door with fixed window. Door shall be lockable.
_____ Stainless steel, wall mounted console with:
_____ Engine start control

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_____ Engine electric start control
_____ Engine stop control
_____ Engine emergency stop control
_____ Hydraulic pressure gages
_____ Hydraulic oil level gage with alarm
_____ Engine tachometer
_____ Engine oil pressure gage
_____ Engine coolant temperature
_____ Windshield wipers operator
_____ Slew Parking Brake operator
_____ Emergency control disengage
_____ Air pressure gage
_____ Air horn operator
_____ Wind Speed and direction readout
_____ Load Rating Load Chart
_____ Fully adjustable low back operators chair with integral armrest mounted "joystick" controls for primary crane motions conforming to API 2C, Paragraph 10.1.4.2. Joystick function and arrangement to be provided with response. Controls include:
_____ Crane slewing (left joystick)
_____ Aux Hoist (left joystick)
_____ Boom raise/Lower (right joystick)
_____ Main Hoist No. 1 (right joystick)
_____ Main Hoist No. 2 (separate lever)
_____ Hose Hoist (separate lever)
_____ Foot pedal for Engine Speed Control.
_____ Foot operated emergency shut down for the hydraulic system

3.3.9 Communications

The following shall be procured and installed in the operator's cab:
_____ Warning horn with control in the operator's console
_____ VHF marine transceiver inside the cabin.
_____ Loud hailer microphone and speaker.

3.3.10 Safety Devices

The following shall be provided on the crane:
_____ Hoist Safety Device shall be supplied with Recording Safe Load Indicator for both Main and the Auxiliary lines. The display shall be backlit, for night operation and shall show on digital displays the following as a minimum:
_____ safe working load (SWL)
_____ actual load
_____ hook radius
_____ rope falls
_____ hook load as a percentage of SWL

_____ Visual and audible alarms shall provide a clear and continuous warning indicating that the preset limits, typically 95% (yellow light) & 110% (red light) of permitted load, have been exceeded, are incorporated into the display. Push buttons shall be provided to change number of falls, and to activate test functions and optional features

_____ A manual emergency load lowering system shall be provided on the main, auxiliary and boom hoists, which when activated will allow the load to be lowered to a safe area without the use of the crane's power unit or the assist of an external power supply.

_____ Positive mechanical anti-two block system shall be fitted on both main and auxiliary hoists.

_____ High and low angle, non-overridable, boom hoist kick-out device shall be fitted.

_____ Emergency Master control disengage operator shall be fitted.

_____ One Fire Extinguishers to be provided in or near the cab.

_____ An anemometer and wind direction indicator system shall be installed with the sensing units located on the top of the gantry where it can be reached for maintenance. Readout shall be located in the operator's cab where easily visible to the operator. The unit shall be powered by the crane power system (i.e. at battery voltage).

3.3.11 Electrical System

Lighting Package shall be provided, consisting of:

_____ Crane electrical & lighting system, with boom mounted equipment consisting of:

1. Two-high lumen LED floodlights swivel mounted along the boom to illuminate the load.
2. Two LED light fixture in engine house and one LED external to engine house light fixture.
3. One LED cab light fixture
4. One cab control panel with branch circuit breakers and control circuits as needed.

The following equipment shall also be provided and wired:

_____ Fan plus self-contained Air Conditioner unit, mounted at the rear of the cab. Unit has coil coatings for marine salt water, with 23,000 BTU cooling with separate defroster. Vents can be positioned to defrost upper and front windows.

_____ Heater/Defroster for defogging windows/heating of cabin.

3.4 OTHER TECHNICAL CRITERIA

3.4.1 Performance Criteria

_____ Crane dynamic and static ratings shall be in accordance with API 2C. Latest edition at order shall apply unless otherwise noted.

_____ The crane and its power pack equipment shall be suitable for 2000 hours per year (intermediate duty).

_____ The auxiliary hoist shall be capable of providing a minimum hook speed of 120 ft/min with a single part line with one full layer on the drum with a maximum significant wave height = 1.5 ft.

_____ The Crane should meet the Performance Criteria detailed in this specification.

Supplier shall provide a process guaranty for the following:

_____ Main Hoist (Static Load),
_____ Aux Hoist (Static Load),
_____ Main Hook speed
_____ Aux Hook speed
_____ Boom Luffing
_____ Swing 360 degrees unlimited

3.4.2 Structural Design Verification Conditions

_____ Structural design of the crane shall be checked against following requirement:
_____ The crane calculations shall be made for all load operations in the most adverse positions, and for wind velocity of at least 40 knots, for Crane in operation, and at least 70 knots, for Crane out of operation in stowed position.

3.4.3 Power and Drive Systems

_____ The crane prime mover shall drive, via independent hydraulic circuits, all the crane motions and auxiliary functions as necessary.
_____ In an emergency loss of prime mover power, the crane shall fail safe. It shall be possible to manually lower the load as required by API Spec 2C. The emergency power system shall allow the crane to be slewed to a safe position and set down the boom in the boom rest.
_____ The load hoist hydraulic system shall be designed to prevent the load lowering before rising when the joystick is moved to the raise position. The winch drums ensure correct spooling during all operating conditions including no load and high winds.

3.4.4 Brakes

_____ The load hoists shall have static brake systems on the winch input drive shaft.
_____ All brakes shall be arranged to automatically apply their full braking force progressively and without shock in case of power failure or a failure in the control system. This braking force shall be sufficient to stop and hold a load of 1.33 times the rated load of the crane hook under all design conditions, including wind, horizontal slide and forward loads, absolute vertical velocity of the cargo deck etc.
_____ The brakes shall be applied directly to the drum.
_____ The hoist drums shall be provided with a non-spark rope guard or spooling arrangement to prevent rope from sliding off.

3.4.5 Boom

_____ A detailed procedure for change out of boom sections, considering the layout of the barge, shall be included in the Operations and Maintenance manual.
_____ The complete boom shall be painted.

4 TECHNICAL REQUIREMENTS

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_____ The following sections are a summary of major requirements of this requisition. Supplier is required to review, become familiar with, and incorporate all requirements of requisition documents. All requirements shall apply unless an exception is granted in writing to Supplier by the Purchaser.

4.1 GENERAL

_____ Equipment supplied under this requisition shall be designed for a life in excess of thirty (30) years' service life. Additionally, the equipment and components shall be subjected to "Intermediate Duty" as defined in API Spec 2C. Hydraulic pumps for crane lifting and slewing functions shall be variable displacement type.

_____ The equipment shall be designed for installation on a 150-ft by 55 ft construction barge.

_____ Supplier provided equipment shall be selected such as to reduce the amount of spares inventory the Owner must purchase.

_____ The supplier shall confirm any and all design information provided by Purchaser and Owner and, during detailed engineering, shall provide sizing calculations or selection criteria for all equipment, instruments, structures, and center of gravity for review, approval, and use by the Purchaser and Owner.

4.1.1 Failure Mode Analysis

_____ The designer shall complete a detailed structural analysis and identify the critical members/ components. The analysis shall also include a failure mode analysis, analyzing the structure in the failure mode (i.e., after failure of the critical members such as structures, winches, ropes, and hooks).

_____ Catastrophic overload caused by the hook being pulled away from the crane either in vertical or in horizontal direction, shall be evaluated.

_____ The failure strength of the principal load carrying components shall be such that the consequences of a catastrophic overcapacity situation is minimized, with priority on safety of humans, equipment, and the environment. The failure strength of the principal load carrying components shall be such that the components supporting the operator's cabin are not the first to fail in any condition.

_____ The analysis shall be submitted to the Purchaser and the Owner for review and approval prior to commencement of the crane fabrication and will be used to understand reliability and consequence of failure of all crane components.

4.1.2 Performance Criteria

_____ The design of the crane, structures and bearings shall be suitable for all cases and continuous operation at all load ranges.

_____ Crane operation shall be conducted primarily in calm water conditions with waves primarily from passing ships. Wake is predominantly in the 0.5 to 1.2 ft range at between 2.5 to 5 second periods. Wind waves during operations may reach 1.5 ft significant height with peak spectral period of 4 seconds. Note that a vessel motions analysis is not available.

_____ Design wind speed for the crane shall be 40 knots for any operating condition.

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4.1.3 Measurement Unit and Language

_____ The measuring unit and language shall be used for nameplates, caution plates, instruments and drawing shall be as follows:

Item	Standard
Units:	U.S. Customary Units (ft, lbs, kips, etc)
Language:	English
Caution Plate (safety signs):	English

OHSA recognized visual signs shall be utilized

4.1.4 Site Conditions Data

_____ The equipment shall be suitable for outdoor installation and subjected to the ambient site conditions and vessel operating and transportation loads as described in the project specifications, unless otherwise specified. This shall include all forces imposed upon the equipment by transportation to Fabricator, vessel motion during transportation to site and while installed on barge for its operating life.

Item	Data
Ambient Air Temperatures:	32 °F to 104°F in open areas
Humidity:	Up to 100% Relative Humidity
Atmosphere:	Salt laden, marine

4.1.5 Noise and Vibration

_____ Noise levels shall not exceed 80 dBA inside the cab when crane operating at full speed.

_____ Vibration shall be minimized as far as practicable by design.

4.1.6 Materials

_____ Supplier is responsible for recommending correct materials specifications and grades and pre and post fabrication treatments for the equipment suitable for its environment, and design conditions, including fluids handled in the equipment.

_____ Supplier shall be responsible for providing documentation suitable and approved by regulatory authorities for all equipment required by them.

_____ Supplier is responsible for material handling access / egress.

_____ Supplier shall provide listing of all Suppliers' Sub-suppliers for all items provided. Alternative materials suitable for the service should be submitted to Purchaser and Owner for review and approval.

_____ Any stainless-steel tubing used in the hydraulic systems shall be type 316 with Molybdenum (Mo) content greater than 2.5%.

4.1.7 Structural

_____ All structural design shall be in accordance with the Supplier project specifications. Ultimately, the completed crane will be delivered directly to the barge fabrication yard, lifted onto the hull, and placed onto the barge-provided foundation extending from the deck of the hull.

4.1.8 Electrical

_____ Supplier shall sub-distribute and provide distribution circuit breakers within crane cabin. Necessary disconnect switch and overload and short circuit protection shall be provided (MCCB/ MCB – Molded Cast Circuit Breaker/Miniature Circuit Breaker) for each individual consumer.

4.1.9 Tagging

_____ Tag numbers shall be assigned by Supplier and shall then be followed through consistently on all Supplier drawings, documentation, and nameplates.

_____ This tagging system typically will not be applied to piping, internal electrical cabling, or equipment-specific components.

4.1.10 Regulatory Compliance

_____ The vessel upon which this equipment will be installed will not be classed. However, the subject equipment shall comply with all OSHA requirements regarding equipment and personnel safety. The State of California has requirements concerning crane design, testing, certification, and operation as outlined in State of California Regulations 1619 and referenced regulations. All certifications required for a new crane shall be obtained by supplier and submitted to Purchaser and Owner prior to final delivery of crane and barge.

4.2 MAINTENANCE REQUIREMENTS

_____ The layout of equipment, and space, on the crane shall ensure that the maintenance activities, including the removal of all major pieces of equipment, can be carried out efficiently in the minimum of time.

_____ The layout of equipment shall permit ease of maintenance with adequate withdrawal space for components which can reasonably be expected to require removal in the lifetime of the equipment.

_____ The crane shall be fitted with all maintenance appurtenances required to allow this to be carried out.

4.2.1 Access

_____ The crane shall be provided with access ladders, walkways, and all necessary handrails, to allow safe access to all parts of the crane for inspection and maintenance. Safe access shall be provided to the gantry or king post frame (depending on crane type), boom (with handrail) including the boom head, and including access to all equipment including light fixtures. The Supplier shall provide all necessary access platforms and an access ladder, with safety hoops. There shall be a safe means of access to the boom.

_____ Each item of mechanical handling equipment shall allow safe access to all parts for inspection and maintenance purposes.

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4.2.2 Safety Devices

_____ Safety devices shall not be dependent on air or electrical power except the crane monitor system.

_____ The crane shall also be fitted with a Safe Load Indicator with a recording facility to provide the lifting history of the crane (programmed PLC (programable logic controller) function, retrievable).

_____ The systems shall be simple, easy to maintain, and provide the crane operator with a status indication in the cab that they are fully operational.

_____ Floodlighting is required to illuminate the load throughout the entire operating envelope of the crane. Lighting is required for all access ways, ladders and working maintenance areas, this shall be combined with emergency lighting to ensure that personnel have sufficient light to exit from any area of the crane onto the main barge deck.

_____ An anemometer and wind direction indicator system shall be installed with the sensing units located on the top of the gantry where it can be reached for maintenance. Readout shall be located in the operator's cab where easily visible to the operator. The unit shall be powered by the crane power system (i.e. at battery voltage).

_____ Electrical isolators for Electrical cabinets shall be provided, if applicable.

4.2.3 Ring or Kingpost Bearing

_____ Depending on the kind of crane, i.e. pedestal with ring bearing, or kingpost with upper and lower bearings, procedures and necessary equipment regarding following items 1-4 shall be provided:

1 Replacement of bearing (ref para 3.3.6 or 3.3.7 as appropriate)
2 Bearing wear test.
3 Taking of grease samples.
4 Alignment check and adjustment of slew pinion and gear.

4.3 FABRICATION AND ASSEMBLY

_____ Equipment shall be completely fabricated, painted, assembled, inspected, and function tested in Supplier facility.

4.3.1 Quality Assurance / Quality Control

_____ The Purchaser and the Owner will ensure all purchased products conform to specified purchase order requirements by establishing and implementing any necessary source inspections or other activities. When source inspections are required, Purchaser's (and possibly Owner's) inspector(s) will conduct activities based on the Purchaser/Owner-approved Supplier Inspection and Test Plan (ITP). The Supplier must identify the critical inspection activities and present these in their Supplier Inspection and Test Plan. The product will not be allowed to ship until the inspector(s) issues an Inspection Release Certificate.

_____ Purchaser's and Owner's QA/QC contact information will be provided at the Supplier kick-off meeting.

_____ The SUPPLIER shall perform work in compliance with ISO 9001 Guidelines.

4.3.2 Materials

_____ Supplier shall furnish new and unused materials, including CA required documentation, as required. Materials shall be free from manufacturing defects.

4.3.3 Electrical

_____ The Supplier shall pre-wire all instruments and utility supplies to junction boxes mounted on the crane. The Supplier shall include cabling, cable trays of SS 316L, glanding, labeling, terminating, and testing all terminations.

4.3.3.1 General

_____ All recommended practices of ABS, USCG, and IEEE-45-2002 Recommended Practice for Electric Installations on Shipboard are deemed requirements of this Specification. All work shall conform to the latest U.S. Coast Guard and ABS Rules.

_____ All required equipment shall be Contractor furnished and installed.

_____ The Contractor shall provide vendor data of all Contractor-furnished equipment in the Data Book described in Section 4.4, Crane Documentation.

4.3.3.2 Cable & Cable Installation

_____ Cables shall be installed in Cableways in compliance with ABS, USCG, and other applicable Regulatory Body Requirements.

_____ Electrical cables shall meet ABS requirements, including flammability and bunched flammability criteria. Power cables shall have a 90°C operating temperature. All cables shall be properly selected for their intended purpose. Cables shall be run as directly as practicable, consistent with adequate ventilation of the cable wire ways, and with due care in the avoidance of hazardous or otherwise undesirable locations.

_____ Cables, insofar as practicable, shall not be installed in locations exposed to weather. Cables for weather deck mounted fixtures and equipment shall be installed on the inside surface of house structures supporting such fixtures and equipment.

_____ Cabling shall be neatly formed and installed in a workmanlike manner, giving particular attention to appearance.

_____ All cables shall be continuous between outlet boxes, connection boxes, switchboards, panel boards, etc. They shall enter the box and shall be secured by a clamp or connector to assure a good electrical connection between the cable armor, where fitted, and the box and wiring device, or the cable armor may be electrically connected to the enclosure by means of a suitable clamp or strap.

_____ Cable entry into electrical equipment in exposed areas shall generally be from below unless otherwise noted. At specific locations, where cable entry from below is impractical, cable entry from another direction shall be the subject of approval by the Purchaser and Owner.

_____ Control and monitoring cables to sensors, remote distribution panels, or to main processors, shall be segregated from power and lighting cables by at least 50 mm, or as otherwise approved by the Purchaser and Owner.

_____ Cable splicing shall not be allowed unless specified for a particular piece of equipment. Where required, the splice shall meet the ABS requirements in 4-8-3/9.19 and 4-8-4/21.23. The splice shall stagger the connections of each conductor. The splice kit shall provide for a watertight connection that incorporates crimped conductor connections, epoxy resin, and heat shrink jackets. Taping is not an acceptable alternative.

_____ Where cables pass through areas where they may be damaged, they shall be protected by stainless steel pipe or other Owner-approved conduit.

_____ Any damage to the cable outer jacket that occurs during cable installation shall be repaired by using a repair kit specifically designed for such purpose. Taping the cable jacket will not be acceptable. Where installation damage affects the conductor or conductor insulation, the entire cable shall be replaced.

_____ Connection of ship's cables by twisting together and taping is strictly prohibited. Removing strands from wire to fit a smaller lug is also prohibited.

_____ Where cables are oversized to suit voltage drop conditions and cannot easily be connected to light fixtures or convenience outlets, a jumper wire of smaller size can be used to connect the fixture or outlet to the larger cables to the fixture. The jumper must be lugged on both ends and made with a bolted splice inside of the fixture or outlet enclosure. The jumper wire must be sized to be adequately protected by the circuit breaker feeding the oversized cable.

_____ A single layer of cables shall rest on one hanger except that a second layer of smaller cables may be installed to fill in between larger cables to facilitate strapping of cables. If an additional layer of cables is required, it shall be supported on a second hanger bracketed a sufficient distance from the first to permit painting and inspection.

4.3.3.3 Cableway & Penetrations

_____ Where cables pass through non-watertight non-gastight bulkheads, decks, or platforms, the openings shall be fitted with collars which extend at least 100 mm (6") above/below platforms and decks, and at least 50 mm from the surface of each side of bulkheads. If cables are to lay against the collar, a rubber or other softener shall be placed between the cables and the collar to prevent chafing.

_____ Cable supports shall be spaced not more than 300 mm (12") on horizontal and 500 mm (20") on vertical runs

_____ Steel hanger or flat bar not less than 5 mm (1/4") thick with corrosion resistant finish shall be used for all cable hanger material. Painting shall be acceptable as a corrosion resistant material for interior locations. Stainless steel shall be used for weather deck and other wet locations. Bolts, nuts, and washers are to be cadmium plated for interior use and are to be stainless steel or bronze for exterior use.

_____ Attachments to watertight bulkheads or decks by means of rivets or bolts penetrating the bulkhead or deck is not permitted. Studs or steel framing welded to the bulkhead or deck shall be used for mounting supports.

_____ Horizontal cableways on deck shall be protected over their entire length by a removable steel cover at least 5mm thick to protect against damage.

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_____ Local runs of cable between cableways and devices may be supported by weld stud hangers or minimum 1" wide flat bar, with maximum spacing of 500 mm (20") between supports.
_____ Cables shall be strapped with stainless steel band straps at least 12 mm (1/2") wide to every fourth hanger on horizontal runs and every hanger on vertical or bulkhead runs. Where cables are supported by the strapping, they shall be strapped on every hanger.

4.3.4 Nameplates and Labels

_____ Nameplates shall be of 316 stainless steel, plastic (flame-retardant material) or bronze, and information shall be etched or embossed.
_____ Nameplate shall be mounted on equipment in a visible location.
_____ All equipment, instruments, and controls shall be provided with a label plate identifying the system to which the item belongs, its tag number and any other pertinent operational data.
_____ Label plates shall be engraved, 3-laminate, colored plastic.
_____ Non-corrosive methods shall be used to identify all components permanently and clearly.
_____ Nameplates shall be permanently mounted on the unit in an accessible location using stainless steel pins.
_____ All nameplate details shall be shown on drawings and submitted for Purchaser and Owner review and comment.
_____ Major equipment components shall have a permanently attached, engraved, or stamped nameplate with the following information:
_____ Name of fabricator
_____ Date of manufacture
_____ Fabricator's serial number
_____ Item tag number
_____ Unit capacity

4.3.5 Assembly

_____ Unit shall be, as far as practicable provided fully assembled. Any disassembly required for shipping shall be performed in Supplier's shop. Supplier shall include an option to provide field labor and materials for re-assembly at Purchaser's facility in Supplier Scope of Supply as a line-item option.
_____ No threaded connections shall be allowed in fuel service.

4.3.6 Coatings and Corrosion Protection

_____ Supplier shall propose and submit an offshore coating system suitable for a marine, salt-laden environment. Purchaser and Owner shall either agree to Supplier's proposal or provide a counter proposal of a system.
_____ All Major buyout items, such as the prime mover, pumps, valves, etc. contained within the machinery enclosure shall retain their factory OEM coatings.

_____ The final paint color for the external parts of the crane including the cab, frame, gantry, boom, machinery enclosure, handrails, and other parts visible from the side and below shall be "Port Blue" per the following description:

_____ Port Blue: per PPG 1/48 point scale 96 line colorant:

1. Thalo Green 8 -1/2 ounces per 5 gallons (D)
2. Thalo Blue 16 -3/4 ounces per 5 gallons (E)
3. Raw Umber ¼ ounce per 5 gallons (L)
4. Titanium White 9 ounces per 5 gallons (W)

_____ The pedestal shall be gray (Purchaser to provide RAL No.) to match the barge stub.

4.3.7 Inspection and Testing

_____ Supplier shall present their standard inspection / testing plan (ITP) with the quotation.

_____ The equipment shall be fully assembled and tested by Supplier prior to shipment. Dry Instrument Air (Free of oil and moisture) shall be used for testing of instrumentation requiring gas or air.

_____ This equipment shall be supplied with manufacturing and testing survey reports signed by Purchaser (and Owner if present).

_____ The crane test procedure shall be submitted to Purchaser and Owner for approval.

_____ The test schedule shall be notified to Purchaser and Owner at least one month in advance.

_____ Inspection and test record shall be submitted at equipment delivery. The record will cover all inspection and testing performed including

_____ Structure material and welding

_____ Piping material and valve & fitting

_____ Electrical and Instrumentation

_____ Function test of fully assembled crane

_____ Load test.

_____ Each item of the mechanical handling equipment shall be fully tested at the Supplier's works.

_____ THE FOLLOWING ADDITIONAL NDE (Non Destructive Examination) REQUIREMENTS SHALL APPLY:

_____ i) All welds in pressure parts constructed from stainless steel materials shall be subject to 100% dye penetrate inspection.

_____ ii) All welds to be 100% visually inspected and 100% Magnetic Particle inspected. Full penetration and Butt welds will also be subjected to 100% volumetric NDE by either ultrasonic or radiography. All areas under lifting points shall be subject to 100% ultrasonic inspection before welding on the attachment to ensure area is free from subsurface laminations, followed by Ultrasonic Testing (UT) inspection to verify weld quality.

_____ iii) The acceptance criteria for NDE shall be in accordance with American Welding Society (AWS) D1.1 Table 6.1 for Visual and Magnetic Particle Inspection. For Volumetric examination by either Ultrasonic or Radiography the acceptance criteria shall be AWS D1.1 Sections 6.13.2 and 6.12.1 respectively.

_____ Crane, hoists, wire ropes, hooks, shall be proof load tested and certified.

4.3.8 Preparation for shipment

_____ Unless otherwise approved in writing by Purchaser and Owner, no work which requires inspection and testing may be shipped until the work has been inspected, tested and Purchaser and Owner have issued a signed Inspection Release Certificate (IRC) to Supplier. If CA survey is required, this equipment may not be shipped until CA has issued a survey report or has signed a letter stating that: they intend to issue a survey report and shipping may be allowed.

_____ Supplier shall provide the work FOB or other mutually agreed shipping terms from Supplier's facility to Fabricator's facility, domestic packed, loaded and secured onto Supplier's supplied transport in accordance with contract procedures and specifications.

_____ The Supplier shall be responsible for the loading and securing and transport of the equipment to Purchaser's facility.

_____ Screwed connections shall be protected with threaded steel plugs or caps.

_____ All machined surfaces and threaded connections subject to corrosion from atmospheric conditions shall be protected by coating with a rust prevention product.

_____ Coupling spacers shall be removed, boxed (complete with bolts), and shipped inside the skid package.

_____ Any openings in piping, flanges, and fittings, junction boxes, panels, and conduit shall be blanked off (airtight) and protected with wood or steel covers. Covers shall be attached by bolting or threading.

_____ All instruments, controls, and other items that are susceptible to damage during shipment shall be removed, crated in waterproof boxes, and securely strapped to the skid.

_____ One set of installation, operating and maintenance instructions and preservation procedures shall be included with the equipment at the time of shipment.

_____ Supplier shall submit equipment preservation procedures to Purchaser and Owner, for review and approval, at least two (2) months prior to shipment.

_____ Equipment shall be prepared for outdoor storage per Purchaser and Owner approved procedures. The duration of storage shall be as per contract, default minimum shall be 12 months.

4.3.9 Heavy Lift

_____ If the equipment is designated as "Heavy Lift" or if this requisition is for heavy lift services, supplier shall include in supplier pricing to provide the Load out Option 2: using crawler crane

_____ Supplier shall provide all calculations required for lift, load out, sea fastening, and transportation.

_____ If supplier is awarded an order, Supplier will provide the following information prior to shipment:

_____ Correct crane specs and certificates

_____ Padeye material / mill certificates, and padeye calculations

_____ Padeye Non Destructive Test reports
_____ Sling and shackle certificates, and calculations

4.4 DOCUMENTATION

_____ A full set of documentation for the crane shall be assembled and submitted to the Purchaser/Owner upon delivery of the crane. This documentation shall include the full set of records for the crane fabrication and assembly and documentation covering all of the purchased fittings and equipment installed. Operating and maintenance manuals shall also be prepared and submitted as part of the documentation set. Three volumes are envisioned, 1) a data book, 2) an assembly and maintenance manual, and 3) an operating manual.

4.4.1 Crane Fabrication and Data Documentation

_____ Crane documentation shall include as-built drawings with final member sizes and arrangements, final inspection reports, material certificates, weld inspection records, coating inspection records, final test reports, final weight reports, and any other relevant documentation. The Data Book shall include equipment cut sheets, dimensioned arrangement drawings, parts lists, assembly drawings, component material descriptions, securing details, and details of interfaces with the barge piping, electrical power, and structural systems for all purchased equipment and fittings. All certifications and approval documents required for individual components and for the fully assembled crane shall be included in the data books.

4.4.2 Assembly and Maintenance Manual

_____ The assembly and maintenance manual to be prepared by the Supplier describing original crane assembly procedures required to assemble the crane on the barge initially, any commissioning procedures, and initial startup procedures. Maintenance procedures and intervals shall be described for each component of the crane requiring regular service. The documentation shall include original fabricators maintenance recommendations and procedures.

4.4.3 Operating Manual

_____ The operating manual shall include detailed instructions, procedures, and warnings for the safe operation of the crane and for each component installed on the crane. Each function shall be described and its operating procedures detailed.

4.4.4 Submittals

_____ Draft versions of each manual shall be submitted to the Purchaser and Owner for review and approval one month before delivery of the completed barge. The Purchaser and Owner will provide feedback two weeks prior to final acceptance testing of the crane.

_____ Four hard copies and one electronic copy of each manual shall be furnished to the Owner on final acceptance of the crane.

EXHIBIT A0
Specifications

4.5 POST DELIVERY ITEMS

4.5.1 Training

_____ Supplier shall specify how much training and how long that training should take for operators to become proficient in the operation and maintenance of the equipment. Supplier shall include the cost to provide training for up to five operators to become proficient on operating and maintaining Supplier Work as three line-item options. The first option shall only include for training Owner's operators at Supplier selected site (such as design or fabrication facility). The second option shall include training only in Fabricator's facility during pre-commissioning onboard the barge. The third option shall include training only at Owner's dock after barge delivered to Port of San Francisco.

4.5.2 Pre-Commissioning and Commissioning Assistance

_____ Supplier shall include the cost to provide startup and commissioning assistance at Fabricator for at least one week, as a line-item option.

4.5.3 Spare Parts, Special Tools and Accessories

_____ The Supplier shall submit the recommended spare parts lists (commissioning / start-up and two (2) years spares; Critical Spares shall be highlighted) with their proposal. The list shall be itemized and priced separately.

_____ The list of any special tools and accessories, and required operating chemicals, fluids or lubricants shall be furnished.

_____ Spare parts if furnished shall be provided in two (2) separate boxes and labeled as "Two Year Spares", and "Start Up and Commissioning Spare / Special Tools".

_____ All spare parts and special tools shall be provided in a supplier provided painted (crane part system with name stenciled on the box) job site steel box with a padlock locking mechanism.

_____ Spare parts and special tools if furnished shall be adequately protected from corrosion and mechanical damage. Identification tags or labeling shall be provided on every spare part and tool.

4.5.4 Warranty / Guarantee

_____ Supplier shall guarantee the performance of the Work as required by this requisition's documents. Failure to meet performance requirements shall obligate Supplier to repair or replace the equipment at their sole cost.

_____ Supplier shall warrant the work for 30 months from shipment or 12 months from first continuous use period (or any other milestone agreed by Owner in writing), whichever is longer. The warranty, as a minimum, shall cover all defects in and/or from: engineering, design, manufacturing, materials, corrosion protection application / performance, and preparation for shipment and packing. Performance guarantee shall be based on the requirements listed in paragraph 4.3.

_____ Warranty shall transfer to Owner in full on acceptance of crane after installation, commissioning and testing on the barge and final acceptance of barge from Purchaser.

APPENDIX 1 INFORMATION TO BE SUPPLIED WITH RESPONSE

Information to be supplied with respose:

_____ General Arrangement of the crane
_____ Plan view of crane
_____ Elevation view of crane
_____ Stack up Arrangements showing crane with hook block lifting 135' x 48" dia pile on barge with 3 ft draft. Two conditions shall be shown:
_____ Minimum hook radius with this lift – radius shall be clearly denoted
_____ hook radius of 60 ft
_____ Weight and Location of center of gravity of crane without boom
_____ Weight and Location of center of gravity of the boom only
_____ Manufacturer and Weights of Blocks (Main lifts) and Overhaul ball (Aux)
_____ Make and model of diesel engine plus Tier 4 certificate
_____ Make and model of other major components including hydraulic pump(s) and winches
_____ Sizes, lengths, strength, and construction of wire rope for each hoist
_____ Description of hydraulic system including justification for proposed pumps considering the Intermediate Duty service and longevity required.
_____ Joystick controls functions and arrangement
_____ Make and description of the crane load monitoring system
_____ Make and description of anemometer/wind indicator
_____ Proposed Coating System(s) for all parts of the crane
_____ Proposed Inspection and Test Plan with major hold points identified.
_____ Recommended spare parts lists (Critical Spares shall be highlighted):
_____ Commissioning / start-up
_____ Two (2) years spares
_____ Recommended training Options:
_____ At Supplier's facility during testing
_____ At Fabricator during testing and commissioning onboard the barge
_____ At Owner's facility after delivery of the barge
_____ Performance and process guarantees

Appendix 2 - Supplier Data Requirements

Supplier to provide the following information at a minimum with a draft prior to delivery and final version at delivery of the crane.

Item No.		Description	With Response	For Review and approval	Data Book Manual
_____	1	Arrangement Drawings	X	X	X
_____	2	Quality Manual		X	
_____	3	Inspection and Test Plan	X	X	

EXHIBIT A0
Specifications

2826	_____ 4	Engineering/Procurement/	X			
2827		Fabrication Schedule				
2828	_____ 5	Supplier Drawing and			X	
2829		Document Register				
2830	_____ 6	Installation, Operation and			X	X
2831		Maintenance Manual				
2832	_____ 7	Parts manual			X	X
2833	_____ 8	Commissioning Spare	X		X	X
2834		Parts Lists				
2835	_____ 9	Recommended Spare	X		X	X
2836		Parts Lists				
2837	_____ 10	List of Specialized Tools			X	X
2838	_____ 11	Manufacturers Catalogues				X
2839	_____ 12	Piping and Instrument			X	X
2840		Diagrams				
2841	_____ 13	Electrical Diagrams				
2842	_____ 14	Piping layout			X	X
2843	_____ 15	Detailed Drawings			X	X
2844	_____ 16	Technical Specification	X		X	

EXHIBIT A0
Specifications

RESPONSE EXCEPTION SHEETS

Return with Response if any exceptions are taken

Please Note: All exceptions to the City's specification shall be listed on the sheets provided, along with the rationale for the exceptions taken by Respondent to this RFQ.

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Exhibit A-1: General Arrangement

GENERAL NOTES

1. THIS DRAWING PRESENTS THE GENERAL ARRANGEMENT OF A CRANE BARGE FOR PERFORMING ROUTINE REPAIRS AND OTHER LIFTING WORKS ALONG THE SAN FRANCISCO WATERFRONT.
2. THE BARGE IS DESIGNED TO PROVIDE STABILITY AND STRENGTH TO LIFT AND HANDLE PILES UP TO 135 FT IN LENGTH AND TO 76,000 LB AT 60 FT RADIUS FROM CRANE CL. SPUD PILES TO HOLD BARGE IN 35 KNOTS WIND AND 2 KNOTS CURRENT IN 40 FT WATER DEPTH.
3. THE BARGE IS DESIGNED TO MEET THE REQUIREMENTS OF THE ABS RULES FOR BUILDING AND CLASSING STEEL BARGES, 2020, ALTHOUGH THE DESIGN WILL NOT ACTUALLY BE REVIEWED NOR APPROVED BY CLASS.
4. THE BARGE IS FURTHER DESIGNED TO SATISFY THE USCG STABILITY REQUIREMENTS IN 46 CFR SUBCHAPTER S.

ABBREVIATIONS

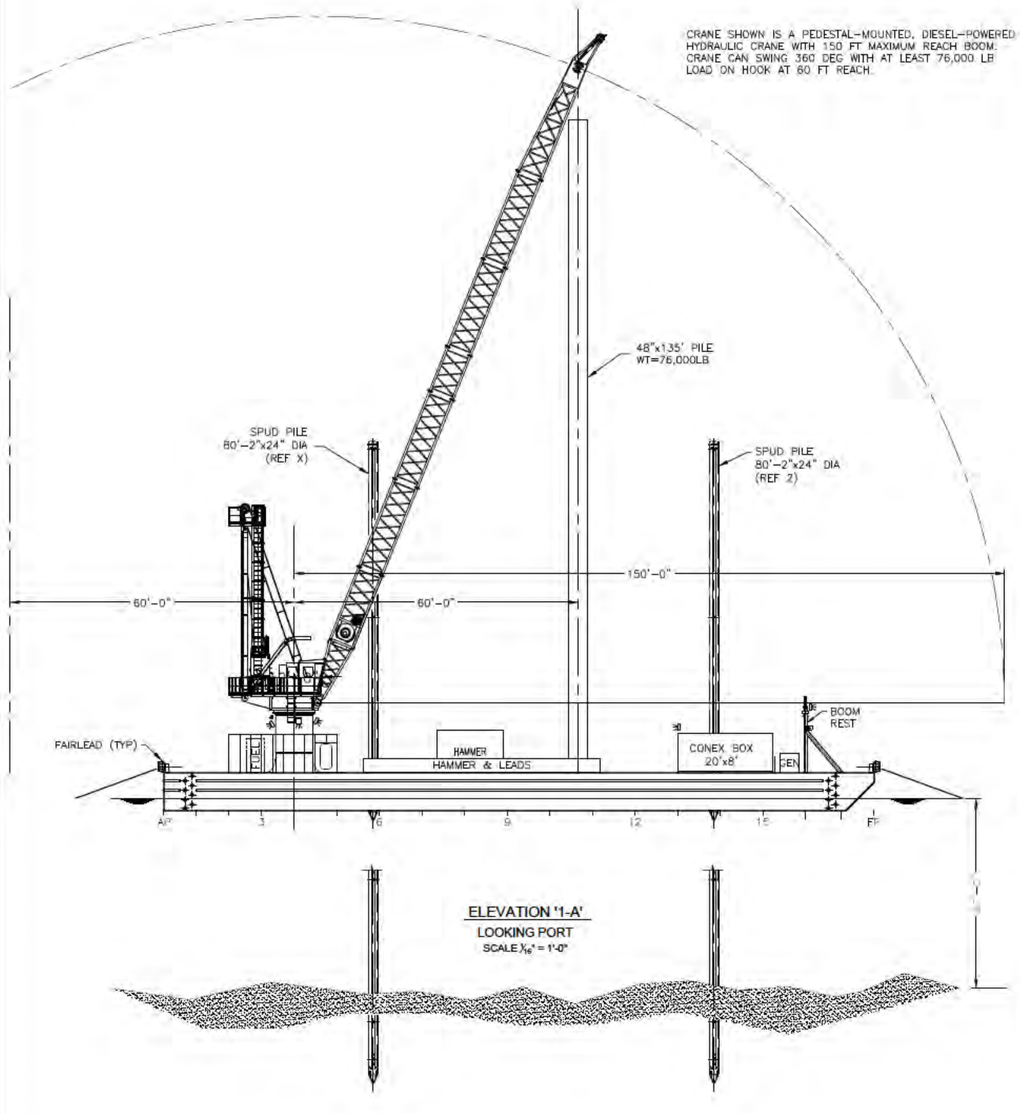
ABL — ABOVE BASELINE
ABT — ABOUT
BHD — BULKHEAD
BKT — BRACKET
BTM — BOTTOM
CHK — CHOCK
CL — CENTERLINE
CLR — CLEAR
CMG — COAMING
CTR — CENTER
DBL — DOUBLE
DET — DETAIL
D.O. — DITTO (SAME AS)
EXISTG — EXISTING
FR — FRAME
FWD — FORWARD
GDR — GIRDER
LONGL — LONGITUDINAL
NS — NEAR SIDE
N&F — NEAR & FAR
OPNG — OPENING
OUTBD — OUTBOARD
PLT — PLATE
PLTG — PLATING
REF — REFERENCE
STD — STANDARD
T&B — TOP & BOTTOM
TYP — TYPICAL
WT — WATERTIGHT

DRAWING INDEX

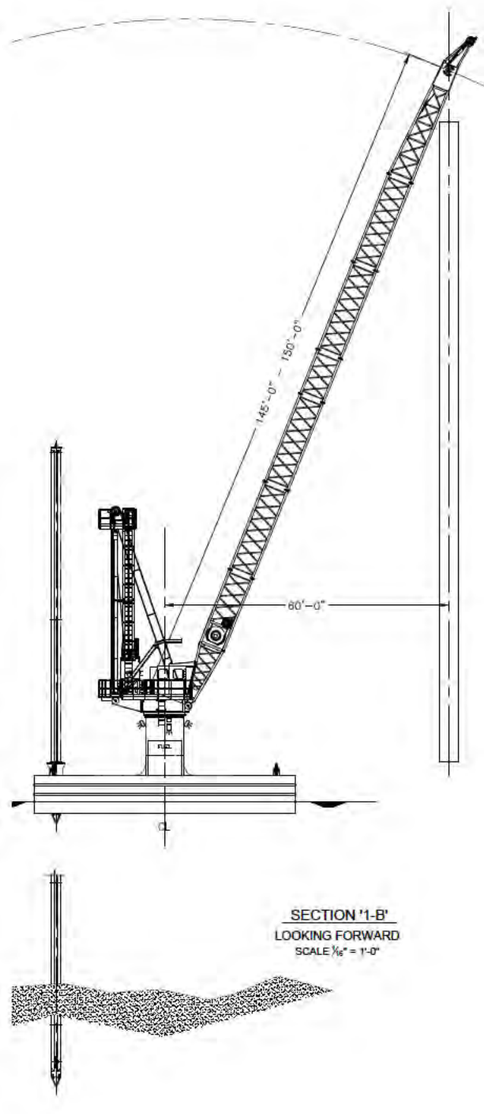
PRINCIPAL PARTICULARS

LENGTH ——— 150'–0"
BEAM ——— 55'–0"
DEPTH ——— 8'–0"
DRAFT ——— 2'–6"
DISPLACEMENT ——— 776 SHORT TONS (2)
LIFT CAPACITY ——— 180,000LB @ 25'–0" RADIUS (ANY DIRECTION)
LIFT CAPACITY ——— 112,000LB @ 60'–0" RADIUS (ANY DIRECTION)
LIFT CAPACITY ——— 26,500LB @ 150'–0" RADIUS (ANY DIRECTION)
DESIGN WATER DEPTH— 60 FT, MOORED; 40FT WITH SPUDS DOWN
AREA LOADING ON DECK = 1200 LB/SQUARE FOOT

CRANE SHOWN IS A PEDESTAL–MOUNTED, DIESEL–POWERED HYDRAULIC CRANE WITH 150 FT MAXIMUM REACH BOOM. CRANE CAN SWING 360 DEG WITH AT LEAST 76,000 LB LOAD ON HOOK AT 60 FT REACH.



ELEVATION '1-A'
LOOKING PORT
SCALE 1/16" = 1'-0"



SECTION '1-B'
LOOKING FORWARD
SCALE 1/16" = 1'-0"

REVISIONS

No.	DESCRIPTION	BY/DATE/APPD
-	PRELIMINARY ISSUE TO CLIENT FOR REVIEW.	RJP 12/11/20 JRP
0	PRELIMINARY ISSUE TO CLIENT FOR REVIEW. 1. SUBDIVIDED BOW CENTER VOID TO ADD CENTER FRESH WATER BALLAST TANK PLUS TWO VOIDS, ONE EACH P & S. 2. ADDED DECK HYDRAULIC PIPING.	JRP 3/08/21 JRP
1	ISSUE FOR BIDDING 1. ADDED SHELL POCKET LADDERS FORE AND AFT 2. ADDED SECOND DECK HATCH TO MOST COMPARTMENTS	JRP 4/06/21 JRP
2	RE–ISSUE FOR BIDDING 1. CORRECTED DISPLACEMENT	JRP 6/13/22 JRP

REFERENCES

No.	TITLE	DWG No.
1	STRUCTURAL SCANTLING PLAN	2018-060-01-02
2	SPUD PILE	2018-060-01-03
3	OUTFITTING	2018-060-01-04
4	MECHANICAL ARRANGEMENT	2018-060-01-05
5		

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DRWN:	RJP	DATE:	DEC 11, 2020	SCALE:	AS NOTED
CHKD:	JRP	APPD:	SAS	ACADFILE:	180000101-2
PROJECT FILE:		2018-060-01		PLOTSCALE:	1:2 ON ANSI D
ABS APPROVAL:	-				

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

CRANE BARGE

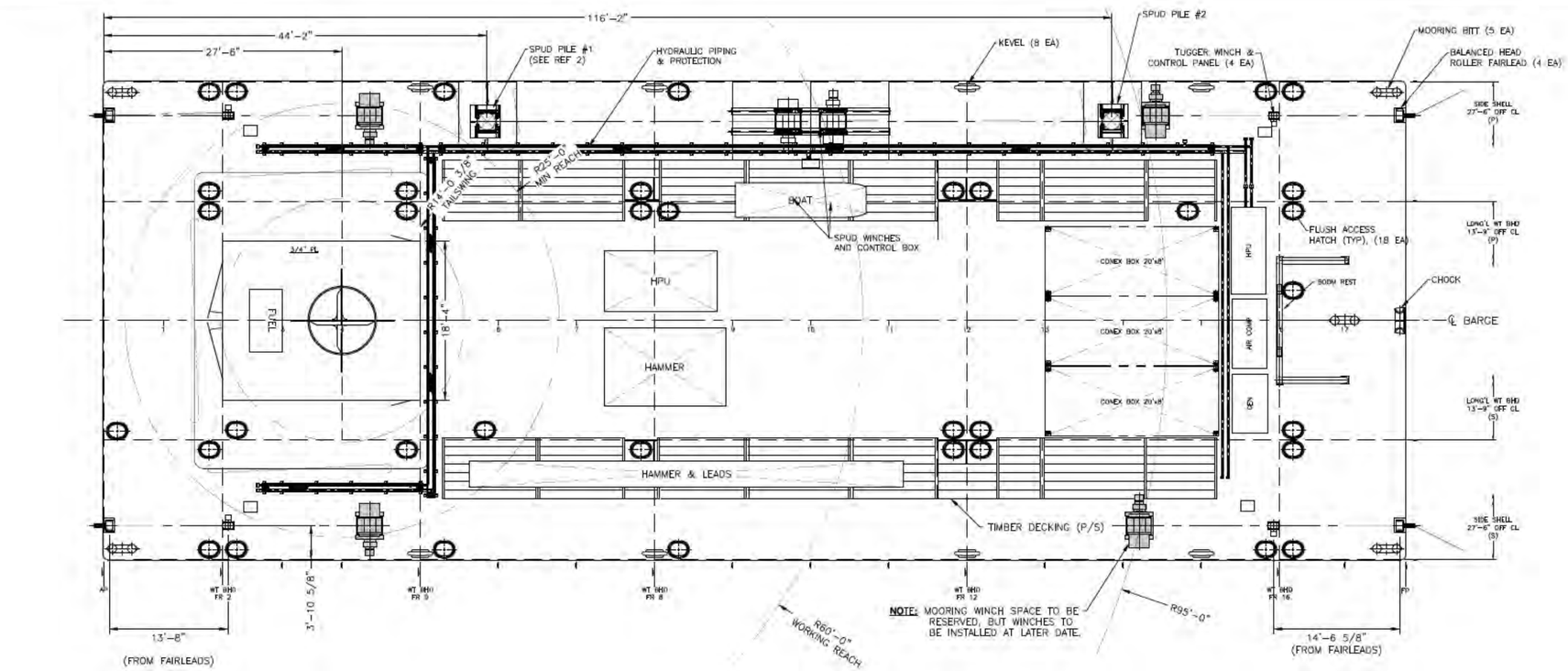
GENERAL ARRANGEMENT

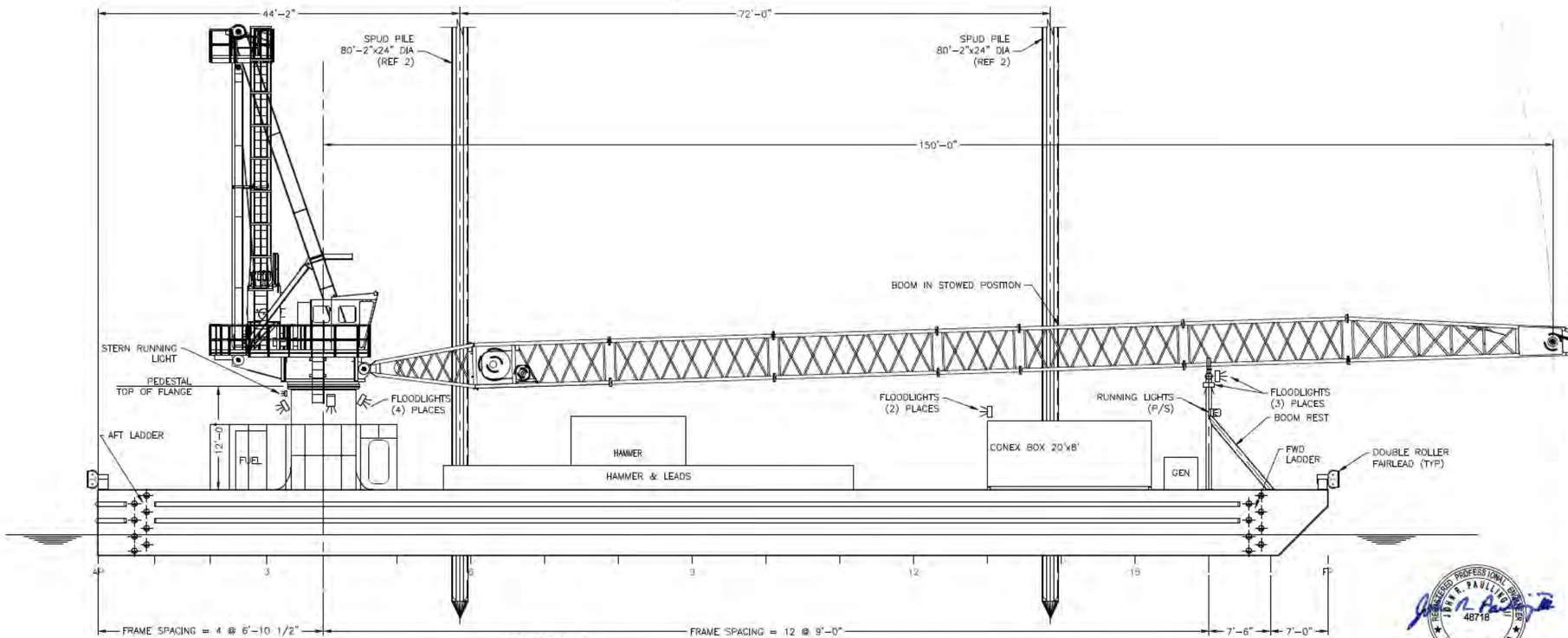
REGISTERED PROFESSIONAL ENGINEER JOHN R. PAULLIN 48718 CIVIL STATE OF CALIFORNIA

JUNE 13, 2022

OWNER APPVL:	-	HEC DWG No.:	2018-060-01-01
DATE:	-	SHEET 1 OF 3	REV 1
FILE:	-		

Exhibit A-1: General Arrangement





ELEVATION 2-B
MAIN DECK ARRANGEMENT
SCALE: 1/8"=1'-0"

REGISTERED PROFESSIONAL ENGINEER JOHN R. PAULLIN 48718 CIVIL STATE OF CALIFORNIA

JUNE 13, 2022

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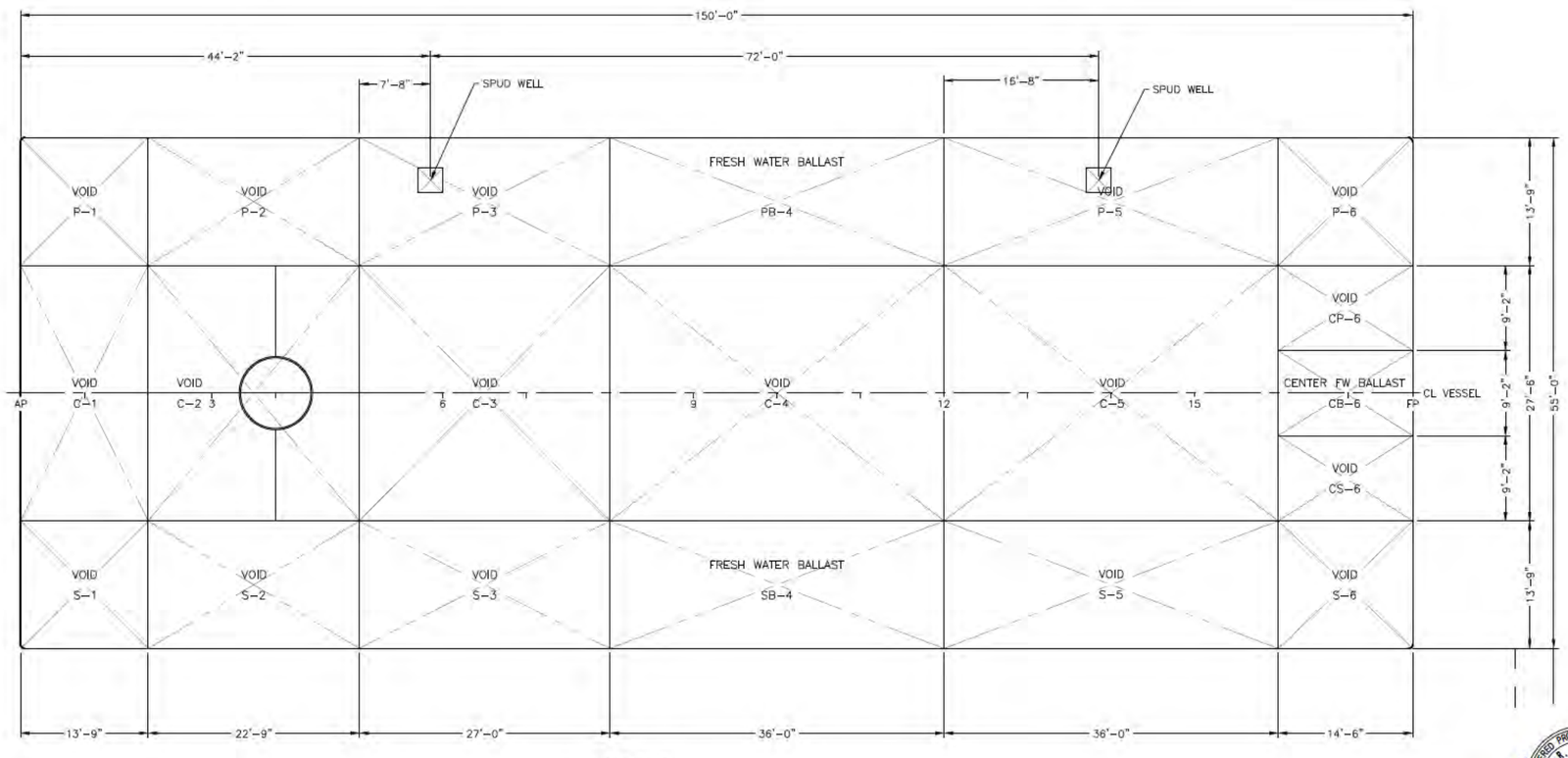
50 TON CRANE BARGE

GENERAL ARRANGEMENT

HEC DWG No.: 2018-060-01-01	SCALE: AS NOTED	SHEET 2 OF 3	REV 2

Exhibit A-1: General Arrangement



PLAN 3-A
TANK ARRANGEMENT
SCALE: 1/8"=1'-0"

REGISTERED PROFESSIONAL ENGINEER
JOHN A. PAULLIN
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50 TON CRANE BARGE

GENERAL ARRANGEMENT

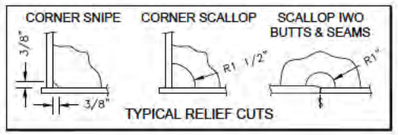
HEC DWG No.:	SCALE: AS NOTED	REV
2018-060-01-01	SHEET 3 OF 3	2

GENERAL NOTES

1. THIS DRAWING PRESENTS THE CONTRACT DESIGN OF A CRANE BARGE FOR PERFORMING ROUTINE REPAIRS AND OTHER LIFTING WORKS ALONG THE SAN FRANCISCO WATERFRONT.
2. ALL PLAN VIEWS ARE TOP LOOKING DOWN. ALL SECTIONS ARE LOOKING AFT. ELEVATIONS VIEWS ARE LOOKING TO PORT, AS FOLLOWS:
   - STARBOARD SIDE: OUTBOARD LOOKING INBOARD
   - PORT SIDE: INBOARD LOOKING OUTBOARD
3. THE BARGE IS DESIGNED TO PROVIDE STABILITY AND STRENGTH TO LIFT AND HANDLE PILES UP TO 135 FT IN LENGTH AND TO 76,000 LB AT A 60 FT RADIUS FROM CRANE CL.
4. THE BARGE IS DESIGNED TO MEET THE REQUIREMENTS OF THE ABS RULES FOR BUILDING AND CLASSING STEEL BARGES, 2020. THE DESIGN WILL NOT BE REVIEWED NOR APPROVED BY CLASS.
5. THE BARGE IS FURTHER DESIGNED TO SATISFY THE USCG STABILITY REQUIREMENTS IN 46 CFR SUBCHAPTER S.
6. ALL MATERIAL, WELDING, FABRICATION AND WORKMANSHIP IS TO BE IN ACCORDANCE WITH APPLICABLE ABS RULES AND TO THE SATISFACTION OF THE ATTENDING SURVEYOR (IF ANY) AND THE OWNER.
7. THERE SHALL BE NO SUBSTITUTIONS WITHOUT PRIOR APPROVAL OF SURVEYOR AND THE OWNER'S REPRESENTATIVE.
8. ALL NEW STEEL IS TO BE ABS GRADE A OR ASTM A-36 UNLESS NOTED OTHERWISE.
9. ALL FAYING SURFACES TO BE SEAL WELDED.
10. EXCEPT WHERE NOTED, ALL WELDS ARE TO BE DOUBLE CONTINUOUS FILLETS WRAPPED AT THE ENDS. UNLESS OTHERWISE INDICATED, WELDS SHALL BE SIZED PER THE TABLE SHOWN BELOW. SIZES PERTAIN TO THE LEG LENGTH.
11. PROVIDE RELIEF CUTS AS SHOWN IN THE TABLE BELOW. IF NONE IS SHOWN ON THE DETAIL, IT IS ASSUMED TO HAVE THE 3/8"x3/8" CORNER SNIPE FIT OVER EXISTING FILLET WELD AND IS TO BE FILLED WITH WELD. SCALLOPS SHALL HAVE RADII AS SHOWN IN THE TABLE BELOW UNLESS NOTED OTHERWISE.

FILLET WELD SIZING TABLE

THICKNESS OF THINNER PLATE	≤1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	≥3/4"
FILLET WELD LEG SIZE	3/16"	7/32"	7/32"	1/4"	5/16"	5/16"	3/8"



PRINCIPAL PARTICULARS

LENGTH _____ 150'-0"
BEAM _____ 55'-0"
DEPTH _____ 8'-0"
DRAFT _____ 2'-6"
DISPLACEMENT _____ 776 SHORT TONS
LIFT CAPACITY _____ 180,000LB @ 25'-0" RADIUS (ANY DIRECTION)
LIFT CAPACITY _____ 112,000LB @ 50'-0" RADIUS (ANY DIRECTION)
LIFT CAPACITY _____ 26,500LB @ 150'-0" RADIUS (ANY DIRECTION)
DESIGN WATER DEPTH_ 60 FT (MOORED)
DESIGN WATER DEPTH_ 40 FT (POSITIONED WITH SPUD PILES)
AREA LOADING ON DECK = 1200 LB/SQUARE FOOT

DRAWING INDEX

ABBREVIATIONS

ABL ___ ABOVE BASELINE
ABT ___ ABOUT
BHD ___ BULKHEAD
BKT ___ BRACKET
BTM ___ BOTTOM
CHK ___ CHOCK
CL ___ CENTERLINE
CLR ___ CLEAR
CMG ___ COAMING
CTR ___ CENTER
DBL ___ DOUBLE
DET ___ DETAIL
D.O. ___ DITTO (SAME AS)
EXISTG ___ EXISTING
FR ___ FRAME
FWD ___ FORWARD
GDR ___ GIRDER
LONGL ___ LONGITUDINAL
NS ___ NEAR SIDE
N&F ___ NEAR & FAR
OPNG ___ OPENING
OUTBD ___ OUTBOARD
PLT ___ PLATE
PLTG ___ PLATING
REF ___ REFERENCE
STD ___ STANDARD
T&B ___ TOP & BOTTOM
TYP ___ TYPICAL
WT ___ WATERTIGHT

REVISIONS

No.	DESCRIPTION	BY/DATE/APPD
-	PRELIMINARY ISSUE TO CLIENT FOR REVIEW.	RJP 12/11/20 JRP
0	ISSUE FOR BIDDING	JRP 3/8/21 JRP
1	ISSUE FOR BIDDING 1. ADD ONE DECK HATCH OPENING FOR MOST COMPARTMENTS 2. ADD CALL OUT FOR CL TRUSS CHORDS	JRP 4/6/21 JRP
2	RE-ISSUE FOR BIDDING 1. CORRECTED DISPLACEMENT	JRP 6/13/2022 JRP

REFERENCES

No.	TITLE	DWG No.
1	GENERAL ARRANGEMENT	2018-060-01-01
2	SPUD PILE	2018-060-01-03
3	OUTFITTING	2018-060-01-04
4	-	-
5	-	-

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DRWN: RJP	DATE: DEC 11, 2020	SCALE:	AS NOTED
CHKD: JRP	APPD: SAS	ACADFILE:	180600102-2
PROJECT FILE:	2018-060-01	PLOTSCALE: 1:2 ON ANSI B	
ABS APPROVAL: -			
-			

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

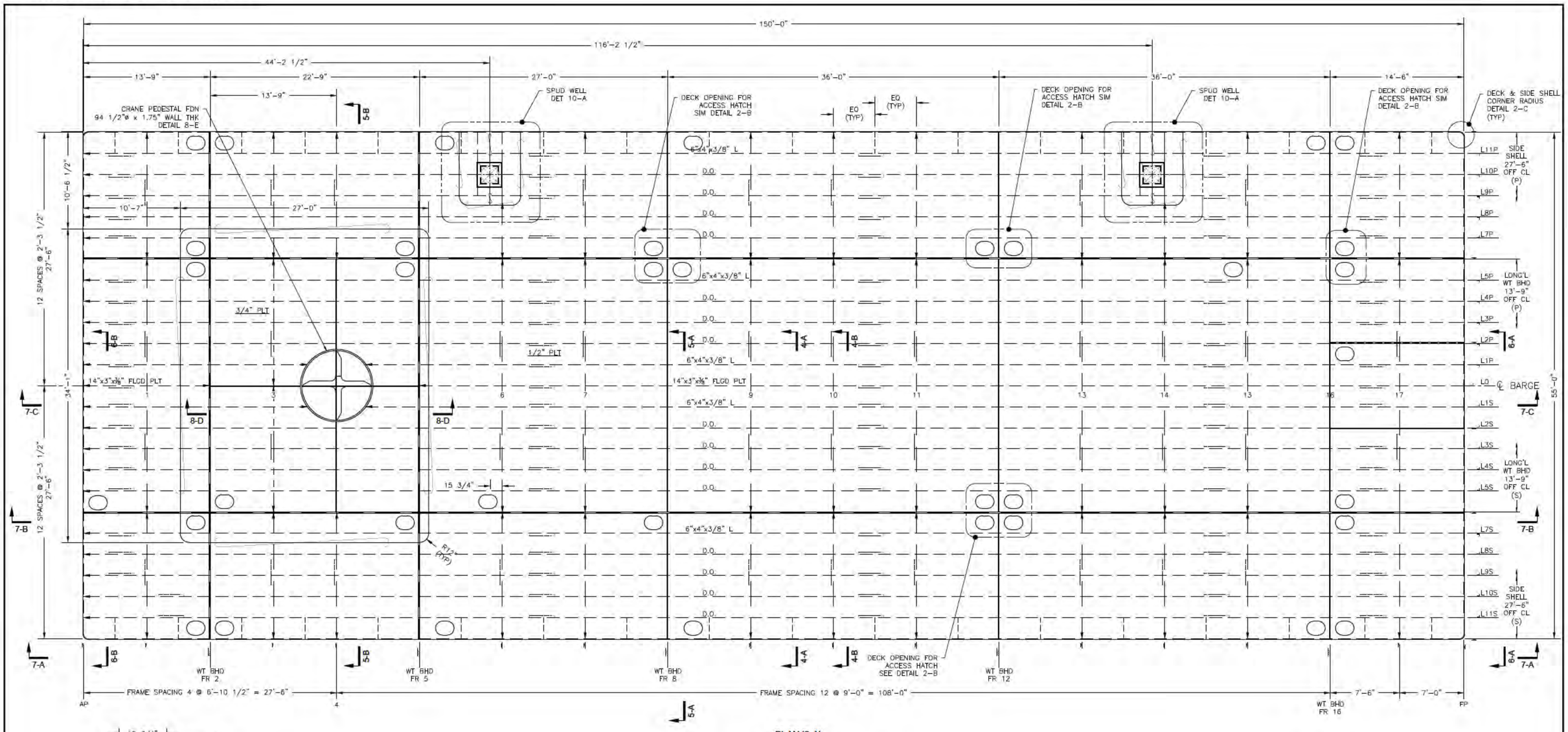
CRANE BARGE

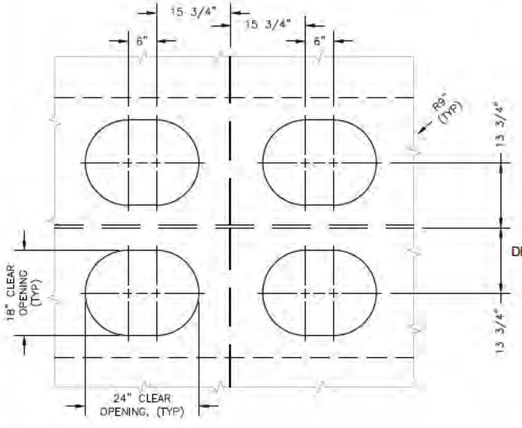
STRUCTURAL SCANTLING PLAN

REGISTERED PROF. STRUCTURAL ENGINEER DAN PAULINO 48718 CIVIL STATE OF CALIFORNIA
JUNE 13, 2022

OWNER APPVL:	-	HEC DWG No.:	2018-060-01-02
DATE:	-	SHEET 1 OF 12	REV 2
FILE:	-		

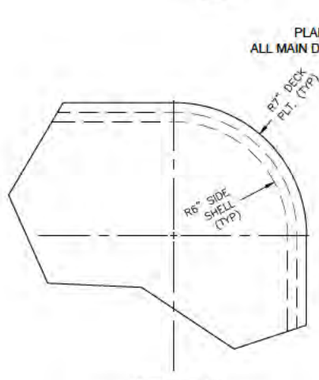
Exhibit A-2: Structural Scantling Plan





DETAIL '2-B'
DECK OPENING FOR ACCESS HATCH
SCALE: 3/4"=1'-0"

PLAN '2-A'
PLAN OF MAIN DECK STRUCTURE
ALL MAIN DECK PLATE = 1/2" EXCEPT AS NOTED
SCALE: 3/16" = 1'-0"



DETAIL '2-C'
DECK & SIDE SHELL RADIUS
SCALE: 3"=1'-0"

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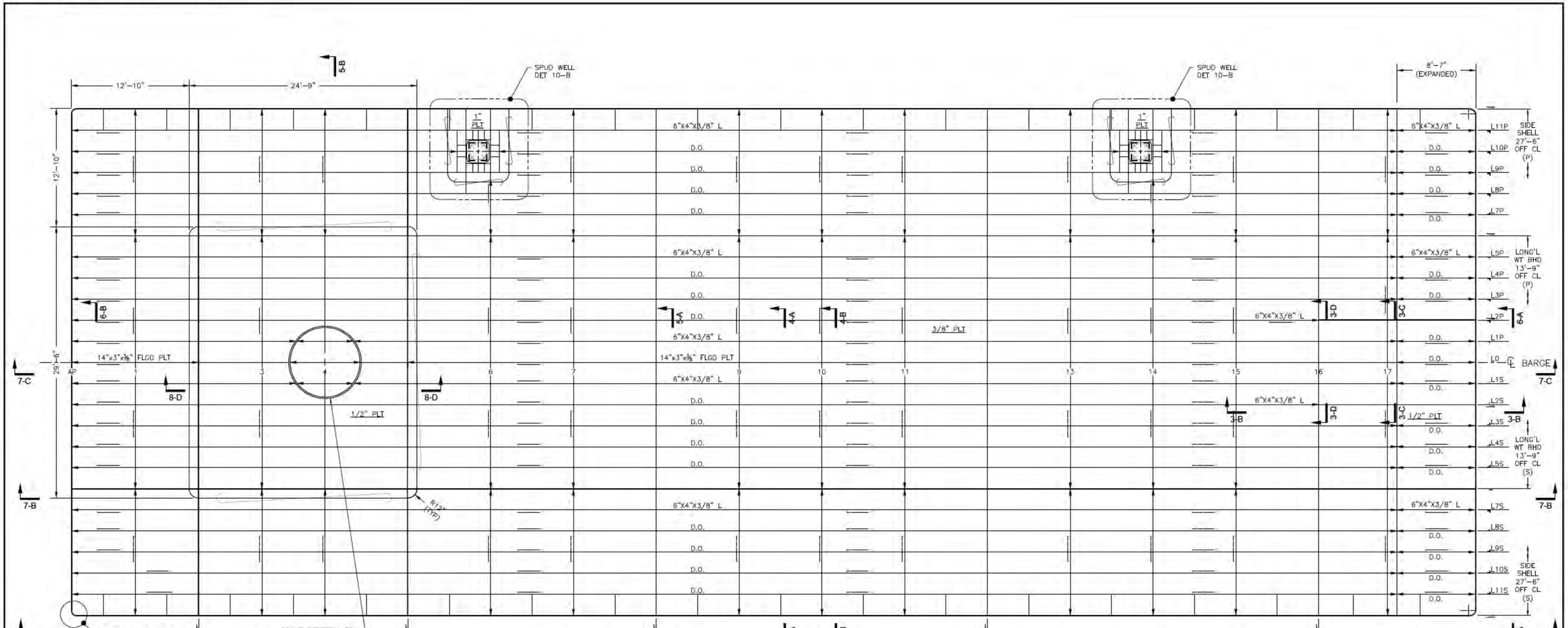
CRANE BARGE

STRUCTURAL SCANTLING PLAN

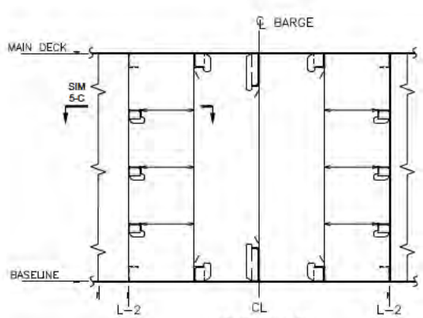
HEC DWG No.: 2018-060-01-02
SCALE: AS NOTED
SHEET 2 OF 12
REV 2

Exhibit A-2: Structural Scantling Plan



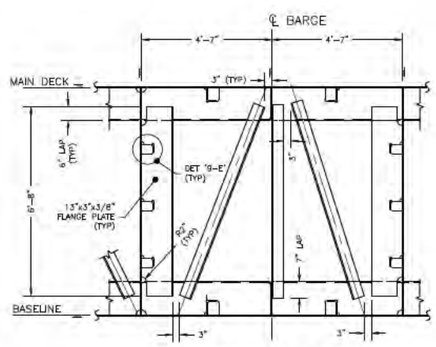
PLAN '3-A'

PLAN OF BOTTOM PLATE STRUCTURE
ALL BOTTOM PLATE = 3/8" EXCEPT AS NOTED
SCALE 3/16" = 1'-0"



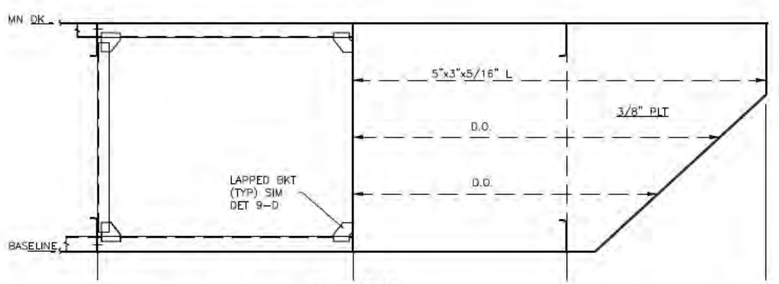
SECTION '3-D'

TRANSVERSE BULKHEAD AT FR 16
AT CL, LKG AFT
FOR INFO NOT SHOWN, SEE SECTION '5-A'
SCALE: 3/8"=1'0"



SECTION '3-C'

WEB FRAME 17
AT CL, LKG AFT
FOR INFO NOT SHOWN, SEE SECTION '4-B'
SCALE: 3/8"=1'-0"



ELEVATION '3-B'

LONGITUDINAL BULKHEADS - FR 16 TO BOW
4'-7" OFF CL, STBD SIDE, LKG INBD
PORT SIDE SIM TO OPP HAND
SCALE: 3/8"=1'-0"

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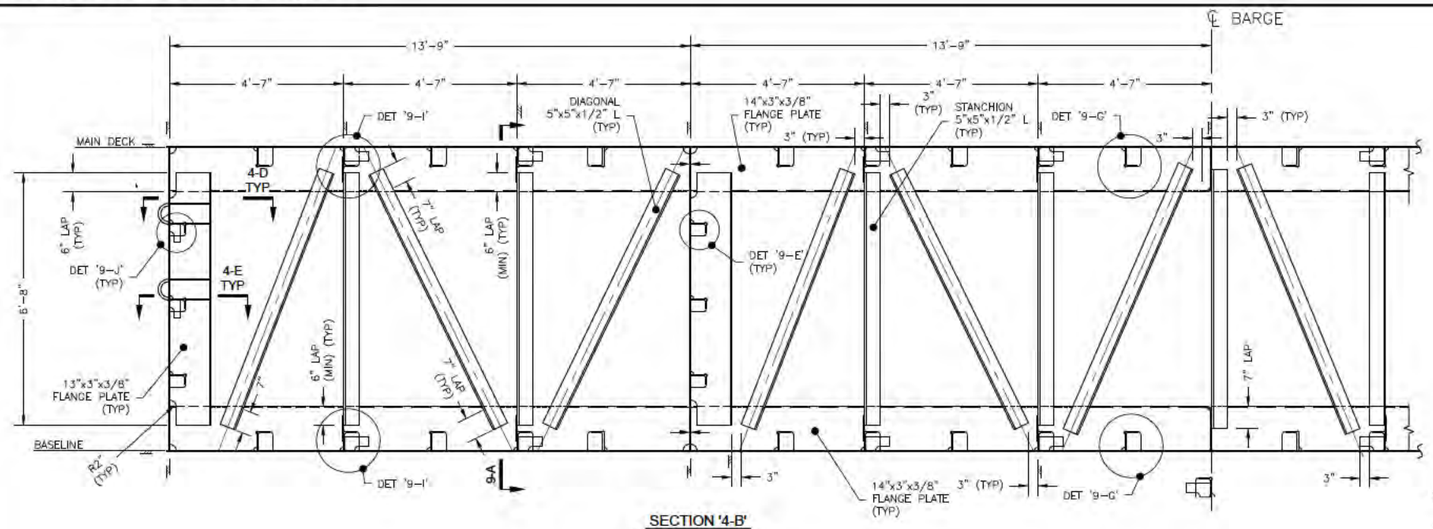
CRANE BARGE

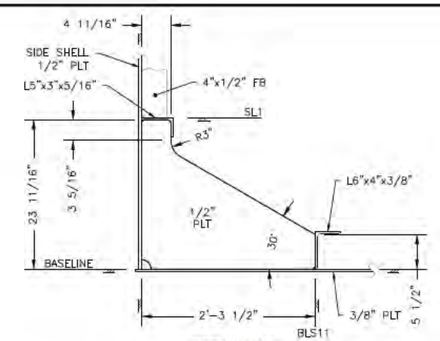
STRUCTURAL SCANTLING PLAN

HEC DWG No.:	SCALE:	AS NOTED	
2018-060-01-02	SHEET 3 OF 12		REV 2

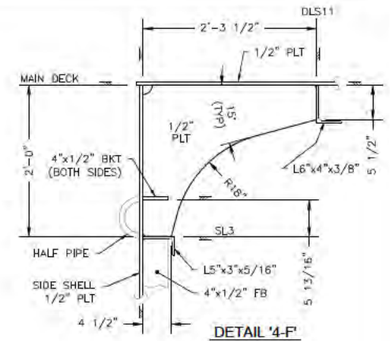
Exhibit A-2: Structural Scantling Plan



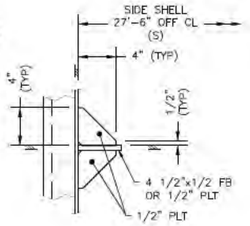
SECTION '4-B'
TYPICAL WEB FRAME
STBD SIDE, LKG AFT
PORT SIDE SIM TO OPP HAND
SCALE: 1/2"=1'0"



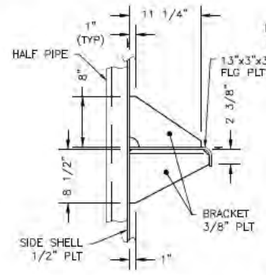
DETAIL '4-G'
BOTTOM BRACKET
SCALE: 1"=1'-0"



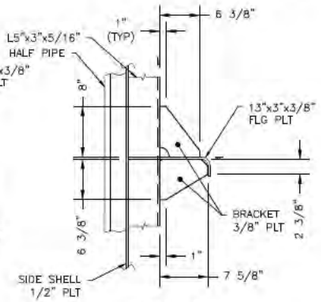
DETAIL '4-F'
TOP BRACKET
SCALE: 1"=1'-0"



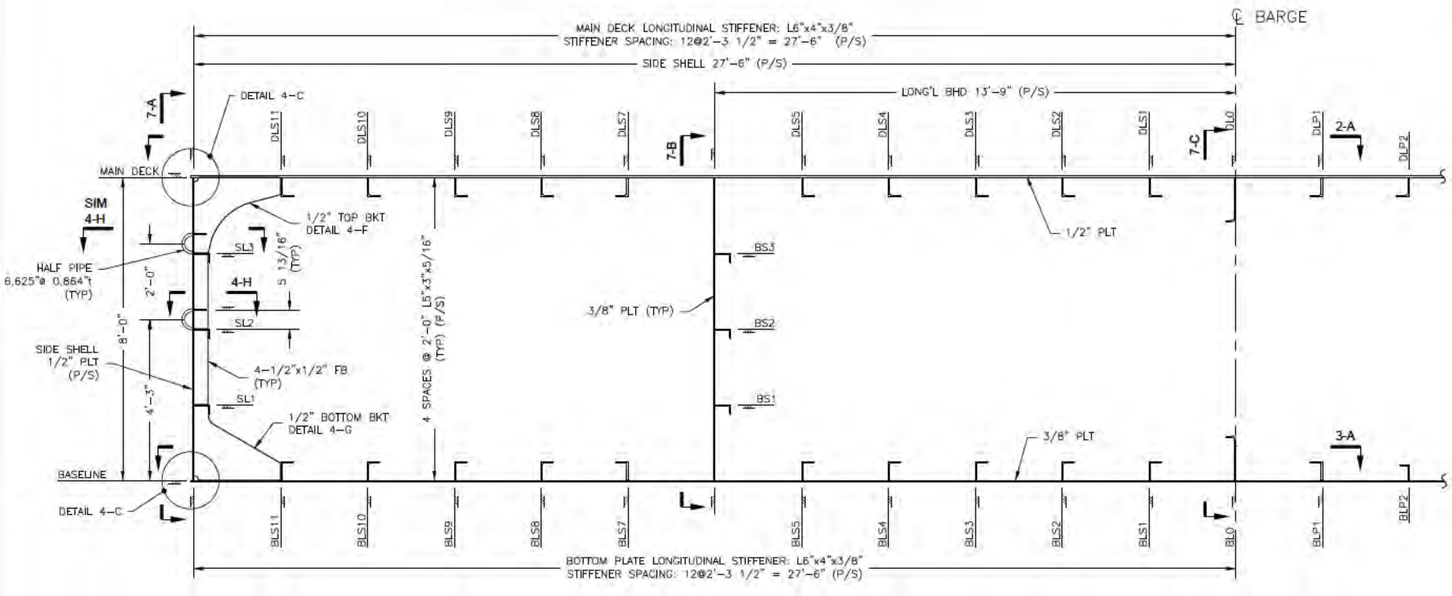
DETAIL 4-H
MID FRAME PIPE SUPPORT BRACKETS
SCALE: 1 1/2"=1'-0"



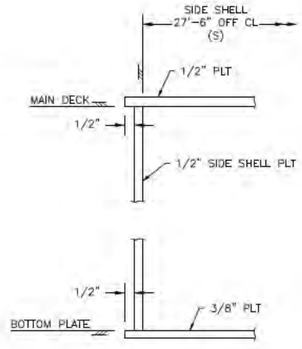
DETAIL '4-D'
HALF PIPE BRACKET
SCALE: 1"=1'-0"



DETAIL '4-E'
HALF PIPE BRACKET AT LONG'L STIFF
SCALE: 1"=1'-0"



SECTION '4-A'
MIDSHIP SECTION
STBD SIDE, LKG AFT
PORT SIDE SIM TO OPP HAND
SCALE: 1/2"=1'0"



DETAIL '4-C'
MAIN DECK, BOTTOM PLATE & SIDE SHELL MOLD LINE
SCALE: 3"=1'-0"

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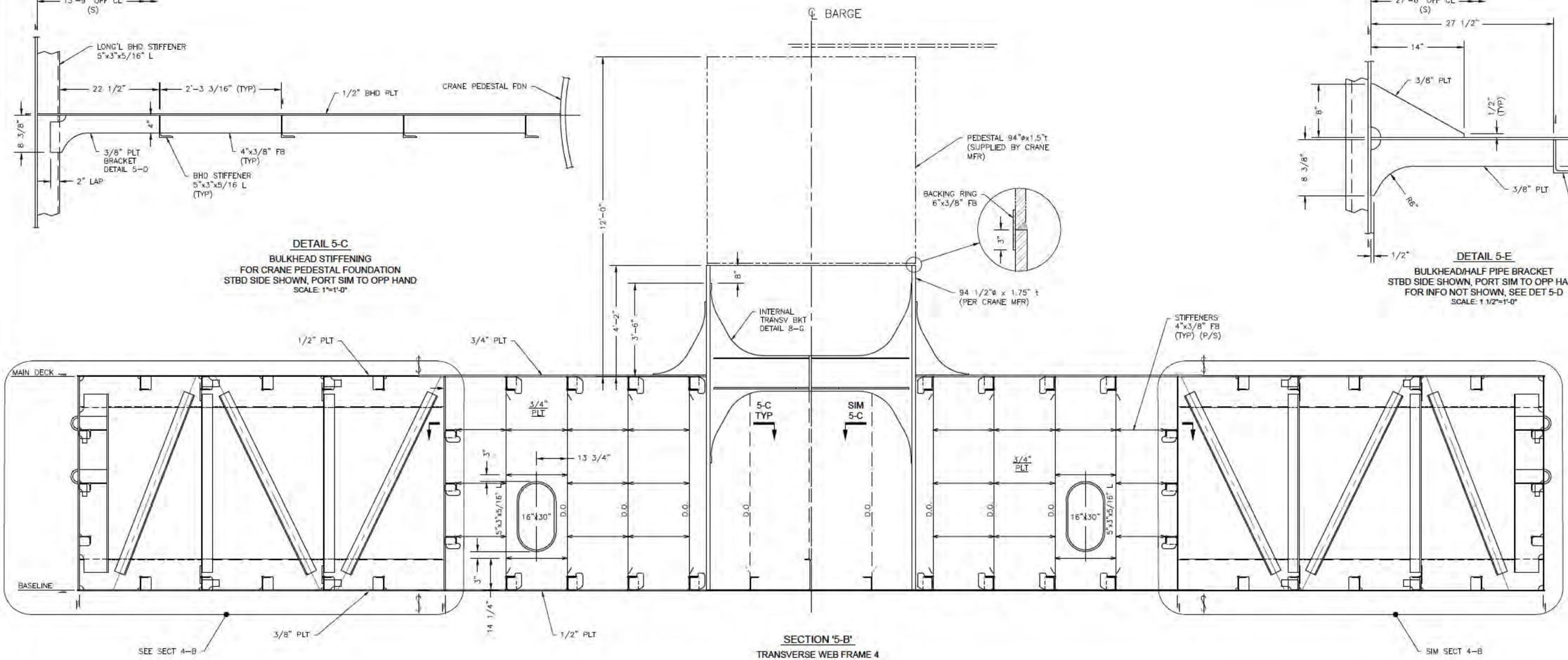
CRANE BARGE

STRUCTURAL SCANTLING PLAN

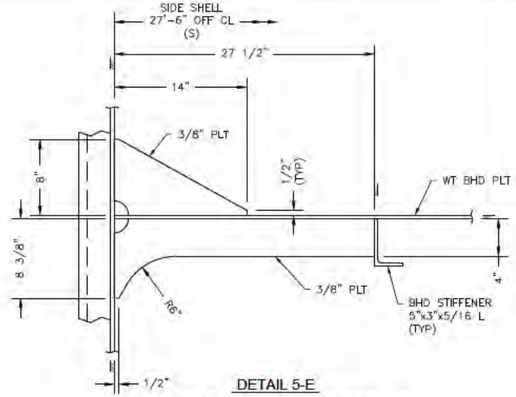
HEC DWG No.: 2018-060-01-02
SCALE: AS NOTED
SHEET 4 OF 12
REV 2

Exhibit A-2: Structural Scantling Plan

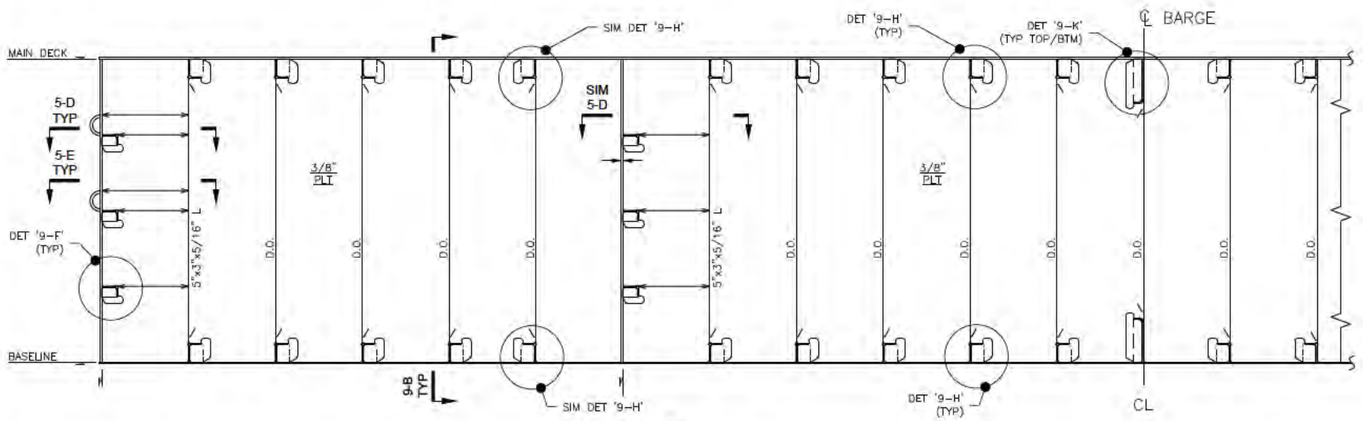
DETAIL 5-C
BULKHEAD STIFFENING
FOR CRANE PEDESTAL FOUNDATION
STBD SIDE SHOWN, PORT SIM TO OPP HAND
SCALE: 1"=1'-0"



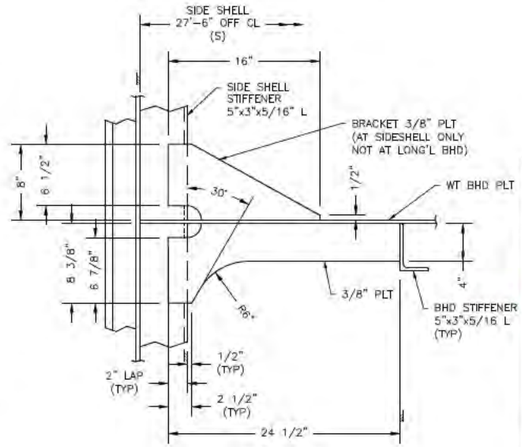
SECTION '5-B'
TRANSVERSE WEB FRAME 4
LKG AFT
SCALE: 1/2"=1'-0"



DETAIL 5-E
BULKHEAD/HALF PIPE BRACKET
STBD SIDE SHOWN, PORT SIM TO OPP HAND
FOR INFO NOT SHOWN, SEE DET 5-D
SCALE: 1 1/2"=1'-0"



SECTION '5-A'
TYPICAL TRANSVERSE BULKHEAD
STBD SIDE, LKG AFT
PORT SIDE SIM TO OPP HAND
SCALE: 1/2"=1'0"



DETAIL 5-D
BULKHEAD BRACKET
STBD SIDE SHOWN, PORT SIM TO OPP HAND
SCALE: 1 1/2"=1'-0"

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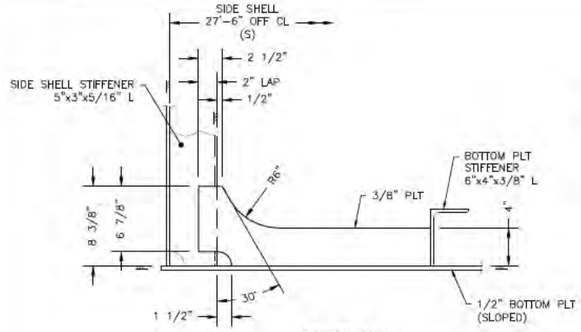
CRANE BARGE

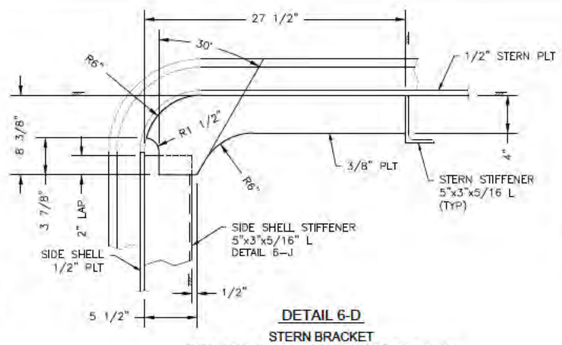
STRUCTURAL SCANTLING PLAN

HEC DWG No.:	SCALE:	AS NOTED	
2018-060-01-02	SHEET 5 OF 12		REV 2

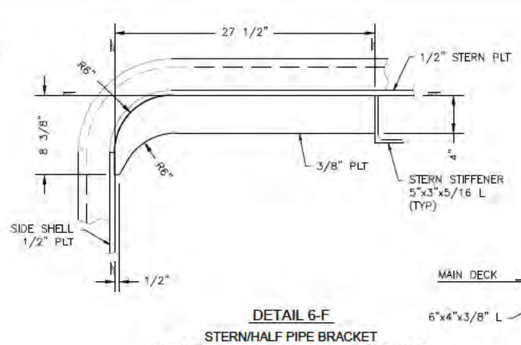
Exhibit A-2: Structural Scantling Plan



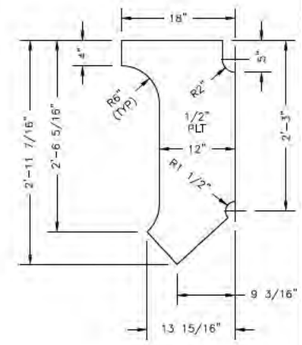
DETAIL 6-C
BOW BRACKET
STBD SIDE SHOWN, PORT SIM TO OPP HAND
SCALE: 1 1/2"=1'-0"



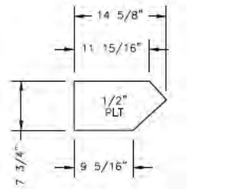
DETAIL 6-D
STERN BRACKET
STBD SIDE SHOWN, PORT SIM TO OPP HAND
SCALE: 1 1/2"=1'-0"



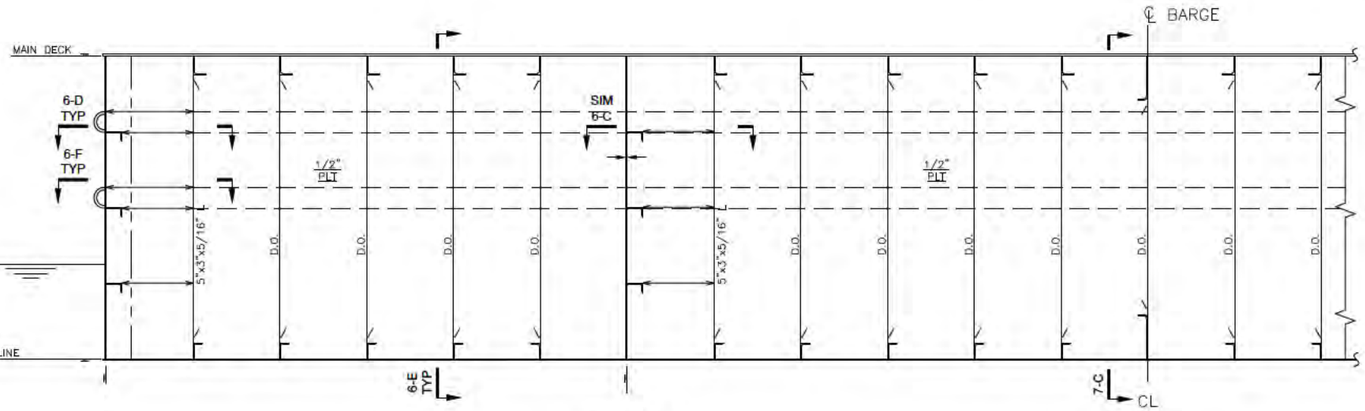
DETAIL 6-F
STERN/HALF PIPE BRACKET
STBD SIDE SHOWN, PORT SIM TO OPP HAND
FOR INFO NOT SHOWN, SEE DET 6-D
SCALE: 1 1/2"=1'-0"



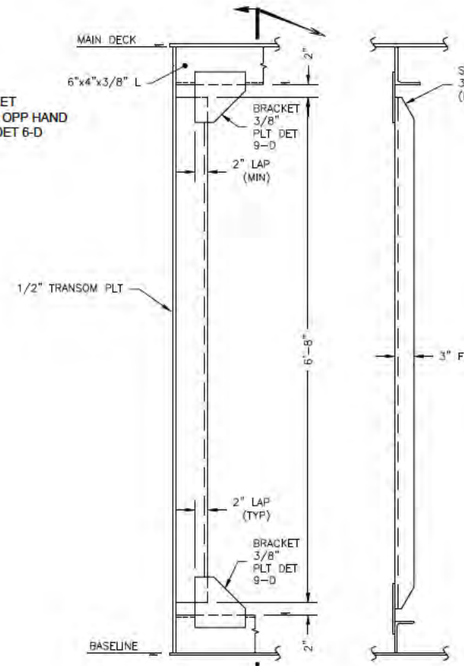
DETAIL 6-H
FWD TRANSITION BRACKET
(20) REQD
SCALE: 1"=1'-0"



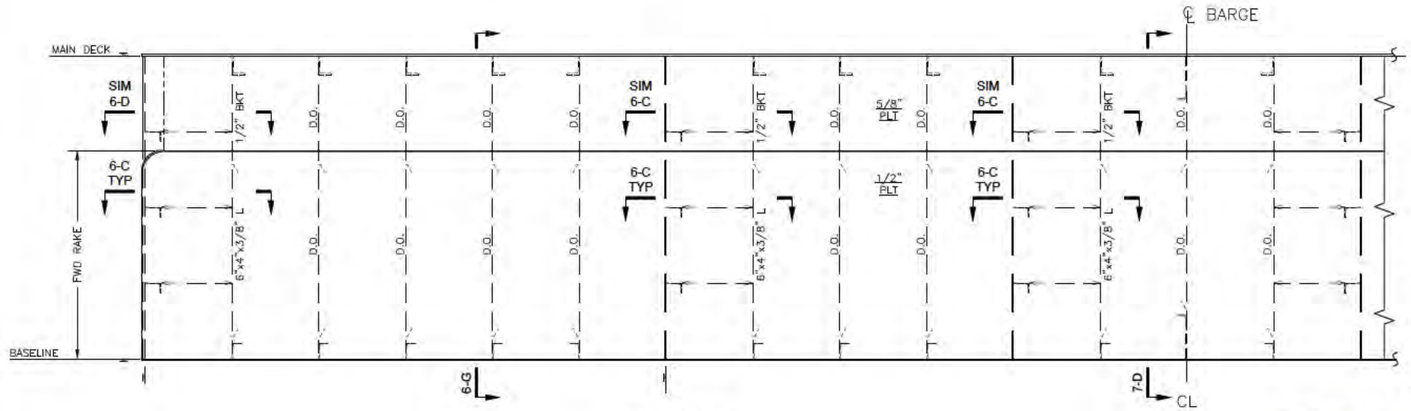
DETAIL 6-I
FWD TRANSITION LAPPED BRACKET
(20) REQD
SCALE: 1"=1'-0"



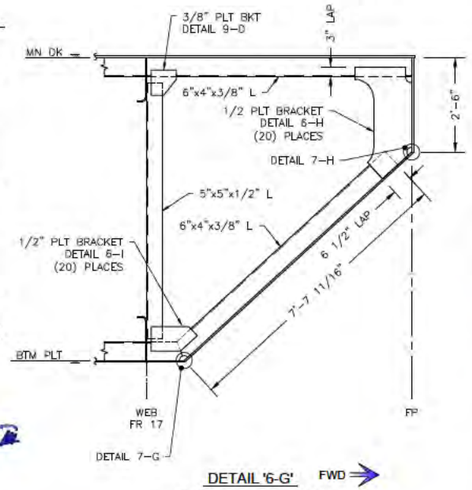
SECTION '6-B'
STERN OF BARGE
STBD SIDE, LKG AFT
PORT SIDE SIM TO OPP HAND
SCALE: 1/2"=1'0"



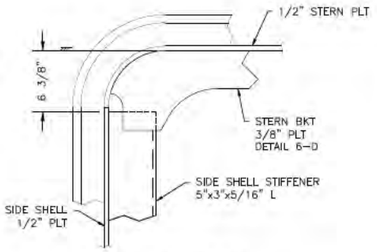
DETAIL '6-E'
TYPICAL TRANSOM STIFFENER
SCALE: 1"=1'-0"



SECTION '6-A'
BOW OF BARGE
STBD SIDE, LKG AFT
PORT SIDE SIM TO OPP HAND
SCALE: 1/2"=1'0"



DETAIL '6-G' FWD
BOW FRAMING DETAIL
SCALE: 1/2"=1'-0"



DETAIL 6-J
SIDE SHELL STIFFENER END
STBD SIDE SHOWN, PORT SIM TO OPP HAND
SCALE: 1 1/2"=1'-0"

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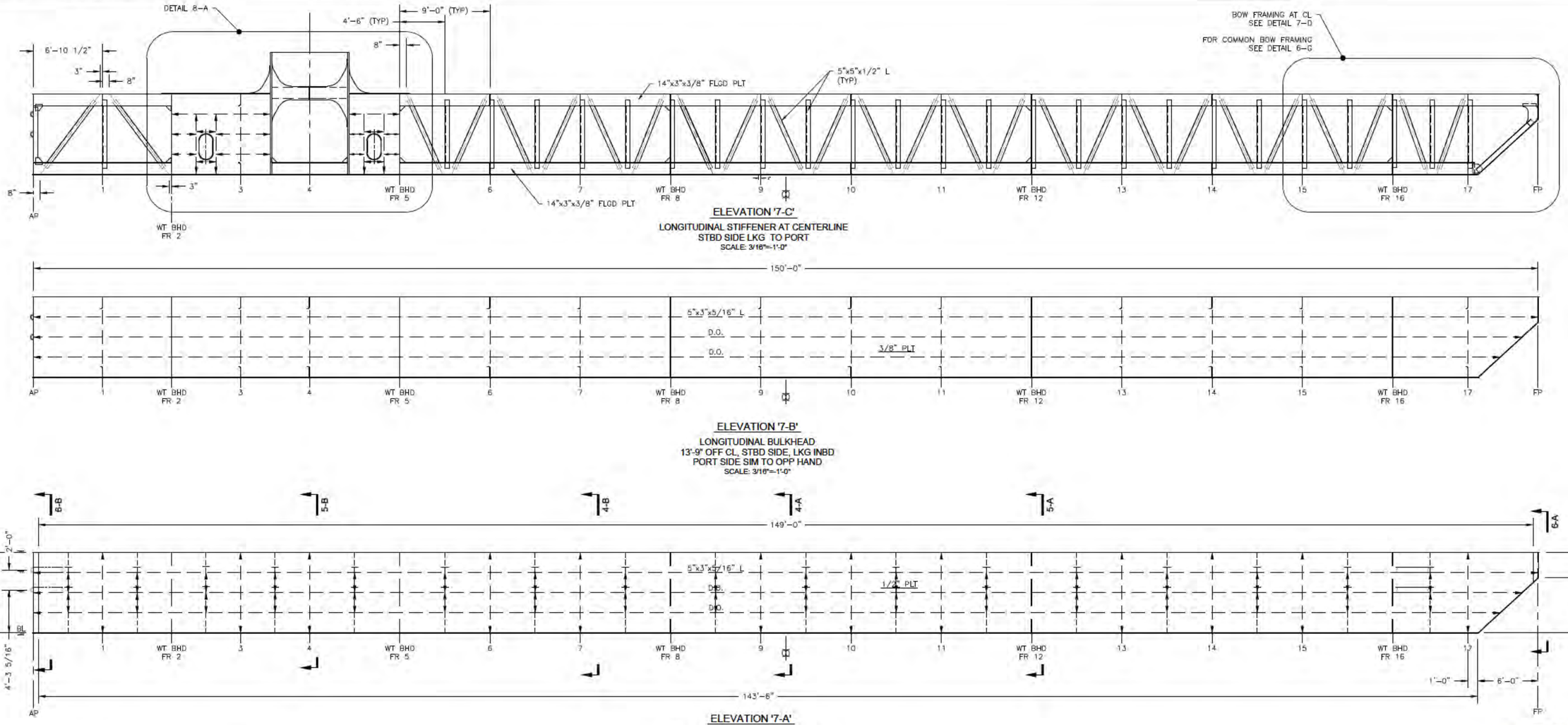
CRANE BARGE

STRUCTURAL SCANTLING PLAN

HEC DWG No.: 2018-060-01-02
SCALE: AS NOTED
SHEET 6 OF 12
REV 2

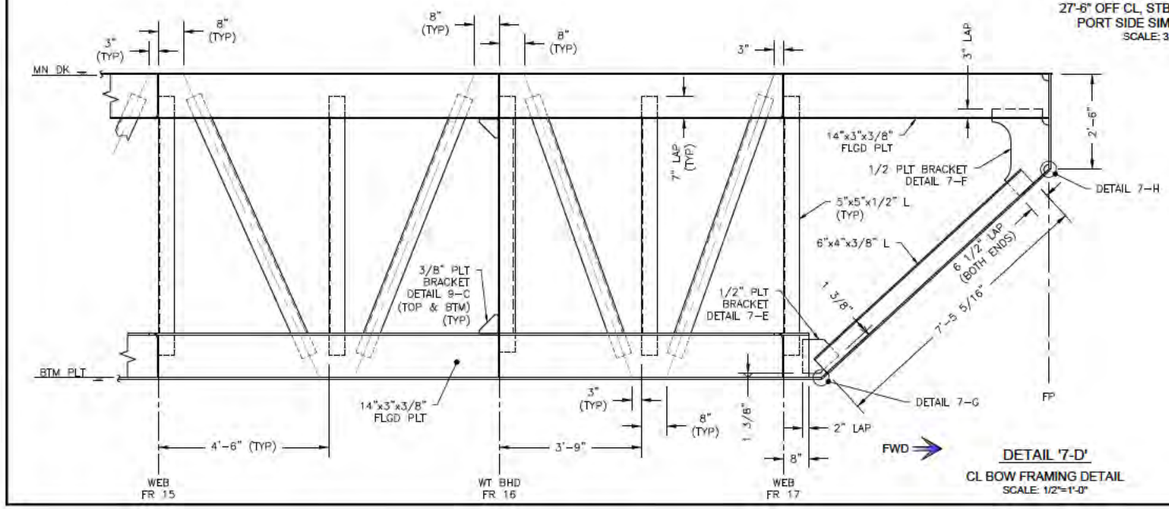
Exhibit A-2: Structural Scantling Plan



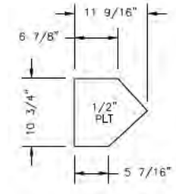
ELEVATION '7-C'
LONGITUDINAL STIFFENER AT CENTERLINE
STBD SIDE LKG TO PORT
SCALE: 3/16"=1'-0"

ELEVATION '7-B'
LONGITUDINAL BULKHEAD
13'-9" OFF CL, STBD SIDE, LKG INBD
PORT SIDE SIM TO OPP HAND
SCALE: 3/16"=1'-0"

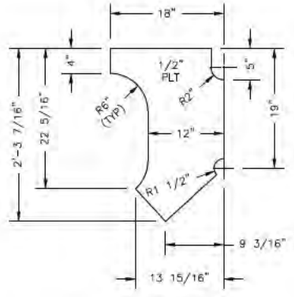
ELEVATION '7-A'
SIDE SHELL PLATE
27'-6" OFF CL, STBD SIDE, LKG INBD
PORT SIDE SIM TO OPP HAND
SCALE: 3/16"=1'-0"



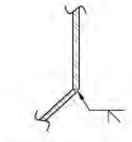
DETAIL '7-D'
CL BOW FRAMING DETAIL
SCALE: 1/2"=1'-0"



DETAIL 7-E
CL TRANSITION LAPPED BRACKET
SCALE: 1"=1'-0"



DETAIL 7-F
CL TRANSITION BRACKET
SCALE: 1"=1'-0"



DETAIL 7-H
WELD DETAIL
SCALE: 1-1/2"=1'-0"

DETAIL 7-G
WELD DETAIL
SCALE: 1-1/2"=1'-0"

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CRANE BARGE

STRUCTURAL SCANTLING PLAN

HEC DWG No.: 2018-060-01-02
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SHEET 7 OF 12
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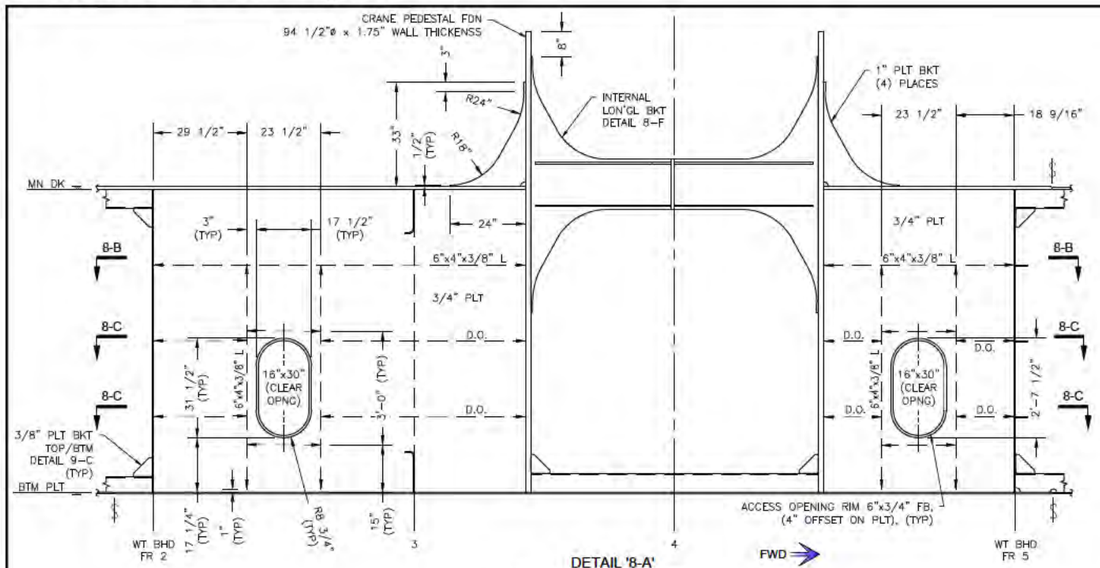
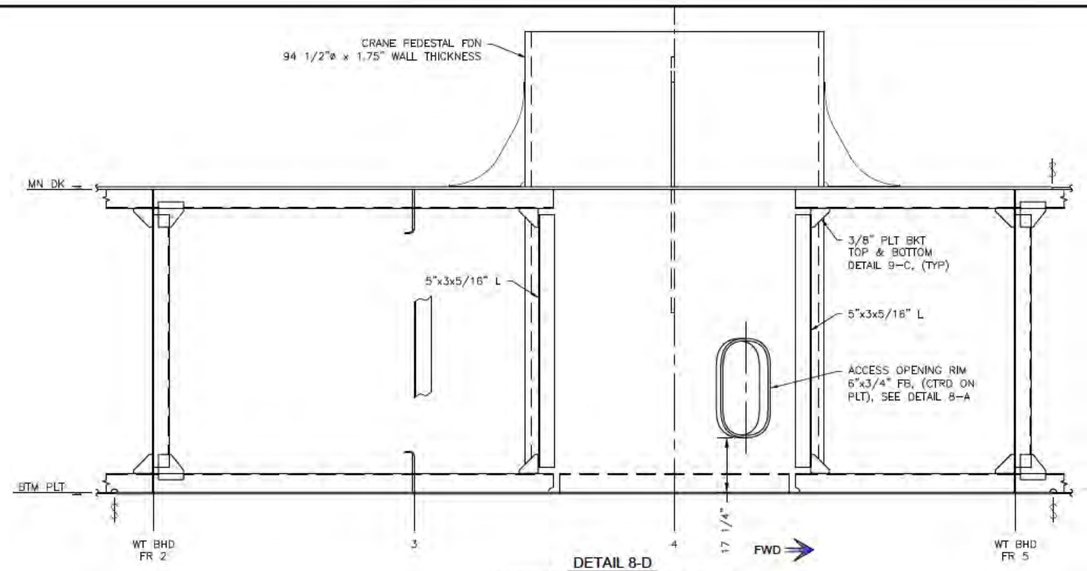
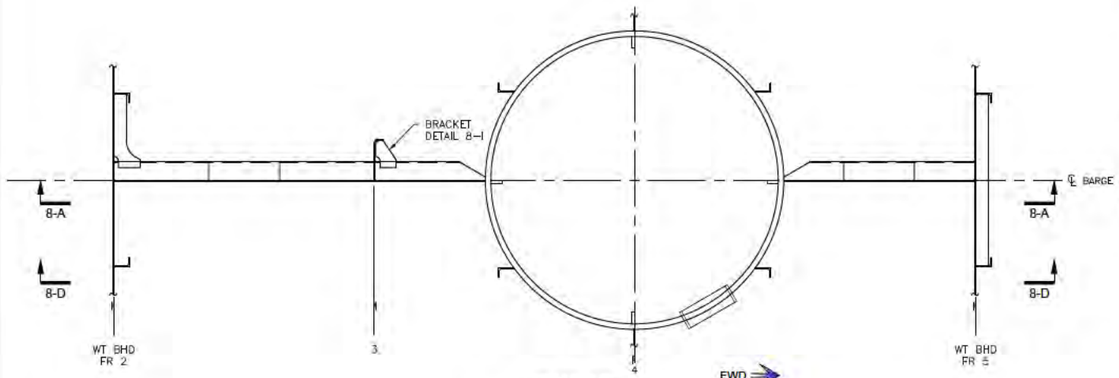
Exhibit A-2: Structural Scantling Plan



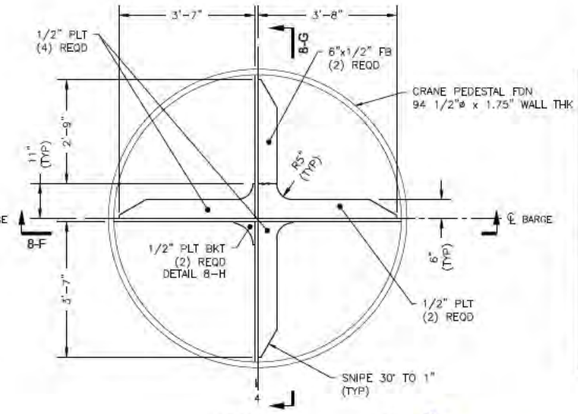
DETAIL '8-A'
CRANE PEDESTAL FOUNDATION AT CL
SCALE: 1/2"=1'-0"



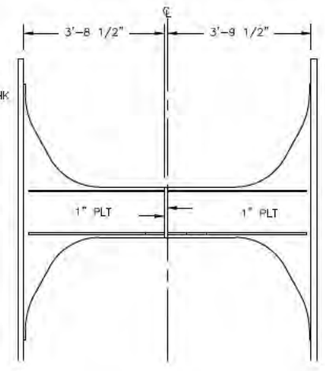
DETAIL 8-D
CRANE PEDESTAL STIFFINING AT L1S
L1P SIM TO OPP HAND
SCALE: 1/2"=1'-0"



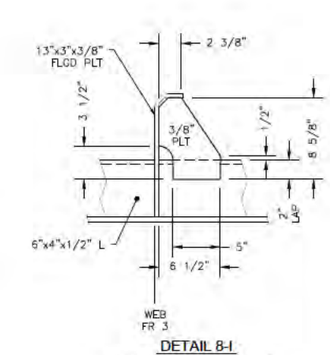
DETAIL '8-B'
CRANE PEDESTAL, BHD STIFFENER
SCALE: 1/2"=1'-0"



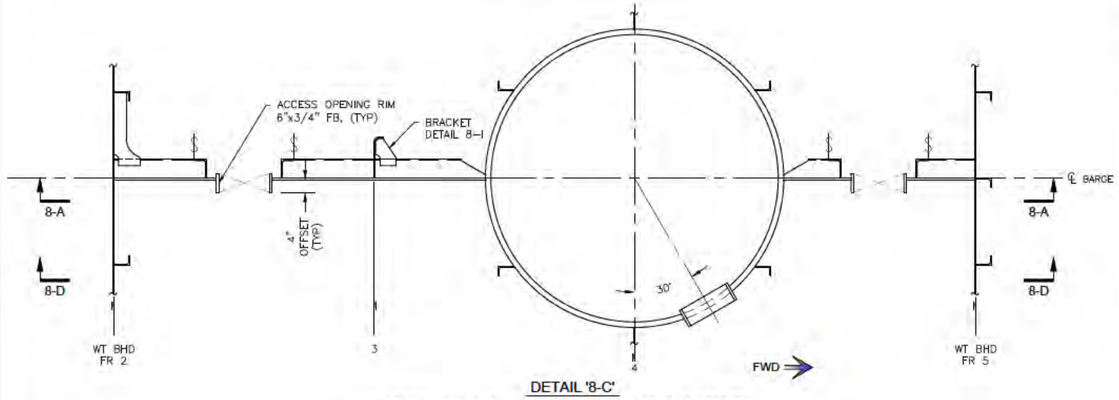
DETAIL '8-E'
INTERNAL CRANE PEDESTAL BRACKET
SCALE: 1/2"=1'-0"



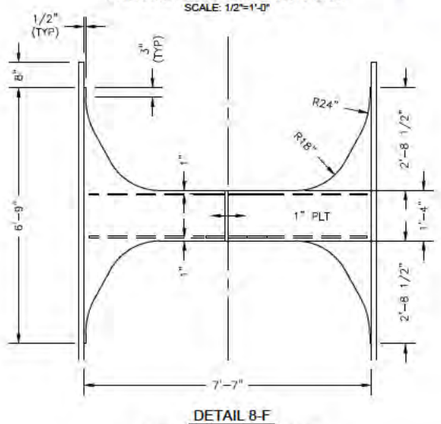
DETAIL 8-G
INTERNAL TRANSV BRACKET
AT FR 4, LKG AFT
FOR INFO NOT SHOWN, SEE DET 8-F
SCALE:: 1/2"=1'-0"



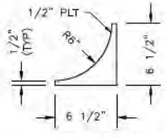
DETAIL 8-I
WEB FR 3 BRACKETS AT CL
(3) REQD
SCALE: 1 1/2"=1'-0"



DETAIL '8-C'
CRANE PEDESTAL, BHD STIFFENER IWO ACCESS OPENING
SCALE: 1/2"=1'-0"



DETAIL 8-F
INTERNAL LONG'L BRACKET
STBD SIDE LKG TO PORT
SCALE:: 1/2"=1'-0"



DETAIL 8-H
TYPICAL RADIUS BRACKET
(8) REQD
SCALE: 1-1/2"=1'-0"

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CRANE BARGE

STRUCTURAL SCANTLING PLAN

HEC DWG No.:	SCALE: AS NOTED	
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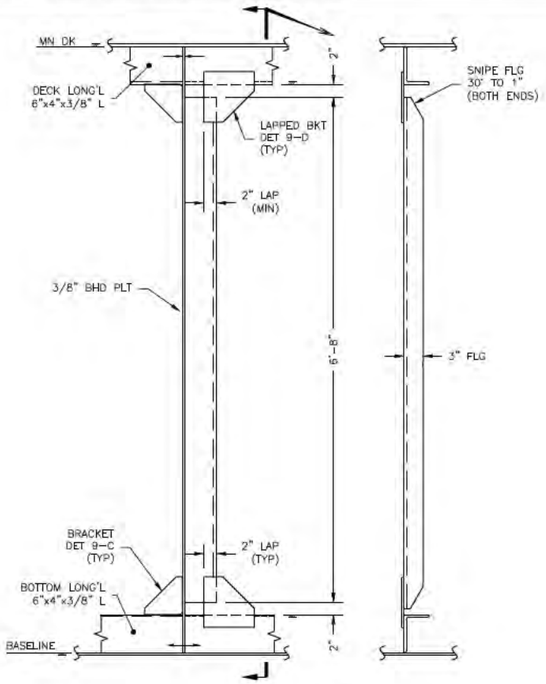
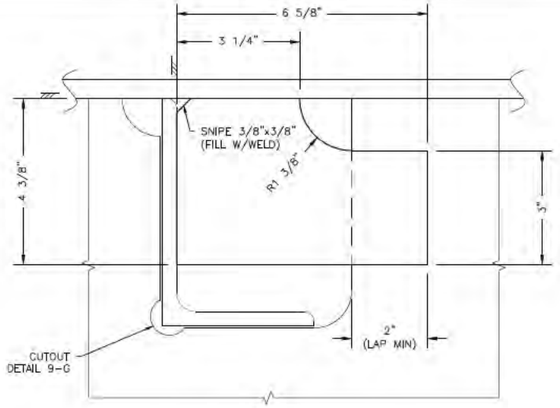
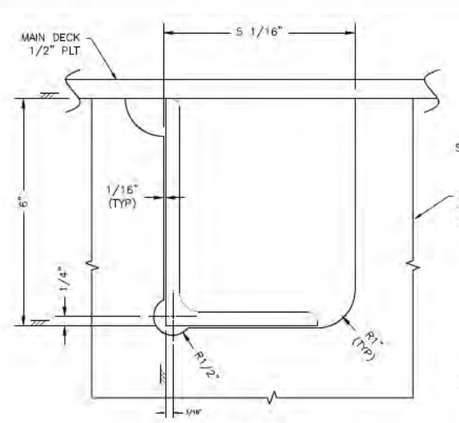
Exhibit A-2: Structural Scantling Plan



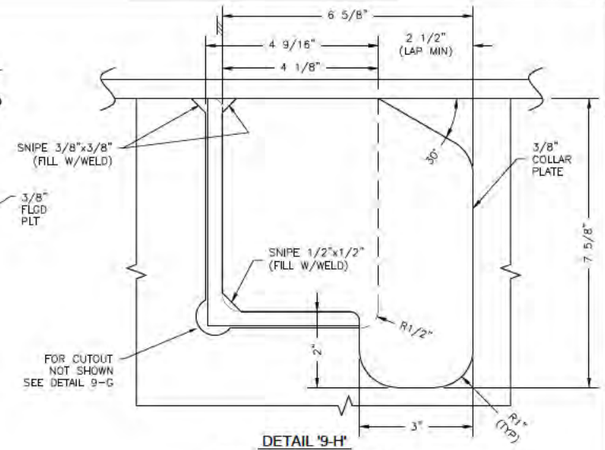
DETAIL '9-B'
TYPICAL BHD STIFFENER
SCALE: 1"=1'-0"



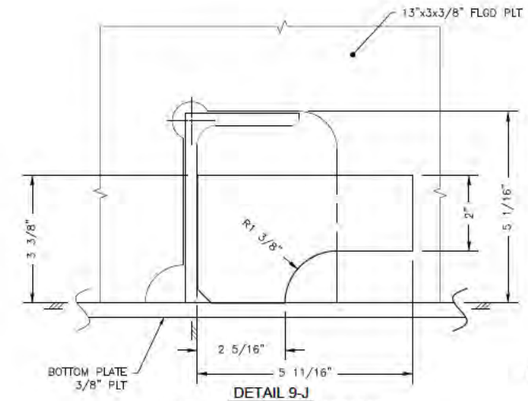
DETAIL 9-I
NON-TIGHT CUTOUT COLLAR PLATE FOR 6"x4"x3/8" L
SCALE: 6"=1'-0"



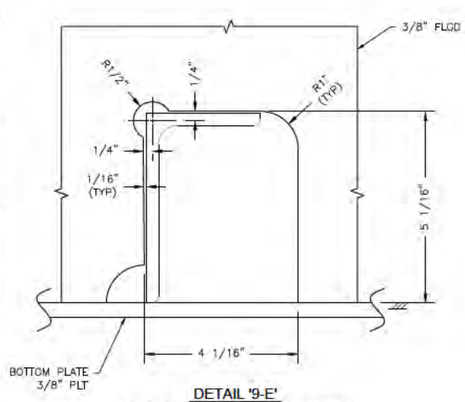
DETAIL '9-G'
NON-TIGHT CUTOUT FOR 6"x4"x3/8" L
SCALE: 6"=1'-0"



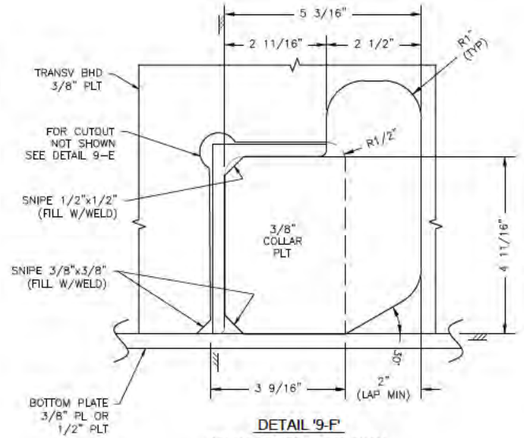
DETAIL '9-H'
WT CUTOUT FOR 6"x4"x3/8" L
SCALE: 6"=1'-0"



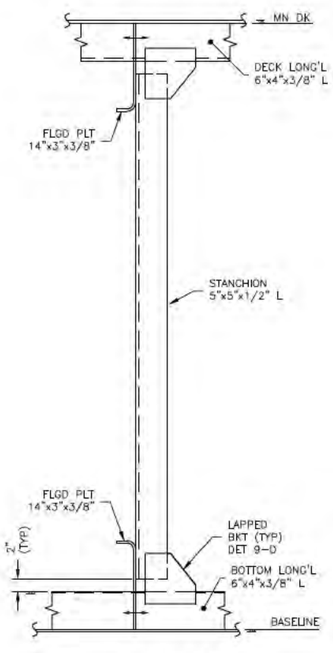
DETAIL 9-J
NON-TIGHT CUTOUT COLLAR PLATE FOR 5"x3"x5/16" L
SCALE: 6"=1'-0"



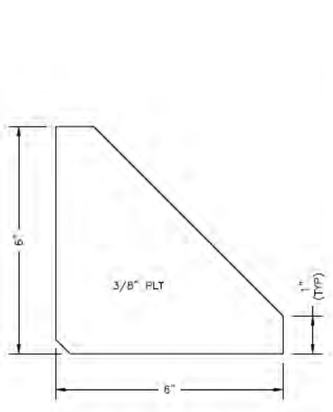
DETAIL '9-E'
NON-TIGHT CUTOUT FOR 5"x3"x5/16" L
SCALE: 6"=1'-0"



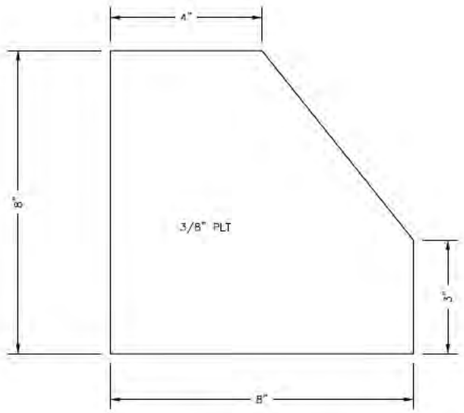
DETAIL '9-F'
WT CUTOUT FOR 5"x3"x5/16" L
SCALE: 6"=1'-0"



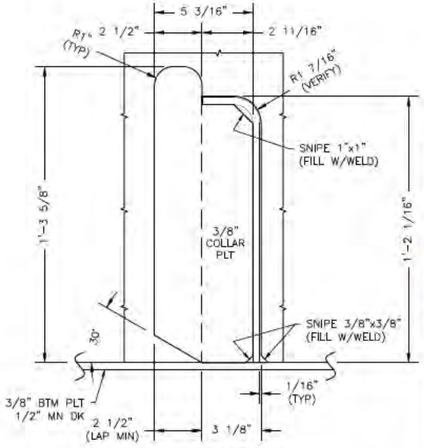
DETAIL '9-A'
TYPICAL WEB FRAME STANCHION
SCALE: 1"=1'-0"



DETAIL '9-C'
TYPICAL BRACKET
SCALE: 6"=1'-0"



DETAIL '9-D'
TYPICAL LAPPED BRACKET
SCALE : 6"=1'-0"



DETAIL '9-K'
WT-CUTOUT FOR 13"x3"x3/8" FLANGED PLATE
SCALE: 3"=1'-0"

REGISTERED PROFESSIONAL ENGINEER JOHN R. PAULLIN 48718 CIVIL STATE OF CALIFORNIA

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CRANE BARGE

STRUCTURAL SCANTLING PLAN

HEC DWG No.:	SCALE: AS NOTED	
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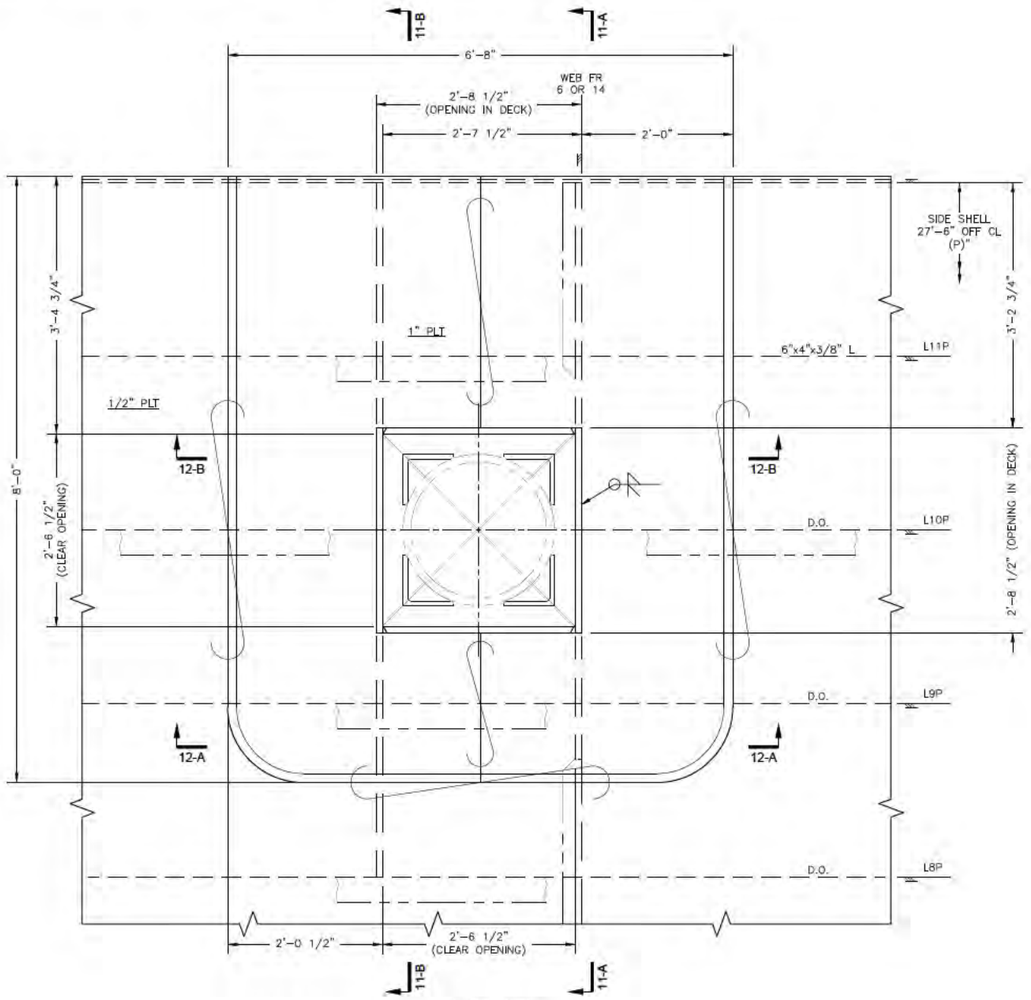
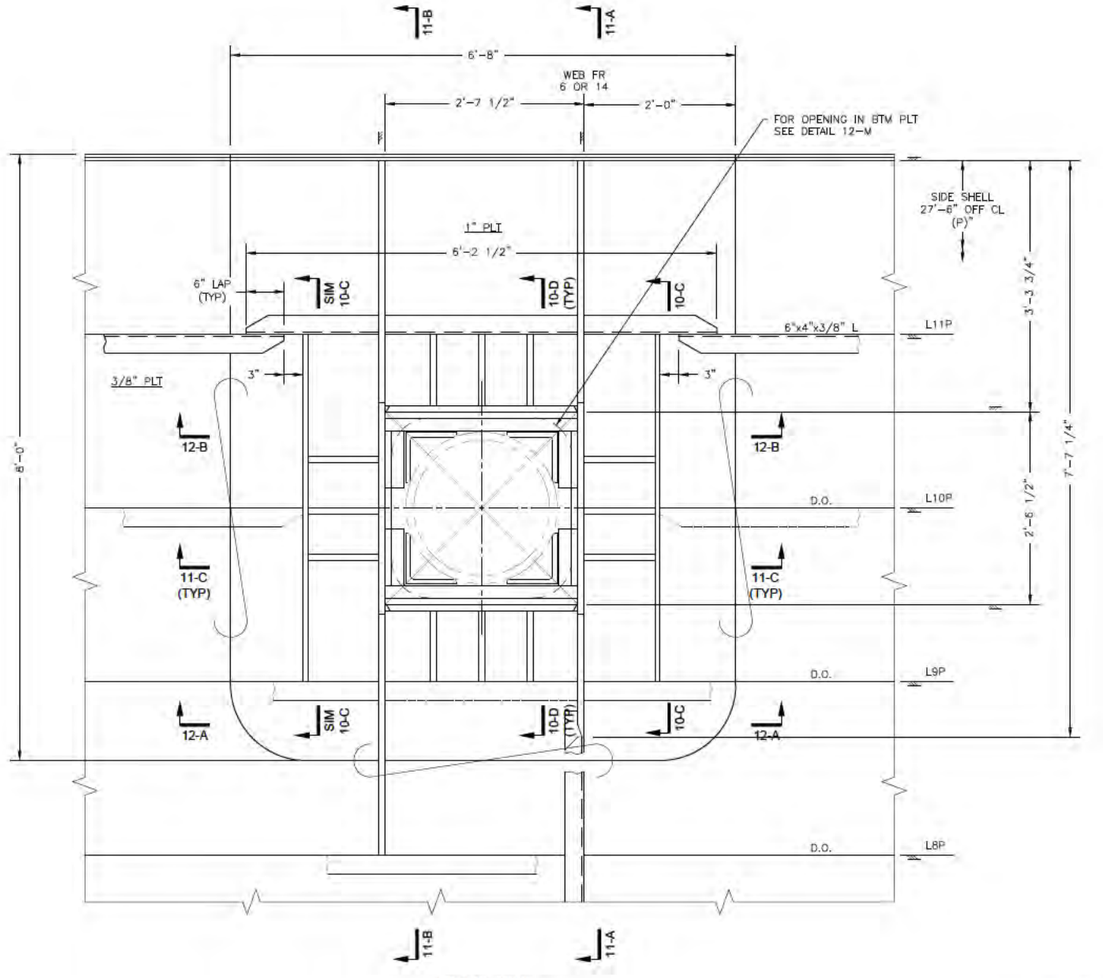
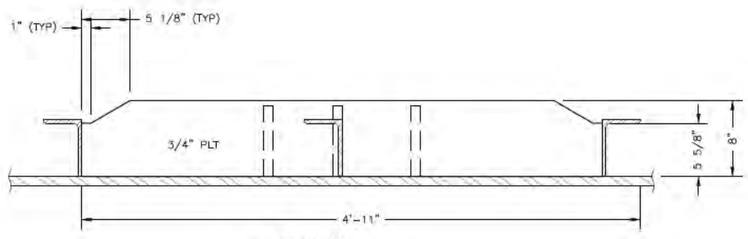
Exhibit A-2: Structural Scantling Plan



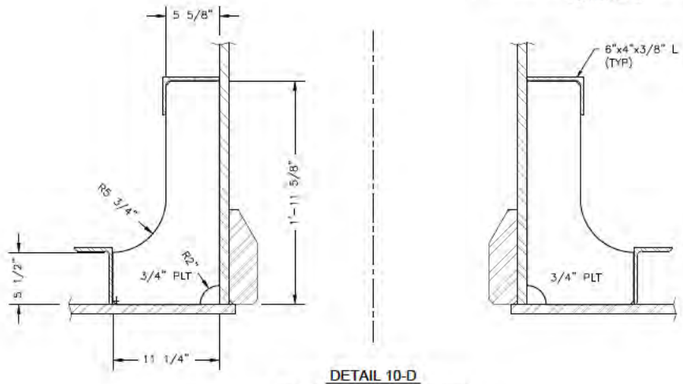
DETAIL 10-A
SPUD WELL AT MAIN DECK
PORT SIDE, AT WEB FRS 6 & 14
SCALE: 1"=1'-0"



DETAIL 10-B
SPUD WELL AT BOTTOM PLATE
PORT SIDE, AT WEB FRS 6 & 14
FOR INFO NOT SHOWN, SEE DETAIL 10-A
SCALE: 1"=1'-0"



DETAIL 10-C
TRANSVERSE BRACKET
(2) REQD
SCALE: 1-1/2"=1'-0"



DETAIL 10-D
TRANSVERSE BASE BRACKETS
(3) OF EACH REQD
SCALE: 1-1/2"=1'-0"

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CRANE BARGE

STRUCTURAL SCANTLING PLAN

HEC DWG No.: 2018-060-01-02	SCALE: AS NOTED	REV 2
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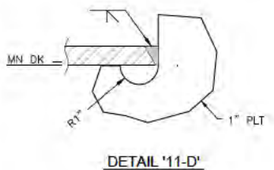
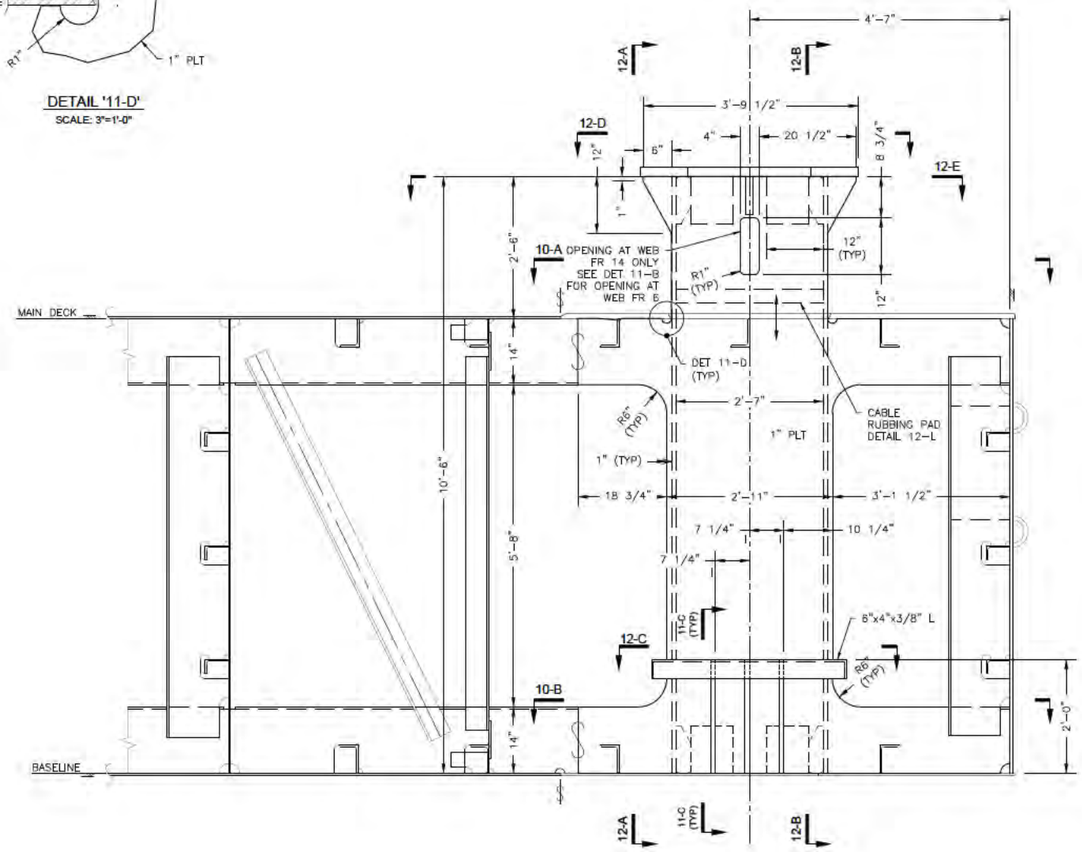
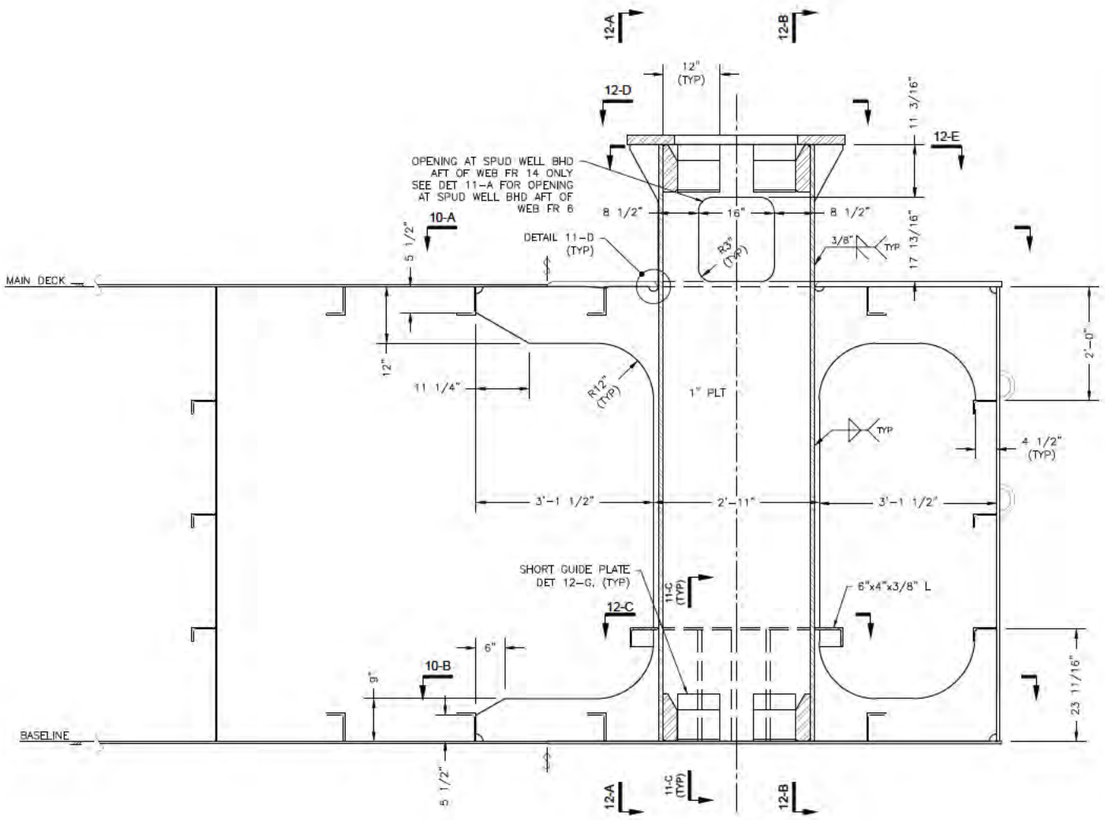
Exhibit A-2: Structural Scantling Plan



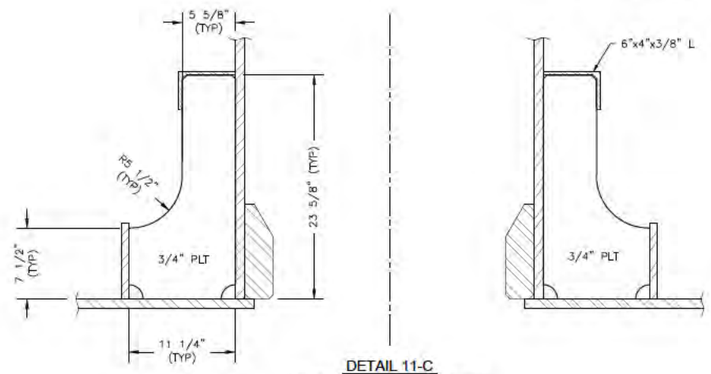
DETAIL '11-D'
SCALE: 3"=1'-0"



DETAIL 11-A
SPUD WELL AT WEB FRAME 14 SHOWN
SPUD WELL AT WEB FRAME 6 SIMILAR EXCEPT AS NOTED
22'-11" OFF CL, PORT SIDE, LKG AFT
SCALE: 3/4"=1'-0"



DETAIL 11-B
SPUD WELL AFT BULKHEAD
2'-7 1/2" AFT OF WEB FRAME 14 SHOWN
AFT OF WEB FRAME 6 SIMILAR EXCEPT AS NOTED
22'-11" OFF CL, PORT SIDE, LKG AFT
FOR INFO NOT SHOWN, SEE DET 11-A
SCALE: 3/4"=1'-0"



DETAIL 11-C
LONGITUDINAL BASE BRACKETS
(6) REQD
SCALE: 1-1/2"=1'-0"

REGISTERED PROFESSIONAL ENGINEER
JOHN R. PAULLIN
48718
CIVIL
STATE OF CALIFORNIA
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STRUCTURAL SCANTLING PLAN

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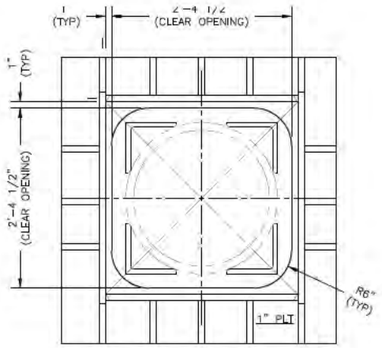
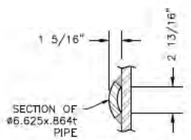
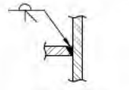
Exhibit A-2: Structural Scantling Plan



DETAIL 12-M
OPENING IN BOTTOM PLATE
GUIDE PLATES NOT SHOWN FOR CLARITY
FOR INFO NOT SHOWN, SEE PLAN 10-B
SCALE: 1"=1'-0"

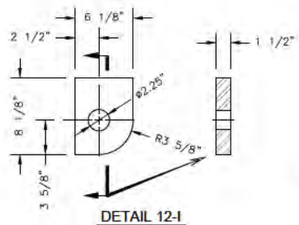


DETAIL 12-L
CABLE RUBBING PAD
SCALE: 1-1/2"=1'-0"

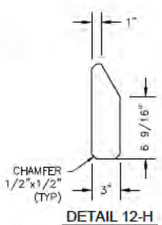


DETAIL 12-K
WELD DETAIL
SCALE: 1-1/2"=1'-0"

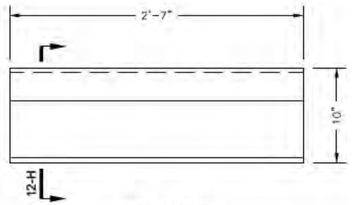
DETAIL 12-J
WELD DETAIL
SCALE: 1-1/2"=1'-0"



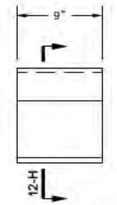
DETAIL 12-I
PADEYE
SCALE: 1-1/2"=1'-0"



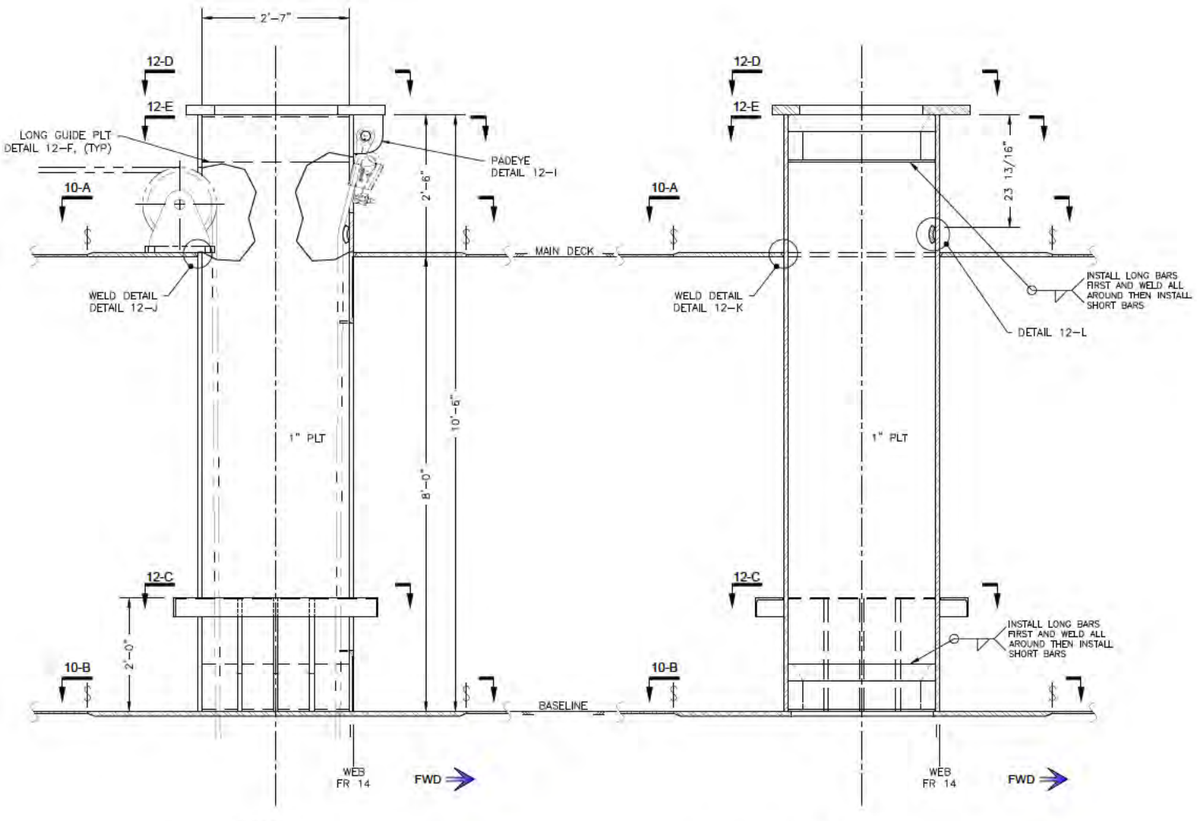
DETAIL 12-H
TYPICAL GUIDE PLATE
CROSS SECTION
SCALE: 1-1/2"=1'-0"



DETAIL 12-F
LONG GUIDE PLATE
(4) REQD PER SPUD WELL
SCALE: 1-1/2"=1'-0"

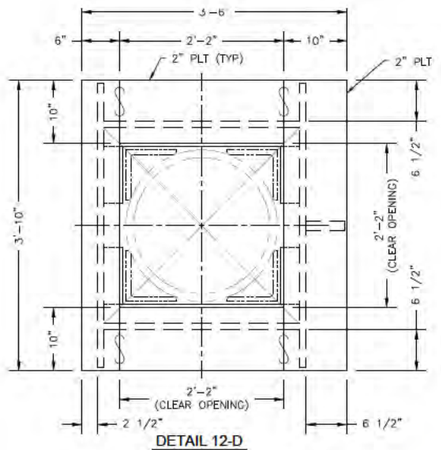


DETAIL 12-G
SHORT GUIDE PLATE
(8) REQD PER SPUD WELL
SCALE: 1-1/2"=1'-0"

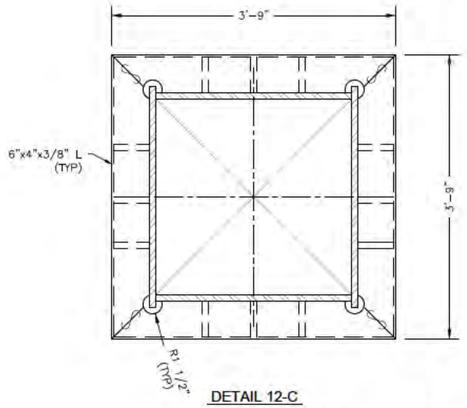


DETAIL 12-A
SPUD WELL INBD BULKHEAD AT WEB FR 14 SHOWN
SPUD WELL INBD BULKHEAD AT WEB FR 6 SIMILAR, BUT RIGGING MIRRORED
21'-6 1/2" OFF CL, PORT SIDE, LKG OUTBD
SCALE: 3/4"=1'-0"

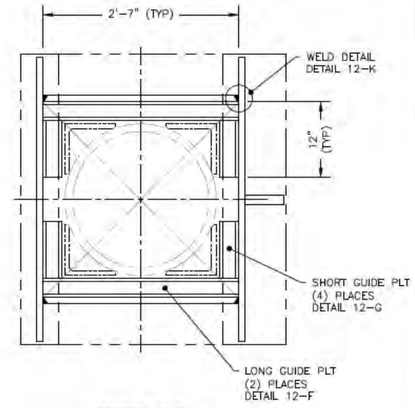
DETAIL 12-B
SPUD WELL OUTBD BULKHEAD AT WEB FR 14 SHOWN
SPUD WELL OUTBD BULKHEAD AT WEB FR 6 SIM
24'-3 1/2" OFF CL, PORT SIDE, LKG OUTBD
FOR INFO NOT SHOWN, SEE DET 12-A
SCALE: 3/4"=1'-0"



DETAIL 12-D
TOP OF SPUD WELL
FR 14 SHOWN, FR 6 SIM BUT TO OPP HAND
SCALE: 1"=1'-0"



DETAIL 12-C
SPUD WELL STIFFENING
SCALE: 1"=1'-0"



DETAIL 12-E
SPUD GUIDE PLATES
AT TOP OF SPUD WELL
FR 14 SHOWN, FR 6 SIM BUT TO OPP HAND
SCALE: 1"=1'-0"

REGISTERED PROFESSIONAL ENGINEER JOHN R. PAULLIN II 48718 CIVIL STATE OF CALIFORNIA

JUNE 13, 2022

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SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

CRANE BARGE

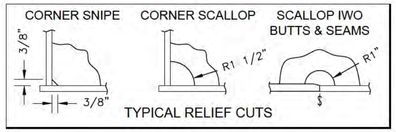
STRUCTURAL SCANTLING PLAN

HEC DWG No.: 2018-060-01-02
SCALE: AS NOTED
SHEET 12 OF 12
REV 2

GENERAL NOTES

1. THIS DRAWING PRESENTS DETAILS FOR TWO SPUD PILES FOR THE PORT OF SAN FRANCISCO CRANE BARGE.
2. ALL PLAN VIEWS ARE TOP LOOKING DOWN. ALL SECTIONS ARE LOOKING AFT. ELEVATIONS VIEWS ARE AS FOLLOWS:
   - FROM STARBOARD SIDE: OUTBOARD LOOKING INBOARD
   - FROM PORT SIDE: INBOARD LOOKING OUTBOARD
3. DRAWING UNITS ARE IN FEET & INCHES.
4. ALL MATERIAL, WELDING, FABRICATION AND WORKMANSHIP IS TO BE IN ACCORDANCE WITH APPLICABLE ABS RULES AND TO THE SATISFACTION OF THE OWNER.
5. THERE SHALL BE NO SUBSTITUTIONS WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
6. ALL NEW STEEL IS TO BE ABS GRADE A OR ASTM A-36 UNLESS 1/1 NOTED OTHERWISE.
7. EXCEPT WHERE NOTED, ALL WELDS ARE TO BE DOUBLE CONTINUOUS FILLETS WRAPPED AT THE ENDS. UNLESS OTHERWISE INDICATED, WELDS SHALL BE SIZED PER THE TABLE SHOWN TO THE RIGHT. SIZES PERTAIN TO THE LEG LENGTH.
8. PROVIDE RELIEF CUTS AS SHOWN IN THE TABLE TO THE RIGHT. IF NONE IS SHOWN ON THE DETAIL, IT IS ASSUMED TO HAVE THE 3/8"x3/8" CORNER SNIPE AND IS TO BE FILLED WITH WELD. SCALLOPS SHALL HAVE RADII AS SHOWN IN THE TABLE BELOW UNLESS NOTED OTHERWISE.

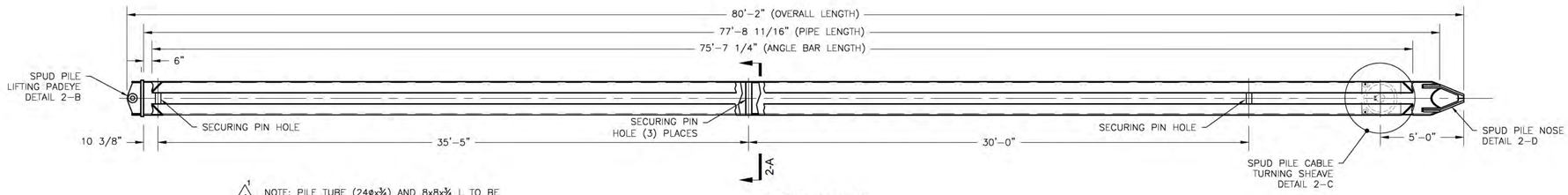
FILLET WELD SIZING TABLE							
THICKNESS OF THINNER PLATE	≤1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	≥3/4"
FILLET WELD LEG SIZE	3/16"	7/32"	7/32"	1/4"	5/16"	5/16"	3/8"



DRAWING INDEX

ABBREVIATIONS

ABL	ABOVE BASELINE	EXISTG	EXISTING
ABT	ABOUT	FR	FRAME
BHD	BULKHEAD	FWD	FORWARD
BKT	BRACKET	GDR	GIRDER
BTM	BOTTOM	LONGL	LONGITUDINAL
CHK	CHOCK	NS	NEAR SIDE
CJP	COMPLETE JOINT PENETRATION	N&F	NEAR & FAR
CL	CENTERLINE	OPNG	OPENING
CLR	CLEAR	OUTBD	OUTBOARD
CMG	COAMING	PLT	PLATE
CTR	CENTER	PLTG	PLATING
DBL	DOUBLE	REF	REFERENCE
DET	DETAIL	STD	STANDARD
D.O.	DITTO (SAME AS)	T&B	TOP & BOTTOM
		TYP	TYPICAL
		WT	WATERTIGHT



1/1 NOTE: PILE TUBE (24ø x ¾) AND 8x8x¾ L TO BE ASTM A-572 GR 50.

ELEVATION '1-A'
SPUD PILE
(2) REQD
SCALE: 1/4"=1'-0"

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MARCH 15, 2021

REVISIONS

No.	DESCRIPTION	BY/DATE/APPD
-	PRELIMINARY ISSUE FOR CLIENT REVIEW	RJP 12/11/20 JRP
0	ISSUE FOR BIDDING	RJP 3/08/21 JRP
1	ISSUE FOR BIDDING INCORPORATE CLIENT COMMENTS: 1. REV NOTE 6 TO INCL ASTM A-36 AND ADD MATERIAL CALL OUT FOR PILES ELEV '1-A' 2. CALL OUT GUIDE ROLLERS DETAILS '2-C' & '3-B' 3. ADD NOTES TO CLOSE UP PILE AFTER SHEAVE INSTALLED (DETAIL '2-C') AND AT NOSE W/ 3/4" PL (DETAIL '2-D')	JRP 3/15/21 JRP

REFERENCES

No.	TITLE	DWG No.
1	GENERAL ARRANGEMENT	2018-060-01-01
2	STRUCTURAL SCANTLING PLAN	2018-060-01-02
3	-	-
4	-	-
5	-	-

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DRWN: RJP	DATE: DEC. 11, 2020	SCALE: AS NOTED	
CHKD: JRP	APPD: SAS	ACADFILE: D600103-1-STAMPED	
PROJECT FILE: 2018-060-01		PLOTSCALE: 1:1 ON ANSI D	
ABS APPROVAL: -			
-			

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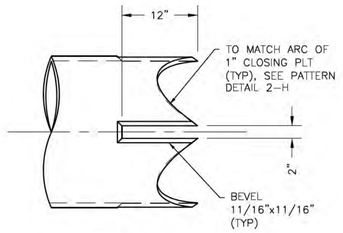
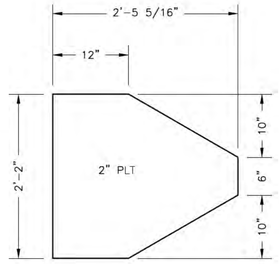
CRANE BARGE

SPUD PILE

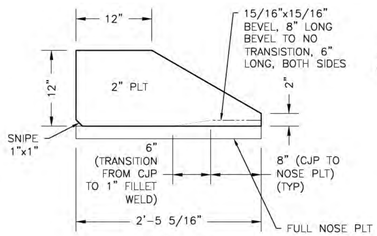
OWNER APPVL:	-	HEC DWG No.:	2018-060-01-03
DATE:	-	SHEET 1 OF 3	REV 1
FILE:	-		



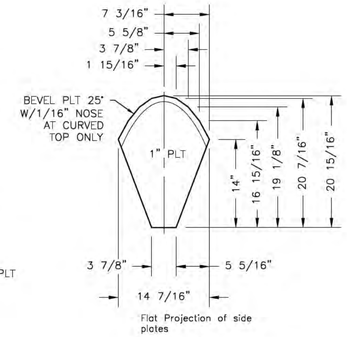
DETAIL '2-E'
CUT OUTS FOR SPUD NOSE
SCALE: 1"=1'-0"



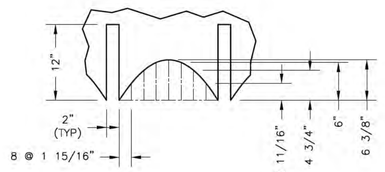
DETAIL '2-F'
FULL NOSE PLATE
SCALE: 1"=1'-0"



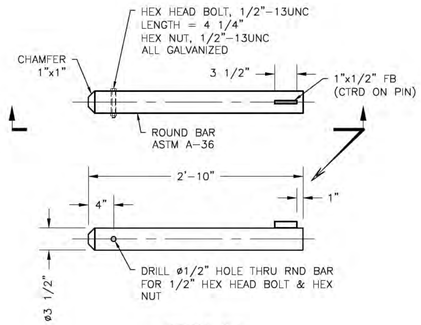
DETAIL '2-G'
HALF NOSE PLATE
SCALE: 1"=1'-0"



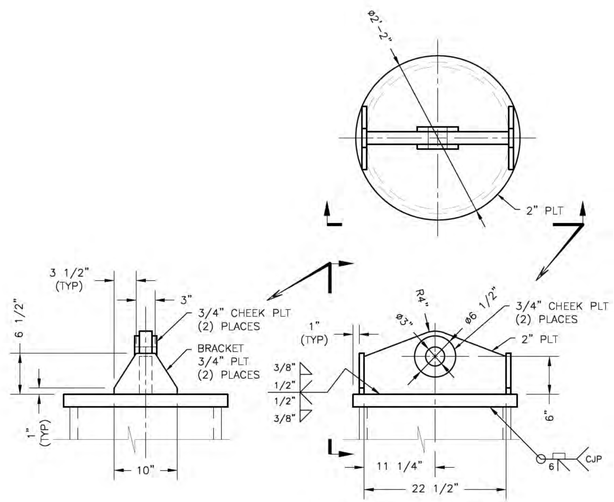
DETAIL 2-H
CLOSING PLATE
FLAT PROJECTION
(4) REQD
SCALE: 1"=1'-0"



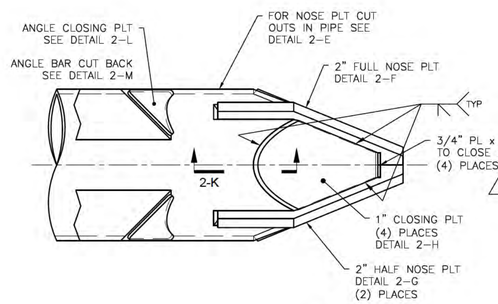
DETAIL 2-I
FLATTENED - PIPE CUT PATTERN
TO MATCH CLOSING PLATES
SCALE: 1"=1'-0"



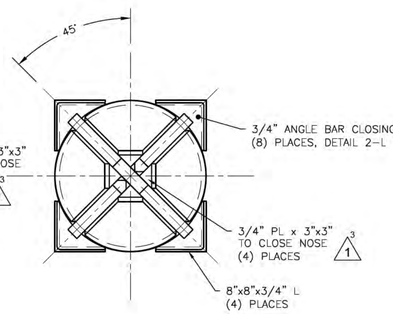
DETAIL 2-J
SECURING PIN
(2) REQD
SCALE: 1"=1'-0"

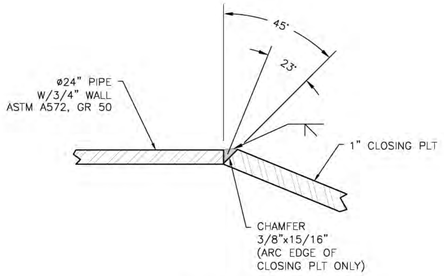


DETAIL '2-B'
SPUD PILE LIFTING PADEYE
SCALE: 1"=1'=0"

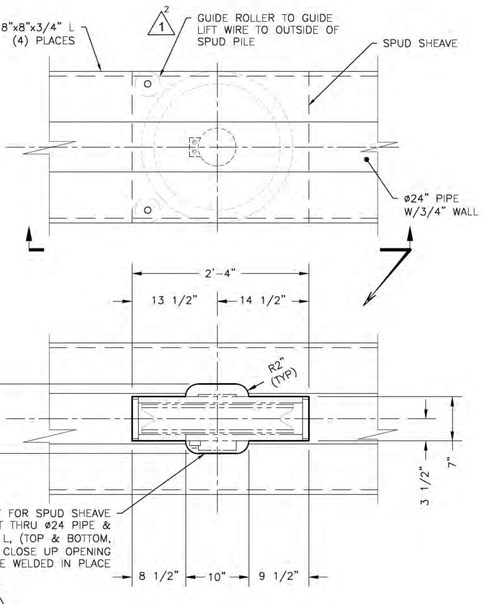


DETAIL '2-D'
SPUD PILE NOSE
SCALE: 1"=1'=0"

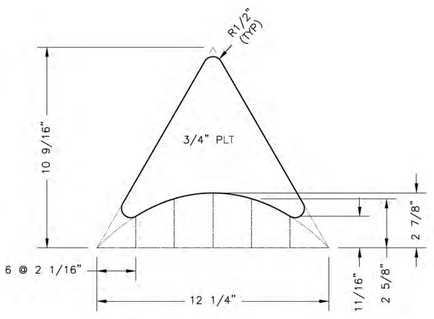




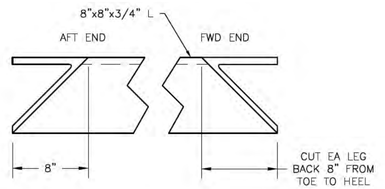
DETAIL '2-K'
WELD DETAIL CLOSING PLT TO PIPE
SCALE: 3"=1'-0"



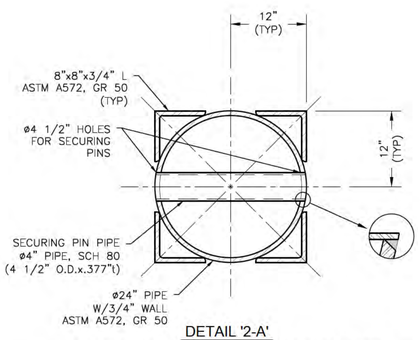
DETAIL '2-C'
SPUD PILE CABLE TURNING SHEAVE
SCALE: 1"=1'=0"



DETAIL 2-L
ANGLE CLOSING PLATE
(8) REQD
SCALE: 3"=1'-0"



DETAIL '2-M'
ANGLE BAR END CUTS
SCALE: 1 1/2"=1'-0"



DETAIL '2-A'
SPUD PILE CROSS-SECTION AT SECURING PIN PIPE
SCALE: 1"=1'=0"

MARCH 15, 2021

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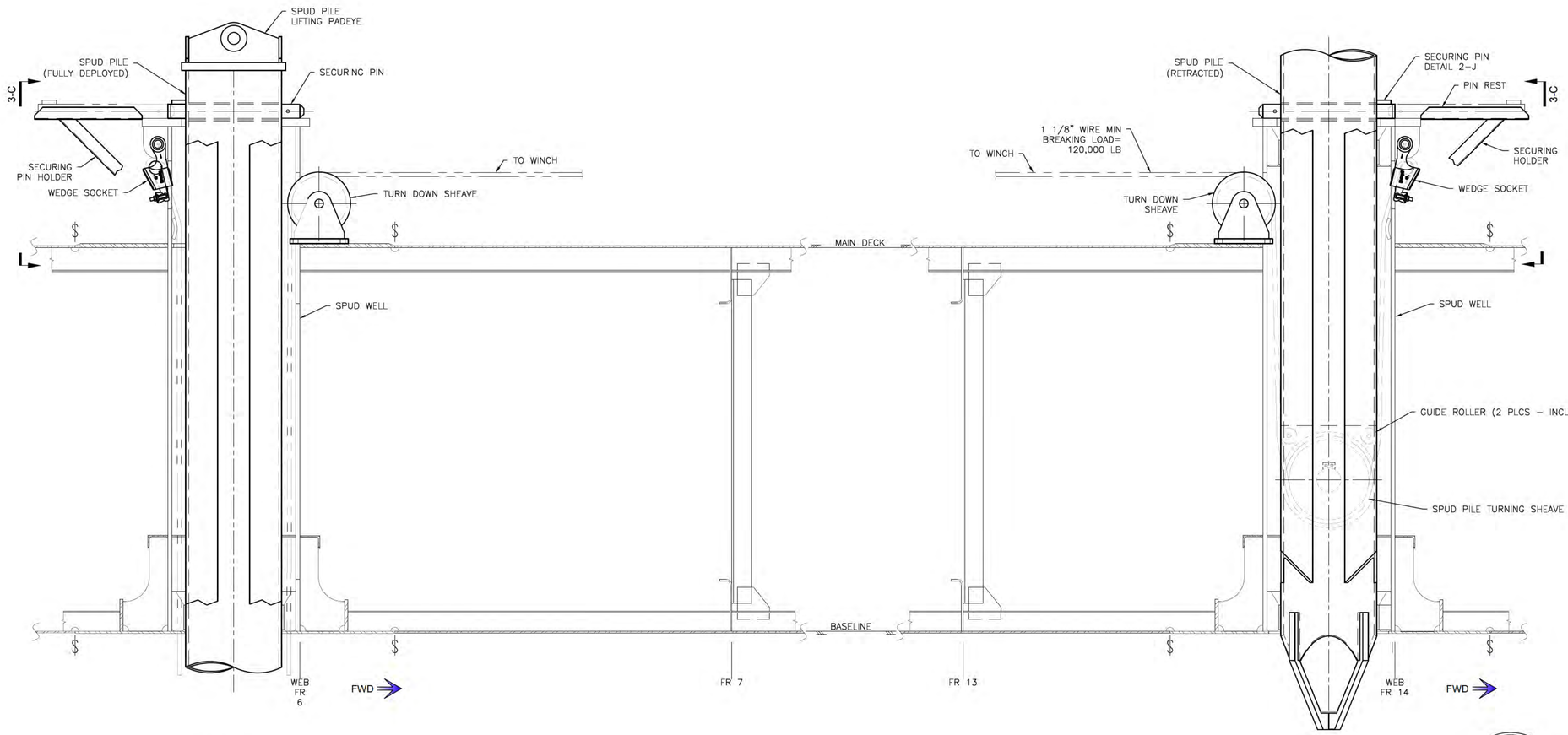
CRANE BARGE

SPUD PILE

HEC DWG No.: 2018-060-01-03
SCALE: AS NOTED
SHEET 2 OF 3
REV 1

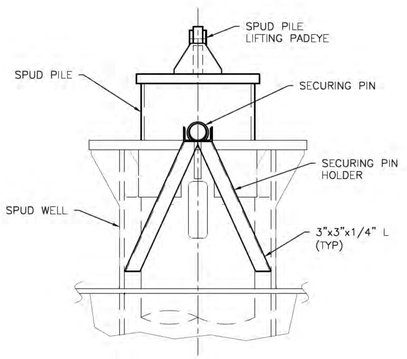


DETAIL 3-A

RIGGING ARRANGEMENT
SPUD PILE - DEPLOYED
SPUD WELL No.1
22'-11" OFF CL
PORT SIDE, LKG OUTBD
SCALE: 3/4"=1'-0"

DETAIL 3-B

RIGGING ARRANGEMENT
SPUD PILE - RETRACTED
SPUD WELL No.2
22'-11" OFF CL
PORT SIDE, LKG OUTBD
SCALE: 3/4"=1'-0"



DETAIL '3-C'

SECURING PIN HOLDER
SCALE: 3/4"=1'-0"

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CRANE BARGE

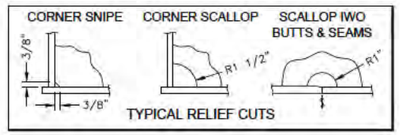
SPUD PILE

HEC DWG No.: 2018-060-01-03
SCALE: AS NOTED
SHEET 3 OF 3
REV 1

GENERAL NOTES

1. THIS DRAWING PRESENTS DETAILS FOR THE OUTFITTING OF A CRANE BARGE FOR PERFORMING ROUTINE REPAIRS AND OTHER LIFTING WORKS ALONG THE SAN FRANCISCO WATERFRONT.
2. THE BARGE IS DESIGNED TO PROVIDE STABILITY AND STRENGTH TO LIFT AND HANDLE PILES UP TO 135 FT IN LENGTH AND TO 76,000 LB AT 60 FT RADIUS FROM CRANE CL.
3. THE BARGE IS DESIGNED TO MEET THE REQUIREMENTS OF THE ABS RULES FOR BUILDING AND CLASSING STEEL BARGES, 2020, ALTHOUGH THE DESIGN WILL NOT ACTUALLY BE REVIEWED NOR APPROVED BY CLASS.
4. ALL MATERIAL, WELDING, FABRICATION AND WORKMANSHIP IS TO BE IN ACCORDANCE WITH APPLICABLE ABS RULES AND TO THE SATISFACTION OF THE OWNER.
5. THERE SHALL BE NO SUBSTITUTIONS WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
6. ALL NEW STEEL IS TO BE ABS GRADE A OR ASTM A-36 UNLESS NOTED OTHERWISE.
7. FOUNDATIONS FOR SPECIFIC EQUIPMENT AND FITTINGS ARE TO BE ADJUSTED AS NECESSARY TO ENSURE THEY PROVIDE THE PROPER SUPPORT.
8. EXCEPT WHERE NOTED, ALL WELDS ARE TO BE DOUBLE CONTINUOUS FILLETS WRAPPED AT THE ENDS. UNLESS OTHERWISE INDICATED, WELDS SHALL BE SIZED PER THE TABLE SHOWN BELOW. SIZES PERTAIN TO THE LEG LENGTH.
9. PROVIDE RELIEF CUTS AS SHOWN IN THE TABLE BELOW. IF NONE IS SHOWN ON THE DETAIL, IT IS ASSUMED TO HAVE THE 3/8"x3/8" CORNER SNIPE AND IS TO BE FILLED WITH WELD. SCALLOPS SHALL HAVE RADII AS SHOWN IN THE TABLE BELOW UNLESS NOTED OTHERWISE.

FILLET WELD SIZING TABLE							
THICKNESS OF THINNER PLATE	≤1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	≥3/4"
FILLET WELD LEG SIZE	3/16"	7/32"	7/32"	1/4"	5/16"	5/16"	3/8"



ABBREVIATIONS

ABL ___ ABOVE BASELINE
ABT ___ ABOUT
BHD ___ BULKHEAD
BKT ___ BRACKET
BTM ___ BOTTOM
CHK ___ CHOCK
CL ___ CENTERLINE
CLR ___ CLEAR
CMG ___ COAMING
CTR ___ CENTER
DBL ___ DOUBLE
DET ___ DETAIL
D.O. ___ DITTO (SAME AS)
EXISTG ___ EXISTING
FR ___ FRAME
FWD ___ FORWARD
GDR ___ GIRDER
LONGIL ___ LONGITUDINAL
NS ___ NEAR SIDE
N&F ___ NEAR & FAR
OPNG ___ OPENING
OUTBD ___ OUTBOARD
PLT ___ PLATE
PLTG ___ PLATING
REF ___ REFERENCE
STD ___ STANDARD
T&B ___ TOP & BOTTOM
TYP ___ TYPICAL
WT ___ WATERTIGHT

DRAWING INDEX

PRINCIPAL PARTICULARS

LENGTH ___ 150'-0"
BEAM ___ 55'-0"
DEPTH ___ 8'-0"
DRAFT ___ 2'-6"
DISPLACEMENT ___ 776 SHORT TONS (1/2)
LIFT CAPACITY ___ 180,000LB @ 25'-0" RADIUS (ANY DIRECTION)
LIFT CAPACITY ___ 112,000LB @ 60'-0" RADIUS (ANY DIRECTION)
LIFT CAPACITY ___ 26,500LB @ 150'-0" RADIUS (ANY DIRECTION)
DESIGN WATER DEPTH 60 FT, MOORED: 40FT WITH SPUDS DOWN

REVISIONS

No.	DESCRIPTION	BY/DATE/APPD
0	ISSUE FOR BIDDING	JRP/03/08/21/JRP
1	REISSUE FOR BIDDING 1. ADDED FORE AND AFT SHELL LADDER P&S, SHEET 13 2. ADDED SECOND DECK HATCHES FOR MOST COMPARTMENTS	JRP/04/06/21/JRP
2	REISSUE FOR BIDDING 1. CORRECTED DISPLACEMENT	JRP/06/13/22/JRP

REFERENCES

No.	TITLE	DWG No.
1	GENERAL ARRANGEMENT	2018-060-01-01
2	STRUCTURAL SCANTLING PLAN	2018-060-01-02
3	SPUD PILES	2018-060-01-03
4	MECHANICAL ARRANGEMENT	2018-060-01-05
5	-	-

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DRWN: RJP	DATE: JUNE 13, 2022	SCALE:	AS NOTED
CHKD: JRP	APPD: SAS	ACADFILE:	180800104-2
PROJECT FILE:	2018-060-01	PLOTSCALE:	1:2 ON ANSI D
ABS APPROVAL: -			
-			

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

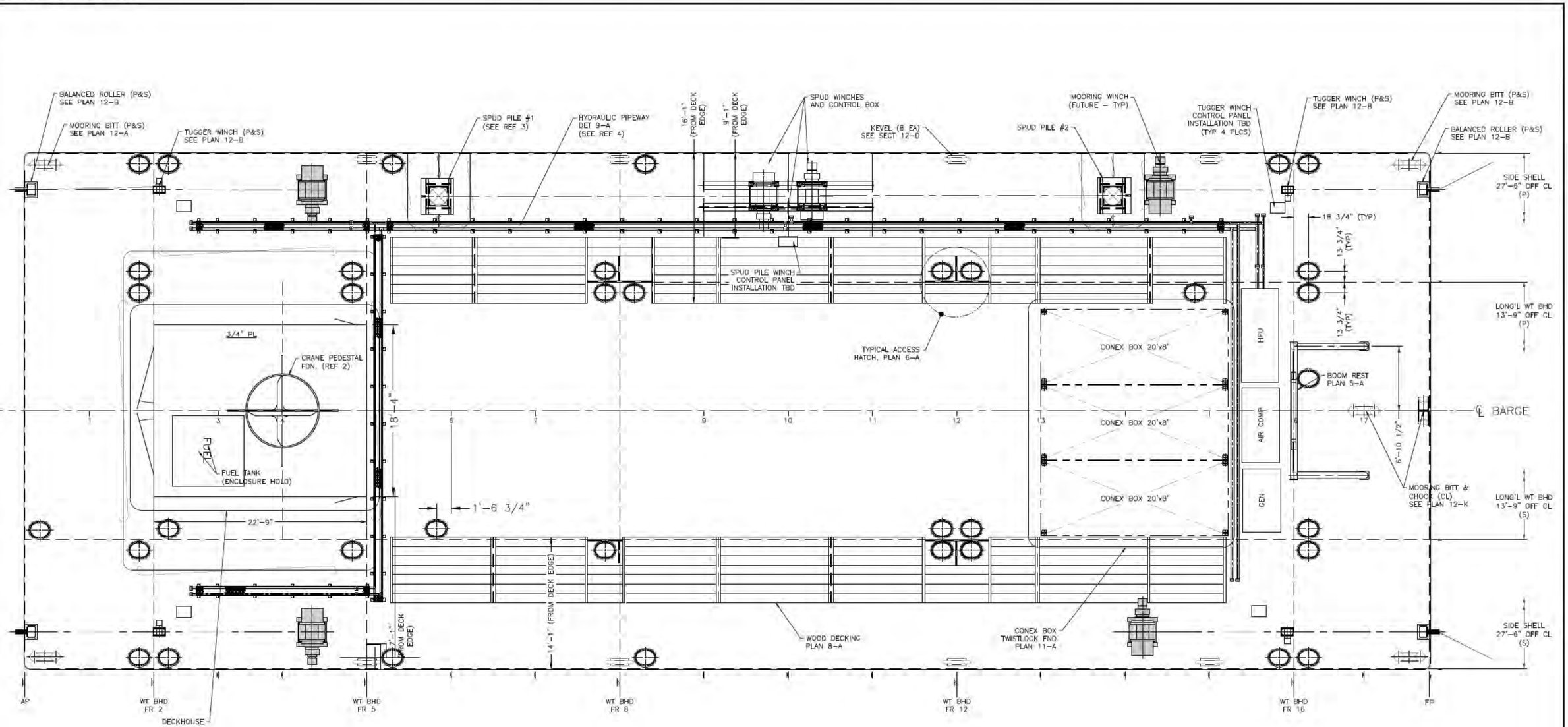
CRANE BARGE

OUTFITTING

REGISTERED PROFESSIONAL ENGINEER JOHN R. PAULINO 48718 CIVIL STATE OF CALIFORNIA
JUNE 13, 2022

OWNER APPVL:	-	HEC DWG No.:	2018-060-01-04
DATE:	-	SHEET 1 OF 13	REV 2
FILE:	-		

Exhibit A-4: Outfitting



KEY PLAN 2-A

OUTFITTING ARRANGEMENT

SCALE: 3/16"=1'-0"

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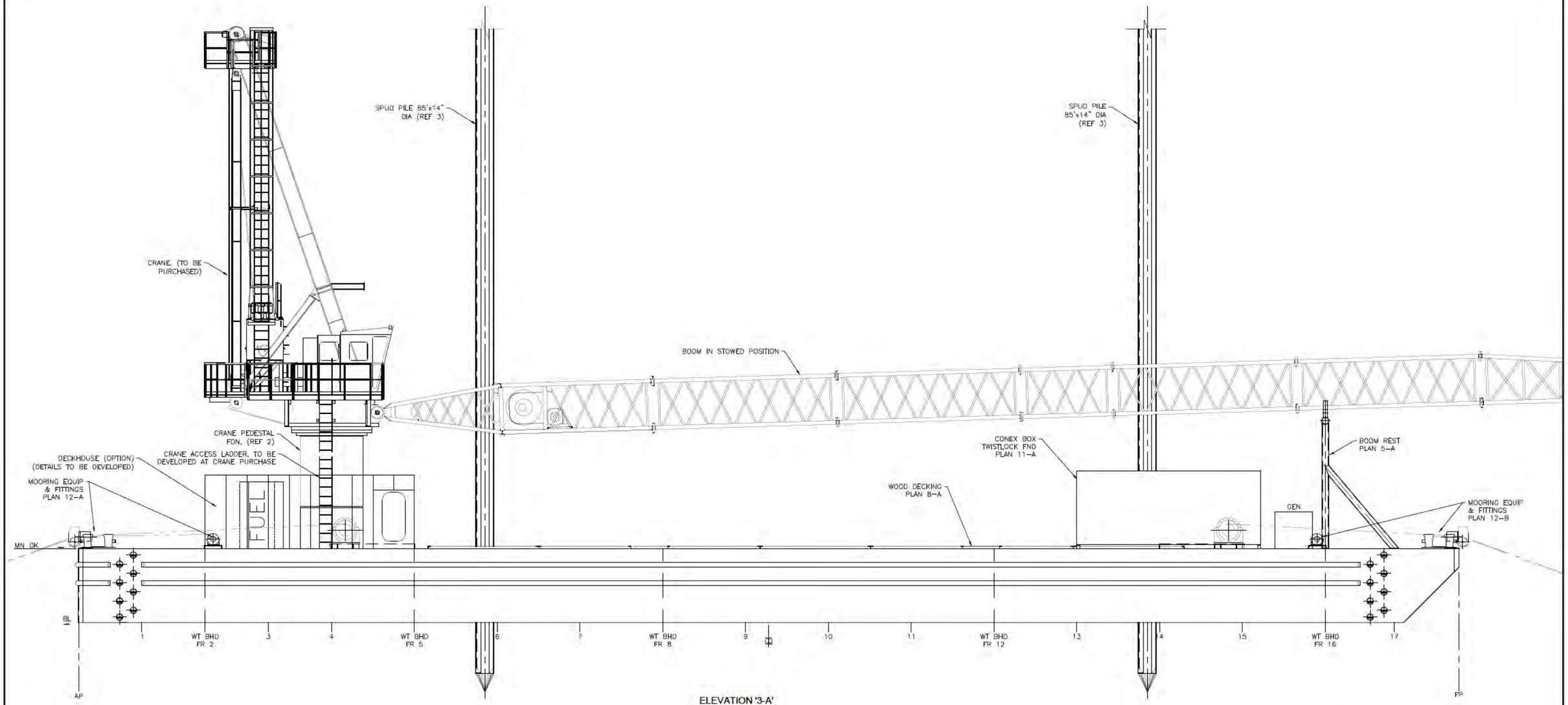
CRANE BARGE

OUTFITTING

JOHN R. PAULINO 48718 REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA

APRIL 6, 2021

HEC DWG No.: 2018-060-01-04 | SCALE: AS NOTED | SHEET 2 OF 13 | REV 2



ELEVATION '3-A'
STBD SIDE, LKG INBD
SCALE: 3/16"=1'-0"

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OUTFITTING

HEC DWG No.: 2018-060-01-04
SCALE: AS NOTED
SHEET 3 OF 13
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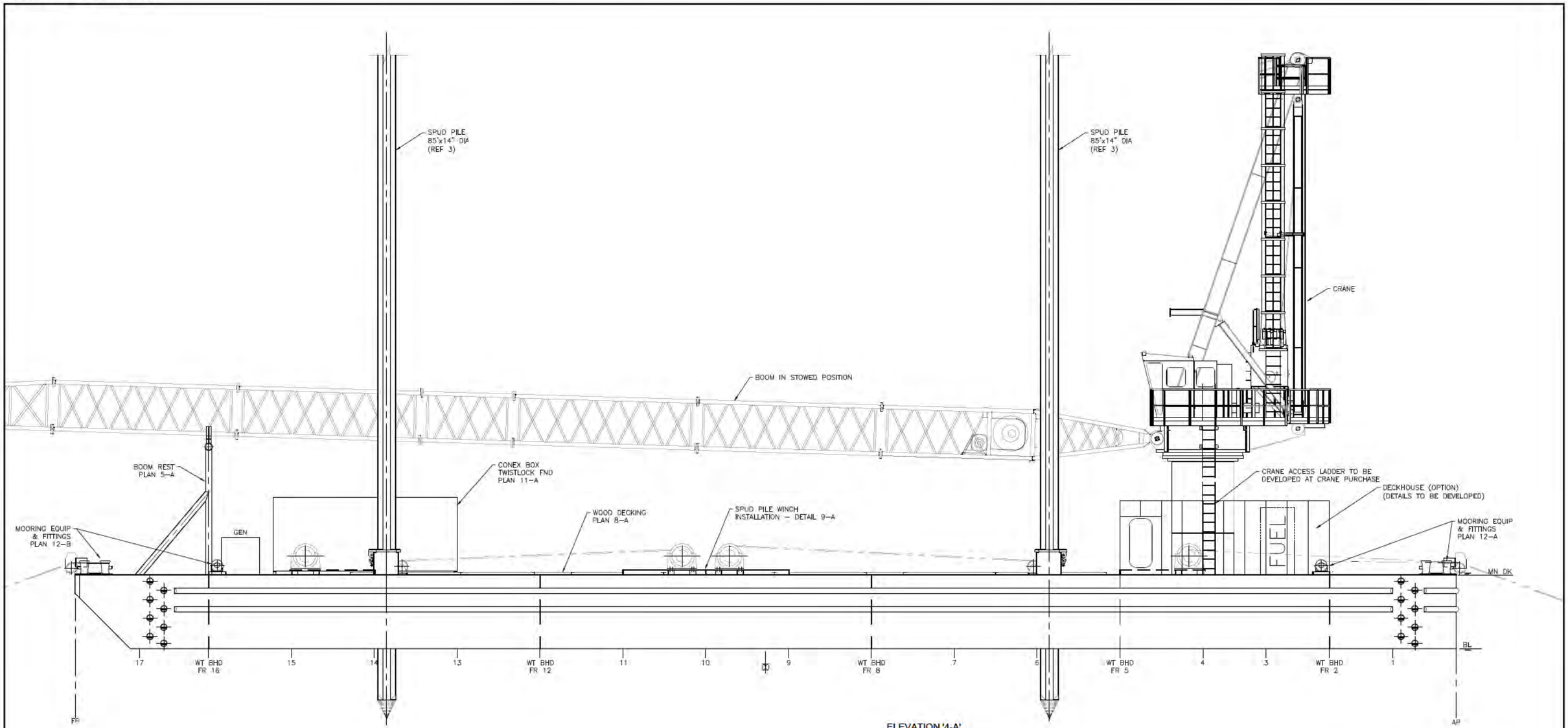
Exhibit A-4: Outfitting



ELEVATION '4-A'

PORT SIDE, LKG INBD

SCALE: 3/16"=1'-0"

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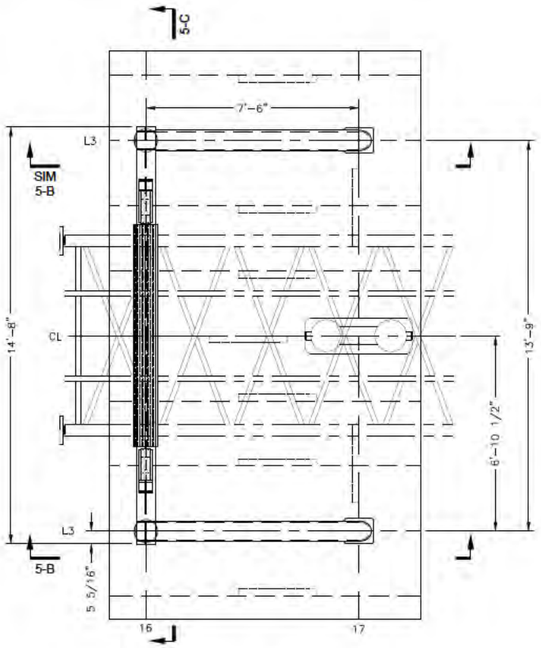
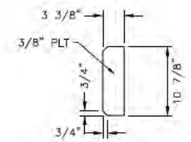
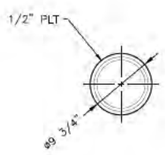
Exhibit A-4: Outfitting



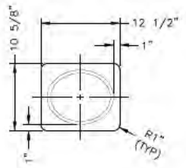
PLAN '5-A'
BOOM REST
BETWEEN FRAMES 16 & 17, MAIN DECK 8'-0" ABL
AT CL OF BARGE
SCALE: 3/8"=1'-0"



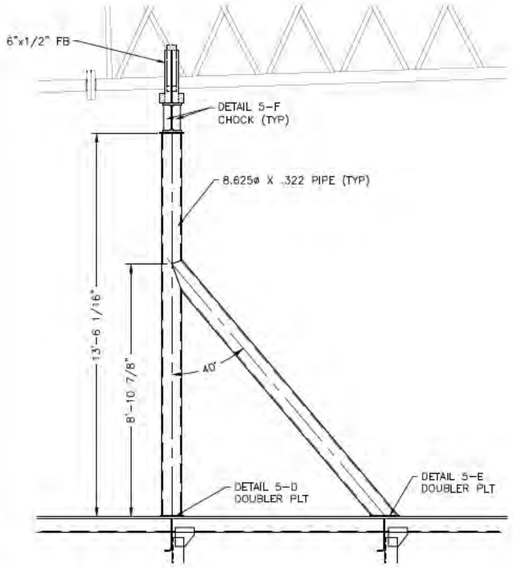
DETAIL '5-F'
CHOCK - 16 REQ'D
SCALE: 1"=1'-0"



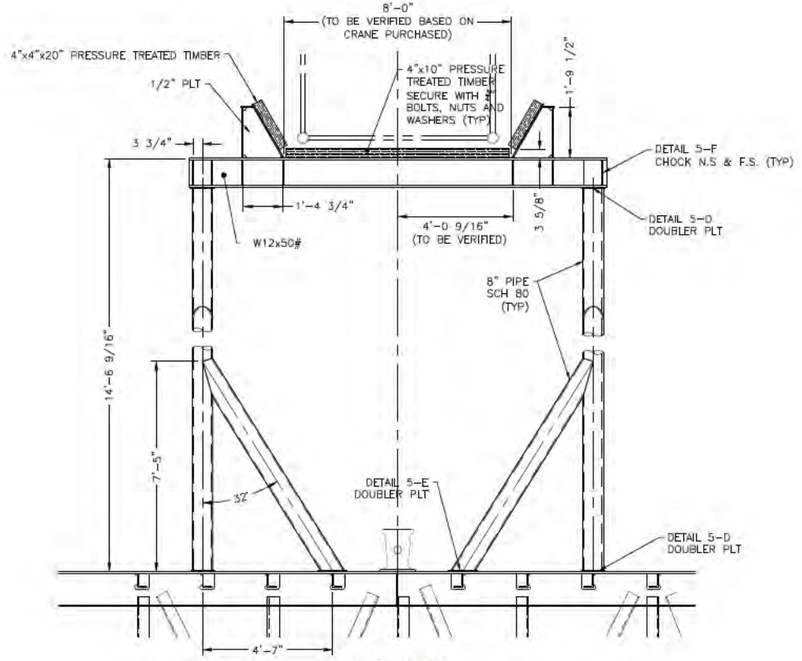
DETAIL '5-D'
DOUBLER PLATE/END CAP
SCALE: 1"=1'-0"



DETAIL '5-E'
DOUBLER PLATE
SCALE: 1"=1'-0"



ELEVATION '5-B'
BOOM REST
6'-10 5/8" OFF CL, STBD SIDE LKG INBD
PORT SIDE SIM TO OPP HAND
SCALE: 3/8"=1'-0"



SECTION '5-C'
BOOM REST
AT FR 16, 8'-0" ABL
ABOUT CL, LKG AFT
SCALE: 3/8"-1'-0"

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OUTFITTING

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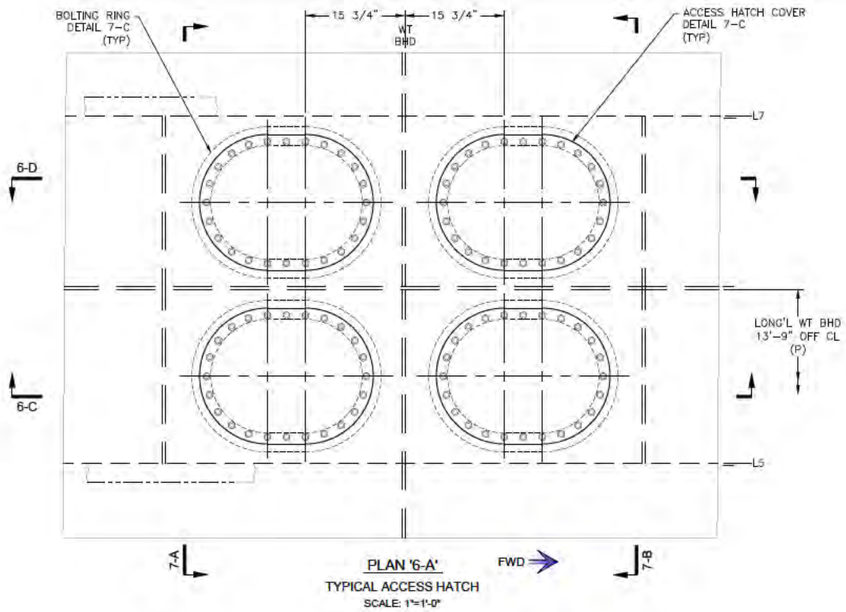
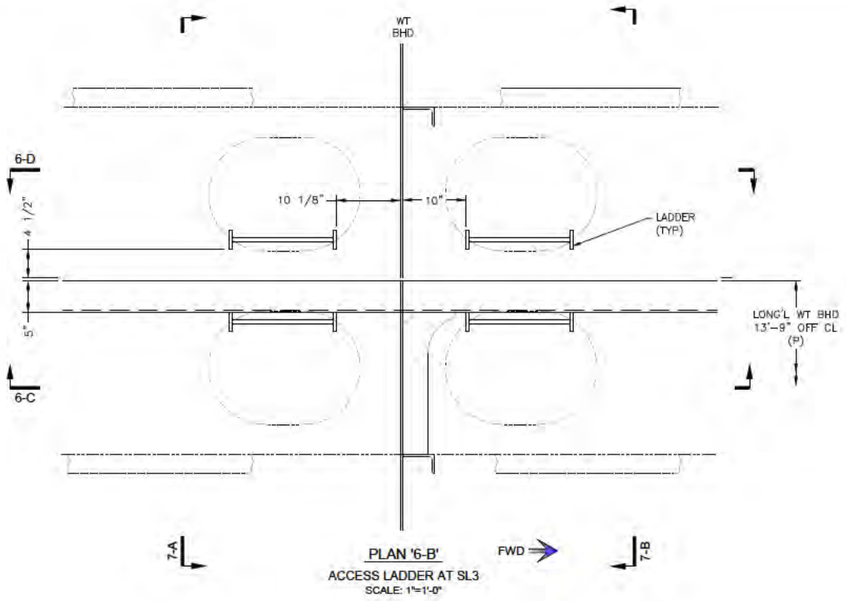
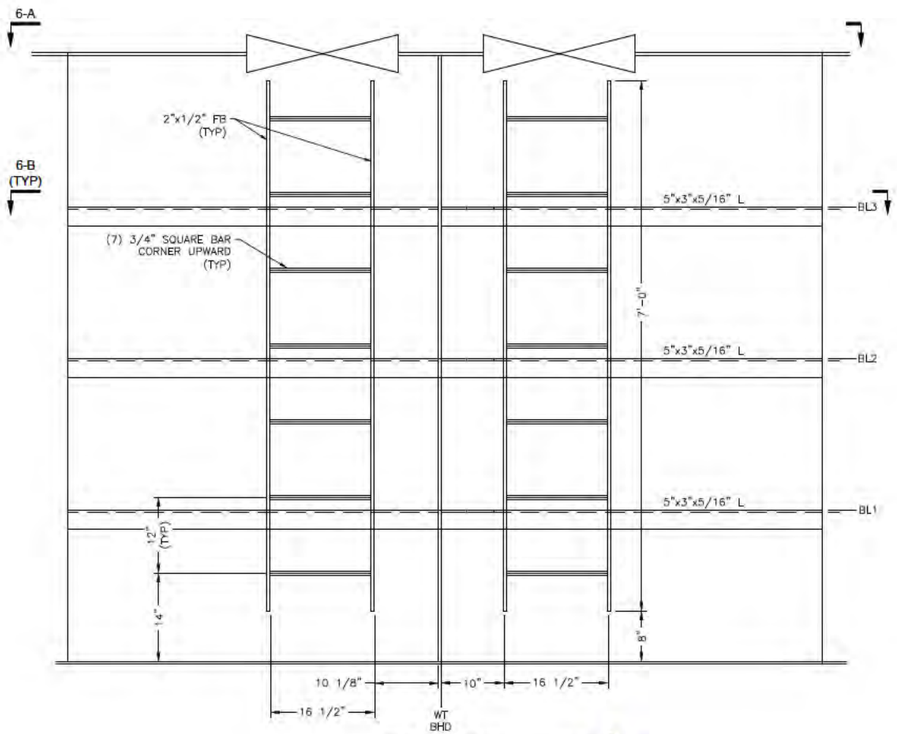
Exhibit A-4: Outfitting



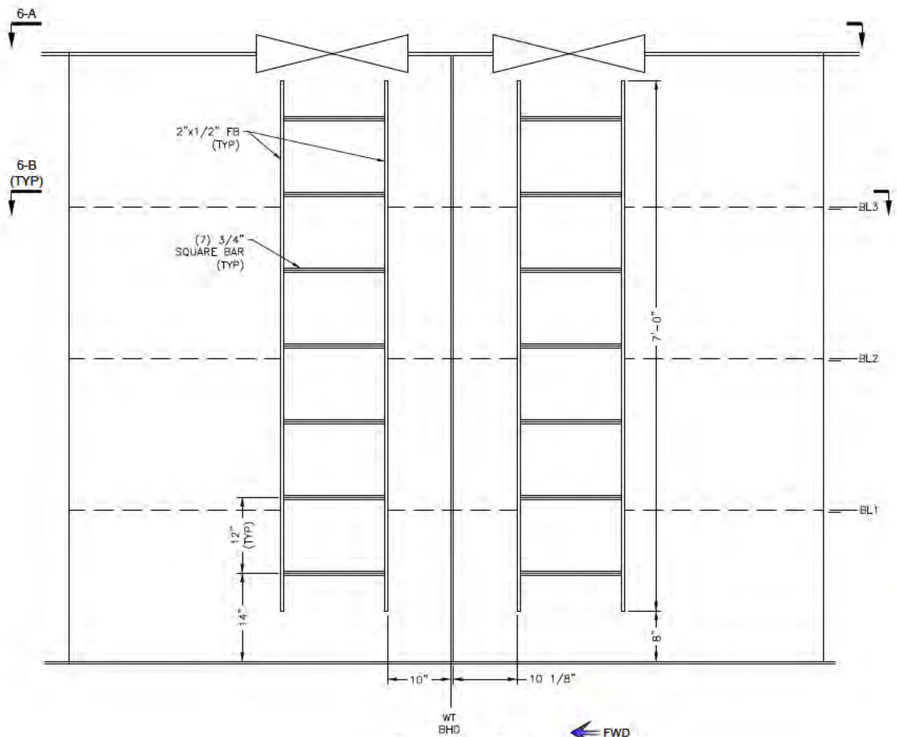
PLAN '6-A'
TYPICAL ACCESS HATCH
SCALE: 1"=1'-0"



PLAN '6-B'
ACCESS LADDER AT SL3
SCALE: 1"=1'-0"



ELEVATION '6-C'
TYPICAL ACCESS LADDER
INBD SIDE OF LONG'L BHD
LKG OUTBD
SCALE: 1"=1'-0"



ELEVATION '6-D'
TYPICAL ACCESS LADDER
OUTBD OF LONG'L BHD
LKG INBOARD
SCALE: 1"=1'-0"

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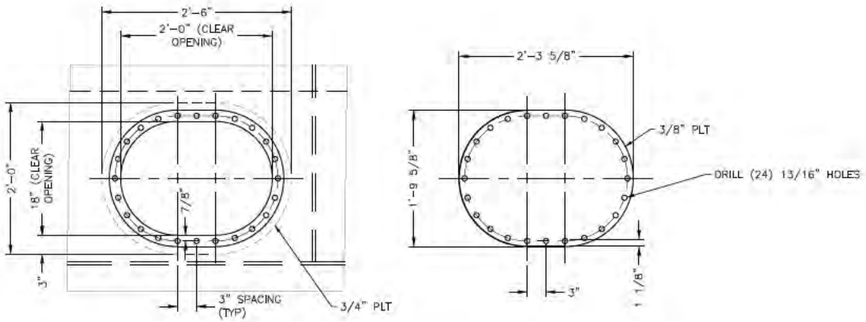
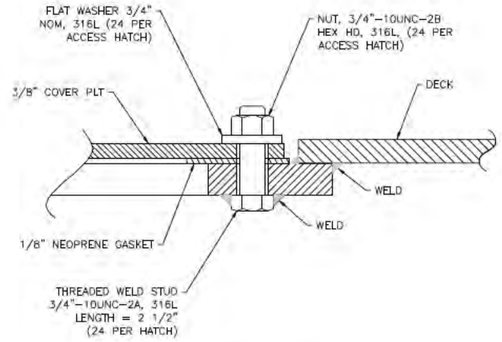
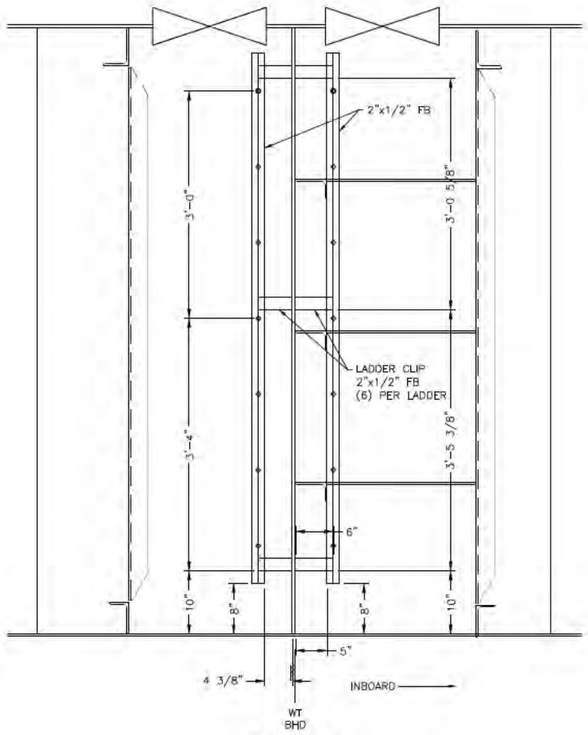


DETAIL '7-C'
TYPICAL DECK RING
SCALE: 1"=1'-0"

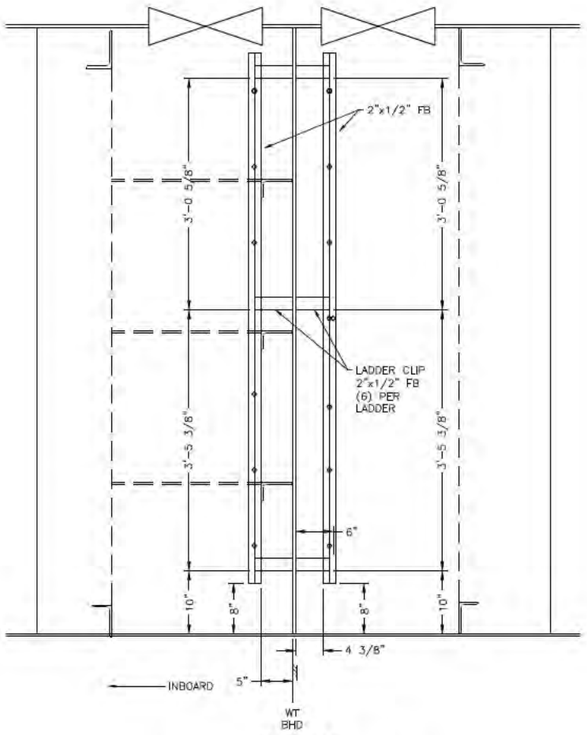
DETAIL '7-D'
TYPICAL ACCESS COVER PLATE
SCALE: 1"=1'-0"



DETAIL '7-E'
ACCESS HATCH ASSEMBLY
SCALE: 1"=1'-0"



SECTION '7-A'
TYPICAL ACCESS HATCH & LADDER
FWD SIDE OF WT BHD
LKG AFT
SCALE: 1"=1'-0"



SECTION '7-B'
TYPICAL ACCESS HATCH & LADDER
AFT SIDE OF WT BHD
LKG FWD
SCALE: 1"=1'-0"

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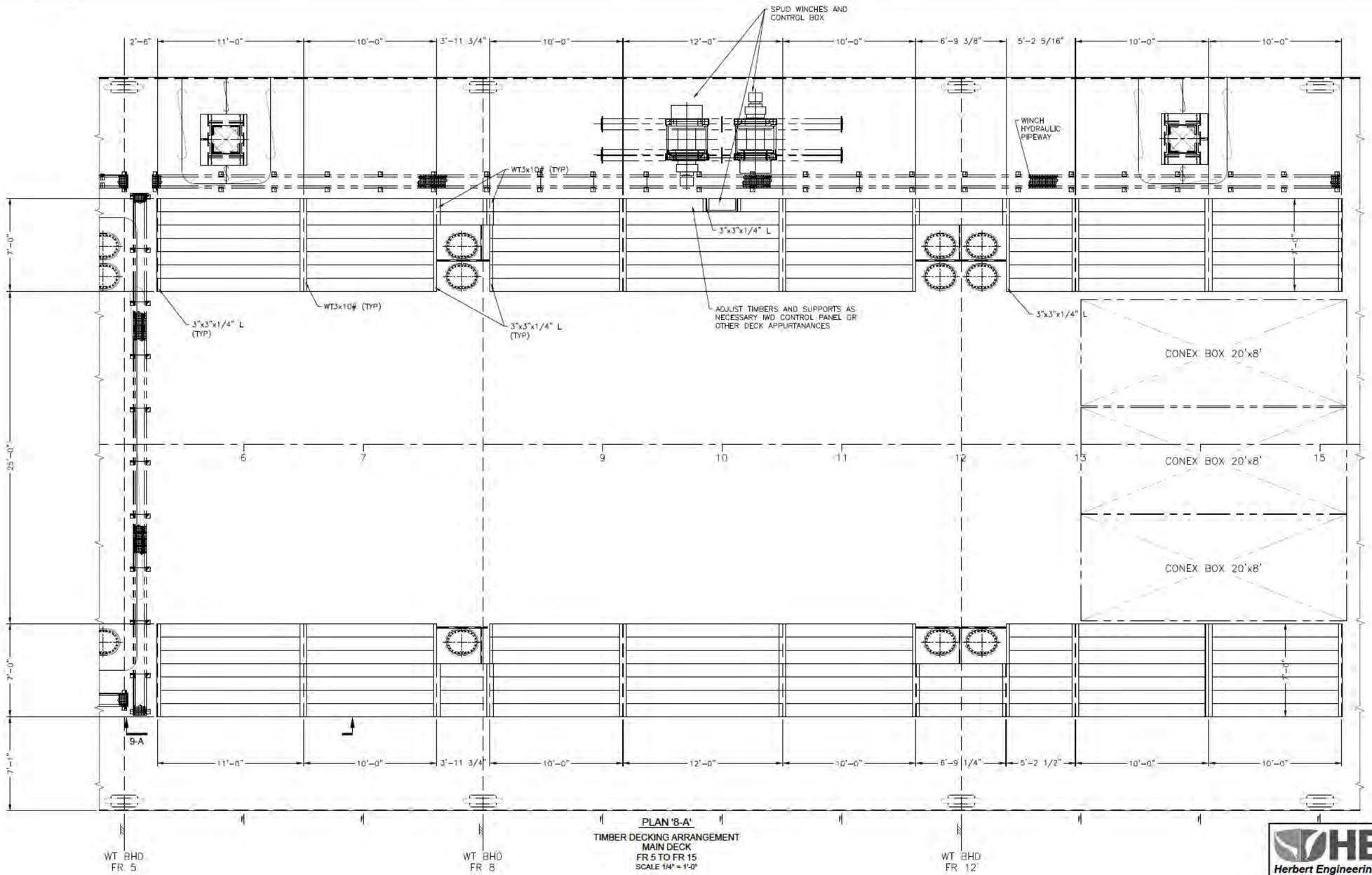
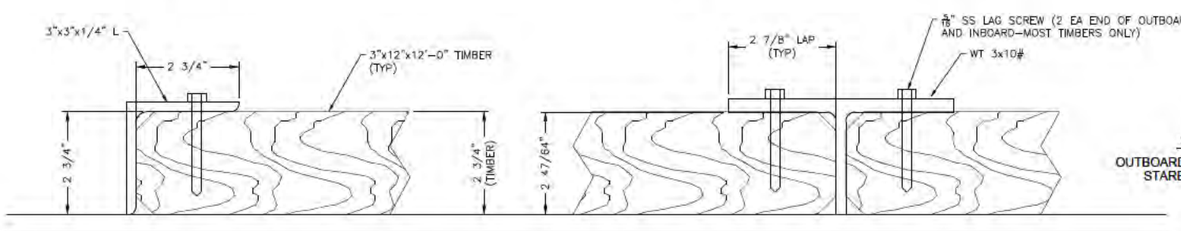
HEC DWG No.: 2018-060-01-04	SCALE: AS NOTED	REV 2
	SHEET 7 OF 13	

Exhibit A-4: Outfitting



PLAN '8-A'
TIMBER DECKING ARRANGEMENT
MAIN DECK
FR 5 TO FR 15
SCALE 1/4" = 1'-0"



SECTION '8-B'
OUTBOARD SIDE OF WOOD DECKING
STARBOARD SIDE LKG INBD
SCALE: 6"=1'-0"

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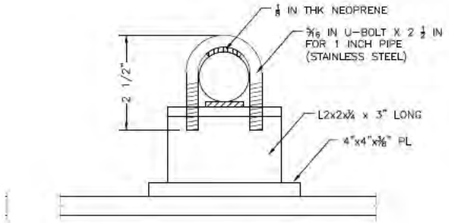
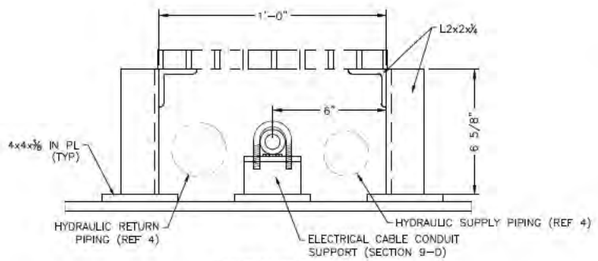
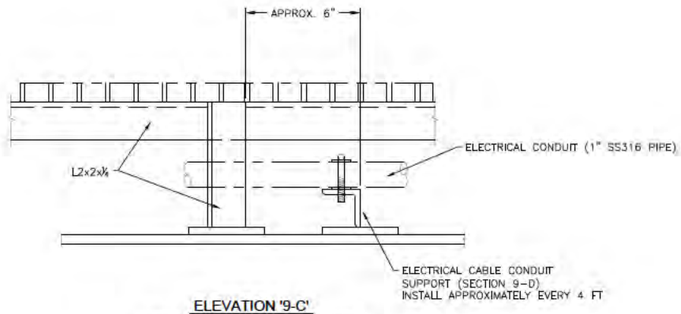


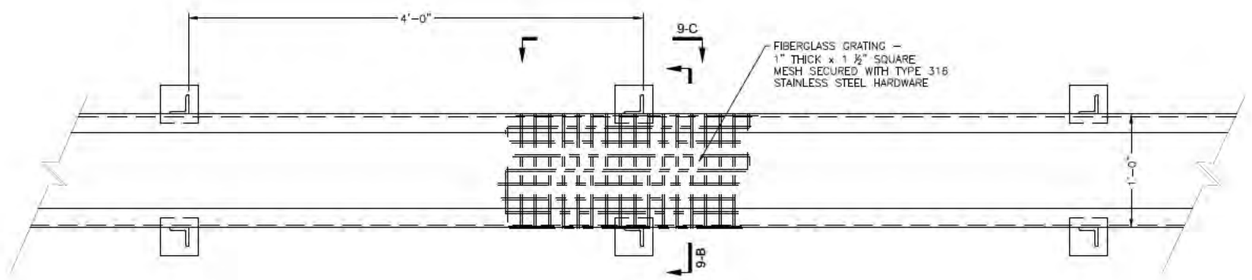
SECTION '9-D'
ELECTRIC CABLE CONDUIT SUPPORT
SCALE 3" = 1'-0"



SECTION '9-B'
HYDRAULIC PIPING PROTECTION
SCALE 3" = 1'-0"



ELEVATION '9-C'
HYDRAULIC PIPING PROTECTION
SCALE 3" = 1'-0"



DETAIL '9-A'
HYDRAULIC PIPING PROTECTION
SCALE 1-1/2" = 1'-0"

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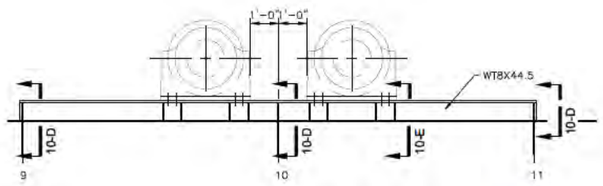
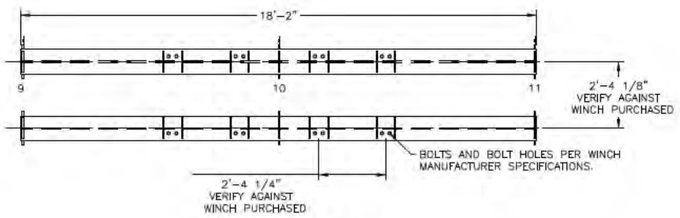
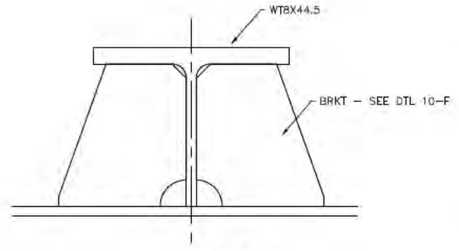


ELEVATION 10-C
SPUD WINCH FOUNDATION
SCALE: 3/8"=1'-0"

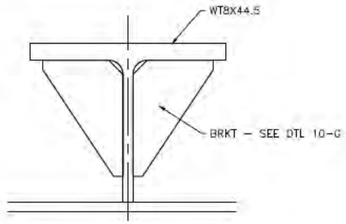
FWD



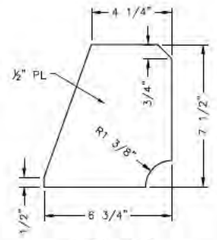
DETAIL 10-B
SPUD WINCH SUPPORT BEAMS
SCALE: 3/8"=1'-0"



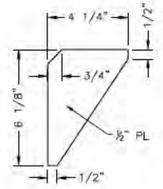
DETAIL 10-D
BRACKETS AT WEB FRAMES
SCALE: 1-1/2" = 1'-0"



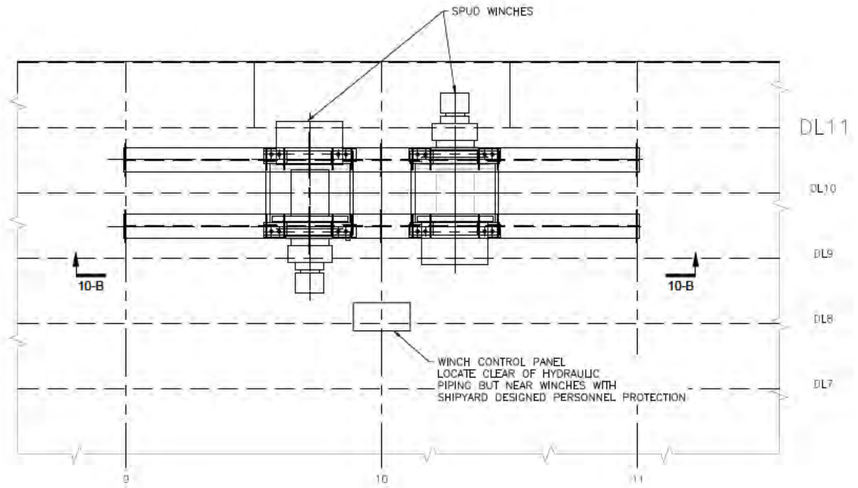
DETAIL 10-E
BRACKETS AT NEAR BOLTS
SCALE: 1-1/2" = 1'-0"



DETAIL 10-F
BRACKETS AT WEB FRAMES
SCALE: 1-1/2" = 1'-0"



DETAIL 10-G
BRACKETS AT NEAR BOLTS
SCALE: 1-1/2" = 1'-0"



DETAIL 10-A FWD
SPUD PILE WINCH FOUNDATION
SCALE: 3/8"=1'-0"

NOTE: ADJUST DIMENSIONS AS REQUIRED FOR ACTUAL EQUIPMENT PURCHASED.

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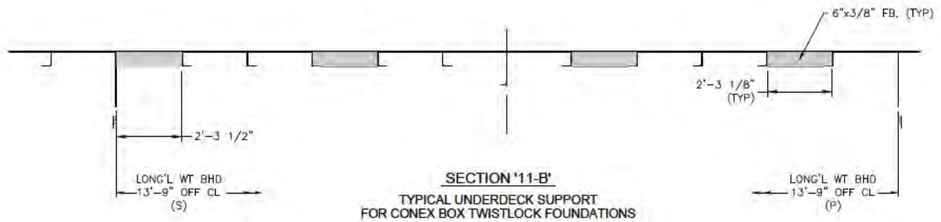
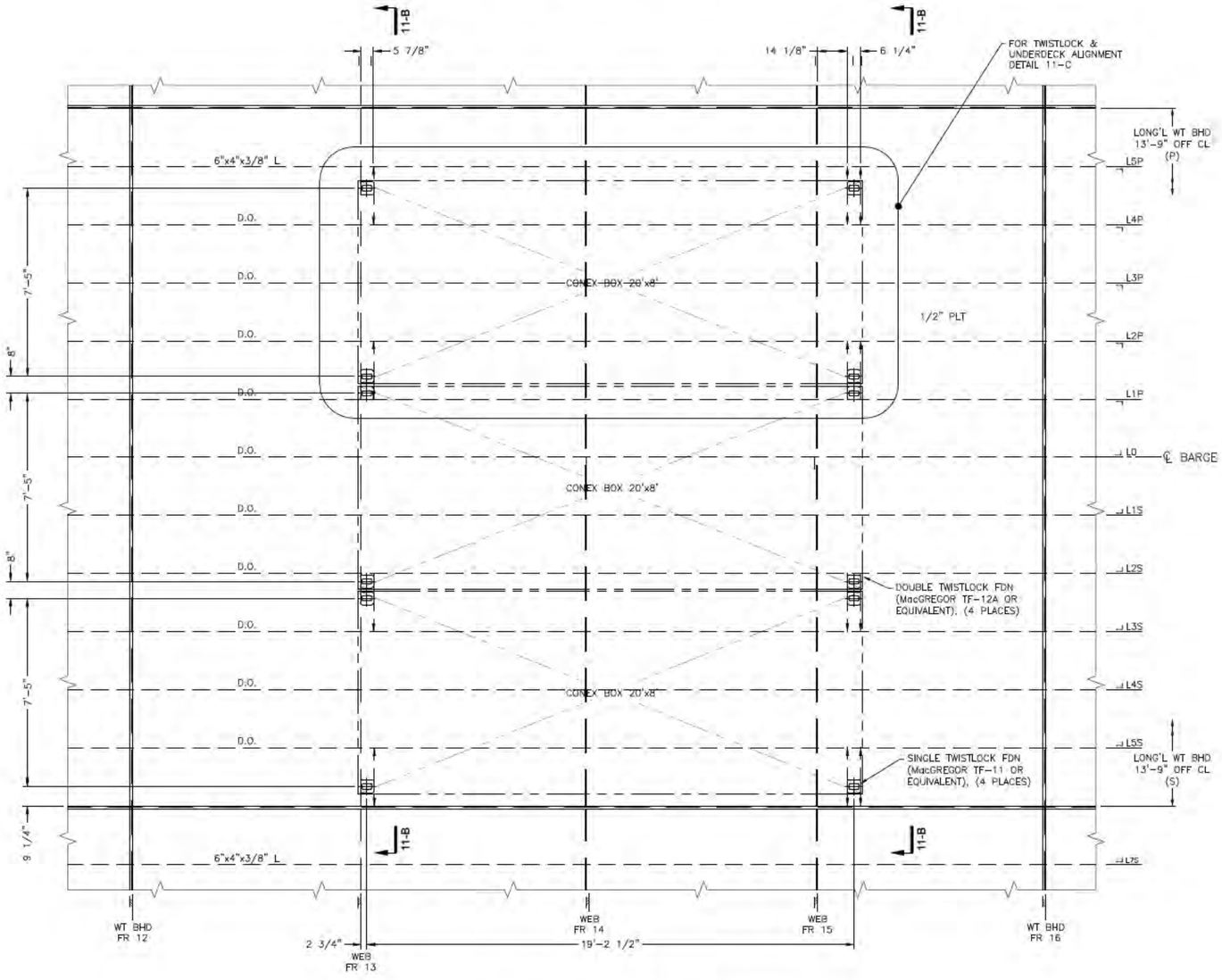
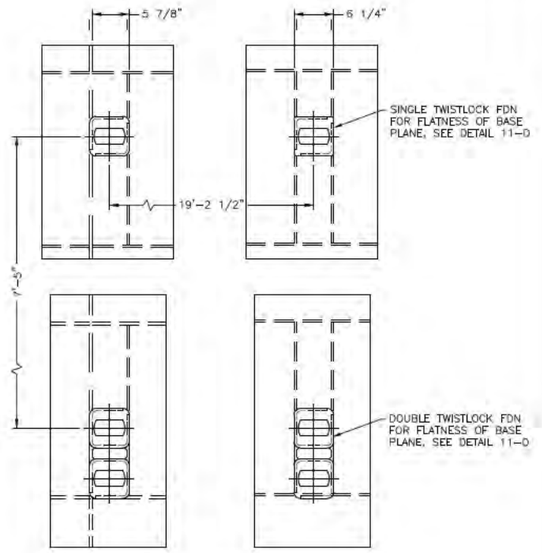


SECTION '11-B'
TYPICAL UNDERDECK SUPPORT FOR CONEX BOX TWISTLOCK FOUNDATIONS ABT CL, LKG AFT
SCALE: 3/8"=1'-0"



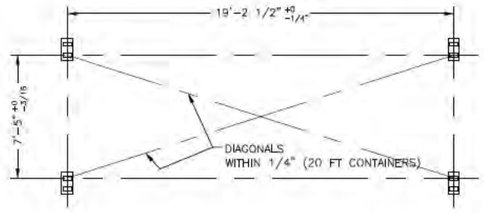
PLAN '11-A'
TWISTLOCK FOUNDATIONS FOR 3 CONEX BOX
SCALE: 3/8"=1'-0"



DETAIL '11-C'
TWISTLOCK & UNDERDECK STRUCTURE ALIGNMENT
SCALE : 1"=1'-0"

FLATNESS OF BASE PLANE OF ANY STACK OF CONTAINERS:

NO POINT SHALL DEVIATE FROM THE PLANE OF THE OTHER THREE BY MORE THAN THAN ±1/8". THE TOLERANCES FOR THE FLATNESS OF THE PLANE OF ANY STACK OF CONTAINERS TO A COMMON PLANE ESTABLISHED BY (2) ADJACENT CONTAINERS SHALL BE ±1/8" OVER 16'-0". SHIMS REQUIRED TO ESTABLISH FLAT PLANE SHALL HAVE A MINIMUM THICKNESS OF 1/4", WITH A CONTINUOUS FILLET WELD OF 1/4".



DETAIL '11-D'
DECK SOCKET TOLERANCES
NOT TO SCALE

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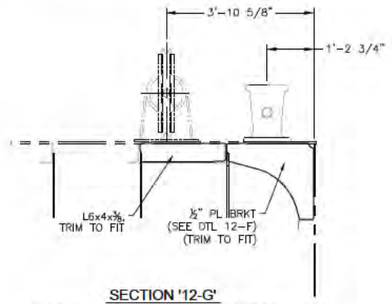
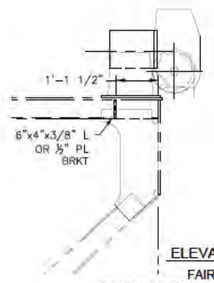
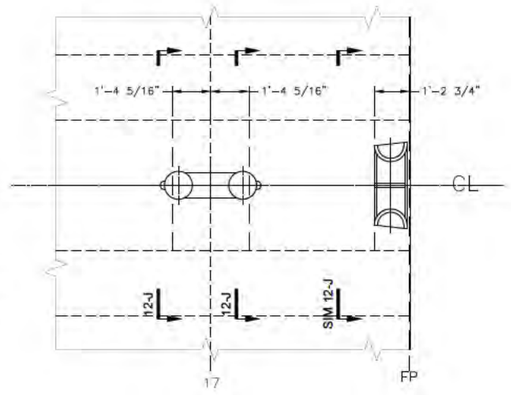


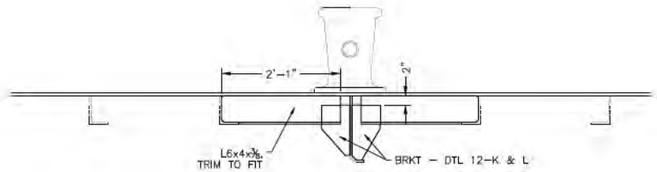
SECTION '12-G'
FWD STBD BOLLARD AND FAIRLEAD FDN
STBD SIDE, PORT SIMILAR, OPP HAND
LKG FWD
SCALE: 1/2"=1'-0"



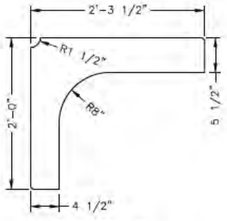
ELEVATION '12-H'
FAIRLEAD FDN
STBD SIDE FWD, PORT SIMILAR, OPP HAND
LKG TO PORT
SCALE: 1/2"=1'-0"



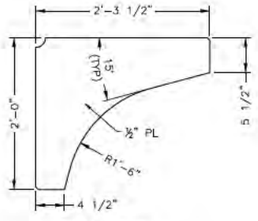
PLAN '12-I'
CENTERLINE BOLLARD AND CHOCK FDN
SCALE : 3/8" = 1'-0"



PLAN '12-J'
CL BOLLARD AND CHOCK FDN
SCALE : 1/2" = 1'-0"

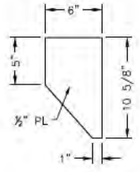


DETAIL '12-E'
KEVEL BRACKET DETAIL
SCALE: 1"=1'-0"

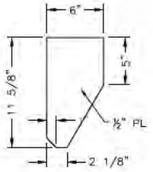


DETAIL '12-F'
BOLLARD BRACKET DETAIL
SCALE: 1"=1'-0"

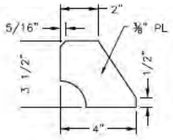
NOTE: ADJUST FOUNDATIONS AS REQUIRED FOR ACTUAL FITTINGS AND EQUIPMENT PURCHASED.



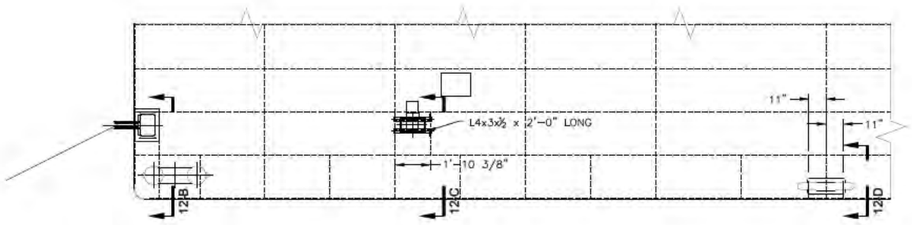
DETAIL '12-K'
CL MOORNG BRACKET DETAIL
SCALE: 1-1/2" = 1'-0"



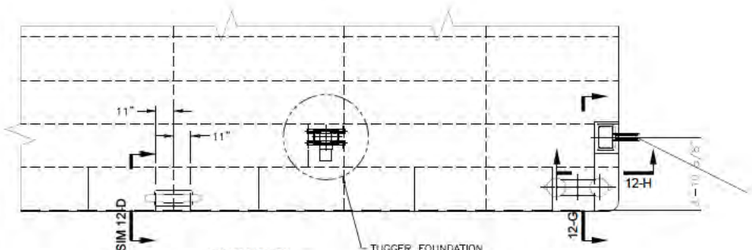
DETAIL '12-L'
CL MOORNG BRACKET DETAIL
SCALE: 1-1/2" = 1'-0"



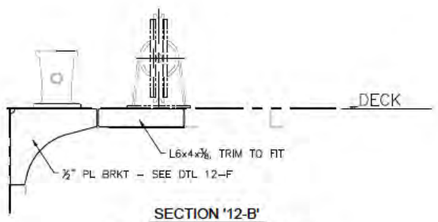
DETAIL '12-M'
TUGGER WINCH BRKT DETAIL
SCALE: 3" = 1'-0"



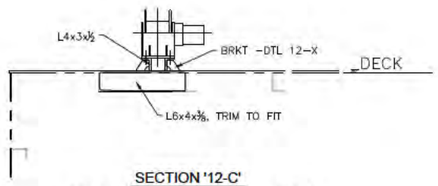
PLAN '12-A'
AFT DECK MOORING FDNS
SCALE: 1/4"=1'-0"



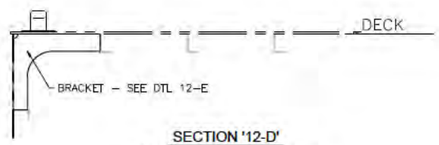
PLAN '12-B'
FORE DECK MOORING FDNS
SCALE: 1/4"=1'-0"



SECTION '12-B'
TYPICAL BOLLARD FOUNDATION
STBD SIDE, PORT SIMILAR, OPP HAND
LKG AFT
SCALE: 1/2"=1'-0"



SECTION '12-C'
TYPICAL TUGGER WINCH FOUNDATION
STBD SIDE, PORT SIMILAR, OPP HAND
LKG AFT
SCALE: 1/2"=1'-0"



SECTION '12-D'
TYPICAL KEVEL FOUNDATION
STBD SIDE, PORT SIMILAR, OPP HAND
LKG AFT
SCALE: 1/2"=1'-0"

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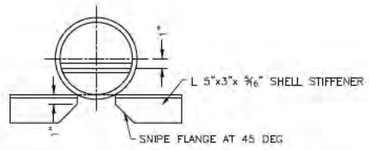
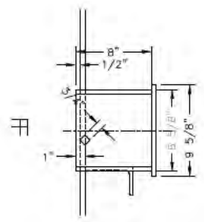
CRANE BARGE

OUTFITTING

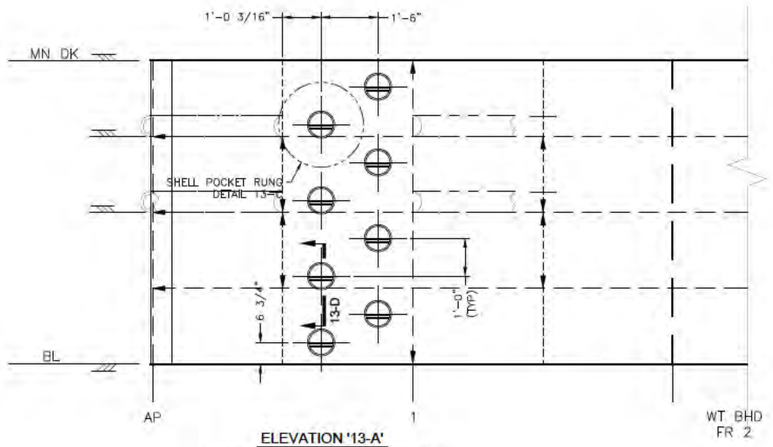
HEC DWG No.: 2018-060-01-04
SCALE: AS NOTED
SHEET 12 OF 13
REV 2



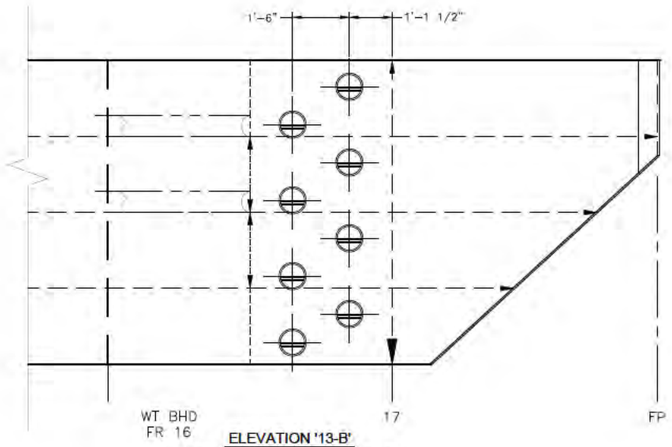
DETAIL '13-C'
SHELL POCKET RUNG
SCALE: 1-1/2"=1'-0"



SECTION '13-D'
SHELL POCKET RUNG
SCALE: 1-1/2"=1'-0"



ELEVATION '13-A'
STBD AFT SHELL LADDER - PORT SIM
SCALE: 1/2"=1'-0"



ELEVATION '13-B'
STBD FWD SHELL LADDER - PORT SIM
SCALE: 1/2"=1'-0"

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CRANE BARGE

OUTFITTING

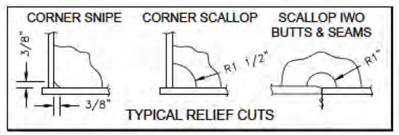
HEC DWG No.: 2018-060-01-04	SCALE: AS NOTED	REV 2
	SHEET 13 OF 13	

Exhibit A-5: Mechanical Arrangement

GENERAL NOTES

1. THIS DRAWING SHOWS THE ARRANGEMENT OF THE HYDRAULIC POWER PIPING ON DECK FROM THE HPU TO THE CONSUMERS. THESE CONSUMERS ARE FOUR TUGGER WINCHES, TWO SPUD-PILE WINCHES AND FOUR SPREAD-MOORING WINCHES.
2. PRESSURE PIPING (SUPPLY) IS SIZED FOR 3000 PSI WORKING PRESSURE AT 142 GPM. RETURN PIPING IS SIZED FOR FOR RETURN TO TANK.
3. ONLY PRESSURE AND RETURN LINES ARE PROVIDED ON DECK. ALL FLOW AND PRESSURE CONTROL REQUIRED FOR WINCHES ARE TO BE SPECIFIED AND PROVIDED IN THE CONTROL PANEL BY THE WINCH SUPPLIER.
4. ALL PLAN VIEWS ARE TOP LOOKING DOWN. ALL SECTIONS ARE LOOKING AFT. ELEVATIONS VIEWS ARE AS FOLLOWS:
   - FROM STARBOARD SIDE: OUTBOARD LOOKING INBOARD
   - FROM PORT SIDE: INBOARD LOOKING OUTBOARD
3. DRAWING UNITS ARE IN FEET & INCHES.
4. ALL MATERIAL, WELDING, FABRICATION AND WORKMANSHIP IS TO BE IN ACCORDANCE WITH APPLICABLE ABS RULES AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
5. THERE SHALL BE NO SUBSTITUTIONS WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
6. ALL NEW STEEL IS TO BE ABS GRADE A UNLESS NOTED OTHERWISE.
7. EXCEPT WHERE NOTED, ALL WELDS ARE TO BE DOUBLE CONTINUOUS FILLETS WRAPPED AT THE ENDS. UNLESS OTHERWISE INDICATED, WELDS SHALL BE SIZED PER THE TABLE SHOWN TO THE RIGHT. SIZES PERTAIN TO THE LEG LENGTH.
8. PROVIDE RELIEF CUTS AS SHOWN IN THE TABLE TO THE RIGHT. IF NONE IS SHOWN ON THE DETAIL, IT IS ASSUMED TO HAVE THE 3/8"x3/8" CORNER SNIPE AND IS TO BE FILLED WITH WELD. SCALLOPS SHALL HAVE RADII AS SHOWN IN THE TABLE BELOW UNLESS NOTED OTHERWISE.

FILLET WELD SIZING TABLE							
THICKNESS OF THINNER PLATE	≤1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	≥3/4"
FILLET WELD LEG SIZE	3/16"	7/32"	7/32"	1/4"	5/16"	5/16"	3/8"



DRAWING INDEX

ABBREVIATIONS

ABL — ABOVE BASELINE
ABT — ABOUT
BHD — BULKHEAD
BKT — BRACKET
BTM — BOTTOM
CHK — CHOCK
CL — CENTERLINE
CLR — CLEAR
CMG — COAMING
CTR — CENTER
DBL — DOUBLE
DET — DETAIL
D.O. — DITTO (SAME AS)
EXISTG — EXISTING
FR — FRAME
FWD — FORWARD
GDR — GIRDER
LONGL — LONGITUDINAL
NS — NEAR SIDE
N&F — NEAR & FAR
OPNG — OPENING
OUTBD — OUTBOARD
PLT — PLATE
PLTG — PLATING
REF — REFERENCE
STD — STANDARD
T&B — TOP & BOTTOM
TYP — TYPICAL
WT — WATERTIGHT

BILL OF MATERIALS

ITEM	QTY	UNIT	SIZE	DESCRIPTION	SPECIFICATION
1	260	FT	2 IN ND	SCH 80 PIPE	ASTM A312 TP316L
2	7	EA	2 IN ND	45 DEG ELBOW CL 3000 LB SOCKET WELD	ASTM A182 F316L
3	1	EA	2 IN ND	90 DEG ELBOW CL 3000 LB SOCKET WELD	ASTM A182 F316L
4	5	EA	2 IN ND	TEE CL 3000 LB SOCKET WELD	ASTM A182 F316L
5	16*	EA	2 IN ND	CODE 62 O-RING FLANGE	SAE J518 316L
6	16*	EA	2 IN ND	CODE 62 FLAT FACE FLANGE	SAE J518 316L
~~7~~	~~7~~	~~EA~~	~~2 IN ND~~	~~CODE 62 BLIND FLANGE~~	~~SAE J518 316L~~
8	260	FT	2-1/2 IN ND	SCH 40 PIPE	ASTM A312 TP316L
9	1	EA	2-1/2 IN ND	90 DEG ELBOW CL 3000 LB SOCKET WELD	ASTM A182 F316L
10	4	EA	2-1/2 IN ND	TEE CL 3000 LB SOCKET WELD	ASTM A182 F316L
11	16*	EA	2-1/2 IN ND	CODE 61 O-RING FLANGE	SAE J518 316L
12	16*	EA	2-1/2 IN ND	CODE 61 FLAT FACE FLANGE	SAE J518 316L
~~13~~	~~5~~	~~EA~~	~~2-1/2 IN ND~~	~~CODE 61 BLIND FLANGE~~	~~SAE J518 316L~~

NOTE: O-RING AND FLAT FACE FLANGES MARKED WITH (*) SHALL BE SUPPLIED BY WINCH VENDOR.
THE NUMBER OF FLANGES SHOWN DOES NOT INCLUDE THOSE NEEDED TO SPOOL PIPE.

NOTE: PIPE SUPPORTS NOT SHOWN IN TABLE. CONTRACTOR TO LAYOUT AND SOURCE THOSE IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

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REVISIONS

No.	DESCRIPTION	BY/DATE/APPD
0	ISSUE FOR BIDDING	3/08/21 / JRP
1	RE-ISSUE FOR BIDDING 1. INCLUDE SPREAD MOORING WITH INITIAL PROCUREMENT	6/13/22 / JRP

REFERENCES

No.	TITLE	DWG No.
1	GENERAL ARRANGEMENT	2018-060-01-01
2	SPUD PILES	2018-060-01-03
3	OUTFITTING	2018-060-01-04
4	-	-
5	-	-

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DRWN: RJP/JRP	DATE: MARCH 08, 2021	SCALE: AS NOTED	
CHKD: JRP/JLG	APPD: SAS	ACADFILE:180600105-1-STAMP	
PROJECT FILE:	2018-060-01	PLOTSCALE: 1:2 ON ANSI full bleed B (11.00 x 17.00 Inches)	
ABS APPROVAL: -			
-			

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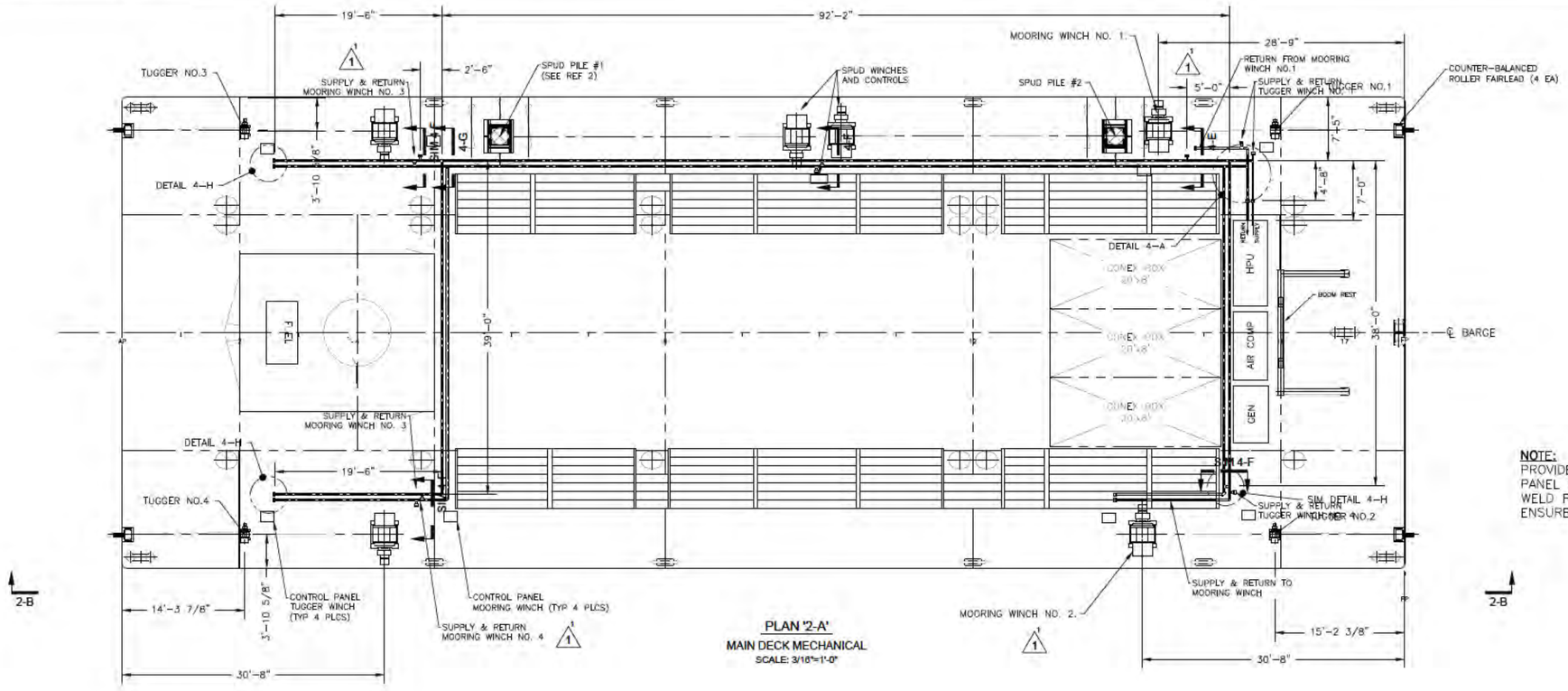
DEPARTMENT OF ENGINEERING

CRANE BARGE

MECHANICAL ARRANGEMENT

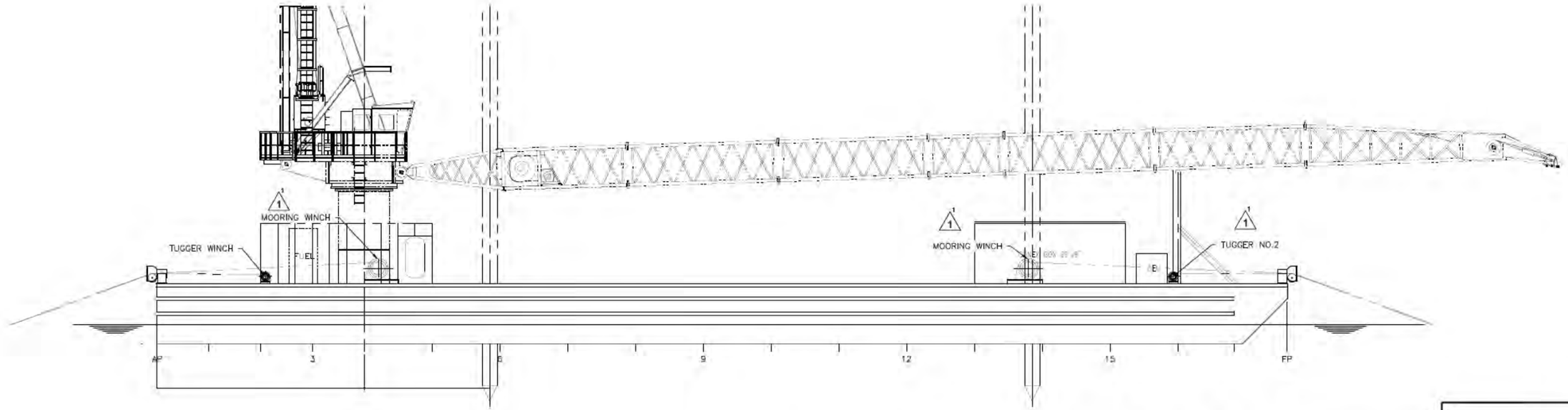
OWNER APPVL:	-	HEC DWG No.:	2018-060-01-05
DATE:	-	SHEET 1 OF 1	REV 1
FILE:	-		

Exhibit A-5: Mechanical Arrangement



PLAN '2-A'
MAIN DECK MECHANICAL
SCALE: 3/16"=1'-0"

NOTE: VENDOR OF EACH CONSUMER OF HYDRAULIC POWER SHALL PROVIDE SUPPLY AND RETURN HOSES THAT CONNECT CONTROL PANEL TO DECK PIPING AND CONTROL PANEL TO WINCH. SOCKET WELD FLANGE AT PIPE TO BE SUPPLIED BY WINCH VENDOR TO ENSURE HOSE FLANGE MATCHES PIPE FLANGE.



ELEVATION '2-B'
MAIN DECK MECHANICAL
SCALE: 3/16"=1'-0"

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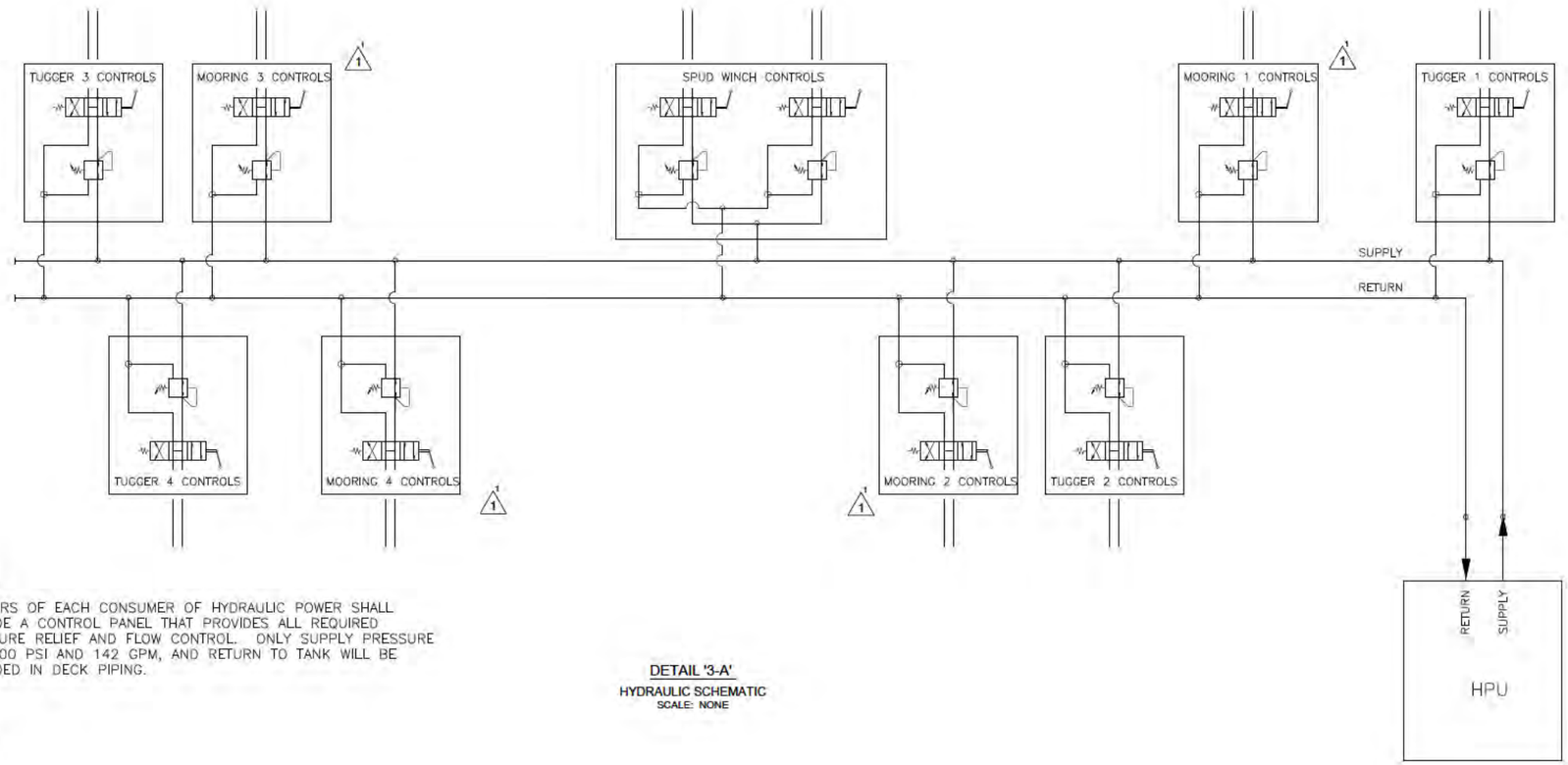
MECHANICAL ARRANGEMENT

HEC DWG No.: 2018-060-01-05
SCALE: AS NOTED
SHEET 2 OF 4
REV 1

Exhibit A-5: Mechanical Arrangement



NOTE:

VENDORS OF EACH CONSUMER OF HYDRAULIC POWER SHALL PROVIDE A CONTROL PANEL THAT PROVIDES ALL REQUIRED PRESSURE RELIEF AND FLOW CONTROL. ONLY SUPPLY PRESSURE OF 3000 PSI AND 142 GPM, AND RETURN TO TANK WILL BE PROVIDED IN DECK PIPING.

1

DETAIL '3-A'

HYDRAULIC SCHEMATIC

SCALE: NONE

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MECHANICAL ARRANGEMENT

HEC DWG No.: 2018-060-01-05

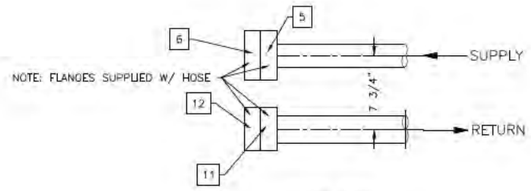
SCALE: AS NOTED

SHEET 3 OF 4

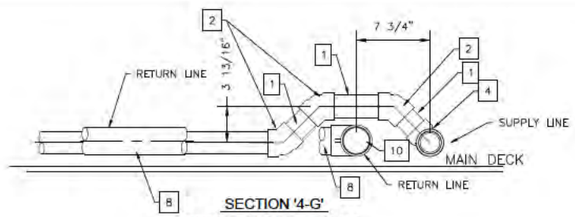
REV 1

Exhibit A-5: Mechanical Arrangement

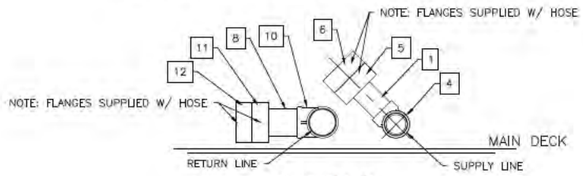
NOTE: SEE BILL OF MATERIALS SHEET 1 FOR ITEM DESCRIPTION



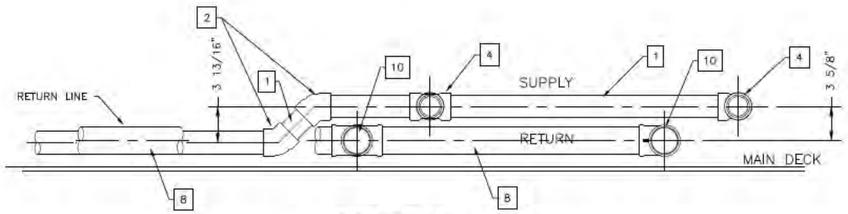
DETAIL '4-H'
PIPING TERMINATION
SCALE 3/4" = 1'-0"
(TYP 3 PLCS)



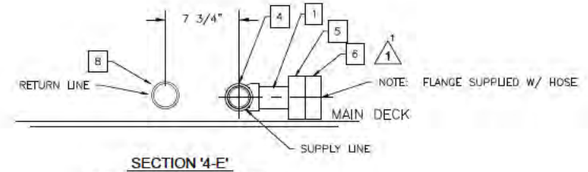
SECTION '4-G'
PIPING PORT SIDE - LKG AFT
SCALE 3/4" = 1'-0"
(SUPPLY AND RETURN TO TUGGER NO. 4)



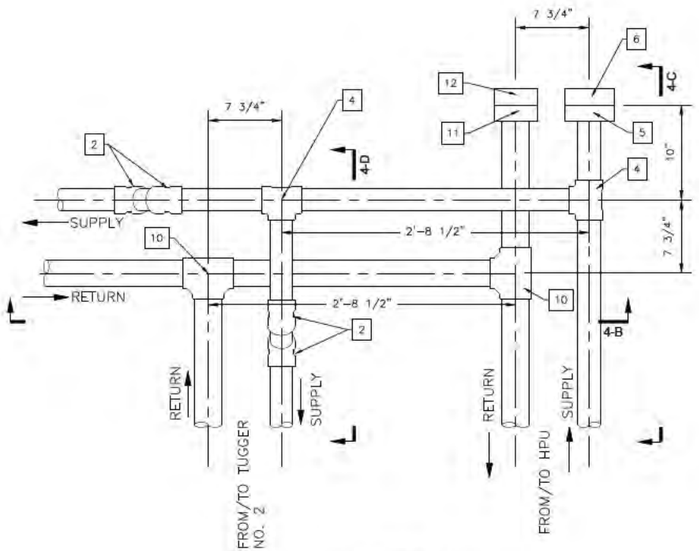
SECTION '4-F'
PIPING PORT SIDE - LKG AFT
SCALE 3/4" = 1'-0"
(SUPPLY AND RETURN CONNECTIONS FOR SPUD PILE WINCHES)



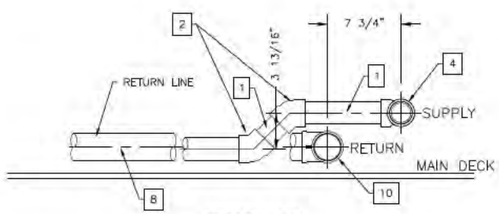
ELEVATION '4-B'
PIPING PORT SIDE - LKG PORT
SCALE 3/4" = 1'-0"



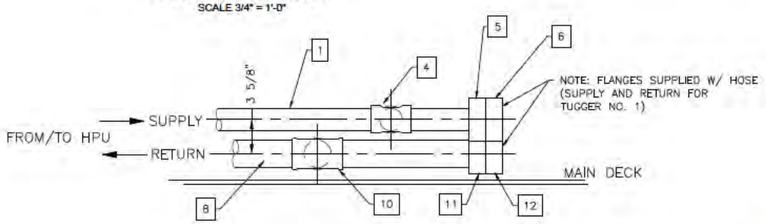
SECTION '4-E'
PIPING PORT SIDE - LKG AFT
SCALE 3/4" = 1'-0"
(SUPPLY CONNECTION FOR NO. 1 MOORING WINCH)



DETAIL '4-A'
PIPING PORT FORWARD
SCALE 3/4" = 1'-0"



SECTION '4-D'
PIPING PORT SIDE - LKG AFT
SCALE 3/4" = 1'-0"



SECTION '4-C'
PIPING PORT SIDE - LKG AFT
SCALE 3/4" = 1'-0"

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MECHANICAL ARRANGEMENT

HEC DWG No.: 2018-060-01-05
SCALE: AS NOTED
SHEET 4 OF 4
REV 1

Exhibit A-6: Electrical One-Line Diagram

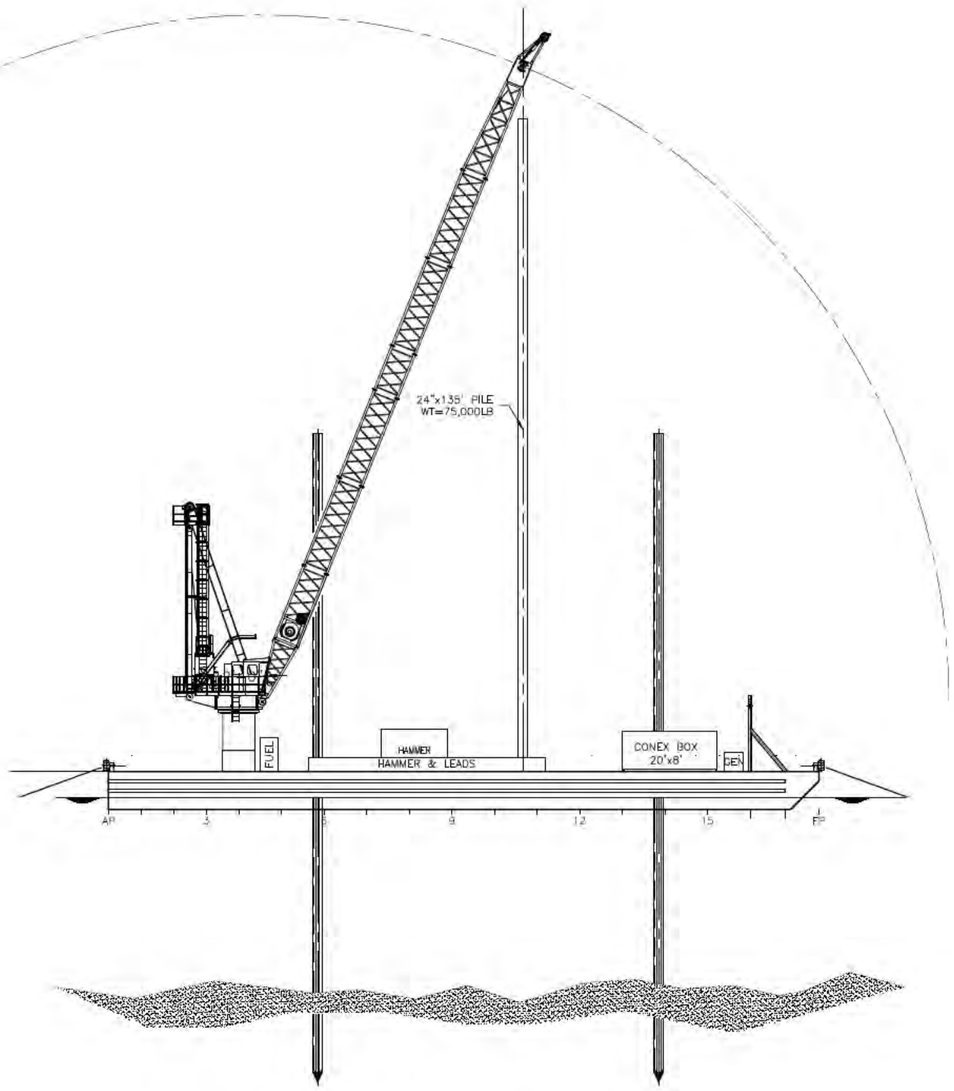
GENERAL NOTES

1. THIS DRAWING PRESENTS THE ONE-LINE DIAGRAM FOR THE ELECTRICAL SYSTEM FOR A CRANE BARGE FOR PERFORMING ROUTINE REPAIRS AND OTHER LIFTING WORKS ALONG THE SAN FRANCISCO WATERFRONT.
2. THE CONCEPT PRESENTED HERE IS DEPENDENT ON SPECIFIC EQUIPMENT AND FIXTURES THAT WILL BE INSTALLED.
3. FOR LOCATION OF ELECTRICAL COMPONENTS, SEE DRAWING 2018-060-01-01 "GENERAL ARRANGEMENT".

ABBREVIATIONS

ABL ___ ABOVE BASELINE
ABT ___ ABOUT
BHD ___ BULKHEAD
BKT ___ BRACKET
BTM ___ BOTTOM
CHK ___ CHOCK
CL ___ CENTERLINE
CLR ___ CLEAR
CMG ___ COAMING
CTR ___ CENTER
DBL ___ DOUBLE
DET ___ DETAIL
D.O. ___ DITTO (SAME AS)
EXISTG ___ EXISTING
FR ___ FRAME
FWD ___ FORWARD
GDR ___ GIRDER
LONGL ___ LONGITUDINAL
NS ___ NEAR SIDE
N&F ___ NEAR & FAR
OPNG ___ OPENING
OUTBD ___ OUTBOARD
PLT ___ PLATE
PLTG ___ PLATING
REF ___ REFERENCE
STD ___ STANDARD
T&B ___ TOP & BOTTOM
TYP ___ TYPICAL
WT ___ WATERTIGHT

DRAWING INDEX



REVISIONS

No.	DESCRIPTION	BY/DATE/APPD
-	PRELIMINARY ISSUE TO CLIENT FOR REVIEW	JRP/AS 1/25/2021 JRP
0	ISSUE FOR BIDDING	JRP/AS 3/8/2021 JRP
1	REISSUE FOR BIDDING 1. REMOVE PRINCIPAL PARTICULARS FROM SHEET 1	JRP/ 6/13/2022 JRP

REFERENCES

No.	TITLE	DWG No.
1	GENERAL ARRANGEMENT	2018-060-01-01
2	-	-
3	-	-
4	-	-
5	-	-

HEC Herbert Engineering Corp.
Naval Architects Marine Engineers Ocean Engineers
San Francisco Annapolis Houston
Glasgow Shanghai www.herbert.com

DRWN:	AS	DATE:	JAN 25, 2021	SCALE:	AS NOTED
CHKD:	AS/JRP	APPD:	SAS	ACADFILE180600106-1+STAMP	
PROJECT FILE:		2018-060-01		PLOTSCALE:	1:2 ON ANSI D
ABS APPROVAL:	-				
-					

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

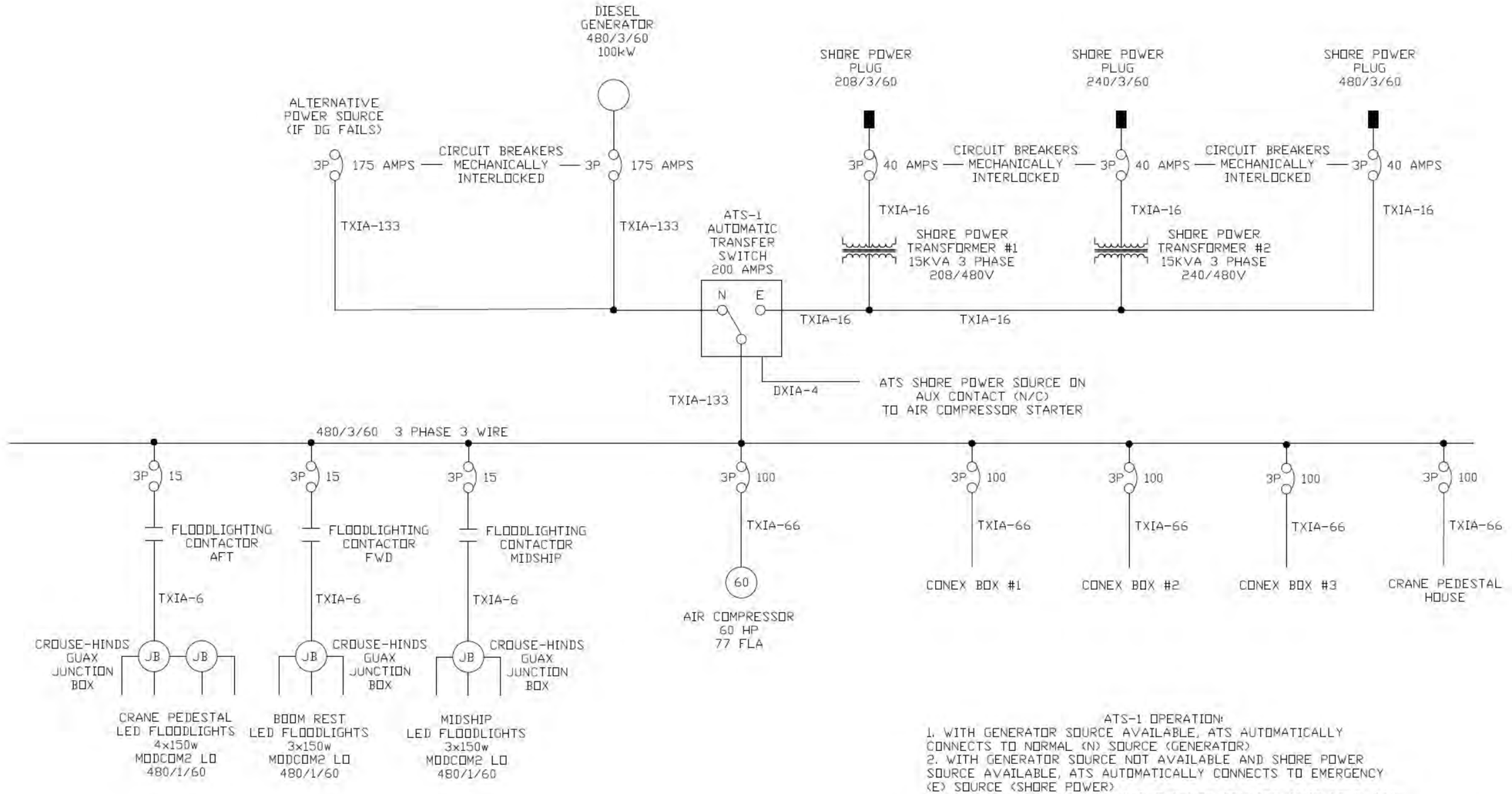
CRANE BARGE

ELECTRICAL ONE-LINE DIAGRAM

REGISTERED PROFESSIONAL ENGINEER
ALTON H. SIVER
No. E11078
Exp. 6/30/2021
ELECTRICAL
STATE OF CALIFORNIA
3/8/21

OWNER APPVL:	-	HEC DWG No.:	2018-060-01-06
DATE:	-	SHEET 1 OF 4	REV 1
FILE:	-		

Exhibit A-6: Electrical One-Line Diagram



ATS-1 OPERATION:
1. WITH GENERATOR SOURCE AVAILABLE, ATS AUTOMATICALLY CONNECTS TO NORMAL (N) SOURCE (GENERATOR)
2. WITH GENERATOR SOURCE NOT AVAILABLE AND SHORE POWER SOURCE AVAILABLE, ATS AUTOMATICALLY CONNECTS TO EMERGENCY (E) SOURCE (SHORE POWER)
3. IF BOTH GENERATOR AND SHORE POWER SOURCES AVAILABLE, ATS AUTOMATICALLY CONNECTS TO NORMAL (N) SOURCE (GENERATOR)

LED FLOODLIGHT & INSIDE LIGHT FIXTURES MANUFACTURED BY PHOENIX LIGHTING

DETAIL '2-A'

BARGE ONE LINE

SCALE: NONE

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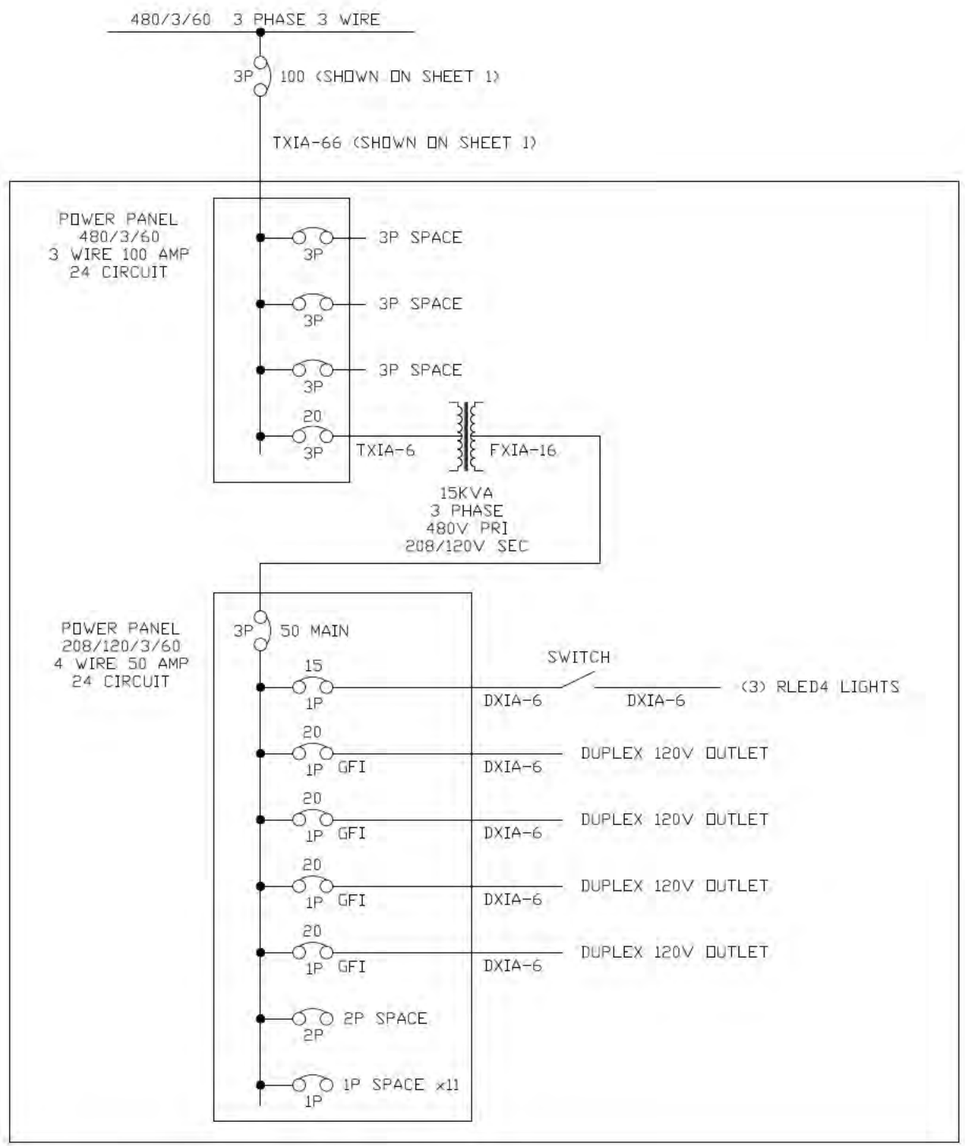
CRANE BARGE

ELECTRICAL ONE-LINE DIAGRAM

REGISTERED PROFESSIONAL ENGINEER ALTON H. SIVER No. E11078 Exp. 8/30/2021 ELECTRICAL STATE OF CALIFORNIA
3/8/21

HEC DWG No.: 2018-060-01-06	SCALE: AS NOTED	REV 1
	SHEET 2 OF 4	

Exhibit A-6: Electrical One-Line Diagram



TYPICAL FOR EACH CONEX BOX AND CRANE PEDESTAL HOUSE (OPTION)

LED FLOODLIGHT & INSIDE LIGHT FIXTURES MANUFACTURED BY PHOENIX LIGHTING

DETAIL '3-A'

CONEX BOX ONE LINE

SCALE: NONE

REGISTERED PROFESSIONAL ENGINEER
ALTON H. SIVER
No. E11078
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STATE OF CALIFORNIA
3/8/21

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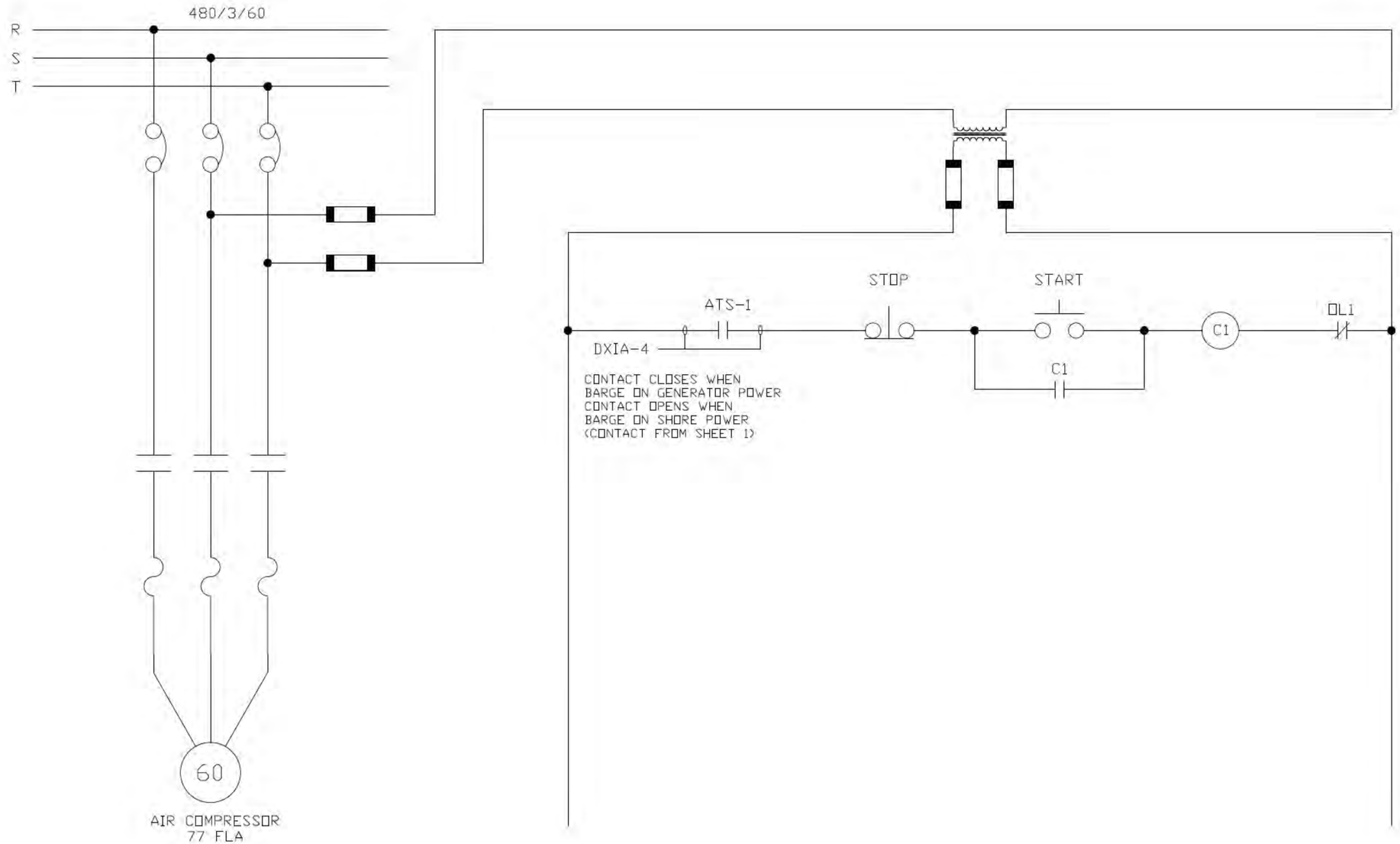
CRANE BARGE

ELECTRICAL ONE-LINE DIAGRAM

HEC DWG No.:	SCALE:	
2018-060-01-06	AS NOTED	REV 1
	SHEET 3 OF 4	

Exhibit A-6: Electrical One-Line Diagram



DETAIL '4-A'

AIR COMPRESSOR ONE LINE

SCALE: NONE

REGISTERED PROFESSIONAL ENGINEER
ALTON H. SIVER
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Exp. 6/30/2021
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3/18/21

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CRANE BARGE

ELECTRICAL ONE-LINE DIAGRAM

HEC DWG No.: 2018-060-01-06	SCALE: AS NOTED	REV 1
	SHEET 4 OF 4	