



PROJECT MANUAL

FOR

Mobile Riverfront - Cooper Riverside Redevelopment

COOPER RIVERSIDE PARK
MOBILE, ALABAMA 36602

Project No. PR-029-22

September 2023

PREPARED BY:
City of Mobile, Alabama
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SECTION 00 11 16
INVITATION TO BID

You are invited to submit a sealed bid for construction of the following facility:

PROJECT NAME: Mobile Riverfront – Cooper Riverside Redevelopment
PROJECT LOCATION: Riverside Park, Mobile, Alabama 36602
PROJECT NUMBER: PR-029-22

This Project is funded by a grant from the Alabama Department of Conservation and Natural Resources, Gulf of Mexico Energy Security Act (GOMESA), Award #G-CMRPE/21/CM. Period of performance for this Grant is 03/15/2022 -03/14/2025.

1. BID DATE:

- A. Sealed Bids will be received and clocked in until **2:15 PM** local time, **Wednesday, the November 8th, 2023** in the office of the City Clerk, Government Plaza, 9th Floor South Administrative Tower, 205 Government Street, Mobile, Alabama 36602.
- B. All Bids not clocked in at the City Clerk's Office prior to the time specified, or Bids received after the specified time, will be automatically rejected and returned immediately, unopened.
- C. Bids will be publicly opened and read at **2:30 PM** local time, in the Atrium Lobby of Government Plaza.

2. SPECIFICATIONS AND DRAWINGS:

- A. Specifications and Drawings are on file and may be examined at the following location:
 - a. City of Mobile, 5th Floor Architectural Engineering Department, Government Plaza, 205 Government Street, Mobile Alabama 36602.
- B. Bidders shall use complete sets of Bid Documents in preparing their bid. Neither the Owner nor Architect/Engineer assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.
- C. A deposit of \$50.00 per set, all of which is refundable in full on the first two sets to each prime contractor bidder if contract documents are returned in reusable condition within ten (10) calendar days of bid date.
 - a. Payments shall be made by check or money order to the City of Mobile. No cash or credit card payments will be accepted.
 - b. Bidders that request documents be sent by mail or another delivery service shall provide the cost of delivery by separate check or money order, which cost is non-refundable, in addition to the cost of Bid Documents.
 - c. Only bidders who have paid the deposit and have registered with the Project Manager may receive electronic (pdf) bid documents.
- D. Bidders are requested to pick-up Bid Documents from Architectural Engineering Department between the hours of 8:00 AM to 12:00 PM and 1:00 PM to 3:00 PM.

- E. Bidders receiving a minimum of one complete set of Bid Documents shall register with the Project Manager.
 - F. Addenda will be issued via e-mail to each bidder registered as having a complete set of Bid Documents and all Pre-Bid Conference attendees.
 - G. **This is a tax exempt project and shall be certified by the requirements of the Alabama Department of Revenue. Bidders shall NOT include sales and use taxes with their bid amounts. Bidders shall complete the Sales Tax Form C-3A and include it as an attachment to their Bid Form (see Section 00400).**
3. BID SURETY: Required on Bids \$10,000.00 or more
- A. A Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or a Bid Bond payable to Owner, City of Mobile, in the amount of 5% of the Base Bid, but in no event more than \$10,000.00 is required to accompany Bid.
 - B. Bid Bond must be issued by a Surety licensed to do business in the State of Alabama. Bidder shall require the attorney in fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.
 - C. No Bid may be modified, withdrawn, or canceled for a period of sixty (60) days after the time designated above for receipt of bids.
 - D. The City of Mobile will have sixty (60) days from the bid opening date to award contract.
4. SURETY QUALIFICATIONS:
- A. A Surety authorized to do business in the State of Alabama must issue Bonds.
 - B. If the Base Bid is \$50,000 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.
5. IRREGULARITIES AND REJECTION:
- A. The City of Mobile reserves the right to waive irregularities in the Bid and in Bidding, and to reject any or all Bids.
6. BIDDER QUALIFICATIONS:
- A. Bids for Work costing \$50,000 or more must be licensed pursuant to current Alabama law and of classifications compliant with the State of Alabama Licensing Board for General Contractors. Note that if the contract amount is \$10,000 or greater, both a Performance Bond and a Labor and Material Payment Bond shall be required. **Before Bidding, Contractor shall verify their license classification of their General Contractors license with the State of Alabama Licensing Board for General Contractors to verify classification is acceptable to perform 51% of the Scope of Work.**
 - B. In case of a joint venture of two or more Contractors, the amount for the bid shall be within the maximum bid limitations as set by the State of Alabama Licensing Board for General Contractors of at least one of the partners to the joint venture.
7. NON-RESIDENT CONTRACTORS:

Mobile Riverfront PR-029-22

- A. Except for contracts funded in whole or part with funds received from a federal agency, preference shall be given to resident Contractors on the same basis as the nonresident Contractor's state awards contracts to Alabama Contractors bidding in similar circumstances.
 - B. Nonresident Bidders shall, prior to submitting a bid, be registered with the Alabama Secretary of State and the Alabama Department of Revenue. Provide the Secretary of State Business "Entity ID Number" on the Bid Form in the space provided.
8. PRE-BID CONFERENCE:
- A. A Pre-Bid Conference shall be held on **October 18th, 2023**, at 10 AM local time. The conference will include a walkthrough of the site location. Conference shall commence at the site's central flagpole.
 - B. Minutes of this conference will be made as an Addendum for the project.
9. BID SUBMITTAL:
- A. Bids must be submitted on copies of the Bid Forms furnished in the bidding documents.
 - B. Bid, with Bid Security, Sales Tax Form C-3A and other supporting data specified, shall be contained in a sealed, opaque envelope, approximately 9x12 inches or larger and be marked on the outside with the words "**SEALED BID FOR MOBILE RIVERFRONT DEVELOPMENT-BULKHEAD REPLACEMENT- PROJECT NUMBER: PR-029-22**".
 - C. The Bid envelope shall be clearly addressed to the Owner as indicated on the Bid Form and include the bid date, the name, address and State License number and classification of the Bidder issued by the State of Alabama Licensing Board for General Contractors.
 - D. All Bids of \$50,000 or more must include the bidder's State of Alabama General Contractor's License information written on the outside of the bid envelope. Any bid submitted without such license information may be rejected and returned to the bidder unopened.
 - E. In addition, in large letters on both front and back of envelope, write the following: **DO NOT OPEN UNTIL TWO-THIRTY PM, NOVEMBER 8TH, 2023**.
 - F. For a bid to be valid it shall be delivered at designated location prior to time and date for receipt of Bids indicated in INVITATION TO BID, or prior to any extension thereof issued to Bidders. After that time no Bid will be received or withdrawn.
 - G. When sent by mail, preferably special delivery, express service, or registered mail, the sealed Bid, marked as indicated above, shall be enclosed in another envelope for mailing such that the exterior mailing container or envelope may be opened without revealing the contents of the Bid. It is the Contractors responsibility to assure delivery of the bid to the City Clerk's Office prior the time and date established.
10. EQUAL OPPORTUNITY:
- A. The City of Mobile, Alabama is an Equal Opportunity Employer and requires that all Contractors comply with the Equal Employment Opportunity laws and the provisions of the Bid Documents in this regard.

- B. The City of Mobile also encourages and supports the utilization of Minority Business Enterprises on these and all other publicly solicited Bids, and shall be in compliance with the City of Mobile's Minority Utilization Plan as adopted by the City Council.
- C. Contractor shall provide an appropriately completed copy of the "City of Mobile Subcontracting and Major Supplier Plan" in the envelope with their Bid Form. Form shall document DBE Subcontractors participating in the project and, should the total % of DBE participation not meet the 15% minimum, all efforts to obtain DBE Subcontractors shall be documented on or attached to the DBE Form when submitted. During construction, contractors are required to submit a "DBE Utilization Report" with every Pay Application.
- D. Contractors should contact the City of Mobile, Supplier Diversity Manager for assistance with DBE Subcontractor information and any questions regarding the DBE Compliance Forms. Contact Archnique Kidd at 251-208-7967.
- E. Contractors shall provide an appropriately completed copy of the following forms:
 - a. Federal Funding Accountability and Transparency Act Disclosure Form
 - b. Unique Entity Identifier (UEI) Documentation and Verification Form
 - c. Provide proof of System for Award Management (SAM) Registration

11. ADDITIONAL BIDDING PROCEDURES:

- A. Refer to the complete information in the Bid Documents prior to submitting a bid. Additional Bidding Procedure information is contained therein, particularly in the specification Section 00 21 00 "Instructions to Bidders - AIA Document A701" and in the specification Section 00 22 00 "Supplementary Instructions to Bidders".

12. STATE OF ALABAMA IMMIGRATION ACT

"The State of Alabama, under the Beason-Hammon Alabama Taxpayer and Citizen Protection Act, Act No. 2011-535, Alabama Code Section 31-13-1, et. Seq., requires:

- A. That the Contractor shall be enrolled in the E-Verify Program, shall participate in that Program during the performance of the contract, and shall verify the immigration status of every employee who is required to be verified, according to the applicable federal rules and regulations; and
- B. That it will attach to the contract the company's documentation of enrollment in E-Verify.
- C. The subcontractor must also enroll in the E-Verify Program prior to performing any work on the contract and shall attach to its sworn affidavit documentation establishing that the subcontractor is enrolled in the E-Verify Program.

13. PUBLIC CONTRACTS WITH ENTITIES ENGAGING IN CERTAIN BOYCOTT ACTIVITIES

- A. By signing this contract, Contractor further represents and agrees that it is not currently engaged in, nor will it engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.

END OF SECTION

SECTION 00 21 00
INSTRUCTIONS TO BIDDERS

PART 1 – GENERAL

This section includes the INSTRUCTIONS TO BIDDERS, AIA Document A701-1997 to be utilized with the Owner's most recent modifications and which shall be used in conjunction with the entire Bid Documents and Section 00 22 00 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS for this project.

DRAFT AIA® Document A701™ - 2018

Instructions to Bidders

for the following Project:
(Name, location, and detailed description)

«Mobile Riverfront -Cooper Riverside Redevelopment»
Cooper Riverside Park
Mobile, Alabama 36602»

THE OWNER:

(Name, legal status, address, and other information)

«City of Mobile »« »
«P.O. Box 1827»
«Mobile, Alabama 36633-1827 »

THE ENGINEER:

(Name, legal status, address, and other information)

«Moffatt & Nichol
11 N Water St Ste 20220, Mobile, AL 36602.

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ARTICLE 1 DEFINITIONS

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™-2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

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§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents. A Bidder must be licensed by the State Licensing Board for General Contractors if the amount for the Contract exceeds the amount established by said Board.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work. A Sub-bidder performing Work must be licensed by the State Licensing Board for General Contractors if the Sub-bidders' contract amount exceeds that established by said Board.

§ 1.10 A non-resident Bidder or Sub-bidder is one who

- a. Is neither organized nor existing under the laws of the State of Alabama
- b. nor maintains its principal place of business in the State of Alabama.

A non-resident contractor who has maintained a permanent branch office within the State of Alabama for at least five (5) continuous years shall not thereafter be deemed to be a non-resident contractor so long as such contractor continues to maintain a branch office within Alabama.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

§ 2.2 The Bidder is licensed by the State Licensing Board for General Contractors and the amount Bid does not exceed the Bid Limit stipulated in the Bidder's License and by the City of Mobile.

§ 2.3 Each and every Contractor belonging to or comprising a part of any entity that is bidding as a joint venture or association involving two or more contractors is licensed by the State Licensing Board for General Contractors and that the amount Bid does not exceed the Bid limit stipulated in at least one of their licenses.

§ 2.4 Any non-resident Bidder is authorized by the Secretary of State of Alabama and is registered with Alabama Department of Revenue to transact business in Alabama.

§ 2.5 Joint Ventures or Associations of Contractors, whether the same are Bidders or Subcontractors of Bidders, will remain in existence until all insurance and warranty requirements for the Project have been fulfilled.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least five (5) calendar days prior to the date for receipt of Bids.

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.2.4 The Contract Drawings and Specifications are intended to cooperate and agree, but should conflicts or difference be found to exist between the requirements within either and clarification has not been obtained in accordance with the above procedure prior to Bidding, then the most costly and/or restrictive interpretation by the decision of the Architectural Engineering Department Director will be final.

§ 3.3 Substitutions

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least five (5) calendar days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.3.6 See Division One Section "Substitution Procedures", if included in Specification.

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than two (2) days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents. No bid will be considered unless made out and submitted on a copy of the Bid Form, Section 00400. Additional Bid Forms will be furnished to prospective Bidders upon request.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

Unit Prices: Supply requested Unit Prices where shown on the Bid Form. Such Unit Prices shall be used to adjust the Contract Amount where the quantities shown on the Drawings and/or Specifications do not reflect amounts required for completion of the work. Where Completion of the Work requires quantities in excess of those shown on the drawings and specifications, unit prices shall be used to compute an extra payment to the Contractor. Where completion of work required quantities less than those on the Drawings and/or specifications, unit prices shall be used to compute a credit to the Owner.

Contingency Allowance: As shown on the Bid Form, Contractor shall add the amount of the contingency allowance to the Base Bid to derive the Total Bid. The contingency allowance shall cover cost of material, labor, overhead, profit and other expenses for complete installation of items of additional work as required for a complete functional project.

The contingency allowance shall be used to fund unforeseen conditions not covered in the construction documents and shall be subject to the provisions of change orders. Upon the completion of work any unused portion of the contingency allowance shall be credited to the Owner by change order.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security if so required in the Bidding Documents:
(Insert the form and amount of bid security.)

«The Bidder shall provide a Bid Security in the form of a cashier's check drawn on an Alabama bank or a Bid Bond. Bid Security is required for bids exceeding \$10,000.00. Bid Security shall be in the amount of 5% of the TOTAL BID, but in no event more than \$10,000.00.»

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected.

§ 4.2.5 Bonds must be issued by a Surety authorized to do business in the State of Alabama. A Performance Bond and a Labor and Material Payment Bond are required for projects exceeding \$10,000.00. If the project cost is \$50,000.00 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:
(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

«Submission of Bid shall be as stated in Section 00100, Invitation to Bid, Paragraph 9, titled "Bid Submittal".»

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted and will be returned unopened.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 The Owner shall accept Alternates in the order listed on the Bid Form to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, within three (3) calendar days or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.
- .4 The name of the Project Superintendent and Project Manager together with the resume of qualifications of each;
- .5 Nonresident Contractor shall submit a letter from an attorney as required by Subparagraph 11.1.2 below and;
- .6 Engineering Firm or Testing Laboratory for testing as specified.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has

reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

§ 6.3.5 The Contractor shall, within ten (10) calendar days of receiving Contract Forms for signature, furnish to the Owner the following items, along with the signed contract, or the Bid Security will be forfeited automatically without further delay:

- .1 A Signed Construction Contract;
- .2 Performance Bond and Labor and Material Payment Bond (originals) on all Bids over \$10,000.00;
- .3 Certificate of Insurance and copy of Builder's Risk Policy (original), as identified in the specifications;
- .4 Schedule of Values; and
- .5 Federal Immigration Law Compliance: E-Verify enrollment documentation.

§ 6.3.6 The Bid Check or Bond of the three (3) lowest Bidders will not be returned until after the Construction Contract is executed.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

§ 7.1.4 A Surety authorized to do business in the State of Alabama shall issue Performance Bond and Labor and Material Payment Bond, as required by the Contract Documents. If the project cost is \$50,000.00 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc.

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than ten (10) calendar days from receiving the Construction Contract forms for signature.

§ 7.2.2 The bonds shall be written on City's Performance Bond and Labor and Material Payment Bond forms.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

§ 8.1.1 AIA Document A101, Standard Form of Agreement Between Owner and Contractor where the Basis of Payment is a stipulated sum will be edited electronically and include the standard signatures as required by the City of Mobile.

ARTICLE 9 NONDISCRIMINATION

§9.1.1 Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities. Contractor shall provide a completed copy of the City of Mobile Subcontracting and Major Supplier Plan with the Bid Form, for bids of \$250,000.00 or greater.

ARTICLE 10 USE OF DOMESTIC PRODUCTS

§ 10.1.1 Section 39-3-1 Code of Alabama provides that the Contractor agrees, in the execution of this contract, to use material supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if available at reasonable prices, and that breach of this agreement by the Contractor shall result in the assessment of liquidated damages in an amount not less than \$500 nor more than 20 percent of the gross amount of the contract price.

§ 10.1.2 Section 39-3-4, Code of Alabama provides that the Contractor for a municipal construction project, financed by the State of Alabama or any political subdivision thereof, is required to use steel produced within the United States. If the Contractor violates the requirement to use domestic steel, this contract will automatically be revoked and the contractor shall not be entitled to any set-off or recoupment for labor or materials used up to the time of revocation.

ARTICLE 11 PREFERENCE TO RESIDENT CONTRACTORS

§ 11.1.1 Except for contracts funded in whole or in part with funds received from a federal agency, preference shall be given to Alabama resident contractors, and a nonresident bidder domiciled in a state having laws granting preference to local contractors shall be awarded the contracts only on the same basis as a the nonresident bidder's state awards contracts to Alabama contractors bidding under similar circumstances. In the letting of public contracts in which any state, county or municipal funds are utilized, resident contractors in Alabama, be they corporations, individuals or partnerships, are to be granted preference over nonresidents in awarding of contracts in the same manner and to the same extent as provided by the laws of the state of domicile of the nonresident.

§ 11.1.2 A successful nonresident bidder shall include in his post bid submittals a written opinion of an attorney at law licensed to practice law in such nonresident bidders' state of domicile, as to the preferences, if any or none, granted by the law of that state to its own business entities whose principal places of business are in that state in the letting of any or all public contracts.

ARTICLE 12 PRE-BID REQUIREMENTS

§ 12.1 STATE OF ALABAMA CONTRACTORS LICENSE

§ 12.1.1 If the Project total bid amount is \$50,000 or more, a license issued by the State of Alabama Licensing Board for General Contractors is required prior to submitting a bid and the licensed classification and bid limits must cover the type of work in this project. See Invitation to Bid, Section 6 "Bidder Qualifications".

§ 12.2 A NONRESIDENT BIDDER

§ 12.2.1 Every bidder shall be registered with the Department of Revenue prior to bidding and all bidders shall have a certificate of authorization to do business in Alabama from the Secretary of the State of Alabama. The registration number shall be included on the bid form.

ARTICLE 13 POST-BID REQUIREMENTS

§ 13.1 CITY CONTRACTOR'S LICENSE

13.1.1 A City of Mobile Contractor's License is required and must be current at the time of bidding. Contractor must qualify and post \$10,000.00 Surety Bond with the Land Use/Code Administration Department before a Contractor's

License will be issued by the Revenue Department. Information on the City Contractor's License may be obtained by writing or calling:

Land Use/Code Administration
P. O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251.208.7421

Revenue Department
P. O. Box 1827
Mobile, Alabama 36633-1827
251.208.7461

13.2 E-VERIFY DOCUMENTATION

§ 13.2.1 The Contractor agrees that it shall comply with all of the requirements of the State of Alabama Immigration Law (Act. No. 2011-535 as amended by Act. No. 2012-491, Alabama Code (1975) Section 31-13-1, et. Seq., See Section 31-13-9), and the provisions of said Law, including all penalties for violation thereof, are incorporated therein.

13.3 PUBLIC CONTRACTS WITH ENTITIES ENGAGING IN CERTAIN BOYCOTT ACTIVITIES

§ 13.3 The Contractor represents and agrees that it is not currently engaged in, nor will engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.



SECTION 00 22 00

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

THE ATTENTION OF ALL BIDDERS IS CALLED TO THE FOLLOWING INSTRUCTIONS AND CONDITIONS:

1. BIDDING DOCUMENTS

- A. Bidders may obtain complete sets of Bid Documents and Specifications (Project Manual) from the Department of Architectural Engineering as listed in the Invitation to Bid.
- B. Bidders shall use the complete set of documents in preparing their bid. The City of Mobile assumes no responsibility for errors or misinterpretations resulting from use of an incomplete set of documents.

2. INTERPRETATION OF BID DOCUMENTS:

- A. Bidders shall carefully study and compare the Bidding Documents and compare various components of the Bidding Documents with each other, shall examine the site and local conditions and shall at once report to the Project Manager any errors, inconsistencies or ambiguities discovered.
- B. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Project Manager by 12:00 PM at least five (5) calendar days prior to the date for receipt of Bids. E-mail requests are required and should be addressed to **sduvvuri@moffattnichol.com**
- C. Interpretations, corrections and changes to the Bidding Documents will be made by a formal, written Addendum. Interpretations, corrections and changes to the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely on them.
- D. Any discrepancy not resolved prior to Bidding shall be bid by the Contractor to provide for the most costly and/or restrictive interpretation of the documents.

3. BIDDING PROCEDURES:

- A. No Bid will be considered unless made out and submitted on a copy of the Bid Form as set forth by the Bid Documents.
- B. All blanks on the Bid Form shall be legibly executed in a non-erasable medium.
- C. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
- D. Interlineations, alterations and erasures must be initialed by the signer of the Bid.
- E. All requested Alternates, Unit Prices and Allowances shall be bid as indicated on the Bid Form and the Bid Documents.

- F. Addenda shall be considered as a part of the Bid Documents and those issued prior to the opening of Bids shall be acknowledged on the Bid Form and any adjustment in cost shall be included in the Contract Sum.

4. BID SECURITY:

- A. A Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or Bid Bond payable to Owner, City of Mobile, in the amount of 5% of the Base Bid, but in no event more than \$10,000.00, must accompany bid. By submitting a Bid Security, the Bidder pledges to enter into a Contract with the City of Mobile on the terms stated in the Bid, and will, if required, furnish bonds covering faithful performance of the Contract and required insurance certificate. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds or insurance or any other required document, the amount of the Bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
- B. Bid Bond shall be valid for a minimum of sixty (60) days from the date of the Bid. The Owner reserves the right to retain the security of all Bidders until the successful Bidder enters into the Contract or until (60) days after Bid opening, whichever is sooner.
- C. Bonds must be issued by a Surety licensed to do business in the State of Alabama. If the project cost is more than \$50,000.00 the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.
- D. Power of Attorney is required for all Bonds.
- E. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment of retainage being made to the Contractor.

5. EXAMINATION OF DOCUMENTS AND SITE WORK:

- A. Before submitting a Bid, Bidders should carefully examine the Bid Documents, visit the site of the Work, including attendance at the Pre-Bid conference, fully inform themselves as to existing conditions and limitations, and include in the Bid a sum to cover the cost of all items included in the Contract and necessary to perform the Work. The submission of a Bid will be considered as conclusive evidence that the Bidder has made such examination.

6. SUBMISSION OF BIDS:

- A. Bid, with Bid Security, Sales Tax Form C-3A, and other supporting data specified, shall be contained in a sealed, opaque envelope, approximately 9x12 inches or larger and be marked on the outside with the words "**SEALED BID FOR MOBILE RIVERFRONT - COOPER RIVERSIDE REDEVOLPMENT – PROJECT NUMBER: PR-029-22**", the Bid Date, and Contractor's name, address, and City of Mobile Business License number. And, if

bidding in an amount \$50,000 or greater, the State of Alabama General Contractor's License number and classification of the Bidder issued by the State of Alabama Licensing Board for General Contractors shall be written on the envelope.

- B. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date specified in the Invitation to Bid, or as modified by Addendum, will not be considered. Late Bids will be returned to the Bidder unopened.
- C. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- D. Oral, telephonic, facsimile or other electronically transmitted bids will not be considered.

7. MODIFICATION OR WITHDRAWAL OF BIDS:

- A. A Bid may not be modified, withdrawn, or canceled by the Bidder for a period of sixty (60) days following the time and date designated for receipt of bids, and each Bidder so agrees in submitting a Bid.

8. CONSIDERATION AND AWARD OF BIDS:

- A. At the discretion of the City, the properly identified Bids received on time will be publicly opened and will be read aloud.
- B. The City shall have the right to reject any and all Bids. A Bid not accompanied by a required Bid security or a Bid which is in any way incomplete or irregular is subject to rejection.
- C. It is the intent of the City to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The City shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the City's judgment, is in the City's best interest.
- D. The award shall be based on the lowest Total Bid for the Base Bid and any allowances, plus any alternates and/or options that may be accepted, as listed on the Bid Form.

9. PROOF OF COMPETENCY OF BIDDER:

- A. Bidders may be required to furnish evidence satisfactory to the City of Mobile that they have sufficient means and experience in the types of work called for to assure the completion of the Contract in a satisfactory manner.

10. SIGNING OF CONTRACT:

- A. The Standard Agreement between the City of Mobile and the Contractor, included herein, shall serve as the Agreement between the City and the Contractor.

- B. The Bidder to whom the Contract is awarded shall, within ten (10) calendar days of receiving the Contract Forms, properly execute and deliver to the Owner, the following items with the signed Agreement:
 - (1). Performance Bond and Labor and Material Payment Bond (originals);
 - (2). Certificate of Insurance (original) with endorsements to City of Mobile;
 - (3). Evidence of enrollment in the E-Verify program.
 - (4). Other documentation as required by the Contract Documents.
- C. Failure or refusal to sign the Agreement or to provide Certificates of Insurance in a form satisfactory to the City of Mobile, E-Verify verification, grant compliance forms or other required documentation, shall subject the Bidder to immediate forfeiture of Bid Security.
- D. On all documents: City of Mobile Business License, the Alabama Secretary of State Business Identity, the Alabama Secretary of State Certificate of Authority (out of state contractors), E-verify documentation, and ACORD Insurance Form, the Contractor's name shall be EXACTLY the same.

11. NONDISCRIMINATION:

- A. Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, inter alia, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

12. AMERICANS WITH DISABILITIES ACT (ADA):

- A. Bidders shall comply with the provisions of the Americans with Disabilities Act (ADA) of 1990 which prohibits discrimination against individuals with disabilities.

13. USE OF DOMESTIC PRODUCTS:

- A. Section 39-3-1, Alabama Code, 1975, provides that the Contractor agree, in the execution of this Contract, to use materials, supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if available at reasonable prices, and that breach of this Agreement by the Contractor shall result in the assessment of liquidated damages in an amount not less than \$500.00 nor more than twenty (20) percent of gross amount of the Contract Price.

14. NON-RESIDENT (OUT OF STATE) CONTRACTORS:

- A. Preference to Resident Contractors: Section 39-3-5, Code of Alabama, 1975, provides that a non-resident (out of State) bidder domiciled in a state which grants a preference to local Contractors is to be awarded a public contract on the same basis as the non-resident bidder's state awards contracts to Alabama bidders. Alabama bidders are given a preference to the same extent that a non-resident bidder receives a preference in his home state. A non-resident bidder must include with any written bid documents a written opinion of an attorney licensed to practice in the non-resident bidder's state declaring what preferences, if any, exists in the non-resident's state.
- B. Certificate of Authority: All non-resident (out of State) bidders shall be registered with the Alabama Secretary of State and the Alabama Department of Revenue prior to submitting a Bid. Provide the Secretary of State Business "Entity ID Number" on the Bid Form in the space provided.

15. ALABAMA IMMIGRATION ACT:

- A. The State of Alabama Immigration Law (Act No. 2011-535 as amended by Act No. 2012-491), requires that Contractors not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. In addition, Contractors are required to enroll in the federal E-Verify program and submit verification of enrollment to the City of Mobile within ten (10) days of receiving the contract forms (see Section 00 60 00).

16. CITY OF MOBILE BUSINESS LICENSE:

- A. A City of Mobile Business License is required and must be current at time of contract award and throughout contract period.

17. CITY OF MOBILE CONTRACTOR'S BUSINESS LICENSE:

- A. A City of Mobile Contractor's Business License is required and must be current when contractor signs the contract and throughout contract period.
- B. Contractor must qualify and post a \$10,000 surety bond with the Land Use/Code Administration Department before a Contractor's Business License will be issued by the Revenue Department. Information on the City Contractor's License may be obtained by writing or calling:

Land Use/Code Administration
P.O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251-208-7421

Revenue Department
P.O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251-208-7461

18. CITY OF MOBILE BUILDING PERMIT:

- A. A City of Mobile Building Permit, City of Mobile Development Permit AND Certificate of Appropriateness is required and shall be obtained from the Land Use/Code Administration Department, but at no cost to the Contractor.
- B. Contractor is responsible for ensuring that all inspections are successfully performed in accordance with City of Mobile regulations.

19. CONSTRUCTION SCHEDULE AND ACCESS:

- A. The project shall be completed within 280 calendar days from the date indicated by the Notice to Proceed.
- B. The Western Administration Complex (WAC) will remain in use throughout the Construction period and the Contractor is directed to coordinate all areas of work and scheduling of work with the Owner. Any interruptive work (A/C or power disconnect / re-connect, etc.) shall be coordinated with the Owner prior to the beginning of the work. There shall be no interruption of service to the building during any scheduled event. Within five (5) days of the bid opening, the Apparent Low Bidder Contractor shall meet with the Owner to discuss Owner scheduling and priorities. Apparent Low Bidder shall then provide a proposed schedule within 5 calendar days of the initial meeting for Owner review and approval.
- C. Contractor shall have access to the site as approved by the Owner, but typically **seven days a week from 7:00 A.M. to 6:00 P.M.** Contractor is directed to coordinate all areas of work and scheduling with the Owner. After hours work will require prior approval of the Project Manager and may require hiring of a guard at the contractor's expense.
- D. The Contractor may be allowed additional construction days due to inclement conditions ("rain days") only as such are appropriately documented and are in excess of the NOAA/National Weather Service average (previous 5 years) for the given month. A "rain day" is defined as more than a "trace" (0.10") of rain falling within a given 24 hour period. The Contractor shall provide documentation and formally request any "rain days" they feel are legitimately due. Documentation shall be submitted to the Project Manager, in writing, within ten (10) calendar days of the rain event. Claim shall include documentation of trades adversely impacted and the impacted activities of each trade.
- E. Construction Schedule – Upon contract award, the successful bidder shall be required to submit a construction schedule. Construction shall be updated monthly and submitted with the application for payment.

20. SITE CONSIDERATIONS:

- A. It is the Contractor's responsibility to carefully remove and store any items not permanently installed within the work areas. It is recommended that the Contractor photograph, videotape or in some manner document any features to be removed and their condition, prior to removal.

- B. Noise and strong smells shall be isolated or kept to a minimum when adjacent portions of the site are occupied.
- C. Contractor shall be responsible to leave the work area and adjacent site clear of equipment and debris, etc. at the end of each work day. All final cleaning is the responsibility of the Contractor and shall be executed prior to acceptance for reuse of any portion of the site.
- D. A dumpster and lay down area for Contractor materials and staging may be located at the site and located per the direction of the Owner. The Contractor is responsible for the removal of the dumpster, any storage containers and any security fencing, temporary erosion control (BMPs), etc. as soon as practical after their use by the Contractor or the work is complete.

21. SALES AND USE TAX EXEMPTION:

- A. As per the State of Alabama ACT 2013-205, the Alabama Department of Revenue (ADOR) has been granted the authority to issue a "Certificate of Exemption from Sales and Use Tax for Governmental Entities" on construction projects. Therefore, this project shall qualify for State of Alabama Sales and Use Tax Exemptions under this ACT. It is the responsibility of the Bidder to confirm the potential tax exempt status of their bid with the ADOR and include any such savings in their bid, as well as accounting for same on their bid form attachment Sales Tax Form C-3A.
- B. The full text of ACT 2013-205 is available on the State of Alabama Building Commission web-site at www.bc.alabama.gov.

22. SUBMISSION OF LIEN WAIVERS:

- A. At each monthly Application for Payment submitted to the owner, the Contractor shall provide completed lien waivers, including those from Subcontractors and material suppliers.

23. NOTICE OF COMPLETION:

- A. For Contracts \$50,000 or greater:
Contractor shall provide proof of publication of Advertisement of Completion for four consecutive weeks in a local newspaper, as required in the Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama. This Advertisement shall not begin until the Project has been accepted by the City of Mobile.
- B. Notice of Completion advertisement shall read as follows:

STATE OF ALABAMA

COUNTY OF MOBILE

NOTICE OF COMPLETION

In accordance with Chapter 1, Title 39, Code of Alabama, 1975, NOTICE IS HEREBY given that (COMPANY NAME) has completed the contract for Mobile Riverfront -Cooper Riverside Redevelopment - PR-029-22, Mobile, Alabama 36602. All persons having any claims for labor, material or otherwise in connection with this project should immediately notify the Architectural Engineering Department, City of Mobile, P.O. Box 1827, Mobile, Alabama 36633-1827.

- C. Advertisement shall not begin until the Project has been accepted by the City of Mobile as Substantially Complete.

24. CONTRACTOR WARRANTY AND CERTIFICATION:

- A. Upon completion of the contract, the Contractor shall certify under oath that all bills have been paid in full.
- B. Contractor shall provide a one year Labor and Materials Warranty on company letterhead in addition to other warranties required by the Bid Documents.

25. LIQUIDATED DAMAGES

- A. A time charge equal to One Thousand Dollars (\$1000.00) per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted, or any required closeout documents are not acceptably submitted, for more than thirty (30) calendar days after the time specified for the Substantial Completion for the Work, the amount of which shall be deducted by the owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained.

- 26. CONTRACTOR shall be cognizant of the Load Limits that have been established on the local streets adjacent and leading to the project site. All material hauling operations shall be performed in an appropriate manner such that the street load limits are not ever exceeded.

- 27. Intent - Provisions of these Special Provisions shall supersede and take precedence over conflicting counterpart provisions located elsewhere in the contract documents.

No provisions under this section shall be construed as relieving the CONTRACTOR from his contractual obligations in the performance and satisfactory completion of all Work as specified and contracted for in said contract documents, except as may be duly authorized in writing by the OWNER.

CONTRACTOR is responsible for all testing associated with the contract documents. OWNER may, at his own expense, perform additional testing for acceptance purposes.

- 28. Scope of Work - The Work to be performed under the various bid items for this contract shall include all plant, processing, tools, supplies, labor, materials, equipment, superintendence,

and incidentals which may be required for the construction unless otherwise specified for a particular bid item.

29. Maintenance of Drainage - The CONTRACTOR shall maintain adequate drainage during construction. The CONTRACTOR shall provide for the removal of water from the land-based Work area and areas adjacent and shall maintain the Work area reasonably dry at all times. No measurement of payment will be made for maintenance of drainage. Payment will be distributed throughout the existing bid items. The CONTRACTOR shall include any and all costs for maintenance of drainage in the contract prices for items of work to which the work is incidental thereto.
30. Communication - The CONTRACTOR shall have someone available to take calls at all times. He shall provide the OWNER and ENGINEER with a local night telephone number to call so that he may be advised of any emergency, trouble, or other matter needing his attention. The emergency telephone number should be displayed on barricades and/or on equipment on the job site.
31. Sanitation Facility - Employee sanitation facilities shall be provided and maintained by the CONTRACTOR.
32. The CONTRACTOR shall be responsible for protecting from damage during entry of large equipment, any fencing, gates, etc. Damaged or removed fencing, gates, etc. shall be replaced in kind at no direct pay. Damage to any culverts along access roads shall be replaced in kind at no direct pay.
33. The CONTRACTOR shall be responsible for eliminating mud and debris from vehicles that could be spilled onto public roads. The CONTRACTOR is responsible for thorough washdown of vehicles where necessary to eliminate mud, tracking, spillage and/or other surface pollution from equipment and operations from entering public streets. The CONTRACTOR shall slope washdown area to promote positive drainage of all truck washdown waste water using existing drainage at the site. Turbid run-off water shall be kept out of canals. Sediment shall be kept out of canals. Sediment shall be kept out of drainage system. Sediment removed shall be disposed of at the proper location indicated by the ENGINEER. CONTRACTOR shall identify a washdown area with the project limits and submit a plan to ENGINEER for approval.
34. Utility Contact Information – Location of utilities indicated on the Drawings, if any, are for information purposes only. It shall be the responsibility of the CONTRACTOR to verify location and depth of all existing utilities (underground and overhead) prior to commencement of construction activities. CONTRACTOR shall contact owner of affected utilities, including One Call, at least 3 working days prior to commencement of construction activities.
35. Insurance will not be measured for payment. Insurance shall be included in the cost of all the other bid items.
36. The CONTRACTOR shall completely inform himself relative to the tidal conditions and water levels near the site. CONTRACTOR shall be aware that these tidal conditions and water levels

may vary during construction, and shall make proper provisions to accommodate construction schedule accordingly.

37. All required records, reports, submittals, etc. shall be provided as per specifications and shall be approved by the ENGINEER prior to payment of each item.
38. The CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Directive Changes, Field Orders, RFI's and other written interpretations and clarifications in good order and annotated to show all changes made during the construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to ENGINEER for OWNER.
39. The CONTRACTOR shall maintain a set of red line As-Built drawings throughout the construction of the project. The As-Built set of drawings shall indicate all changes and clarifications that occur during the project and shall be delivered electronically to the ENGINEER upon completion of the work.
40. A Work Plan including description and schedule of activities to be performed, as well as equipment to be utilized for the proposed construction, as required in the Contract Documents and Drawings, shall be submitted to the ENGINEER for review and approval upon execution of the Construction Contract, but no later than three (3) days prior to the Pre-Construction Meeting.
41. Within 30 days of the date of Notice to Proceed, the CONTRACTOR shall submit to the ENGINEER and the OWNER, for approval, a Hurricane Preparedness Plan. The Plan shall describe in detail the necessary measures which the CONTRACTOR will perform, at no additional costs to the OWNER, in case of a hurricane warning. Revise Plan as required by the ENGINEER and OWNER.

END OF SECTION

SECTION 00 41 00
BID FORM

Copies of the following Bid Forms shall be used. Bids submitted on alternate forms may be rejected. Fill in all blank spaces with an appropriate entry. Bid Form must be signed by an officer of the company and notarized.

TO: City of Mobile, 205 Government St., P.O. Box 1827, Mobile, AL, 36633

REF: PROJECT NO.: PR-029-22
PROJECT NAME: Mobile Riverfront- Cooper Riverside Redevelopment
PROJECT LOCATION: Cooper Riverside Park
Mobile, Alabama, 36602

In compliance with the Bid Documents and having carefully and thoroughly examined said documents for the subject Work prepared by the City of Mobile, Architectural Engineering Department dated September 8, 2023; and all Addendum (a) Number(s) _____, dated _____, 2023 (CAUTION: before submitting any bid it is the Bidder's responsibility to check with the Architectural Engineering Department for all Addenda or special instructions that may impact the Bid) thereto, receipt of which is hereby acknowledged, the premises and all conditions affecting the Work prior to making this Proposal, the Undersigned Bidder, hereby

COMPANY NAME: _____

ADDRESS: _____ **PHONE:** _____

ALABAMA GENERAL CONTRACTOR LICENSE NO. _____

CITY OF MOBILE BUSINESS LICENSE NO. _____

SECRETARY OF STATE OF ALABAMA BUSINESS IDENTITY NO. _____

SECRETARY OF STATE OF ALABAMA ACCOUNT NO. _____

(Note: Secretary of State Account Number shall be filled in only by non-resident bidders)

(Check one) A Corporation A Partnership An Individual Doing Business

hereby proposes to furnish all labor, materials, tools, equipment, and supplies and to sustain all the expenses incurred in performing the Work on the above captioned Project in accordance with the terms of the Contract Documents, and all applicable laws and regulations for the sum listed below. The initial term of the Contract shall extend for Three Hundred Sixty Five (365) calendar days from the date of the Notice to Proceed.

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following ADDENDA: (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____

BASE BID: \$ _____

CONTINGENCY ALLOWANCE: + \$ 350,000.00

TOTAL BASE BID: \$ _____
(Fill in here and in Total Bid below)

TOTAL BASE BID: _____

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

_____ N/A Dollars (\$ _____ N/A
_____)

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

_____ N/A Dollars (\$ _____ N/A
_____)

Alternate No. 3 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

_____ N/A Dollars (\$ _____ N/A
_____)

(Note: Show amount in both words and figures. In case of discrepancy, the amount in words shall govern). **Bids shall be provided in whole dollar amount with no cents.**

BASE BID						
SCOPE	ITEM NO.	DESCRIPTION	UNIT	EST QTY	UNIT PRICE (US DOLLARS)	TOTAL AMOUNT (US DOLLARS)
GENERAL CONDITIONS	1.0	General Conditions	LS	1		
	2.0	Mobilization and Demobilization	LS	1		
	3.0	Vibration and Displacement Monitoring	LS	1		
NORTH BULKHEAD DEMOLITION	4.0	Landside Demolition	LS	1		
	5.0	Demolition of Existing Wharf Bulkhead Cap and North Cofferd Cell Caps	LS	1		
	6.0	Demolition of Existing Wharf and Piling and Deadman Deck	LS	1		
	7.0	Bulkhead Construction and Relief Excavation and Stockpiling	CY	3409		
	8.0	Bulkhead Construction and Relief Excavation and Disposal	CY	1750		
	9.0	North Cofferd Cells Waterside Excavation	CY	2584		
	10.0	Support of Excavation	LS	1		
	11.0	Demolition of North Cofferd Cells	LF	258		
	12.0	Removal of Rip-Rap at North End of Wharf	CY	100		

NORTH BULKHEAD CONSTRUCTION	13.0	Bulkhead Wall	LF	399		
	14.0	Bulkhead Closures	LS	1		
	15.0	Tieback System	EA	42		
	16.0	Bulkhead Stone Backfill	CY	400		
	17.0	Bulkhead Wall Cap	CY	134		
	18.0	Backfill behind Bulkhead using Stockpiled Materials	CY	3409		
	19.0	Bulkhead Appurtenances	LS	1		
	20.0	Deadman Deck	CY	2		
SOUTH COFFER CELL SDEMOLITION	21.0	Construction Excavation, Stockpiling, and Backfill	CY	19		
	22.0	Demolition of Existing Cell Cap and Retaining Wall	CY	11		
SOUTH COFFER CELL CONSTRUCTION	23.0	Cell Encasement Piling	VLF	990		
	24.0	Cell Concrete Encasement	CY*	178		
	25.0	Geotextile	SF	12,830		
	26.0	Revetment	CY	4480		
	27.0	Encasement Cap	CY	26		
	28.0	Buoys	EA	3		
		BASE BID TOTAL AMOUNT	-----	-----	-----	

*Bid quantity is based on the neat volume of encasement assuming no voids in the existing cell. Payment for encasement overrun beyond the bid estimated quantity due to loss of material into corrosion voids in the cell will be made at the Unit bid price for this item, under the contingency allowance for unanticipated additional work.

REQUIRED LISTING OF SUBCONTRACTORS/SUPPLIERS: List the subcontractors/suppliers for the trades listed below which you intend to use for the base bid. If no trades are designated, the listing is not required. List yourself for work you intend to self-perform. Any envelope adjustments to this section must be initialed by the bidder. Failure to complete this section may render your bid non-responsive. See Supplemental Instructions to Bidders for additional information.

(List requested trades here, if any)

BID SECURITY: The undersigned Bidder agrees that the attached Bid Security, as a Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or a Bid Bond, made payable to the City of Mobile, in the amount of 5% of the bid amount, but in no event more than \$10,000, as the proper measure of liquidated damages which the City will sustain by the failure of the undersigned to execute the Contract. Said Bid Security shall become the property of the City of Mobile as liquidated damages as specified in the Contract Documents.

AMERICANS WITH DISABILITIES ACT (ADA): The undersigned Bidder agrees to fully comply with all requirements of the Americans with Disabilities Act of 1990 and the Amendment Act.

NONDISCRIMINATION: Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, inter alia, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

SIGNATURE: If the undersigned Bidder is incorporated, the entire legal title of the company followed by "a corporation" should be used. If Bidder is an individual, then that individual's full legal name followed by doing business as (d/b/a) and name of firm, if any, should be used. If Bidder is a partnership, then full name of each partner should be listed followed by "d/b/a" and name of firm, if any.

Ensure that name and exact arrangement thereof is the same on all forms submitted with this Bid. If a word is abbreviated in the official company name, such as "Co.", then use that abbreviation. If not abbreviated in the official name, spell out.

Bidder agrees not to revoke or withdraw this Bid until sixty (60) calendar days following the time and date for receipt of bids. If notified in writing of the acceptance of this Bid within this time

period, Bidder agrees to execute a Contract based on this Bid on the proscribed form within ten (10) calendar days of said notification and to furnish Performance Bond and Materials and Payment Bond as specified.

COMPANY NAME: _____
(Printed or Typed)

BY: _____
(Signature of Company Officer)

COMPANY OFFICER: _____
(Printed or Typed)

TITLE: _____ **DATE:** _____, 2023
(Printed or Typed)

Sworn to and subscribed before me this _____ day of _____,
2023

Notary Public

Attachments:

1. Bid Security, with Power of Attorney
2. Secretary of State Authorization (Out of state bidders only)
3. Sales Tax Form C-3A

END OF BID FORM

**ACCOUNTING OF SALES TAX
ATTACHMENT TO BID FORM SECTION 00 41 00
SALES TAX FORM C-3A**

To: City of Mobile

Date: _____

Name of Project: Mobile Riverfront Development - Bulkhead Replacement

Project Number: PR-029-22

SALES TAX ACCOUNTING

Pursuant to Act 2013-205, Section 1(g) the Contractor accounts for the sales tax NOT included in the bid proposal form as follows:

	<u>ESTIMATED SALES TAX AMOUNT</u>
<u>BASE BID:</u>	\$ _____
<u>ADD ALT. #1:</u>	\$ _____
<u>ADD ALT. #2:</u>	\$ _____

Failure to provide an accounting of sales tax shall render the bid non-responsive. Other than determining responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.

Legal Name of Bidder: _____

Mailing Address: _____

***By (Legal Signature):** _____

*Name (type or print): _____ (Seal)

*Title: _____

Telephone Number: _____



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

Bidders and Proposers – Please complete and submit these forms as required by your City of Mobile Bid or Proposal Specification.

This document provides information to the City of Mobile about the subcontractors and major suppliers you intend to use to complete this contract. Failure to submit this form, when so required by the bid or proposal specification, will render your bid non-responsible. Not all specifications require this form to be completed, or may require its completion under varying circumstances. Refer to the specification for direction.

The City of Mobile will use this form to:

- Understand your intended use of subcontractors and major suppliers as part of your bid/proposal submission.
- Evaluate your capability to complete the performance of this contract.
- Determine your use of Disadvantaged Business Enterprises (DBEs) as subcontractors and suppliers.
- For certain contracts, assess whether you exercised “good faith efforts” to use DBE subcontractors and suppliers for at least 15% of the value of your bid/proposal amount. (See City of Mobile City Code Sec. 14-2.)

Include this form with your bid/proposal submission. Should your bid be considered the lowest responsible bid, you will have the opportunity to update this form at contract signature. You also will be required to re-verify your information at contract conclusion.

The bid specification may require you to attempt in “good faith” to use DBE subcontractors and suppliers for at least 15% of the value of your bid in the performance of this contract. If you don’t have that level of DBE subcontractor / supplier usage (as documented on **Form 1**), you are required to complete the “good faith effort” documentation on **Form 2**. When so required, failure to adequately address the good faith effort factors on Form 2 will render your bid or proposal as non-responsive. The determination whether the bid or proposal adequately demonstrates and documents a DBE subcontractor/supplier plan, or good faith efforts to complete such a plan, will be at the sole discretion of the City of Mobile. You are encouraged to work with the City of Mobile Supplier Diversity Manager when preparing this form.

About “**DBEs**”: The City of Mobile considers businesses owned by minorities, women, or disabled veterans to be DBEs. Please consult with the City Supplier Diversity Manager for clarification or lists of certified DBEs.

About “**Good Faith**” **Effort**: The City of Mobile expects contractors holding large contracts to recruit and engage DBEs to be a part of their team. If the specification sets, and you cannot meet, the 15% target, you must show us how you attempted to recruit and engage DBEs to meet this target. This helps the City identify DBE market weaknesses for development, and ensures all bidders are equally considering this obligation in preparing a bid. The “good faith effort” factors on **Form 2** are not intended to be a mandatory, exhaustive, or exclusive. They are a tool to help you, and to help the City consistently and fairly consider your effort.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

FORM 1: Background and Plan

Section I. Information about your company

Company	
Address	
Telephone	
E-Mail	

RFP/RFQ Solicitation Number	
Project Description	
Is your company a DBE company?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Work force demographics	Male _____ Female _____ Minority _____ Non-minority _____ Vets _____
Total #of Employees	_____

Subcontractor/Major Supplier Plan submitted by:

Printed Name: _____

Signature: _____ Date: _____

Title: _____

The following employee will be designated as the **DBE Liaison** for all communication regarding DBE participation including documentation for DBE participation and maintenance of records of Good Faith Efforts for this contract award:

Name: _____ Title: _____

E-mail: _____ Phone: _____



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE
Subcontracting and Major Supplier Plan

Form 2: Good Faith Effort Documentation

Name of Bidder: _____

Contact Person: _____

Phone _____ Email _____

Please complete this form if you are unable to identify DBE subcontractors or suppliers to reach 15% of the value of your bid.

YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Did you do these suggested areas for DBE recruitment and engagement
		PRE-BID MEETING(S): The bidder attended all pre-bid meetings scheduled by the City to inform DBEs of contracting and subcontracting opportunities.
		CMDBE/ALDOT DBE LIST(S): The bidder utilized the Office of Supplier Diversity's list or lists of certified ALDOT DBE 's
		SMALL CONTRACT(S): The bidder selected specific portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals (including breaking down contracts into smaller units to facilitate DBE participation). Consider support services, including insurance, accounting, temporary labor, and transportation, landscaping, and janitorial as potential areas for DBE use.
		FOLLOW-UP: The bidder followed-up initial indications of interest by DBEs by contacting those DBEs to determine with certainty if they remained interested in bidding.
		ADVERTISEMENT: The bidder advertised in general circulation and/or trade association publications concerning subcontracting opportunities, and allowed DBEs reasonable time to respond.
		INTERNET ADVERTISING: The bidder advertised DBE and/or subcontracting opportunities on the City of Mobile Facebook page or other internet portals that are accessible to DBEs and/or potential subcontractors.
		GOOD FAITH NEGOTIATIONS: The bidder negotiated in good faith with interested DBEs and did not reject DBEs as unqualified without sound business reasons based on a thorough investigation of their capabilities.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

		INFORMATION: The bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the subcontract.
		WRITTEN NOTICE(S): The bidder/proposer took the necessary steps to provide written notice in a manner reasonably calculated to inform DBEs of subcontracting opportunities and allowed sufficient time for them to participate effectively.
		COMMUNITY RESOURCES: The bidder/proposer used the services of available community organizations, small and/or disadvantaged business assistance offices and other organizations that provided assistance in the recruitment and placement of DBE firms.
		CONTRACT RECORDS: The bidder/proposer has maintained the following records for each DBE that has bid on the subcontracting opportunity: 1. Name, address, and telephone number; 2. A description of information provided by the bidder/proposer or subcontractor; and 3. A statement of whether an agreement was reached, and if not, why not, including any reasons for concluding that the DBE was unqualified to perform the job.

Please indicate if any of the following applied:

_____ There are not ways to break out 15% of the value of this contract for subcontractors / suppliers.

_____ Could not find sufficient DBEs to provide subcontracting or supplier services.

_____ DBEs were available but did not have sufficient qualifications or experience to meet the needs of this contract.

Please indicate additional efforts you have taken to recruit and engage DBEs. _____

Suggestions or comments to improve this program. _____

SECTION 00 50 00

STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

PART 1 – GENERAL

This section includes the STANDARD FORM OF AGREEMENT BETWEEN OWNER and CONTRACTOR, AIA Document A101, wherein the basis of payment is a Stipulated Sum; the document has been electronically modified to meet the Owner's requirements and shall be used for the Project.

DRAFT AIA® Document A101™ – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « » day of « » in the year « »

(In words, indicate day, month and year.)

BETWEEN the Owner:

(Name, legal status, address and other information)

«City of Mobile »« »
«P. O. Box 1827 »
«Mobile, Alabama 36633-1827 »
« »

and the Contractor:

(Name, legal status, address and other information)

«»« »
« »
« »
« »

«City of Mobile Business License Number: »
«Secretary of State Registration Number: »

for the following Project:

(Name, location and detailed description)

«Mobile Riverfront -Cooper Riverside Redevelopment
Cooper Riverside Park
Mobile, Alabama 36602
PR-029-22
Riverside Redevelopment Phase 1

The Engineer:

(Name, legal status, address and other information)

« Moffat & Nichol
11 N Water St Ste 20220
Mobile, AL 36602
»

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101™-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

1	THE CONTRACT DOCUMENTS
2	THE WORK OF THIS CONTRACT
3	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4	CONTRACT SUM
5	PAYMENTS
6	DISPUTE RESOLUTION
7	TERMINATION OR SUSPENSION
8	MISCELLANEOUS PROVISIONS
9	ENUMERATION OF CONTRACT DOCUMENTS, INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others (See attachment Exhibit A).

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

A date set forth in a notice to proceed issued by the Owner.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

Not later than «Three Hundred Sixty Five Days» («365») calendar days from the date of the Notice to Proceed for commencement of the Work.

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Contract. The Contract Sum shall be « _____ and 00/100 Dollars» (\$ « _____ .00»), subject to additions and deductions as provided in the Contract Documents.

Base Bid: \$
Contingency Allowance: \$ 350,000.00
Total Contract Sum: \$

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
N/A	

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Contingency Allowance: Three Hundred Fifty thousand dollars and 00/100 Dollars (\$350,000.00)

- A. Contingency Allowance shall cover cost of material, labor, overhead, profit and other expenses for complete installation of items of additional work as required for a complete, functional project.
- B. Contingency Allowance shall be used for unforeseen conditions not covered in the construction documents.
- C. All extra work under this section must be authorized by the Owner, in writing, prior to materials or undertaking work.
- D. Upon completion of the Work, the unused portion of the Allowance shall be credited back to the Owner in the form of a Change Order.
- E. Allowances are subject to the same provision of AIA 201 Article 7.3.7.

§ 4.4 Unit prices, if any:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
1. N/A		

§ 4.5 Liquidated damages:

(Insert terms and conditions for liquidated damages, if any.)

«A time charge equal to two hundred fifty dollars and no cents (\$250.00) per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted or any required closeouts documents are not acceptably submitted for more than thirty (30) days after the date specified for the substantial Completion of the Work, the amount of which shall be deducted by the owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained. »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the 25th of the month.

§ 5.1.3 Provided that an Application for Payment in acceptable format is received by the Architect not later than the first «1st » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the tenth «10th » day of the «following » month. If an Application for Payment in acceptable format is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than «forty » («40 ») days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This accepted schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201, General Conditions of the Contract for Construction (including Owner's then-current modifications), and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing and insured as specified;
- .3 Completed work shall be determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201-2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201-2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.6.3 Any Progress Payment shall include partial release of liens for material and labor for previous application for payment amount approved and paid. For projects over \$250,000.00, the DBE Utilization Report shall be included with the pay application.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

«Five percent (5%) of the first fifty percent (50%) of the completed work and after fifty percent (50%) completion has been accomplished, no further retainage shall be held from the original Contract Sum. Increases in the contract sum by Change Order shall also be subject to retainage.»

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

«N/A »

« »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

(Insert any other conditions for release of retainage upon Substantial Completion.)

«The net amount of the Retainage shall be equal to two and one half percent (2.5%) of total Contract Sum, as increased or decreased by Change Order. »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final monthly progress payment, constituting the entire unpaid balance of the Contract Sum, less retainage, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201 (including Owner's then-current modifications which may be obtained from the Owner or, alternatively, a copy of which is incorporated in the Project Manual and incorporated by reference herein as a part thereof), and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a Certificate of Substantial Completion has been issued by the Architect/Owner and the project accepted.

§ 5.2.2 The Owner's final payment to the Contractor of retainage shall be made as follows:

« The final two and one half percent (2.5%) of the total Contract Sum retained will not be paid until proof of publication is submitted and all written claims paid in full. Contractor to submit the following:

- Contractor's Affidavit of Payment of Debts and Claims (AIA form G706, included in contract documents) with
 - a.) Contractor's Release or Waiver of Liens
 - b.) Releases or Waivers of Liens from Subcontractors and Material and Equipment Suppliers;
- Contractor's Affidavit of Release of Liens (AIA form G706A, included in contract documents);
- Consent of Surety, if any, to final payment (AIA form G707, included in contract documents);
- Any additional close out requirements per the contract documents; and
- Notarized Affidavit of Notice of Completion advertisement from publisher.

Contractor shall provide proof of publication of Notice of Completion in a local newspaper once per week for four (4) consecutive weeks, as required in the Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama quoted below. "The Contractor shall, immediately after the completion of the contract, give notice of Completion by an advertisement in a newspaper of general circulation published within the city or county in which the work has been done, for a period of four (4) consecutive weeks. A final settlement shall not be made upon the contract until the expiration of thirty (30) days after the completion of the notice. Proof of publication of the notice shall be made by the contractor to the authority by whom the contract was made by affidavit of the publisher and a printed copy of the notice published. If no newspaper is published in the county in which the work is done, the notice may be given by the contract." (Acts 1927, No. 39, 9.37; Acts 1935, No. 39, 9. 70; Code 1940, T. 50, Section 16; Acts 1983, No. 83-737, 9.1203; Acts 1989, No. 89-650m 9. 1284, Section 1; Acts 1994, No. 94-207, p. 270, Section 1; Acts 1997, No. 97-225, p. 348, Section 1.)

The Notice of Completion shall read as follows:

STATE OF ALABAMA
COUNTY OF MOBILE
NOTICE OF COMPLETION

In accordance with Chapter I, Title 39, Code of Alabama, 1975, NOTICE IS HEREBY given that () has completed the contract for Western Administration Complex – Recycling Center Compactor Relocation (PW-017-22), 4851 Museum Drive, Mobile, Alabama, 36608. All persons having any claims for labor, material or otherwise in connection with this project should immediately notify the Architectural Engineering Department, City of Mobile, P. O. Box 1827, Mobile, Alabama 36633-1827.

Publication of the Notice of Completion shall not begin until the Project has been accepted as Substantially Complete by the City of Mobile. »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Engineer will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker. *(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

«N/A »

§ 6.2 Binding Dispute Resolution

For any Claim, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[] Litigation in a court of competent jurisdiction

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents. A copy of such amended, revised or supplemental provision is incorporated in the contract documents and hereby incorporated by reference herein as a part thereof.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

«Director, Real Estate & Asset Management »
«P. O. Box 1827 »
«Mobile, Alabama 36633-1827 »

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

« »
« »

« »§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth below:

The Contractor shall purchase and maintain from a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18 of the General Conditions of the Contract for Construction.

The Contractor shall take out and maintain during the life of the Contract no less than the following amounts of insurance with the City of Mobile named as an additional insured. Contractor shall submit a Certificate of Insurance. Insurance companies listed as the "Companies Affording Coverage" shall be authorized by the Secretary of the State of Alabama. Insurance produced out of the State of Alabama must be signed or counter signed by a licensed Agent of Alabama, with the Agent's name, address and telephone number typed or printed on the face of the Certificate of Insurance.

- .1 Workmen's Compensation Insurance: - Statutory-amount and coverage as required by all applicable laws, rules or regulations of the State of Alabama.
- .2 Employee's Liability Insurance shall be provided for limits of liability not less than:
 - A. Bodily Injury by Accident \$1,000,000 each accident
 - B. Bodily Injury by Disease \$1,000,000 each employee
 - C. Bodily Injury by Disease \$1,000,000 each policy
- .3 The Contractor shall provide Broad Form (commonly termed Comprehensive) General Liability Insurance (including premises-product-completed operations, independent contractors, and blanket contractual liability), specifically covering the obligations assumed by the Contractor for limits of liability not less than:
 - A. Bodily Injury \$1,000,000 each person
\$1,000,000 each occurrence
 - B. Property Damage \$1,000,000 each occurrence; or
 - C. Bodily Injury & Property Damage \$1,000,000 combined single limit
4. Such comprehensive policy shall include the following:
 - A. All liability of the Contractor, for the Contractor's Direct Operations.

- B. Subcontractor's Operations.
 - C. Completed Operations Cover, thereby meaning any loss which shall occur after the contract has been completed, but which can be traced back to the Contract.
 - D. General Aggregate Limit shall apply on a "Per Project" Basis.
 - E. Contractual Liability, meaning thereby; any risk assumed by the Contractor under Hold Harmless Agreements or any other assumption of liability, but specifically items 11.1.1.8.3G herein below
 - F. Broad Form Property damage Coverage, including Completed Operations.
 - G. Personal Injury Liability, with employee's exclusions removed.
 - H. Explosion and Collapse Hazard:
 - Included or Not Applicable.
 - I. Underground Hazard:
 - Included or Not Applicable.
5. The Contractor shall carry for himself and shall require that all Subcontractors and all Owners of Automobiles or trucks rented or hired on the contract carry, until the Contract is completed, Comprehensive Automobile Liability Coverage for Bodily Injury and property. Damage for any auto in amounts not less than the minimum amounts as indicated. The Contractor and Subcontractor shall also carry for themselves insurance for all non-owned and hired automobile at the limits of liability as indicated below:
- | | | |
|----|------------------------------------|--|
| A. | Bodily Injury | \$1,000,000 each person
\$1,000,000 each occurrence |
| B. | Property damage | \$1,000,000 each occurrence; or, |
| C. | Bodily Injury &
Property damage | \$1,000,000 combined single limit |
6. Umbrella/Excess Liability: \$2,000,000 combined single limit each occurrence for bodily injury and/or property damage
7. Builder's Risk Coverage: The Contractor shall carry for the Owner, himself, and all Subcontractors a Builder's Risk Policy to cover the full amount of the Contract during construction, fabrication or erection of any equipment.
8. A Surety authorized to do business in the State of Alabama shall furnish the required Insurance.
9. The standard ACORD™ format shall be provided. The ACORD™ Certificate must be signed or countersigned by a Licensed Resident Agent of the State of Alabama and the agent's name, address and telephone number must appear on the face of the certificate.
10. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc. if the bid price exceeds \$50,000.00.
11. "In Rem" endorsement.
12. Borrowed Servant/Alternate Employer endorsement in favor of the City of Mobile.

The insurance shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

Certificates of insurance acceptable to the Owner shall be filed with the Owner within ten (10) calendar days from date of issuance of contract forms for execution. Contractor shall deliver to the City of Mobile, certificates of

insurance certifying the existence and limits of the insurance coverages along with separate policy endorsements. Contractor shall also be responsible for delivering policy renewal certificates to the City of Mobile, and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies shall contain a provision that coverages afforded under the policies will not be cancelled subject to non-renewal nor material change, or allowed to expire without at least 30 days' (except 10 days from non-payment) prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the time. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

All policies of insurance, except worker's compensation, shall be endorsed to provide that all such insurances are primary and non-contributing with any other insurance maintained by the City of Mobile and endorsed to waive rights of subrogation in favor of the City of Mobile.

The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 8.5.2 The Contractor shall provide bonds as set forth below:

Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

The Labor and Material Payment Bond and the Performance Bond shall each be for one hundred percent (100%) of the Contract Sum.

1. Bond shall be submitted with the executed agreement on provided form(s).
2. Power of Attorney is required for both bonds.
3. A Surety authorized to do business in the State of Alabama shall furnish both bonds.
4. A Surety licensed to do business in the State of Alabama must execute the bonds.
5. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc., if the bid price exceeds \$50,000.00.
6. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment being made to the Contractor.

§ 8.6 Contractor agrees to indemnify and hold the City, its elected officials, officers, agents, and employees whole and harmless from all costs, liabilities and claims for damages of any kind (including interest and attorneys' fees) arising in any way out of the performance of this Agreement and/or the activities of Contractor, its principals, directors, agents and employees in the performance of this Agreement, for which the City is alleged to be liable. In the event that the City, through no fault of its own, is made a party to any lawsuit or legal proceeding arising in any way from this contract or any activities conducted pursuant thereto, Contractor hereby agrees to pay all of City's costs of defense, including but not limited to all attorneys' fees, court costs, expert witness fees and other expenses, through trial and, if necessary, appeal. This section is not as to third parties or to anyone a waiver of any defense or immunity or statutory damages cap otherwise available to Contractor or City, and these defenses and matters may be raised in the City's behalf in any action or proceeding arising under this Agreement.

§ 8.7 Other provisions:

«Contractor shall provide a minimum one (1) year warranty from the date of substantial completion of all Labor and Materials for the Work covered by this contract, unless otherwise specified. Labor and Material warranties required by other sections of the construction document shall not conflict with this provision. The most stringent warranty provision shall apply. »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A201, General Conditions of the Contract for Construction, including Owner’s then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

.3 Drawings

Number	Title	Date

.4 Specifications

Section	Title	Date
DIVISION 1	GENERAL REQUIREMENTS	
Section 01 11 00	Summary of the Work	
Section 01 21 00	Allowances	
Section 01 29 73	Schedule of Values	
Section 01 31 00	Project Management & Coordination	
Section 01 31 19	Project Meetings	
Section 01 32 00	Construction Progress Documentation	
Section 01 33 00	Submittal Procedures	
Section 01 40 00	Quality Assurance, Control, & Documentation	
Section 01 56 00	Cleaning Up	
Section 01 60 00	Materials and Equipment	
Section 01 63 00	Substitution Procedures	
Section 01 73 00	Execution Requirements	
Section 01 77 00	Closeout Procedures	
DIVISION 2	EXISTING CONDITIONS	

.5 Addenda, if any:

Number	Date

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract

Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

- .6 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

§ 9.2 Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
N/A			

§ 9.2.1 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor’s bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

Document	Title	Date	Pages
	«BIDDING AND CONTRACT REQUIREMENTS		
Section 00 11 16	Invitation to Bid		
Section 00 21 00	Instructions to Bidders - AIA Document A701		
Section 00 22 00	Supplementary Instructions to Bidders		
Section 00 41 00	Bid Form		
	Accounting of Sales Tax Form C-3A		
	DBE Subcontracting & Major Supplier Plan		
Section 00 50 00	Standard Form of Agreement Between Owner and Contractor AIA Document A101		
Section 00 60 00	Bonds, Certificates and Affidavits		
	Performance Bond		
	Labor and Material Payment Bond		
	E-Verify Documentation (Sample)		
	Application and Certificate for Payment - AIA Document G702 and G703		
	City of Mobile DBE Utilization Report		
	Certificate of Substantial Completion - AIA Document G704		
	Contractor’s Affidavit of Payment of Debts and Claims - AIA Document G706		
	Contractor’s Affidavit of Release of Liens - AIA Document G706A		
	Consent of Surety to Final Payment - AIA Document G707		
	Request for Taxpayer Identification Number and Certification W9 Tax Form and City of Mobile Vendor Information Form		
Section 00 70 00	General Conditions of the Contract for Construction - AIA Document A201»		
	City of Mobile Federal Funding Accountability and Transparency Act Disclosure Statement		
	City of Mobile Unique Identity Identifier (UEI) Documentation and Verification Form		

§ 9.2.2 Best Management Practices (BMPs):

The Contractor shall be responsible for providing, implementing and maintaining BMPs for sediment and erosion control in full compliance with all applicable Local, State and Federal Codes and Ordinances throughout the contract period. All Work shall be in accordance with the Clean Water Act; the Alabama Water Pollution Control Act; the current version of the Alabama Handbook for Erosion Control, Sediment Control Stormwater Management on Construction sites and Urban Areas; and the current version of the Mobile, Alabama City Code Chapter 17 Stormwater Management and Flood Control. All Waste water with oils, grease, paint, mortar, etc., shall be properly contained and disposed of.

§ 9.2.3 Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to

assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

§ 9.2.4 By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

§ 9.2.5 Public Contracts with Entities Engaging in certain Boycott Activities:
By signing this contract, the Contractor further represents and agrees that it is not currently engaged in, nor will it engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK



This Agreement entered into as of the day and year first written above.

City of Mobile

Legal Name of Party to Contract:
Contractor:

OWNER *(Signature)*

«William S. Stimpson, Mayor »« »
(Printed name and title)

CONTRACTOR *(By Signature)*

« »« »
(Printed name and title)

ATTEST:

City Clerk

Director, Real Estate & Asset Management



SECTION 00 60 00
BONDS, CERTIFICATES AND AFFIDAVITS

PART 1 – GENERAL

This section includes the Bond Forms and Certificates that are to be used on this Project. No other forms will be accepted. Forms may be obtained from the Architectural Engineering Department, City of Mobile, telephone number 251-208-7454.

1.1 FORMS

- A. PERFORMANCE BOND. Owner’s modified Performance Bond form.
- B. LABOR AND MATERIAL PAYMENT BOND. Owner’s modified Payment Bond form.
- C. E-Verify Documentation (Sample)
- D. APPLICATION AND CERTIFICATION FOR PAYMENT - AIA Document G702 and AIA Document G703
- E. CERTIFICATE of SUBSTANTIAL COMPLETION – AIA Document G704-2017
- F. CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS - AIA Document G706
- G. CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS - AIA Document G706A.
- H. CONSENT OF SURETY TO FINAL PAYMENT - AIA Document G707
- I. Request for Taxpayer Identification Number and Certification, W-9 Form, and City of Mobile Vendor Information Form

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or other Party shall be considered plural where applicable.

KNOW ALL MEN BY THESE PRESENTS: That the Contractor, _____, hereinafter called the Principal, and _____, hereinafter called the Surety, are held and firmly bound unto the **City of Mobile, P. O. Box 1827, Mobile, AL 36633**, hereinafter called the Owner, in the penal sum of _____ Dollars (\$_____.00) for payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns for the faithful performance of a certain written Contract dated the _____ day of _____, 2023 entered into between the Principal and the City of Mobile for furnishing all labor, material, equipment and insurance and performing all Work required to properly complete Mobile Riverfront – Cooper Riverside Redevelopment (PR-029-22), Cooper Riverside Park , Mobile, Alabama, 36602, a copy of which said Contract is incorporated herein by reference and is made a part hereof as if fully copied herein.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall faithfully perform the terms and conditions of the Contract in all respects on its part and shall fully pay all obligations incurred in connection with the performance of such Contract on account of labor and materials used in connection therewith, and all such other obligations of every form, nature and character, and shall save harmless the Owner from all and any liability of every nature, kind and character which may be incurred in connection with the performance or fulfillment of such Contract or other such and liability resulting from negligence or otherwise on the part of such Principal and further save harmless the Owner from all cost and damage which may be suffered by reason of the failure to fully and completely perform said contract and shall fully reimburse and repay the Owner for all expenditures of every kind, character, and description which may be incurred by the Owner in making good any and every default which may exist on the part of the Principal in connection with the performance of said Contract; and further that the Principal shall pay all lawful claims of all persons, firms, partnerships, or corporations for all labor performed and material furnished in connection with the performance of the Contract, and that the failure to do so with such persons, firms, partnerships or corporations shall give them a direct obligation; and provided, however, that no suit, action, or proceedings by reason of any default whatever shall be brought on this bond after two years from the date on which the final payment on the Contract falls due, and provided, further, that if any alterations or additions which may be made under the Contract, or in the work to be done under it, or the giving by the Owner of any extensions of time for the performance of the Contract or any other forbearance being expressly waived. This obligation shall remain in full force and effect until the performance of all covenants, terms and conditions herein stipulated and after such performance, it shall become null and void.

In addition to any other legal mode of service, service of summons, and other process in civil actions brought in Mobile County may be had on the Contractor or the Surety on the bond by leaving a copy of the summons and complaint or other pleading or process with the Mayor of the City of Mobile which shall bind the principal Contractor and Surety to the mode of service above described and that the service shall be the same as personal service on the contractor or surety. This Bond is given pursuant to the terms of Alabama Code, Title 39-1-1, et. al., As Amended.

EXECUTED IN FOUR (4) COUNTERPARTS.

SIGNED, SEALED AND DELIVERED this ____ day of _____, 2023.

CONTRACTOR AS PRINCIPAL
Company: _____ (Corporate Seal)

SURETY
Company: _____ (Corporate Seal)

By: _____ (Signature)

By: _____ (Signature)

Name and Title: _____

Name and Title: _____

Resident Agent: _____ (Signature)

Name and Title: _____
Company Name: _____
Address: _____
Phone and Fax: _____

Owner's Representative: Cassie Boatwright
Director
REAM Department
PO Box 1827
Mobile, AL 36633
251-208-7454

LABOR AND MATERIAL PAYMENT BOND

Any singular reference to Contractor, Surety, Owner or other Party shall be considered plural where applicable.

KNOW ALL MEN BY THESE PRESENTS: That the Contractor, _____, _____, as Principal, and _____, as Surety, are held and firmly bound unto the **City of Mobile, P. O. Box 1827, Mobile, AL 36633** (hereinafter called the "Obligee") in the penal sum of _____ Dollars and no/cents (\$_____.00) lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has entered into a certain Contract with said Obligee, dated the ____ day of _____, 2022, (hereinafter called the "Contract") for furnishing all labor, material, equipment and insurance and perform all work required to properly complete Mobile Riverfront – Cooper Riverside Redevelopment (PR-029-22), Cooper Riverside Park, Mobile, Alabama, 36602, which, **THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH** that if said Principal and all subcontractors to whom any portion of work provided for in said Contract is sublet and all assignees of said Principal and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, materials or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension of or additions to said Contract, and for the payment of reasonable attorney's fees, incurred by the claimant or claimants in suits on each bond, then the above obligations shall be void; otherwise to remain in full force and effect. **PROVIDED**, however, that this bond is subject to the following conditions and limitations.

- (a) Any person, firm or corporation that has furnished labor, materials or supplies for or in the prosecution of the work provided for in said contract shall have a direct right of action against the Principal and Surety on this bond, which right of action shall be asserted in a proceeding instituted in the County in which the work provided for in said Contract is to be performed or in any county in which said Principal and Surety does business. Such right of action shall be asserted in a proceeding instituted in the name of the claimant or claimants for his or their use and benefit against said Principal and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.
- (b) The Principal and Surety hereby designate and appoint _____ **Attorney-In-Fact**, as the agent of each of them to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this bond and hereby consent that such service shall be the same as personal service on the Principal and/or Surety. In addition to any other legal mode of service, service of summons, and other process in civil actions brought in Mobile County may be had on the Contractor or the Surety on the bond by leaving a copy of the summons and complaint or other pleading or process with the Mayor of the City of Mobile which shall bind the principal Contractor and Surety to the mode of service above described and that the service shall be the same as personal service on the contractor or surety.
- (c) The Surety shall not be liable hereunder for damage or compensation recoverable under any Workmen's Compensation or Employer's Liability Statute.
- (d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than two years after the final settlement of said Contract.
- (e) This bond is given pursuant to the terms of Alabama Code, Title 39-1-1, et. al., As Amended.

EXECUTED IN FOUR (4) COUNTERPARTS.

SIGNED, SEALED AND DELIVERED this ____ day of _____, 2023

CONTRACTOR AS PRINCIPAL
Company: _____ (Corporate Seal)

SURETY
Company: _____ (Corporate Seal)

By: _____ (Signature)

By: _____ (Signature)

Name and Title: _____

Name and Title: _____

Resident Agent: _____ (Signature)

Owner's Representative: Cassie Boatwright
Director
REAM Department
PO Box 1827
Mobile, AL 36633
251-208-7454

Name and Title: _____
Company Name: _____
Address: _____
Phone and Fax: _____

Company ID Number:

Approved by:

Employer	
Name (Please Type or Print)	Title
Signature	Date
Department of Homeland Security – Verification Division	
Name (Please Type or Print)	Title
Signature	Date

Company ID Number:

Information Required for the E-Verify Program	
Information relating to your Company:	
Company Name	
Company Facility Address	
Company Alternate Address	
County or Parish	
Employer Identification Number	
North American Industry Classification Systems Code	
Parent Company	
Number of Employees	
Number of Sites Verified for	

APPLICATION AND CERTIFICATION FOR PAYMENT

AIA DOCUMENT G702

PAGE ONE OF

PAGES

TO OWNER City of Mobile
 P. O. Box 1827
 Mobile, AL 36633-1827

APPLICATION NO:

Distribution to:

OWNER
ARCHITECT
CONTRACTOR

FROM CONTRACTOR: VIA ARCHITECT:

PERIOD TO:

PROJECT NO:

CONTRACT FOR:

CONTRACT DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

1. ORIGINAL CONTRACT SUM \$ _____
2. Net change by Change Orders \$ _____
3. CONTRACT SUM TO DATE (Line 1 + 2) \$ _____
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$ _____
5. RETAINAGE:
 - a. _____ % of Completed Work \$ _____
 (Column D + E on G703)
 - b. _____ % of Stored Material \$ _____
 (Column F on G703)
 Total Retainage (Lines 5a + 5b or Total in Column I of G703) \$ _____
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total) \$ _____
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \$ _____
8. CURRENT PAYMENT DUE \$ _____
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6) \$ _____

CONTRACTOR:

By: _____ Date: _____

State of: _____ County of: _____
 Subscribed and sworn to before me this _____ day of _____
 Notary Public: _____
 My Commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$ _____

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)
 ARCHITECT: _____
 By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CONTINUATION SHEET

AIA DOCUMENT G703

PAGE OF PAGES

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:
 APPLICATION DATE:
 PERIOD TO:
 ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		E THIS PERIOD	F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)						
GRAND TOTALS									

Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity

**OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE**

Return to Office of Supplier Diversity
Via email: archnique.kidd@cityofmobile.org

or
P.O. Box 1948
Mobile, AL 36633

**DBE Compliance
DBE UTILIZATION REPORT**

CONTRACTOR: _____ **Certified DBE:** YES NO **Contract Start Date:** _____

DESCRIPTION: _____ **Estimated Completion Date:** _____

This report is for the month of: JAN FEB MARCH APR MAY JUNE JULY AUG SEPT OCT NOV DEC **FINAL** _____
(CHECK ONE):

Original Contract Amount	Total Amount of Contract Changes (change orders or amendments)	Final Contract Amount (include contract changes)	Payments to Date from City of Mobile	OFFICE USE ONLY (Verification)
\$	\$	\$	\$	

Instructions: List all DBEs utilized on the contract, whether or not the firms were originally listed for DBE goal credit. List actual amount paid to each DBE firm. If the established Percentage is not being met, please include a narrative description of the progress being made in DBE participation.

DBE SUBCONTRACTOR	DBE DESCRIPTION OF WORK	DBE SUBCONTRACT AMOUNT	DBE PAYMENTS THIS REPORT	PAYMENTS TO DATE	OFFICE USE ONLY (Verification)
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
TOTALS		\$	\$	\$	

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT. SUPPORTING DOCUMENTATION IS ON FILE AND IS AVAILABLE FOR INSPECTION BY CITY OF MOBILE OFFICE OF SUPPLIER DIVERSITY PERSONNEL AT ANY TIME.

PRINT NAME: _____

SIGNATURE: _____ (Title) _____ (Date)



AIA[®]

Document G704™ – 2000

Certificate of Substantial Completion

PROJECT: *(Name and address)*

PROJECT NUMBER:

CONTRACT FOR:

CONTRACT DATE:

TO OWNER: *(Name and address)*

TO CONTRACTOR: *(Name and address)*

OWNER

ARCHITECT

CONTRACTOR

FIELD

OTHER

PROJECT OR PORTION OF THE PROJECT DESIGNATED FOR PARTIAL OCCUPANCY OR USE SHALL INCLUDE:

The Work performed under this Contract has been reviewed and found, to the Architect's best knowledge, information and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated above is the date of issuance established by this Certificate, which is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

ARCHITECT

BY

DATE OF ISSUANCE

A list of items to be completed or corrected is attached hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment.

Cost estimate of Work that is incomplete or defective: \$ _____

The Contractor will complete or correct the Work on the list of items attached hereto within () days from the above date of Substantial Completion.

CONTRACTOR

BY

DATE

The Owner accepts the Work or designated portion as substantially complete and will assume full possession at (time) on (date).

OWNER

BY

DATE

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance shall be as follows: *(Note: Owner's and Contractor's legal and insurance counsel should determine and review insurance requirements and coverage.)*



AIA[®] Document G706[™] – 1994

Contractor's Affidavit of Payment of Debts and Claims

PROJECT: *(Name and address)*

ARCHITECT'S PROJECT NUMBER:

OWNER:

ARCHITECT:

TO OWNER: *(Name and address)*

CONTRACT FOR: General Construction

CONTRACTOR:

CONTRACT DATED:

SURETY:

OTHER:

STATE OF:

COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose

Indicate Attachment Yes No

CONTRACTOR: *(Name and address)*

The following supporting documents should be attached hereto if required by the Owner:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
3. Contractor's Affidavit of Release of Liens (AIA Document G706A).

BY: _____

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:



AIA[®] Document G707[™] – 1994

Consent Of Surety to Final Payment

PROJECT: *(Name and address)*

ARCHITECT'S PROJECT NUMBER:

OWNER:

CONTRACT FOR: General Construction

ARCHITECT:

TO OWNER: *(Name and address)*

CONTRACT DATED:

CONTRACTOR:

SURETY:

OTHER:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

on bond of
(Insert name and address of Contractor)

, SURETY,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the
Surety of any of its obligations to
(Insert name and address of Owner)

, CONTRACTOR,

as set forth in said Surety's bond.

, OWNER,

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

(Printed name and title)

Attest:

(Seal):

**CITY OF MOBILE, AL
VENDOR INFORMATION FORM**

Company Information:

1. City Vendor Number:

2. Name of Company:

3. Company D.B.A. Name, if any:

4. Mailing Address:

5. Remittance Address:

6. Telephone:

7. Fax

8. Main Email:

Primary Contact:

9. Contact Name and Title:

10. Contact Phone:

11. Contact Fax:

12. Contact Email:

Alternate Contact (if applicable):

13. Alt. Contact Name and Title:

14. Alt. Contact Phone:

15. Alt. Contact Fax:

16. Alt. Contact Email:

City of Mobile Business License Information:

17. City of Mobile Business License No. (if required):

Please attach additional sheets if necessary.

ELECTRONIC PAYMENT AUTHORIZATION

I authorize the City of Mobile to pay amounts owed to my company by EFT (electronic funds transfer). In the event of any discrepancy, the City has the authority to reverse the payment and debit my account for the incorrect payment amount.

All fields are required to be completed.

Company Name _____

City Vendor No. _____ Tax Identification No. _____
(if available)

Billing Address _____

City State Zip _____

EFT Contact Person _____

EFT Contact Phone _____

EFT Contact Email _____
(required for EFT payment notification emails)

Bank Name _____

Routing Number _____ Account Number _____

Account Type Checking or Savings

Authorized Official (print) _____

Authorized Official (signature) _____ Date 09/20/2022

For City Use Only:

Vendor No. _____

Entered Date _____

Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification; check only **one** of the following seven boxes:

<input type="checkbox"/> Individual/sole proprietor or single-member LLC	<input type="checkbox"/> C Corporation	<input type="checkbox"/> S Corporation	<input type="checkbox"/> Partnership	<input type="checkbox"/> Trust/estate
<input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____				
Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.				
<input type="checkbox"/> Other (see instructions) ▶ _____				

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) _____
Exemption from FATCA reporting code (if any) _____
(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.)
Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number										
				-			-			
or										
Employer identification number										
				-						

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here Signature of U.S. person ▶

Date ▶ **09/20/2022**

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding?* on page 2.*

By signing the filled-out form, you:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
- Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

SECTION 00 70 00
GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION,
AIA DOCUMENT A201 - 2007

PART 1 – GENERAL

This section includes the GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA Document A-201, that is to be used for this Project. The document has been electronically modified to meet the City of Mobile's requirements and shall be used for the project.



AIA[®]

Document A201[™] – 2007

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

THE OWNER:

(Name, legal status and address)

City of Mobile

Architectural Engineering Department

P. O. Box 1827

Mobile, Alabama 36633-1827

THE ARCHITECT:

(Name, legal status and address)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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- 15 CLAIMS AND DISPUTES

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User Notes:

(1383216234)

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, Project Manual, specifications, and other similar materials.

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

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§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or

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the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the ~~site~~ site, as may be required. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 ~~Unless otherwise provided in the Contract Documents, the~~ The Owner shall furnish to the Contractor ~~one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2, up to ten copies of the drawings and specifications as required for Contractor's execution of the Work. Any additional sets of documents that the contractor desires for construction of the Project will be issued to contractor at actual printing and handling costs.~~

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

3.3.4 Three (3) days after the opening of the Bids, the Contractor shall furnish for written approval, an outline of the education, experience and character of the Contractor's project manager, superintendent and engineer. Any future substitution must have prior written approval of the Architect.

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§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to ~~them~~them.

3.4.4 The Contractor's or his Subcontractor's supervisors and workmen engaged on special work or skilled Work in any supervisory position or trade shall be qualified and have had sufficient education, training and experience as a recognized professional or master mechanic in such Work to perform it properly and satisfactorily as prescribed in the Contract Documents.

3.4.5 Any project manager, superintendent, engineer, foreman or workman employed by the Contractor or by a subcontractor who, in the sole opinion of the Architect, does not perform his Work in a proper and skillful manner or becomes party to disrespectful, intemperate, disorderly, intoxicated, or dishonest behavior, or uses foul language, fights, commits criminal act(s) falsifies records and construction, covers-up faulty Work or materials, does not comprehend or follow instructions, does not get along with the Architect or Owner's representative, or is otherwise objectionable, shall, at the written request by the Architect, be discharged 24 hours by the Contractor or Subcontractor employing such project manager, superintendent, engineer, foreman or workman, and shall not be employed again or any portion of the Work without the written consent of the Architect.

3.4.6 Should the Contractor fail to remove such person or persons specified in Article 3.4.5 hereinabove or fail to furnish suitable and sufficient machinery, equipment, materials or qualified labor force for the proper execution of the Work, the Architect may withhold all payments which are or may become due the Contractor or may suspend the Work until such orders are complied with.

3.4.7 Contractor shall abide by provisions of Section 14-1 and Section 14.2, Code of the City of Mobile, originally adopted December 10, 1991. Prohibiting Discrimination in Employment by Contractors, Subcontractors and Vendors performing Work and providing materials and supplies for the City of Mobile. A copy of said Code is located in the City's Projects Architectural Engineering Department. Certification of compliance with this requirement shall be made for all persons involved in the Work by the signature of the General Contractor on the Bid Form (Section 00410).

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

~~§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS~~
PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

~~§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for City of Mobile building permit without cost, and shall secure and pay for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.~~

~~3.7.1.1 The Contractor shall secure building and other permits customarily obtained from the City of Mobile at no cost.~~

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

~~§ 3.8.1~~ The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

1. ~~Allowances-allowances~~ shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
2. Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
3. ~~Whenever whenever~~ costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

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§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly within ten (10) business days after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals

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upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents ~~in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule,~~ with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action. Wherever Shop Drawings are required in these Specifications, Shop Drawings shall be submitted for approval before materials are fabricated. Drawings shall show complete details. The General Contractor shall check and approve them either in writing or by stamp before forwarding to the Architect. The Architect will mark copies "Approved" if correct; or "Approved As Noted" if only minor corrections are necessary. If major corrections are necessary they will be noted on the Shop Drawings and they will be returned to the Contractor for correction and resubmission. Submit four (4) copies for Architect's and Owner's use plus the number of copies the contractor requires for his own use.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor

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shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that which would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be

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liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

3.19 As applicable, the Contractor shall be responsible at the appropriate time during construction of the Project to have all permanent meters installed (electrical, water, gas, etc.) and all utilities connected prior to the time of Final Inspection. The Contractor shall pay all utilities costs until the Project is accepted by the City of Mobile.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number. "Architect" may also designate the Licensed Designer of the Project and may be an Engineer or Landscape Architect.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative ~~during construction until the date the Architect issues the final Certificate for Payment.~~ (1) during construction (2) until all conditions necessary for the final completion and payment have been fulfilled and (3) with the Owner's concurrence, from time to time during the one-year period for correction of Work described in Section 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the ~~Contract Documents.~~ Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

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§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 ~~Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, The apparent low bidder, within (3) days after bids are opened shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day-14 day period shall constitute notice of no reasonable objection.~~

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 ~~If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsibly in submitting names as required.~~

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

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- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall may be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. ~~If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.~~

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents. The total of all Change Orders on each contract shall not exceed ten percent (10%) of the contract price for each project and shall be subject to at least one of the following criteria:

1. Minor changes for a total monetary value less than required for competitive bidding under the State Competitive Bid Laws.
2. Changes for matters relatively minor and incidental to the original contract necessitated by unforeseen circumstances arising during the course of the Work.
3. Emergencies arising during the course of the Work on the Contract.
4. Changes or Alternates provided for in the original bidding where there is no difference in price on the Change Order from the original best bid on the Alternate.
5. Changes of relatively minor items not contemplated when the plans and specifications were prepared and the project was bid which are in the public interest.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

1. The change in the Work;
2. The amount of the adjustment, if any, in the Contract Sum; and
3. The extent of the adjustment, if any, in the Contract Time.
4. There shall be attached to each Change Order a signed statement from the Architect containing the following:
 - A. A statement of what the Change Order covers and who instituted the Change Order and why it is necessary or desired.
 - B. A statement setting forth the reasons for using the Change Order method rather than taking new competitive bids.
 - C. A statement that all prices have been reviewed and found reasonable, fair and equitable and recommending approval of the same.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes

in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- 1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- 2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- 3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- 4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices ~~shall~~ may be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount, allowance of 10% mark-up on Subcontractor's direct cost (actual cost of Labor & Materials) and 15% mark-up on a Contractor's direct (actual cost of Labor & Materials). In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- 1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- 2 Costs of materials, supplies and equipment, including cost of transportation, ~~whether incorporated or consumed; actually incorporated or consumed in the work;~~
- 3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented ~~from~~ by the Contractor or others;
- 4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- 5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be

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reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

1. No Work shall commence and no materials ordered until the Owner issues the written Notice to Proceed.
2. The Work shall be commenced within ten (10) days of the date of a written Notice to Proceed.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; Owner; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

§ 8.4 LIQUIDATED DAMAGES

8.4.1 Time is the essence of the Contract. Any delay in the completion of the Work as provided for in the Contract Documents will cause inconvenience to the public and loss and damage to the Owner in interest, and in additional administrative, architectural, inspection, and supervision charges.

Therefore, a time charge equal to \$250.00 per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted or any required closeouts documents are not acceptably submitted for more than 30 days after the time specified for the Substantial Completion of the Work, the amount of which shall be deducted by the Owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

.1 Unit Prices and Allowances, if stated in the Contract Documents, shall be identified within the Schedule of Values.

§ 9.3 APPLICATIONS FOR PAYMENT

~~§ 9.3.1 At least ten days before the date established for each progress payment, the~~ The Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the on the first of each month; for Work done through the 25th of the preceding month, four (4) original, itemized Applications for Payment for Work completed in accordance with the accepted schedule of values, if required under Section 9.2, 9.2., for completed portions of the Work. Such application shall be notarized, if required, notarized and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents and documents as follows:

.1 Until the final payment is made, the Owner shall pay ninety-seven and one half percent (97.5%) of the amount due the Contractor on account of progress payments (note: the 2-1/2% retainage is calculated by withholding the first 5% of the first 50% of the work completed); and

.2 The Contractor shall provide documentation substantiating that test, inspections and approvals for portions of Work included in an Application for Payment and required by the Contract Documents, or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction were made at the appropriate time.

~~§ 9.3.1.1 As provided in Section 7.3.9, such~~ Such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders. Work, which have been authorized and approved by properly executed Change Order(s).

~~§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay. Such applications may include requests for payment on account of changes in the Work, which have been authorized and approve by properly executed Change Order(s).~~

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the

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Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, ~~Architect~~, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall ~~may~~ be extended appropriately and the Contract Sum shall ~~may~~ be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents. Work.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed

to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees payment. (5), contractors Affidavit of Release of Liens, (6) separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers (7) written warranty on Contractor's letterhead covering materials and labor for one year, and (8) the advertisement of completion. The Contractor shall provide proof of publication of Advertisement of completion in a local newspaper for four (4) consecutive weeks, as required in Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama. The final 2.5% retained will not be paid until proof of publication is submitted and all written claims paid in full. This advertisement shall not begin until the City of Mobile has accepted the Project.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, Contractor, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

1. Liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
2. failure of the Work to comply with the requirements of the Contract Documents; or
3. terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall comply with all Federal, State and Local law regarding safety including the requirements of the Occupational Safety and Health Act of 1970, Public Law #91-596, latest revision. Contractor shall take all other reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

1. employees on the Work and other persons who may be affected thereby;
2. the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
3. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
4. The Contractor shall be responsible for damage done to buried cables and other utilities by its equipment and shall contact the appropriate offices prior to construction for information depth, etc., of utilities in the area.

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§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss ~~(other than damage or loss insured under property insurance required by the Contract Documents)~~ loss to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and ~~start-up~~ start-up, except to the extent that any such delay is attributable to the Contractor's objection to the persons or entities whom Owner shall have furnished to perform the task of removal or safe containment of such material or substance.

~~§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.~~

~~§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances for materials or substances brought to the site by the Contractor regardless of whether such materials or substances were required by the Contract Documents.~~

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence or wantonness on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify ~~may reimburse~~ the Contractor for all reasonable cost and expense thereby incurred.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall ~~may~~ be determined only as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, ~~other than to the Work itself,~~ because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

The Contractor shall take out and maintain during the life of the Contract no less than the following amounts of insurance with the Owner named as an additional insured. Contractor shall submit a Certificate of Insurance and a supplemental Attachment for Certificate of Insurance 25-2 (7/90), AIA Document G715, Insurance companies listed as the "Companies Affording Coverage"

shall be authorized by the Secretary of the State of Alabama. Insurance produced out of the State of Alabama must be signed or counter signed by a Resident Agent of Alabama, with the Resident Agent's name, address and telephone number typed or printed on the face of the Certificate of Insurance.

1 Workmen's Compensation and Employer's Liability Insurance: - Statutory-amount and coverage as required by law of place in which the Work is performed.

2 Employee's Liability Insurance shall be provided for limits of liability not less than:

A. Bodily Injury by Accident \$1,000,000 each accident

B. Bodily Injury by Disease \$1,000,000 each employee

3 The Contractor shall provide Broad Form (commonly termed Comprehensive) General Liability Insurance (including premises-product-completed operations) for limits of liability not less than:

A. Bodily Injury \$1,000,000 each person

\$1,000,000 each occurrence

B. Property Damage \$1,000,000 each occurrence; or

C. Bodily Injury & Property Damage \$1,000,000 combined single limit

4 Such comprehensive policy shall include the following:

A. All liability of the Contractor, for the Contractor's Direct Operations.

B. Subcontractor's Operations.

C. Completed Operations Cover, thereby meaning any loss which shall occur after the contract has been completed, but which can be traced back to the Contract.

D. Contractual Liability, meaning thereby; any risk assumed by the Contractor under Hold Harmless Agreements or any other assumption of liability, but specifically Items 11.1.1.8.3G herein below

E. Broad Form Property damage Coverage, including Completed Operations.

F. Personal Injury Liability, with employee's exclusions removed.

G. The Contractor shall indemnify and save harmless the Owner against all loss, cost, or damaged on account of injuries to persons or property occurring in the performance of the Contract, including all reasonable attorney's fees incurred by the Owner, on account thereof.

H. Explosion and Collapse Hazard:
Included or Not Applicable.

I. Underground Hazard:
Included or Not Applicable.

5 The Contractor shall carry for himself and shall require that all Subcontractors and all Owners of Automobiles or trucks rented or hired on the contract carry until the Contract is completed. Comprehensive Automobile Liability Coverage for Bodily Injury and property Damage in amounts not less than the minimum amounts as indicated. The Contractor and Subcontractor shall also carry for themselves insurance for all non-owned and hired automobile at the limits of liability as indicated below:

A. Bodily Injury \$1,000,000 each person
\$1,000,000 each occurrence

B. Property damage \$1,000,000 each occurrence; or

C. Bodily Injury & Property damage \$1,000,000 combined single limit

6. Excess Liability: \$2,000,000 limit

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7. Builder's Risk Coverage. The Contractor shall carry for the Owner, himself, and all Subcontractor's a Builder's Risk Policy to cover the full amount of the Contract during construction, fabrications or erection of any equipment.

8. A Surety authorized to do business in the State of Alabama shall furnish the required insurance.

9. The ACCORD™ Certificate must be signed or countersigned by a Licensed Resident Agent of the State of Alabama and the agent's name, address and telephone number must appear on the face of the certificate.

10. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc., if the bid price exceeds \$50,000.00

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's ~~consultants~~ Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 ~~Unless otherwise provided, the Owner~~ The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional ~~deductibles~~ deductibles (See 11.1.1 Supplement Builder's Risk Coverage). Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the ~~Owner~~ Contractor shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

~~§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.~~

~~§ 11.3.2 BOILER AND MACHINERY INSURANCE~~

~~The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.~~

~~§ 11.3.3 LOSS OF USE INSURANCE~~

~~The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.~~

~~§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.~~

~~§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.~~

~~§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable~~

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conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

~~§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.~~

~~§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.~~

~~§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.~~

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

~~§ 11.4.1 The Owner shall have the right to require the Contractor to Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract thereunder.~~

~~§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.~~

~~11.4.3. The Labor and Material Payment Bond and Performance Bond shall each be for one hundred percent (100%) of the Contract price if the Contract Price is greater than \$10,000.00~~

- ~~1. Cost of the bonds shall be included in the bid.~~
- ~~2. Bonds shall be submitted with the executed agreement on provided form(s).~~

3. Power of Attorney is required for both bonds.
4. A Surety authorized to do business in the State of Alabama shall furnish both bonds.
5. A Surety licensed to do business in the State of Alabama must execute the bonds.
6. Each bond must be signed or countersigned by a Resident Agent of the State of Alabama.
7. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc., if the bid price exceeds \$50,000.00.
8. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment being made to the Contractor.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

State of Alabama.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

13.2.3 No assignment of the Contract shall be made without the written permission of Surety providing bonding and the City of Mobile.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public

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authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.5.7 Test, inspections or approvals made in addition to the Architects normal design and contract administration services caused by the Contractor shall be paid for by the Contractor. The normal service schedule is contained in Article 2.8.1 of AIA B102-2007 as amended by the Owner and is available to Contractor on request.

13.5.8 The Contractor must call the Urban Development Department of the City of Mobile for their inspections and approval at the times required by the Urban Development Department, as well as notify the Architect, Consulting Engineer, and/or Test Laboratory, for inspection and approval of sub-grade conditions, under slab and footing Conditions, vapor barrier placement, reinforcing steel placement, all structural connections, electrical, mechanical, etc. None of the above will be accepted that have been covered up before receiving approval of the Architect or his Consultant.

§ 13.6 INTEREST

~~Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.~~

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

13.8 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

13.8.1 As between the Owner and Contractor:

1. Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;

2. Between Substantial Completion and Final Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to the final payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all event not later than the date of issuance of the final Certificate for Payment; and
3. After Final Payment. As to acts or failures to act occurring after the relevant date of the final Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any Warranty provided under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

13.9 SUBSTITUTION OF MATERIALS AND EQUIPMENT

13.9.1 Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturer's or vendor's names, trade names, catalog numbers, or the like, it is so identified for the purpose of establishing a standard, and any material, article, or piece of equipment of other manufacturers or vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or piece of equipment so proposed is, in the opinion of the Architect, of equal substance, appearance and function. It shall not be purchased or installed by the Contractor without the Architect's written approval.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
2. An act of government, such as a declaration of national emergency that requires all Work to be stopped;
3. Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
4. The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages executed.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall ~~may~~ be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, ~~along with reasonable overhead and profit on the Work not executed.~~ termination.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. ~~Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes acting with due diligence, reasonable should have first recognized the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Architect and the other party.~~

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the ~~Work-Work~~ giving rise to such claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- 1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- 2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been

rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 ~~The Initial Decision Maker Architect~~ will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the ~~Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, Architect reasonably concludes that,~~ it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; ~~therefore;~~ and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties ~~but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.~~

~~§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.~~

~~§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.~~

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall not be subject to mediation as a condition precedent to binding dispute resolution.

~~§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in~~

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User Notes:

(1383216234)

writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

~~§ 15.3.3~~ The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

~~§ 15.4 ARBITRATION~~

~~§ 15.4.1~~ If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

~~§ 15.4.1.1~~ A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

~~§ 15.4.2~~ The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

~~§ 15.4.3~~ The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

~~§ 15.4.4 CONSOLIDATION OR JOINDER~~

~~§ 15.4.4.1~~ Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

~~§ 15.4.4.2~~ Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

~~§ 15.4.4.3~~ The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.



CITY OF MOBILE
FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT (“FFATA”)
DISCLOSURE STATEMENT

Effective Date of Agreement _____

Award Description/Title _____

Entity Completing Form _____

Entity UEI Number _____

Address _____

City, State, Zip+4 _____

In your business or organization’s preceding completed fiscal year, did your business or organization (the legal entity to which the UEI Number belongs receive (1) 80 percent or more of your annual gross revenues is U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements; and (2) \$25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements?

YES NO **If yes, answer next question.**

If no, stop here and sign form and return to the City of Mobile Office of Grants Management

Does the public have access to information about the compensation of the executives in your business or organization (the legal entity to which this UEI Number belongs) through periodic reports filed under Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)), or Section 6104 of the Internal Revenue Code of 1986?

YES NO **If no, answer next question.**

If yes, stop here and sign form and return to the City of Mobile Office of Grants Management

Provide the following information for the five (5) most highly compensated executives in your business or organization (the legal entity to which this UEI Number belongs):

Name	Position Title	Total Compensation Amount for the Entity’s Last Complete Fiscal Year

Signature

Title

Date

Typed Name of Signature



CITY OF MOBILE

SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROCESS

The System for Award Management verifies businesses through the U.S. Department of Treasury and the U.S. Department of Homeland Security to prevent fraud.

All entities submitting proposals or receiving payments from the City of Mobile through federal grants and/or contracts are required to obtain a UEI Number and register with the System for Award Management (SAM). No proposals will be accepted, nor contracts executed, nor payments made to vendors until verification of UEI Number and SAM registration by the City of Mobile is complete.

OVERVIEW

- The System for Award Management (SAM) is an official website of the U.S. government.
- There is no cost to use SAM. You can use this site for FREE to:
 - ✓ Register to do business with the U.S. government
 - ✓ Update or renew your entity registration
 - ✓ Check status of an entity registration
 - ✓ Search for entity registration and exclusion records

GETTING STARTED

- You must have an active registration in SAM to do business with the Federal Government or with the City on projects funded through federal grants.
- To register in SAM, at a minimum, you will need the following information:
 - ✓ Your UEI (FORMERLY DUNS) Number
 - ✓ Legal Business Name and Physical Address
 - ✓ Your Taxpayer Identification Number (TIN) and Taxpayer Name associated with your TIN. Review your tax documents from the IRS (such as a 1099 or W-2 form) to find your Taxpayer Name.
 - ✓ Your bank's routing number, your bank account number, and your bank account type, i.e. checking or savings, to set up Electronic Funds Transfer (EFT).

**FOR ADDITIONAL INFORMATION,
PLEASE CONTACT THE CITY OF MOBILE OFFICE OF GRANTS MANAGEMENT at (251) 208-6853.**



CITY OF MOBILE

UNIQUE ENTITY IDENTIFIER (UEI) DOCUMENTATION AND VERIFICATION FORM

Name of Organization _____

UEI Number _____

IF YOUR ORGANIZATION DOES NOT HAVE A UEI (FORMERLY DUNS) NUMBER, PLEASE READ THE INFORMATION BELOW AND CHECK THE BOX IF YOU INTEND TO OBTAIN ONE

Information about Your UEI Number and Instructions to Obtain Your UEI Number

The Federal Funding Accountability and Transparency Act (FFATA) requires all applicants seeking Federal sub-grants and/or sub-contracts to have a UEI number. Please refer to Title 2 of the Code of Federal Regulations Part 25.100 (2 CFR Part 25.100). The Federal government uses UEI numbers to better identify related organizations receiving funding under grants and cooperative agreements and to provide consistent name and address data for electronic grant application systems.

Obtain a UEI Number – A UEI or Unique Entity Identifier Number is a unique, nonindicative 12-digit number issued and maintained by SAM.gov that verifies the existence of a business entity globally. After you receive a UEI Number, your business will be listed in the SAM.gov database.

1. **If you have already registered or are unsure**, log onto https://sam.gov/search/?page=1&pageSize=25&sort=-ModifiedDate&sfm%5Bstatus%5D%5Bis_Active%5D=true and enter your Business Name and click **SEARCH**. The site will display the results of your search and provide an option to send your UEI Number via email if you are registered.

2. **To obtain a UEI Number**, register by logging onto <https://sam.gov/content/home>. (If you visit a site that attempts to charge you for obtaining a UEI Number, you are at the wrong site because registering for a UEI Number is completely free and is usually created within one (1) business day.

FOR OFFICE OF GRANTS MANAGEMENT USE ONLY

UEI NUMBER VERIFIED YES NO

Date: _____

Performed by: _____

Position Title: _____

Department: _____

Contract/Grant Number: _____

Federal Award Number: _____



ISSUED FOR BID DOCUMENTS

**Mobile Riverfront Development
Bulkhead Replacement**

Technical Specifications

Prepared by



moffatt & nichol

11 North Water Street Suite 20220

Mobile, Alabama 36602

(T) 251-378-9000

September 8, 2022



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SECTION 01 01 00

Mobilization and Demobilization

1.0 INTRODUCTION

1.1 Scope

This Work consists of preparatory Work and operations, including those necessary for movement of personnel, equipment supplies and incidentals to the project site; the establishment of offices, buildings and other facilities necessary for Work on the project; the cost of bonds and any required insurance; and other pre-construction expenses necessary for start of the Work, excluding the cost of construction materials.

This Work shall also consist of post construction Work and operations, including those necessary to undo/remove any of the above mentioned items.

Reimbursement for this item shall not exceed 10% of the contract base bid including mobilization and demobilization.

2.0 REFERENCES

NOT USED

3.0 DEFINITIONS

NOT USED

4.0 GENERAL

4.1 Measurement

4.1.1 *Arbitrary Mobilization by CONTRACTOR*

The OWNER will pay for mobilization and demobilization only once each. Should the CONTRACTOR elect to demobilize prior to completing the project, such demobilization and subsequent remobilization shall be at no cost to the OWNER.

4.1.2 *Ratio of Mobilization and Demobilization Effort*

Sixty percent (60%) of the lump sum price will be paid to the CONTRACTOR upon completion of mobilization to the work site and the remaining forty percent (40%) will be paid to the CONTRACTOR upon completion of demobilization.

4.1.3 *Justification of Mobilization Costs*

In the event that the ENGINEER considers the amount in this item, sixty percent (60%) and forty percent (40%) which represents mobilization and demobilization respectively, does not bear a reasonable relation to the cost of the Work in this contract, the ENGINEER may require the CONTRACTOR to produce cost data to justify this portion of the bid. Failure to justify such price to the satisfaction of the ENGINEER will result in payment of actual mobilization costs, as determined by the ENGINEER at the completion of mobilization, and actual demobilization costs at the completion of demobilization, and payment of the remainder of this item in the final payment under this contract. The determination of the ENGINEER is not subject to appeal.

4.2 Payment

All costs connected with mobilization and demobilization of all the CONTRACTOR's plant, equipment, personnel, and those of his subcontractors and such others costs as may be denoted in the contract documents shall be paid for at the contract lump sum price for Bid Item 01010-1 "Mobilization and Demobilization".

-END OF SECTION-

SECTION 01 10 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

The following generally defines the pay items as presented in the Schedule of Bid Items. This summary shall not be construed to restrict or limit the scope of work as required by the drawings and/or specifications. The intent of this section is to explain, in general, what is and is not included within each project bid item (item to be paid) and identify cut-off points where one bid item ends, and another begins. If no bid item exists for a portion of the work, include the costs in a related bid item. Pay Item Quantities are based on plan quantities and are for information only. Final Payment is based on satisfactory completion of each item at the total lump sum as shown in the Schedule of Bid Items. The lump sum price for each item shall include the furnishing of all labor, materials, tools, equipment, and incidentals to complete each bid item.

1.02 RELATED SECTIONS

Section 31 00 00

Earthwork

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

PART 4 - COMPENSATION

4.01 GENERAL

A. Bid Item 1.0: General Conditions

This bid item consists of:

- a. All indirect costs not directly included in all of the following bid items, such as project management, insurance and bonding, and others.
- b. Maintenance and submission of project as-built drawings.

Payment shall be made at the Lump Sum bid price.

B. Bid Item 2.0: Mobilization and Demobilization

This bid item consists of:

- a. Mobilization of materials, equipment, personnel, and other pre-construction expenses necessary for start of the work as required to assemble and set up the project excluding the cost of construction material.
- b. Demobilization of the above after completion of the project and cleanup of the site.

Sixty percent (60%) of the lump sum price will be paid to the CONTRACTOR upon completion of mobilization to the work site and the remaining forty percent (40%) will be paid to the CONTRACTOR upon completion of demobilization.

In the event that the ENGINEER considers the amount in this item, sixty percent (60%) and forty percent (40%) which represents mobilization and demobilization respectively, does not bear a reasonable relation to the cost of the Work in this contract, the ENGINEER may require the CONTRACTOR to produce cost data to justify this portion of the bid. Failure to justify such price to the satisfaction of the ENGINEER will result in payment of actual mobilization costs, as determined by the ENGINEER at the completion of mobilization, and actual demobilization costs at the completion of demobilization, and payment of the remainder of this item in the final payment under this contract. The determination of the ENGINEER is not subject to appeal.

All costs connected with mobilization and demobilization of all the CONTRACTOR's plant, equipment, personnel, and those of his subcontractors and such others costs as may be denoted in the contract documents shall be paid for at the contract lump sum price.

C. Bid Item 3.0: Vibration and Displacement Monitoring

This bid item consists of:

- a. Installation, maintenance, and removal of vibration and movement of the existing Wallace tunnel, north coffer cells, and wharf.
- b. Development of monitoring control program

Payment shall be made at the Lump Sum bid price.

D. Bid Item 4.0: Landside Demolition

This bid item consists of:

- a. Demolition of all items required for demolition on Contract Drawing CD-101.
- b. No additional payments will be made for landside demolition under other bid items.

Payment shall be made at the Lump Sum bid price.

4.02 NORTH BULKHEAD DEMOLITION

A. Bid Item 5.0: Demolition of Existing Wharf Bulkhead Cap and North Coffered Cell Caps

This bid item consists of:

- a. Demolition and disposal of concrete caps and attached appurtenances (fenders) above existing bulkhead and north coffer cell sheet piles.

Payment shall be made at the Lump Sum bid price.

B. Bid Item 6.0: Demolition of Existing Wharf and Piling and Deadman Deck

This bid item consists of:

- a. Demolition and disposal of existing wharf appurtenances, deck, superstructure, piles
- b. Partial demolition of top of existing bulkhead as required to construct new bulkhead
- c. Partial demolition of existing deadman deck as required to install new tie rods.

Payment shall be made at the Lump Sum bid price.

C. Bid Item 7.0: Bulkhead Construction and Relief Excavation and Stockpiling

This bid item consists of:

- a. Temporary relief excavation landside of existing bulkhead and deadman.
- b. Construction excavation within and landside of coffer cells
- c. Only excavated materials which meet the requirements of the specifications for reuse as backfill, and thus may be stockpiled for reuse, are included in this item.

Payment shall be made at the Unit bid price per Cubic Yard of in-place materials that are excavated and stockpiled for re-use.

Payment shall only be made when submitted quantities are accompanied by a progress survey or final survey, as applicable. See Section 31 00 00 "Earthwork". No additional payment shall be made for over-excavation below the lines and grades in the Contract Drawings.

D. Bid Item 8.0: Bulkhead Relief Excavation and Disposal

This bid item consists of:

- a. Temporary relief excavation behind existing bulkhead and proposed deadman piles
- b. Excavated materials which do not meet the requirements of the specifications for reuse as backfill, and thus must be disposed of, are included in this item.
- c. Surplus excavated materials do meet the requirements for reuse as backfill are also included in this item.

Payment shall be made at the Unit bid price per Cubic Yard of in-place materials that are excavated and disposed .

Payment shall only be made when submitted quantities are accompanied by a progress survey or final survey, as applicable. See Section 31 00 00 "Earthwork". No additional payment shall be made for over-excavation below the lines and grades in the Contract Drawings.

E. Bid Item 9.0: North Coffe Cells Waterside Excavation

This bid item consists of:

- a. Excavation within coffer cells waterside of the new bulkhead to final design mudline contours
- b. Disposal of the excavated materials

Payment shall be made at the Unit bid price per Cubic Yard of in-place materials that are excavated and disposed .

Payment shall only be made when submitted quantities are accompanied by a progress survey or final survey, as applicable. See Section 31 00 00 "Earthwork". No additional payment shall be made for over-excavation below the lines and grades in the Contract Drawings.

F. Bid Item 10.0: Support of Excavation

This bid item consists of:

- a. Support of excavation/Shoring for construction and temporary relief excavations.

Payment shall be made at the Lump Sum bid price.

G. Bid Item 11.0: Demolition of North Coffe Cells

This bid item consists of:

- a. Partial demolition and disposal of landside coffer cell sheeting as required to construct new bulkhead and of waterside sheeting to mudline.
- b. Record survey of cells after they are exposed by initial surface excavation/demolition.

Payment shall be made at the Unit bid price per plan Linear Feet of cell piling.

H. Bid Item 12.0: Removal of Rip-Rap at North End of Wharf

This bid item consists of:

- a. Removal and stock piling on site of rip-rap under the existing wharf's north end as required to install new bulkhead.

Payment shall be made at the Unit bid price per Cubic Yard of rip-rap.

4.03 NORTH BULKHEAD CONSTRUCTION

A. Bid Item 13.0: Bulkhead Wall

This bid item consists of:

- a. Procurement and installation of NZ14 and NZ19 sheet piles, as well as corner and angle connectors, for new bulkhead wall.
- b. Record survey of bulkhead alignment after installation.

Payment shall be made at the Unit bid price per plan Linear Feet of wall.

B. Bid Item 14.0: Bulkhead Closures

This bid item consists of:

- a. Installation of grout bag columns and underwater steel plating to form closures of new bulkhead wall between new sheet and existing sheet piles.

Payment shall be made at the Lump Sum bid price.

C. Bid Item 15.0: Tieback System

This bid item consists of:

- a. Procurement and installation of all steel shapes and hardware for new tieback system including 24" diameter pipe piles, concrete plugs, tie-rod sleeves, #14 tie rods, couplers, nuts, anchor plates, etc. based on the design shown in the plans.
- b. .
- c. Drilling through existing deadman beams for passage of tie rods.

Payment shall be made at the Unit bid price per Each tieback.

D. Bid Item 16.0: Bulkhead Stone Backfill

This bid item consists of:

- a. Backfilling the annular space between the existing bulkhead wall and new bulkhead wall with stone

Payment shall be made at the Unit bid price per Cubic Yard of backfill.

E. Bid Item 17.0: Bulkhead Wall Cap

This bid item consists of:

- a. Construction of the new bulkhead wall concrete cap

Payment shall be made at the Unit bid price per Cubic Yard of concrete.

F. Bid Item 18.0: Backfill behind Bulkhead using Stockpiled Materials

This bid item consists of:

- a. Backfill landside of new bulkhead upon completion of bulkhead and tieback system using stockpiled materials

The bid quantity requires the backfill to be placed from final excavated grades to the final construction grades shown on Contract Drawing CG-101.

Payment shall be made at the Unit bid price per Cubic Yard of backfilled materials, placed, and compacted to the lines and grades as shown on the Contract Drawings.

Payment shall only be made when submitted quantities are accompanied by a progress survey or final survey, as applicable. See Section 31 00 00 "Earthwork". No additional payment shall be made for backfill of over-excavation below the lines and grades in the Contract Drawings.

G. Bid Item 19.0: Bulkhead Appurtenances

This bid item consists of:

- a. Procurement and installation of cleats, fenders, and ladders on the bulkhead cap

Payment shall be made at the Lump Sum bid price.

H. Bid Item 20.0: Deadman Deck

This bid item consists of:

- a. Construction of the cast-in-place concrete deck to replace the demolished precast panel above the existing deadman at the south end of the new bulkhead.

Payment shall be made at the at the Unit bid price per Cubic Yards of concrete.

4.04 SOUTH COFFER CELL DEMOLITION

A. Bid Item 21.0: Construction Excavation, Stockpiling, and Backfill

This bid item consists of:

- a. Construction excavation behind the existing cell cap as required for demolition.
- b. Stockpiling of the excavated materials.
- c. Backfill of the same excavation using the stockpiled materials.

The bid quantity is excavation to the bottom of the concrete cap demolition at a 3H:1V slope, below an existing pavement which is 6" thick. Provide justification to the Engineer for review if a shallower or more extensive excavation is proposed, or an otherwise increased quantity.

Payment shall be made at the Unit bid price per Cubic Yard of excavated materials.

B. Bid Item 22.0: Demolition of Existing Cell Cap and Retaining Wall

This bid item consists of:

- a. Construction excavation behind the existing cell cap as required for demolition.
- b. Demolition and disposal of the existing cell concrete cap, concrete retaining wall, and attached appurtenances (railing, fenders).

Payment shall be made at the at the Unit bid price per Cubic Yard of concrete.

4.05 SOUTH COFFER CELL CONSTRUCTION

A. Bid Item 23.0: Cell Encasement Piling

This bid item consists of:

- a. Procurement and installation of 36" diameter steel half-pipe piling for encasement of the existing cell

Payment shall be made at the at the Unit bid price per Vertical Linear Foot of piling.

B. Bid Item 24.0: Cell Concrete Encasement

This bid item consists of:

- a. Installation of tremie concrete encasement of the existing cell between the half-pipe piling and existing cell flat sheet piles.

Payment shall be made at the at the Unit bid price per Cubic Yard of concrete.

Bid quantity is based on the neat volume of encasement assuming no voids in the existing cell, plus an estimated volume of voids within the cells behind corrosion holes as documented in Appendix A.

Payment for encasement overrun beyond the bid estimated quantity due to additional loss of concrete into corrosion voids in the cell will be made at the Unit bid price for this item, under the contingency allowance for unanticipated additional work.

C. Bid Item 25.0: Geotextile

This bid item consists of:

- a. Procurement and installation of geofabric on the riverbed before placement of revetment stone.

Payment shall be made at the at the Unit bid price per Square Foot of geotextile.

D. Bid Item 26.0: Revetment

This bid item consists of:

- a. Construction of stone revetment around the perimeter of the cell using Class 3 riprap.

Payment shall be made at the at the Unit bid price per Cubic Yard of stone.

E. Bid Item 27.0: Encasement Cap

This bid item consists of:

- a. Construction of the concrete cap and fascia above and along the encasement half-pipe piling
- b. Connections between the new cap and existing cap

Payment shall be made at the at the Unit bid price per Cubic Yard of Concrete.

F. Bid Item 28.0: Buoys

This bid item consists of:

- a. Procurement and installation of regulatory marker buoys, chains, and anchors around the revetment.

Payment shall be made at the at the Unit bid price per Each buoy.

***** END OF SECTION *****

SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 CONTRACT DOCUMENTS

- A. The Agreement, General Conditions of the Contract, Supplemental General Conditions of the Contract, Special Provisions, Technical Specifications, and Construction Drawings, Addenda and Modifications are binding on all Work required for this Project.
- B. Mobile Riverfront Bulkhead Replacement Construction Drawings Issued for Bid / Issued for Construction Drawings and Technical Specifications prepared by Moffatt & Nichol dated September 8, 2023.

1.02 PERMITS

The Regulatory Permits: The Contractor shall abide by provisions stipulated in the Regulatory Permits received for this Project. The Regulatory Permits include the following:

1. US Army Corps of Engineers (ACOE) Nationwide Permit No. SAM 2023-00241-LML dated April 7, 2023.
2. City of Mobile Building Department Permit - Contractor to Obtain (fees excluded)

1.03 SCOPE OF WORK

The work covered by these specifications consists of furnishing all equipment, materials, and labor, and performing all operations required for construction of the Mobile Riverfront Bulkhead Replacement located in Mobile, AL, herein termed Mobile Riverfront as described and in accordance with the Contract Documents. Major tasks associated with these items of work are included but are not limited to the following.

- A. Mobilization and Demobilization
- B. Demolition
- C. Turbidity and Erosion Control Measures
- D. Required Earthwork and Compaction
- E. Construction of Bulkhead and Tieback System
- F. Construction of Rock Revetment
- G. Instrumentation and Monitoring of Existing Structures
- H. All Miscellaneous Requirements Not Specifically Noted Here but Required by the Plans and Specifications.

1.04 LAYOUT OF THE WORK

The Owner shall provide information to the Contractor regarding benchmarks for the project. The Contractor shall be responsible for all detailed construction staking.

1.05 EXCLUSIONS

The following is excluded from the Contractor's Scope of Work:

- A. Regulatory permitting:
 - 1. Commencement and closeout notification to ACOE and ADCNR, to be completed by Owner's Engineer.
- B. Work to be performed by Owner:
 - 1. See drawing G-101 for all work to be performed by the owner prior to the beginning of any onsite activity by the contractor.
- C. Procurement of steel piling:
 - 1. The Owner will procure all steel piling, which includes:
 - a. Bulkhead steel sheet piles
 - b. Deadman steel pipe piles
 - c. South cell encasement half-pipe piles
 - 2. The piling will be stored by the Owner at an offsite location. The Contractor shall be responsible for retrieving the piling and delivering it to the site.

1.06 MATERIALS AND METHODS

All materials and methods of construction used on this Project shall conform to the qualifications established by the Contract Documents.

1.07 PROJECT REFERENCES

- A. Underwater Inspection Finding Report prepared by Moffatt & Nichol, dated September 1, 2022. (Moffatt & Nichol Project No. 10961-04)
Refer to Appendix A.
- B. Topographical Property Boundary Survey prepared by McCrory Williams dated January 13, 2023. Topographical Survey prepared by Rowe Engineering and Surveying dated January 13, 2023.
Refer to Appendix B.
- C. Bathymetric Survey prepared by Rowe Engineering and Surveying dated October 3, 2022. Surveyor of Record, Cecil Hudson, PLS (29983).
Refer to Appendix C.

1.08 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings and property boundaries.
- B. Limit use of site and premises to allow:
 - 1. Owner Occupancy.
 - 2. Work by Others.
 - 3. Work by Owner.
- C. Provide access to and from site as required by law and by Owner.
- D. Utility Systems
 - 1. Maintain access to existing piping, valves, fittings and fire hydrants. If necessary to restore access, promptly move equipment and materials for the work.
 - 2. Except for work specifically covered by this project, do not adjust components of the existing systems without prior approval by the Owner.

1.09 EXISTING WORK

- A. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- B. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Owner's Representative. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

1.10 SUPERVISION AND SUPERINTENDENT

The Contractor or competent Superintendent must be on the Project when construction activities are taking place. The Superintendent shall supervise, direct, and control the Contractor's operations, personnel, work and the Subcontractor's operations. The Contractor shall give the Owner and Engineer written notification of the name of the Superintendent. The Superintendent shall be employed by the General Contractor and shall be assigned to the project full-time. The Superintendent shall be incidental to mobilization. A copy of the Drawings and Specifications shall be available on the project site at all times.

1.11 INSPECTION

- A. The Contractor shall keep the Owner or duly appointed representative fully informed of contract operations and plans so that a representative may arrange to be present at various time that work is being performed.
- B. Contractor's Work Log & Monthly Report
 - 1. The Contractor shall complete the daily work log at the end of each working day and make available to the Owner upon request.
 - 2. The Contractor shall prepare and submit a monthly progress report with sufficient detail and figures to clearly represent the work completed, hindrances, and progress as it relates to the contract schedule. Progress report will be reviewed each month with Owner prior to submitting pay application.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

***** END OF SECTION *****

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use form **that is part of web-based Project management software** or otherwise **acceptable to Engineer**.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
 - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific

- features and requirements indicated. Indicate deviations, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from **ICC-ES, if applicable**.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within **seven** days of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within **15** days of receipt of request, or **seven** days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than **15** days prior to time required for preparation and review of related submittals.
1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Engineer will consider requests for substitution if received within **60** days after **the Notice to Proceed**. Requests received after that time may be considered or rejected at discretion of Engineer.
1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.

- i. Requested substitution provides specified warranty.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project, including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. RFIs.
 - 3. Digital project management procedures.
 - 4. Web-based Project management software package.
 - 5. Project meetings.
- B. Related Requirements:
 - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
 - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request for Information. Request from Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within **15** days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses, cellular telephone numbers, and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, and in web-based Project software directory. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.
 1. Schedule construction operations in sequence required to obtain the best results, where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 1. Preparation of Contractor's construction schedule.
 2. Preparation of the schedule of values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 1. Engineer will return without response those RFIs submitted to Engineer by other entities controlled by Contractor.

2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Owner name.
 3. Owner's Project number.
 4. Name of Engineer.
 5. Engineer's Project number.
 6. Date.
 7. Name of Contractor.
 8. RFI number, numbered sequentially.
 9. RFI subject.
 10. Specification Section number and title and related paragraphs, as appropriate.
 11. Drawing number and detail references, as appropriate.
 12. Field dimensions and conditions, as appropriate.
 13. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 14. Contractor's signature.
 15. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: **Software-generated form with substantially the same content as indicated above, acceptable to Engineer.**
1. Attachments shall be electronic files in PDF format.
- D. Engineer's Action: Engineer will review each RFI, determine action required, and respond. Allow **ten** working days for Engineer's response for each RFI. RFIs received by Engineer after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.

- e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Engineer's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
2. Engineer's action may include a request for additional information, in which case Engineer's time for response will date from time of receipt by Engineer of additional information.
 3. Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within **10** days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. **Use software log that is part of web-based Project management software. Include the following:**
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Engineer.
 4. RFI number, including RFIs that were returned without action or withdrawn.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Engineer's response was received.
 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
- F. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within **seven** days if Contractor disagrees with response.

1.7 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Engineer's Data Files Not Available: Engineer will not provide Engineer's **CAD drawing** digital data files for Contractor's use during construction.
- B. Web-Based Project Management Software Package: **Provide, administer, and use** web-based Project management software package for purposes of hosting and managing Project communication and documentation until Final Completion.
 1. Web-based Project management software includes, at a minimum, the following features:
 - a. Compilation of Project data, including Contractor, subcontractors, Engineer, Engineer's consultants, Owner, and other entities involved in Project. Include names of individuals and contact information.
 - b. Access control for each entity for each workflow process, to determine entity's digital rights to create, modify, view, and print documents.

- c. Document workflow planning, allowing customization of workflow between project entities.
 - d. Creation, logging, tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, Construction Change Directives, and Change Orders.
 - e. Track status of each Project communication in real time, and log time and date when responses are provided.
 - f. Procedures for handling PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
 - g. Processing and tracking of payment applications.
 - h. Processing and tracking of contract modifications.
 - i. Creating and distributing meeting minutes.
 - j. Document management for Drawings, Specifications, and coordination drawings, including revision control.
 - k. Management of construction progress photographs.
 - l. Mobile device compatibility, including smartphones and tablets.
2. Provide up to **seven** Project management software user licenses for use of Owner Engineer, and Engineer's consultants.
 3. At completion of Project, provide digital archive in format that is readable by common desktop software applications in format acceptable to Engineer. Provide data in locked format to prevent further changes.
- C. PDF Document Preparation: Where PDFs are required to be submitted to Engineer, prepare as follows:
1. Assemble complete submittal package into a single indexed file, incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

1.8 PROJECT MEETINGS

- A. General: **Schedule and conduct** meetings and conferences at Project site unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Engineer of scheduled meeting dates and times a minimum of **seven** days prior to meeting.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Engineer, within **three** days of the meeting.

- B. Preconstruction Conference: **Schedule and conduct** a preconstruction conference before starting construction, at a time convenient to Owner and Engineer, but no later than **15** days after execution of the Agreement.
1. Attendees: Authorized representatives of Owner, Engineer, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Responsibilities and personnel assignments.
 - b. Tentative construction schedule.
 - c. Phasing.
 - d. Critical work sequencing and long lead items.
 - e. Designation of key personnel and their duties.
 - f. Lines of communications.
 - g. Use of web-based Project software.
 - h. Procedures for processing field decisions and Change Orders.
 - i. Procedures for RFIs.
 - j. Procedures for testing and inspecting.
 - k. Procedures for processing Applications for Payment.
 - l. Distribution of the Contract Documents.
 - m. Submittal procedures.
 - n. Preparation of Record Documents.
 - o. Use of the premises.
 - p. Work restrictions.
 - q. Working hours.
 - r. Owner's occupancy requirements.
 - s. Responsibility for temporary facilities and controls.
 - t. Procedures for moisture and mold control.
 - u. Procedures for disruptions and shutdowns.
 - v. Construction waste management and recycling.
 - w. Parking availability.
 - x. Office, work, and storage areas.
 - y. Equipment deliveries and priorities.
 - z. First aid.
 - aa. Security.

- bb. Progress cleaning.
- 3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other Sections and when required for coordination with other construction.
 - 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Engineer of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility requirements.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written instructions.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.

- x. Protection of adjacent work.
 - y. Protection of construction and personnel.
 - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: **Schedule and conduct** a project closeout conference, at a time convenient to Owner and Engineer, but no later than **90** days prior to the scheduled date of Substantial Completion.
- 1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 - 2. Attendees: Authorized representatives of Owner, Engineer, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of Record Documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Procedures for completing and archiving web-based Project software site data files.
 - d. Submittal of written warranties.
 - e. Requirements for preparing operations and maintenance data.
 - f. Requirements for delivery of material samples, attic stock, and spare parts.
 - g. Requirements for demonstration and training.
 - h. Preparation of Contractor's punch list.
 - i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - j. Submittal procedures.
 - k. Owner's partial occupancy requirements.
 - l. Installation of Owner's furniture, fixtures, and equipment.
 - m. Responsibility for removing temporary facilities and controls.
 - 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

- E. Progress Meetings: **Conduct** progress meetings **once a month**. The occurrence of specific days/dates throughout the progress of construction will be decided during the pre-construction meeting.
1. Coordinate dates of meetings with preparation of payment requests.
 2. Attendees: In addition to representatives of Owner and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site use.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Status of correction of deficient items.
 - 14) Field observations.
 - 15) Status of RFIs.
 - 16) Status of Proposal Requests.
 - 17) Pending changes.
 - 18) Status of Change Orders.
 - 19) Pending claims and disputes.
 - 20) Documentation of information for payment requests.
 4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 01 32 00

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Startup construction schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Construction schedule updating reports.
 - 4. Daily construction reports.
- B. Related Requirements:
 - 1. Section 013100 "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
 - 2. Section 013300 "Submittal Procedures" for submitting schedules and reports.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine the critical path of Project and when activities can be performed.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.

2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Resource Loading: The allocation of labor and equipment necessary for completing an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
1. PDF file.
- B. Startup construction schedule.
1. Submittal of cost-loaded startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- E. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports to contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
1. Activity Report: List of activities sorted by activity number and then early start date, or actual start date if known.
 2. Total Float Report: List of activities sorted in ascending order of total float.
- F. Construction Schedule Updating Reports: Submit with Applications for Payment.

1.5 QUALITY ASSURANCE

- A. Prescheduling Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to the preliminary construction schedule and Contractor's Construction Schedule, including, but not limited to, the following:
1. Review software limitations and content and format for reports.
 2. Verify availability of qualified personnel needed to develop and update schedule.
 3. Discuss constraints, including **work stages and partial Owner occupancy**.
 4. Review submittal requirements and procedures.
 5. Review time required for review of submittals and resubmittals.
 6. Review requirements for tests and inspections by independent testing and inspecting agencies.
 7. Review time required for Project closeout and Owner startup procedures.

8. Review and finalize list of construction activities to be included in schedule.
9. Review procedures for updating schedule.

1.6 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of values, **list of subcontracts**, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 1. Secure time commitments for performing critical elements of the Work from entities involved.
 2. Coordinate each construction activity in the network with other activities, and schedule them in proper sequence.

1.7 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules
 1. Use **[Microsoft Project] [Primavera] [Meridian Prolog] [scheduling component of Project management software package specified in Section 013100 "Project Management and Coordination**
- B. Time Frame: Extend schedule from date established for **the Notice to Proceed** to date of **Substantial Completion**.
 1. Contract completion date to not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each project feature or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than 60 days, unless specifically allowed by Engineer.
 2. Temporary Facilities: Indicate start and completion dates for the following as applicable:
 - a. Securing of approvals and permits required for performance of the Work.
 - b. Temporary facilities.
 - c. Construction of mock-ups, prototypes and samples.
 - d. Regulatory agency approvals.
 - e. Punch list.
 3. Procurement Activities: Include procurement process activities long lead-time items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 4. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.

5. Startup and Testing Time: Include no fewer than **21** days for startup and testing.
 6. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Engineer's administrative procedures necessary for certification of Substantial Completion.
 7. Punch List and Final Completion: Include not more than **30** days for completion of punch list items and Final Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 2. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use-of-premises restrictions.
 3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Startup and placement into final use and operation.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- F. Contractor's Construction Schedule Updating: At **bi-weekly** intervals, update schedule to reflect actual construction progress and activities. Issue schedule **at least three working days** before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate Final Completion percentage for each activity.
- G. Recovery Schedule: When periodic update indicates the Work is **14** or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- H. Distribution: Distribute copies of approved schedule to Engineer, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

1.8 CPM SCHEDULE REQUIREMENTS

- A. Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within **14** days of date established for **the Notice to Proceed**. Outline significant construction activities for the first **60** days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- C. CPM Schedule: Prepare Contractor's Construction Schedule using a time-scaled CPM network analysis diagram for the Work.
1. Develop network diagram in sufficient time to submit CPM schedule, so it can be accepted for use no later than 30 days after date established for the Notice to Proceed.
 - a. Failure to include any work item required for performance of this Contract must not excuse Contractor from completing all work within applicable completion dates.
 2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
 3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
 4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:

- a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Fabrication.
 - f. Utility interruptions.
 - g. Installation.
 - h. Work by Owner that may affect or be affected by Contractor's activities.
 - i. Testing and inspection.
 - j. Punch list and Final Completion.
2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates to be consistent with Contract milestone dates.
 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
 - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall Project schedule.
- F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.
 2. Description of activity.
 3. Main events of activity.
 4. Immediate preceding and succeeding activities.
 5. Early and late start dates.
 6. Early and late finish dates.
 7. Activity duration in workdays.
 8. Total float or slack time.
- G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed.
 2. Changes in early and late start dates.

3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float or slack time.
7. Changes in the Contract Time.

1.9 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 4. Equipment at Project site.
 5. Material deliveries.
 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 7. Testing and inspection.
 8. Accidents.
 9. Meetings and significant decisions.
 10. Unusual events.
 11. Stoppages, delays, shortages, and losses.
 12. Meter readings and similar recordings.
 13. Emergency procedures.
 14. Orders and requests of authorities having jurisdiction.
 15. Change Orders received and implemented.
 16. **Construction** Change Directives received and implemented.
 17. Services connected and disconnected.
 18. Equipment or system tests and startups.
 19. Partial completions and occupancies.
 20. Substantial Completions authorized.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013200

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Submittal schedule requirements.
 - 2. Administrative and procedural requirements for submittals.
- B. Related Requirements:
 - 1. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
 - 2. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 3. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
 - 4. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.4 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Engineer and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.

2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.
4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal Category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Engineer's final release or approval.

1.5 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
 1. Project name.
 2. Date.
 3. Name of Engineer.
 4. Name of Contractor.
 5. Name of firm or entity that prepared submittal.
 6. Names of subcontractor, manufacturer, and supplier.
 7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier and alphanumeric suffix for resubmittals.
 8. Category and type of submittal.
 9. Submittal purpose and description.
 10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
 11. Drawing number and detail references, as appropriate.
 12. Indication of full or partial submittal.
 13. Location(s) where product is to be installed, as appropriate.
 14. Other necessary identification.
 15. Remarks.

16. Signature of transmitter.
- B. Options: Identify options requiring selection by Engineer.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Engineer on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
- D. Submittals Utilizing Web-Based Project Software: Prepare submittals as PDF files or other format indicated by Project management software.

1.6 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 1. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on **Engineer's** receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow **15** days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Engineer's consultants, Owner, or other parties is indicated, allow **21** days for initial review of each submittal.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block, and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Engineer's action stamp.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Engineer's action stamp.

1.7 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams that show factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before Shop Drawings, and before or concurrently with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

- a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.
1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package.
 2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
 - a. Project name and submittal number.
 - b. Generic description of Sample.
 - c. Product name and name of manufacturer.
 - d. Sample source.
 - e. Number and title of applicable Specification Section.
 - f. Specification paragraph number and generic name of each item.
 3. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Engineer will return submittal with options selected.
 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or

containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- a. Number of Samples: Submit two sets of Samples. Engineer will retain one Sample set; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least **three** sets of paired units that show approximate limits of variations.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- G. Certificates:
 1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
 2. Installer Certificates: Submit written statements on manufacturer's letterhead, certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
 3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
 4. Material Certificates: Submit written statements on manufacturer's letterhead, certifying that material complies with requirements in the Contract Documents.
 5. Product Certificates: Submit written statements on manufacturer's letterhead, certifying that product complies with requirements in the Contract Documents.
 6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of AWS B2.1/B2.1M on AWS forms. Include names of firms and personnel certified.

- H. Test and Research Reports:
1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
 2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
 3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
 4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
 5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
 6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - a. Name of evaluation organization.
 - b. Date of evaluation.
 - c. Time period when report is in effect.
 - d. Product and manufacturers' names.
 - e. Description of product.
 - f. Test procedures and results.
 - g. Limitations of use.

1.8 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Engineer.
- B. Delegated Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit **digitally signed PDF file** paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

1.9 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. Contractor's Approval: Indicate Contractor's approval for each submittal with **indication in web-based Project management software**. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
 - 1. Engineer will not review submittals received from Contractor that do not have Contractor's review and approval.

1.10 ENGINEER'S REVIEW

- A. Action Submittals: Engineer will review each submittal, indicate corrections or revisions required, **and return**.
 - 1. PDF Submittals: Engineer will indicate, via applied stamp on each submittal or on an accompanying comment page, the appropriate action, as follows:
 - a. NO EXCEPTIONS TAKEN: When the Engineer marks a submittal as "NO EXCEPTIONS TAKEN", the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
 - b. MAKE CORRECTIONS NOTED: When the Engineer marks a submittal as "MAKE CORRECTIONS NOTED", the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and with requirements of the Contract Documents. Final payment depends on that compliance.
 - c. REVISE AND RESUBMIT: When the Engineer marks a submittal as "REVISE AND RESUBMIT", do not proceed with the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat as necessary to obtain a different action mark.
 - 1) Do not use, or allow others to use, submittals marked as "REVISE AND RESUBMIT" at the Project Site or elsewhere where Work is in progress.
 - d. REJECTED: When the Engineer marks a submittal as "REJECTED", do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Prepare a new submittal according to the notations; resubmit without delay. Repeat as necessary to obtain a different action mark.
 - 1) Do not use, or allow others to use, submittals marked as "REJECTED" at the Project Site or elsewhere where Work is in progress.
 - e. SUBMIT SPECIFIED ITEMS: When the Engineer marks a submittal as "SUBMIT SPECIFIED ITEMS", the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and with requirements of the Contract Documents. Final payment depends on that compliance. Prepare a new submittal to include the specified items indicated.

- f. REVIEW NOT REQUIRED: When the Engineer marks a submittal as “REVIEW NOT REQUIRED”, it is deemed that the submitted information is not requested and therefore is not subject to review and that an official response on the item has been discharged.
- 2. Submittals by Web-Based Project Management Software: Engineer may return PDF submittals on Project management software website. Engineer’s action indicated on the submittal supersedes actions available through the software.
 - a. The Contractor shall configure the list of available actions to match those listed on the Engineer’s applied stamp.
- B. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Engineer.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Engineer will **discard** submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Engineer without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

SECTION 01 45 35

SPECIAL INSPECTIONS

PART 1 - GENERAL

1.01 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

B. INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC

(2021) International Building Code

1.02 GENERAL REQUIREMENTS

Perform Special Inspections in accordance with the Statement of Special Inspections, Schedule of Special Inspections and Chapter 17 of ICC IBC. The Statement of Special Inspections shall be prepared by the Contractor and the Schedule of Special Inspections is included at the end of this specification. Special Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.

1.03 DEFINITIONS

A. Continuous Special Inspections

Continuous Special Inspections is the constant monitoring of specific tasks by a special inspector. These inspections must be carried out continuously over the duration of the particular tasks.

B. Perform

Perform these Special Inspections tasks for each welded joint or member.

C. Observe

Observe these Special Inspections items on a periodic daily basis. Operations need not be delayed pending these inspections.

D. Special Inspector (SI)

A qualified person retained by the Contractor and approved by the Owner's Representative as having the competence necessary to inspect a particular type of construction requiring Special Inspections. The SI must be an independent third party hired directly by the Prime Contractor.

E. Associate Special Inspector (ASI)

A qualified person who assists the SI in performing Special Inspections but must perform inspection under the direct supervision of the SI and cannot perform inspections without the SI on site.

F. Third Party

A Special inspector must not be an employee of the Contractor or of any Sub-Contractor performing the work to be inspected.

G. Special Inspector of Record (SIOR)

A licensed engineer in responsible charge of supervision of all special inspectors for the project. The SIOR must be an independent third-party entity hired directly by the Prime Contractor.

H. Structural Engineer of Record (SER)

A registered design professional contracted by the Government as an A/E responsible for the overall design and review of submittal documents prepared by others. The SER is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws in the state in which the design professional works. The SER is also referred to as the Engineer of Record (EOR) in design code documents.

I. Statement of Special Inspections (SSI)

A document developed by the SER identifying the material, systems, components and work required to have Special Inspections. This statement should be at the end of this specification.

J. Schedule of Special Inspections (SSI)

A schedule which lists each of the required Special Inspections, the extent to which each Special Inspection is to be performed, and the required frequency for each in accordance with ICC IBC Chapter 17. This schedule should be at the end of this specification.

K. Definable Feature of Work (DFOW)

An inspection group that is separate and distinct from other inspection groups, having inspection requirements and/or inspectors that are unique.

1.04 SUBMITTALS

- A. General: Submit the following in accordance with Section 01 33 00, "Submittals" of these Specifications. Note that approval of submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the Specifications nor from responsibility of errors of any sort in the submittals.

Preconstruction Submittals

- a. Special Inspections Project Manual

B. Test Reports

1. Special Inspections Daily Reports
2. Special Inspections Biweekly Reports

C. Certificates

1. Special Inspector of Record Qualifications
2. Special Inspector Qualifications

D. Closeout Submittals

1. Interim Report of Special Inspections for each DFW
2. Final Report of Special Inspections

1.05 SPECIAL INSPECTOR QUALIFICATIONS

- A. Submit qualifications for each special inspector and the special inspector of record. Certification shall attest that each Special Inspector is qualified by knowledge and experience to perform the specified Special Inspections. Information which provides evidence of the knowledge and experience necessary to qualify a person as a Special Inspector for the category of work being certified, will accompany the qualification.
- B. Steel Construction and High Strength Bolting
 1. Special Inspector
 - a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or
 - b. Registered Professional Engineer with three years of related experience.
 - c. Associate Special Inspector
Engineer-In-Training with one year of related experience.
- C. Concrete Construction
 1. Special Inspector
 - a. ICC Reinforced Concrete Special Inspector Certificate with one year of related experience, or
 - b. ACI Concrete Construction Special Inspector, or
 - c. Registered Professional Engineer with three years of related experience
 2. Associate Special Inspector
 - a. ACI Concrete Construction Special Inspector in Training, or
 - b. Engineer-In-Training with one year of related experience
- D. Verification of Site Soil Condition, Fill Placement and Load-Bearing Requirements
 1. Special Inspector
 - a. ICC Soils Special Inspector Certificate with one year of related experience, or
 - b. NICET Soils Technician Level II Certificate in Construction Material Testing, or
 - c. Geologist-In-Training with three years of related experience, or
 - d. Registered Professional Engineer with three years of related experience
 2. Associate Special Inspector
 - a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or
 - b. Engineer-In-Training with one year of related experience
- E. Deep Foundations
 1. Special Inspector

- a. NICET Soils Technician Level II Certificate in Construction Material Testing, or
 - b. Geologist-In-Training with three years of related experience, or
 - c. Registered Professional Engineer with three years of related experience
2. Associate Special Inspector
- a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or
 - b. NICET Geotechnical Engineering Technician Level I Construction or Generalist Certificate with one year of related experience, or
 - c. Engineer-In-Training with one year of related experience

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.01 RESPONSIBILITIES

- A. Special Inspector of Record
1. Supervise all Special Inspectors required by the contract documents and the IBC.
 2. Submit a SIOR Letter of Acceptance attesting to acceptance of the duties of SIOR, signed and sealed by the SIOR.
 3. Verify the qualifications of the Special Inspectors.
 4. Prepare a Special Inspections Project Manual, which will cover the following:
 - a. Roles and responsibilities of the following individuals during Special Inspections: SIOR, SI, ASI, General Contractor's QC Manager and SER.
 - b. Organizational chart and/or communication plan, indicating lines of communication.
 - c. Contractor's internal plan for scheduling inspections. Address items such as timeliness of inspection requests, who to contact for inspection requests, and availability of alternate inspectors.
 - d. Indicate the government reporting requirements.
 - e. Propose forms or templates to be used by SI and SIOR to document inspections.
 - f. Indicate procedures for tracking nonconforming work and verification that corrective work is complete.
 - g. Include a section in the manual that covers each specific item requiring Special Inspections that is indicated on the Schedule of Special Inspections. Provide names and qualifications of each special inspector who will be performing the Special Inspections for each specific item. Provide detail on how the Special Inspections are to be carried out for each item so that the expectations are clear for the General Contractor and the Subcontractor performing the work.

5. Make a copy of the Special Inspections Project Manual available on the job site during construction. Submit a copy of the Special Inspections Project Manual for approval.
6. Attend coordination and mutual understanding meeting where the information in the Special Inspections Project Manual will be reviewed to verify that all parties have a clear understanding of the Special Inspections provisions and the individual duties and responsibilities of each party.
7. Maintain a 3- ring binder for the Special Inspector's daily and biweekly reports and the Special Inspections Project Manual. This file must be located in a conspicuous place in the project trailer/office to allow review by the SER.
8. Submit a copy of the Special Inspector's daily reports to the Contractor and Engineer.
9. Discrepancies that are observed during Special Inspections must be reported to the Contractor for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.
10. Submit a biweekly Special Inspections report until all work requiring Special Inspections is complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:
 - a. A brief summary of the work performed during the reporting time frame.
 - b. Changes and/or discrepancies with the drawings, specifications and mechanical or electrical component certification, that were observed during the reporting period.
 - c. Discrepancies which were resolved or corrected.
 - d. A list of nonconforming items requiring resolution.
 - e. All applicable test results including nondestructive testing reports.
11. At the completion of each Definable Feature of Work (DFOW) requiring Special Inspections, submit an interim report that documents the Special Inspections completed for that DFOW including corrections of all discrepancies noted in the daily reports. Interim reports of Special Inspections must be signed and dated by the SIOR.
12. At the completion of the project submit a comprehensive final report of Special Inspections that documents the Special Inspections completed for the project including corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and bear the seal of the SIOR.

B. Special Inspectors

1. Inspect all elements of the project for which the special inspector is qualified to inspect and are identified in the Schedule of Special Inspections.
2. Attend preparatory phase meetings related to the Definable Feature of Work (DFOW) for which the special inspector is qualified to inspect.
3. Submit a copy of the daily reports to the Contractor and Engineer.
4. Discrepancies that are observed during Special Inspections must be reported to the Contractor for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.
5. Submit a biweekly Special Inspection Report until all inspections are complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:
 - a. A brief summary of the work performed during the reporting time frame.

- b. Changes and/or discrepancies with the drawings, specifications and mechanical or electrical component certification, that were observed during the reporting period.
 - c. Discrepancies which were resolved or corrected.
 - d. A list of nonconforming items requiring resolution.
 - e. All applicable test result including nondestructive testing reports.
6. At the completion of each DFOV requiring Special Inspections, submit an interim report of Special Inspections that documents the Special Inspections completed for that DFOV. Identify the inspector responsible for each item inspected and corrections of all discrepancies noted in the daily reports. The interim report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.
7. At the completion of the project submit a comprehensive final report of Special Inspections that documents the Special Inspections completed for the project and corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.

3.02 DEFECTIVE WORK

- A. Check work as it progresses, but failure to detect any defective work or materials must in no way prevent later rejection if defective work or materials are discovered, nor obligate the Owner to accept such work.

STATEMENT OF SPECIAL INSPECTIONS

Project: Mobile Riverfront Bulkhead Replacement
Location: City of Mobile, Alabama
Owner's Representative: Moffatt & Nichol
Owner's Address:

This Statement of Special Inspections is submitted as required by the Alabama State Building Code, which has adopted the 2021 International Building Code. It includes a Schedule of Special Inspection Services applicable to this project, the name of the Special Inspector, the identity of other approved agencies retained for conducting Special Inspections, and the required inspector qualifications. This Statement of Special Inspections was prepared by the following Designers of Record:

Structural Waterfront	Tom Shafer, PE		
	(Type or print name)	(Signature)	(Date)
Architectural			
	(Type or print name)	(Signature)	(Date)
Electrical			
	(Type or print name)	(Signature)	(Date)

The Special Inspector shall keep records of all special inspections and tests and shall furnish reports to the Owner's Representative and the Designers of Record. Reports shall indicate if the work inspected or tested was or was not completed in conformance with the approved construction documents. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Owner's Representative and the Designers of Record. The Special Inspections program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Owner and the Designers of Record.

Interim Report Frequency: Monthly

A Final Report of Special Inspections documenting completion of all required Special Inspections, testing, and correction of any discrepancies should be submitted prior to issuance of a Certificate of Use and Occupancy.

Job Site safety and means and methods of construction are solely the responsibility of the Contractor.

Owner's Authorization:

Signature Date

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Structural Steel & High Strength Bolting | <input type="checkbox"/> Helical Pile Foundations |
| <input type="checkbox"/> Welding of Structural Steel | <input type="checkbox"/> Rammed Aggregate Piers & Stone Columns |
| <input type="checkbox"/> Cold-Formed Steel Deck | <input type="checkbox"/> Sprayed Fire-Resistant Material |
| <input type="checkbox"/> Open-Web Steel Joists & Joist Girders | <input type="checkbox"/> Mastic & Intumescent Fire-Resistant Coatings |
| <input type="checkbox"/> Cold-Formed Steel Framing | <input type="checkbox"/> Exterior Insulation & Finish System |
| <input checked="" type="checkbox"/> Concrete Construction | <input type="checkbox"/> Fire-Resistant Penetrations & Joints |
| <input type="checkbox"/> Masonry Construction _b | <input type="checkbox"/> Smoke Control |
| <input type="checkbox"/> Wood Construction | <input type="checkbox"/> Retaining Wall & Systems > 5 Feet |
| <input checked="" type="checkbox"/> Soils | <input type="checkbox"/> Special Inspections for Wind Resistance |
| <input checked="" type="checkbox"/> Driven Deep Foundations | <input type="checkbox"/> Special Inspections for Seismic Resistance |
| <input type="checkbox"/> Cast-in-Place Deep Foundations | |

- a. The inspection frequency indicated on the following inspection tables are "C" continuous, "P" periodic, & "O" random on a daily basis.
- b. Level A is the minimum inspection program for empirically / prescriptively designed masonry in Risk Category I, II or III structures. Level B is the minimum inspection program for empirically / prescriptively designed masonry in Risk Category IV structures and engineered masonry in Risk Category I, II or III structures. Level C is the minimum inspection program for engineered masonry in Risk Category IV structures. Engineered masonry structures are those designed in accordance with portions of the TMS 402-13 / ACI 530-13/ASCE 5-13 other than Part 4 or Appendix A.

Inspection Agents	Firm Name & Point of Contact	Address / Phone / E-mail
1. Special Inspector (SI-1)		
2. Testing Agency (TA-1)		
3. Testing Agency (TA-2)		
4. Geotechnical Engineer (GE-1)		
5. Other (O-1)		

Note: The inspection and testing agent(s) shall be engaged by the Owner or the Registered Design Professional of Record acting as the Owner's agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the State Construction Office, prior to commencing work.

- Seismic Design Category: A B C D
- Basic Wind Speed (V_{asd}): 90-109mph 110-119mph ≥ 120 mph
- Wind Exposure Category: B C D

Schedule of Special Inspection Services
Structural Steel and High-Strength Bolting^a

Inspection Task	Task	Freq	Reference for Criteria	Agent
	Req'd		AISC 360	
1. Structural Details				
a. Verify diameter, grade, type and length of anchor rods, tie rods, and other embedded items supporting structural steel	<input checked="" type="checkbox"/>	P	N5.8	
b. Inspection of erected tie rods and connections verifying compliance with the construction documents	<input checked="" type="checkbox"/>	P	N5.8	

a. References to "AISC 360" in this table are to the AISC 360-16.

Schedule of Special Inspection Services
Concrete Construction^a

Inspection Task	Task	Freq	Reference for Criteria	Agent
	Req'd		Standard ^a	
1. Inspect reinforcement, including prestressing tendons, and verify placement	<input checked="" type="checkbox"/>	P	ACI Ch.20, 25.2, 25.3, 26.6.1-26.6.3	
2. Concrete Anchors:				
a. Inspect anchors cast in concrete	<input type="checkbox"/>	P	ACI 26.13	
b. Inspect adhesive anchors installed in hardened concrete with horizontally or upwardly inclined orientations that resist sustained tension loads	<input type="checkbox"/>	C	ACI 26.13	
c. Inspect adhesive anchors installed in hardened concrete with orientations different from Item 3.b	<input checked="" type="checkbox"/>	P	ACI 26.13	
d. Inspect mechanical anchors installed in hardened concrete	<input checked="" type="checkbox"/>	P	ACI 26.13	
3. Collect mix designs and verify the correct mix used during installation	<input checked="" type="checkbox"/>	P	ACI 26.13	
4. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete	<input checked="" type="checkbox"/>	C	ASTM C172, ASTM C31, ACI 26.4, 26.12	
5. Verify maintenance of specified curing temperature and techniques	<input checked="" type="checkbox"/>	P	ACI 26.13	
6. Inspect formwork for shape, location and dimensions of the concrete member being formed	<input checked="" type="checkbox"/>	P	ACI 26.13	

a. References to "ACI" in this table are to the ACI 318-19.

Schedule of Special Inspection Services
Soils

Inspection Task	Task	Freq	Reference for Criteria	Agents
	Req'd		Standard	
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity	<input type="checkbox"/>	P		
2. Verify excavations extend to proper depth and have reached the correct soil material	<input checked="" type="checkbox"/>	P		
3. Perform classification and testing of compacted fill materials	<input checked="" type="checkbox"/>	P		
4. Verify that materials used, densities, lift thickness and procedures used during placement and compaction of compacted fill are in accordance with the approved soils report and the construction documents	<input checked="" type="checkbox"/>	C		
5. Prior to placement of compacted fill, verify that the subgrade has been prepared in accordance with the approved soils report and the construction documents	<input checked="" type="checkbox"/>	P		

Schedule of Special Inspection Services
Driven Deep Foundations, Bulkhead Walls, and Deadman Piles

Inspection Task	Task	Freq	Reference for Criteria	Agents
	Req'd		Standard	
1. Verify that deep foundation materials, sizes and lengths comply with the construction documents	<input checked="" type="checkbox"/>	C		
2. Observe pile load tests and determine capacities of test elements ensuring compliance with the construction documents.	<input type="checkbox"/>	C		
3. Inspect driving operations and maintain complete and accurate records for each element	<input checked="" type="checkbox"/>	C		
4. Verify placement, location, plumbness, hammer size and type, blow count per foot of penetration, required penetrations to achieve design capacity, tip and butt elevations, damage and anomalies	<input checked="" type="checkbox"/>	C		

*** END OF SECTION ***

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

1.2 USE CHARGES

- A. Installation, removal, and use charges for temporary facilities to be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to CITY OF MOBILE employees, Engineer and their representatives, Construction Inspectors, testing agencies, and other authorities having jurisdiction.

1.3 INFORMATIONAL SUBMITTALS

- A. Construction Site Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances and vehicle circulation, staging, equipment, and material storage areas (onsite and offsite): Indicate if the use of a supplemental or other staging area is considered. Show locations of access and haul routes, ingress, and egress to the jobsite.
- B. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.
- C. Backflow Preventers Certificate:
 - 1. Certificate attesting that the design, size and make of each backflow preventor has satisfactorily passed the complete sequence of performant testing and evaluation for the respective level of approval.
- D. Weather Readiness (comply with):
 - 1. Monitor weather conditions a minimum of twice a day and take appropriate actions according to an approved Emergency Plan.

Condition FOUR (Sustained winds of 50 knots or greater expected within 72 hours):

Normal daily jobsite cleanup and good housekeeping practices. Collect and store in piles or containers scrap lumber, waste material, and rubbish for removal and disposal at the close of each work day. Maintain the construction site including storage areas, free of accumulation of debris. Stack form lumber in neat piles less than 4 feet high. Remove all debris, trash, or objects that could become missile hazards.

Condition THREE (Sustained winds of 50 knots or greater expected within 48 hours)

Maintain "Condition FOUR" requirements and commence securing operations necessary for "Condition ONE" which cannot be completed within 18 hours. Cease all routine activities which might interfere with securing operations. Commence securing and stow all gear and portable equipment. Make preparations for securing buildings. Review requirements pertaining to "Condition TWO" and continue action as necessary to attain "Condition THREE" readiness.

Condition TWO (Sustained winds of 50 knots or greater expected within 24 hours):

Curtail or cease routine activities until securing operation is complete. Reinforce or remove form work and scaffolding. Secure machinery, tools, equipment, materials, or remove from the jobsite. Expend every effort to clear all missile hazards and loose equipment from general base areas.

Condition ONE. (Sustained winds of 50 knots or greater expected within 12 hours):

Secure the jobsite and leave premises.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Security Fencing: Arrange for authorities having jurisdiction to inspect temporary fencing to maintain jobsite security throughout the duration of the project.

1.5 PROJECT CONDITIONS

CONTRACTOR is responsible for understanding jobsite access is limited including anticipated restrictions for ingress and egress to PROJECT involves crossing an active CSX rail track. Height, weight and width restrictions for this access shall be understood and maintained according to the jurisdictional authorities.

CONTRACTOR is responsible for verifying all jobsite conditions and notifying OWNER / ENGINEER of conflicts related to access, site security, and protection of all existing infrastructure included but not limited to adjacent PROJECT roads, concrete planters, fencing, utilities that unless otherwise noted shall be protected at all times.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Bulletin Board:

Within one calendar day of mobilization on site and prior to the commencement of work activities, provide a clear weatherproof covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, Safety and Health Information as required by contract documents.

B. Fencing:

Provide fencing along the construction site and at all open excavations and tunnels to control access by unauthorized personnel. Safety fencing must be highly visible to be seen by pedestrians and vehicular traffic. All fencing shall meet the following requirements.

Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts.

Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide **galvanized-steel** bases for supporting posts.

Polyethylene Mesh Safety Fencing: Temporary safety fencing must be a high visibility orange colored, high density polyethylene grid, a minimum of 48 inches high and maximum mesh size of 2 inches. Fencing must extend from the grade to a minimum of 48 inches above the grade and be tightly secured to T-posts spaced as necessary to maintain a rigid and taut fence. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

C. Barricades:

Erect and maintain temporary barricades to limit public access to hazardous areas. Whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic barricades will be required. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

D. Warning Signs:

Post temporary signs, tags, and labels to give workers and the public adequate warning and caution of construction hazards. Provide signs at locations of access points from north and south directions of project that warn the public of the presence of construction hazards. Signs must require unauthorized persons to keep out of the construction site.

2.2 TEMPORARY FACILITIES

A. Temporary Utilities:

Reasonable amounts of utilities will be made available without charge. Make connections, provide transformers and meters, make disconnections; and provide backflow preventer devices on connections to domestic water lines. Under no circumstances will taps to base fire hydrants be allowed for obtaining domestic water.

Provide temporary utilities required for construction. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

1. Sanitation:

Provide and maintain within the construction area minimum field-type sanitary facilities approved by the OWNER. Regularly maintain, clean and remove waste to a commercial facility.

Any penalties or fines associated with improper discharge will be the responsibility of the CONTRACTOR. Maintain these conveniences at all times. Include provisions for pest control and elimination of odors. OWNER toilet facilities will not be available to CONTRACTOR'S personnel.

B. Employee Parking:

CONTRACTOR employees will park privately owned vehicles in an area designated by the OWNER. This area will be within reasonable walking distance of the construction site. Employee parking must not interfere with existing and established parking requirements of the government installation.

C. Temporary Project Safety Fencing:

As soon as practicable, but not later than 15 days after the date established for commencement of work, furnish and erect temporary project safety fencing at the work site. Maintain the safety fencing during the life of the contract and, upon completion and acceptance of the work, remove from the work site.

D. Fire Protection:

Provide temporary fire protection equipment for the protection of personnel and property during construction. Remove debris and flammable materials weekly to minimize potential hazards.

Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

E. Traffic Provisions:

Maintenance of Traffic: Conduct operations in a manner that will not close any thoroughfare or interfere in any way with traffic on railways or highways except with written permission of the OWNER at least 15 calendar days prior to the proposed modification date, and provide a Traffic Control Plan detailing the proposed controls to traffic movement for approval.

The plan must be in accordance with State and local regulations and the MUTCD, Part VI.

Conduct work so as to minimize obstruction of traffic, and maintain traffic on at least half of the roadway width at all times. Obtain approval from the OWNER prior to starting any activity that will obstruct traffic.

Provide, erect, and maintain, at CONTRACTOR'S expense, lights, barriers, signals, passageways, detours, and other items, that may be required by the Life Safety Signage, overhead protection authority having jurisdiction.

Protection of Traffic: Maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the OWNER. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment the work, and the erection and maintenance of adequate warning, danger, and direction signs, will be as required by the State and local authorities having jurisdiction. Protect the traveling public from damage to person and property.

Minimize the interference with public traffic on roads selected for hauling material to and from the site. Investigate the adequacy of existing roads and their allowable load limit. Contractor is responsible for the repair of any damage to roads caused by construction operations.

Safety Systems: Protect the integrity of any installed safety systems or personnel safety devices. Obtain prior approval from OWNER if entrance into systems serving safety devices is required. If it is temporarily necessary to remove or disable personnel safety devices in order to accomplish contract requirements, provide alternative means of protection prior to removing or

disabling any permanently installed safety devices or equipment and obtain approval from the OWNER.

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

- A. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
- B. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
 - 1. Identification Signs: Provide Project identification signs as indicated on contract documents.
 - 2. Safety Signs: Provide temporary warning signs to inform public of general instructions and suggestions relative to safety measures.
 - a. Safety (warning) signs shall comply with MUTCD and OSHA requirements.
 - 3. Maintain, relocate and furnish signs throughout the duration of project.
- C. Waste Disposal Facilities:
 - 1. Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

3.2 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
 - 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Temporary Erosion and Sedimentation Control:
 - 1. Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, in accordance with ADEM and OWNER requirements.

- a. Verify that flows of water redirected from construction areas or generated by construction activity do not enter waterways pursuant to USACE joint permit requirements.
 - b. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction. Additional protection measures requested by OWNER or their ENGINEER shall be installed by CONTRACTOR at no additional cost to the project.
 - c. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
 - d. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection:
1. Protect existing site vegetation and trees pursuant to contract documents.
- F. Site Enclosure Fence: **Before construction operations begin**, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.
1. Extent of Fence: **As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.**
- G. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- I. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.

3.3 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than

Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of CONTRACTOR. OWNER reserves right to take possession of Project identification signs.
2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The Work of This Section Includes: Administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for Contractor requirements related to Owner-furnished products.
 - 2. Section 012500 "Substitution Procedures" for requests for substitutions.
 - 3. Section 017700 "Closeout Procedures" for submitting warranties.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products unless otherwise indicated.
 - 3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.
 - 1. Evaluating Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the

specification. Manufacturer's published attributes and characteristics of basis-of-design product also establish salient characteristics of products for purposes of evaluating comparable products.

- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.
- D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:
 - 1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
 - 2. Data indicating compliance with the requirements specified in "Comparable Products" Article.
- E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."
- F. Substitution: Refer to Section 012500 "Substitution Procedures" for definition and limitations on substitutions.

1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
 - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is inconspicuous.
 - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service- or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.
 - e. Ratings.

1.5 COORDINATION

- A. Modify or adjust affected work as necessary to integrate work of approved comparable products and approved substitutions.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and that products are undamaged and properly protected.
- C. Storage:
 - 1. Provide a secure location and enclosure at Project site for storage of materials and equipment.
 - 2. Store products to allow for inspection and measurement of quantity or counting of units.
 - 3. Store materials in a manner that will not endanger Project structure.
 - 4. Store products that are subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation and with adequate protection from wind.
 - 5. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 7. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections are to be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. **Manufacturer's Warranty:** Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of Owner or endorsed by manufacturer to Owner.
 - 2. **Special Warranty:** Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of Owner or endorsed by manufacturer to Owner.
- B. **Special Warranties:** Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Engineer will make selection.
 5. Descriptive, performance, and reference standard requirements in Specifications establish salient characteristics of products.
 6. Or Equal: For products specified by name and accompanied by the term "or equal," "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
 - a. Submit additional documentation required by Engineer in order to establish equivalency of proposed products. Unless otherwise indicated, evaluation of "or equal" product status is by Engineer, whose determination is final.
- B. Product Selection Procedures:
1. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed or an unnamed product that complies with requirements.
 - a. Non-limited list of products is indicated by the phrase "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following."
 - b. Provision of an unnamed product is not considered a substitution, if the product complies with requirements.
 2. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed or a product by an unnamed manufacturer that complies with requirements.

- a. Non-limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following."
 - b. Provision of products of an unnamed manufacturer is not considered a substitution, if the product complies with requirements.
3. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.
- C. Visual Selection Specification: Where Specifications include the phrase "as selected by Engineer from manufacturer's full range" or a similar phrase, select a product that complies with requirements. Engineer will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Engineer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer may return requests without action, except to record noncompliance with the following requirements:
1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.
- B. Engineer's Action on Comparable Products Submittal: If necessary, Engineer will request additional information or documentation for evaluation within **seven** days of receipt of a request for a comparable product. Engineer will notify Contractor of approval or rejection of proposed comparable product within **15** days of receipt of request, or **seven** days of receipt of additional information or documentation, whichever is later.
1. Engineer's Approval of Submittal: Marked with approval notation from Engineer's action stamp. See Section 013300 "Submittal Procedures."
 2. Use product specified if Engineer does not issue a decision on use of a comparable product request within time allocated.

- C. Submittal Requirements, Two-Step Process: Approval by Engineer of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 01 73 00

EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering.
 - 3. Installation.
 - 4. Cutting and patching.
 - 5. Coordination of Owner's portion of the Work.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
 - 9. Correction of the Work.
- B. Related Requirements:
 - 1. Section 013300 "Submittal Procedures" for submitting surveys.
 - 2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
 - 3. Section 02 100 "Demolition" for demolition and removal of selected portions of the structures.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.4 INFORMATIONAL SUBMITTALS

- A. Cutting and Patching Plan: Submit plan describing procedures at least **10** days prior to the time cutting and patching will be performed. Include the following information:

1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.

1.5 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 1. Structural Elements: When cutting and patching structural elements, or when encountering the need for cutting and patching of elements whose structural function is not known, notify Engineer of locations and details of cutting and await directions from Engineer before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. **Operational elements include the following:**
 - a. Primary operational systems and equipment.
 - b. Electrical wiring systems.
 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Engineer's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Engineer for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.

- C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
 - 2. List of detrimental conditions, including substrates.
 - 3. List of unacceptable installation tolerances.
 - 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to **local utility** that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer in accordance with requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks and existing conditions. If discrepancies are discovered, notify Engineer promptly.
- B. Engage a **land surveyor** experienced in laying out the Work, using the following accepted surveying practices:
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish limits on use of Project site.
 - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 4. Inform installers of lines and levels to which they must comply.
 - 5. Check the location, level and plumb, of every major element as the Work progresses.
 - 6. Notify Engineer when deviations from required lines and levels exceed allowable tolerances.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Engineer.

3.4 FIELD ENGINEERING

- A. Identification: Owner-provided survey shall be used to identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Engineer. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Engineer before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

- C. Benchmarks: Establish and maintain a minimum of **two** permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb, and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure satisfactory results as judged by Engineer. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.
- F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Engineer.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

- I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Engineer. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 CUTTING AND PATCHING

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of Work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements in Section 011000 "Summary."
- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to **minimize** interruption to occupied areas.
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. **Concrete and Masonry**: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as practicable, as judged by Engineer. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
- H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 PROGRESS CLEANING

- A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, in accordance with regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.
 1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces in accordance with written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in **Section 017419 "Construction Waste Management and Disposal."**
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- C. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace damaged, defective, or nonconforming Work. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
- C. Restore permanent facilities used during construction to their specified condition.
- D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

SECTION 01 78 00

CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.01 SUBMITTALS

- A. The Contractor shall submit the following in accordance with the Contract Documents. Note that approval of the submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the specifications nor from responsibility of errors of any sort in the submittals.
- B. Closeout Submittals
 - 1. Project Record Documents and Samples.
 - a. As-Built Drawings

1.02 PROJECT RECORD DOCUMENTS AND SAMPLES

- A. As-Built Drawings
 - 1. As work progresses, the Contractor shall keep an up-to-date set of as-built drawings. As-built drawings are the latest set of as-bid documents including addenda and revisions in place prior to formal Notice to Proceed with red line or text marks made on the drawings or attachments made therewith. Such marks or attachments shall be a complete and comprehensive reference to all changes to as-bid documents.
 - 2. Maintain the as-built drawings using one set of full-size contract drawings kept at the jobsite, which shall be available for review by the Engineer at all times. Upon completion of the work, deliver the marked set of prints to the Engineer. Requests for partial payments will not be approved until the marked prints are delivered to the Engineer.
 - 3. Delivery of the as-built drawings to the Engineer shall be accompanied by the following required surveys performed during construction:
 - a. Existing Cofferdams and Deadman Survey
 - b. As-Built Bulkhead Wall Piling Survey

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

***** END OF SECTION *****

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final Completion procedures.
 - 3. List of incomplete items.
 - 4. Submittal of Project warranties.
 - 5. Final cleaning.
- B. Related Requirements:
 - 1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial Completion and Final Completion.
 - 2. Section 017800 "Closeout Submittals" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.3 DEFINITIONS

- A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Engineer's use prior to Engineer's inspection, to determine if the Work is substantially complete.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.5 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest-control inspection.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items required by other Sections.

1.7 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of **10** days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by **Engineer**. Label with manufacturer's name and model number.
 - 5. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of **10** days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Advise Owner of changeover in utility services.
 - 3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 4. Complete final cleaning requirements.
 - 5. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of **10** days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before certificate will be issued.
 - 1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

2. Results of completed inspection will form the basis of requirements for Final Completion.

1.8 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
 1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. Certified copy of the list will state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.9 LIST OF INCOMPLETE ITEMS

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 1. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Engineer.
 - d. Name of Contractor.
 - e. Page number.

1.10 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Engineer for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. Warranties in Paper Form:
 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.

2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove labels that are not permanent.
 - g. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
 - h. Clean strainers.
 - i. Leave Project clean and ready for occupancy.
- C. Construction Waste Disposal: Comply with waste-disposal requirements in **Section 015000 "Temporary Facilities and Controls."**

3.2 CORRECTION OF THE WORK

- A. Complete repair and restoration operations required by "Correction of the Work" Article in Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION 017700

SECTION 02 41 00

DEMOLITION

PART 1 - GENERAL

1.01 REFERENCES

The following is a list of standards which may be referenced in this section:

1. American National Standards Institute (ANSI): A10.6, Safety Requirements for Demolition Operations.
2. Occupational Safety and Health Administration (OSHA), U.S. Code of Federal Regulations (CFR) Title 29 Part 1926—Occupational Safety and Health Regulations for Construction.
3. Environmental Protection Agency (EPA), U.S. Code of Federal Regulations (CFR), Title 40:
 - a. Part 61 – National Emission Standards for Hazardous Air Pollutants.
 - b. Part 82 – Protection of Stratospheric Ozone.
 - c. Part 273 – Standards for Universal Waste Management.

1.02 DEFINITIONS

- A. ACM: Asbestos-containing material.
- B. Demolition: Dismantling, razing, destroying, or wrecking of any fixed building or structure or any part thereof. Demolition also includes removal of pipes, manholes tanks, conduit, and other underground facilities, whether as a separate activity or in conjunction with construction of new facilities.
- C. Modify: Provide all necessary material and labor to modify an existing item to the condition indicated or specified.
- D. Relocate: Remove, protect, clean, and reinstall equipment, including electrical, instrumentation, and all ancillary components required to make the equipment fully functional, to the new location identified on the Drawings.
- E. Renovation: Altering a facility or one or more facility components in any way.
- F. Salvage/Salvageable: Remove and deliver, to the specified location(s), the equipment, building materials, or other items so identified to be saved from destruction, damage, or waste; such property to remain that of Owner. Unless otherwise specified, title to items identified for demolition shall revert to Contractor.

1.03 SUBMITTALS

- A. Informational Submittals:
 1. Submit proposed demolition/renovation plan, in accordance with requirements specified herein, for approval before such Work is started.
 2. Submit proposed construction phasing plan, in accordance with requirements specified herein, for approval before such Work is started.

3. Submit copies of any notifications, authorizations and permits required to perform the Work.
 4. Copies of reports and other documentation are required for abandoning wells.
- B. Existing Coffe Cells and Concrete Deadman Survey

1.04 REGULATORY AND SAFETY REQUIREMENTS

- A. When applicable, demolition Work shall be accomplished strictly per 29 CFR 1926-Subpart T.
- B. Comply with federal, state, and local hauling and disposal regulations. In addition to the requirements of the General Conditions, Contractor's safety requirements shall conform to ANSI A10.6.

1.05 DEMOLITION/RENOVATION PLAN

The demolition/renovation plan shall provide for safe conduct of the Work and shall include:

1. Detailed description of methods and equipment to be used for each operation, including protection for public, property, and workers.
2. Contractor's planned sequence of operations, including coordination with other work in progress.
3. Disconnection schedule of utility services.

After the submittal is reviewed by the Engineer, a pre-construction meeting will be held to discuss the Engineer's comments and concerns while obtaining feedback from the contractor. The submittal revision shall incorporate changes determined by the meeting.

1.06 CONSTRUCTION PHASING PLAN

The construction phasing plan shall provide for safe conduct of the Work and shall include:

1. Sequence of each activity described in the construction phasing notes with the Drawings, as pertains to the contractor's proposed means and methods, including any proposed deviations from those notes.
2. Any additional activities required for the contractor's mean and methods of constructing the work.

After the submittal is reviewed by the Engineer, a pre-construction meeting will be held to discuss the Engineer's comments and concerns while obtaining feedback from the contractor. The submittal revision shall incorporate changes determined by the meeting.

1.07 EXISTING COFFER CELLS AND CONCRETE DEADMAN SURVEY

- A. After removing existing landscaping and concrete slabs on grade above the existing coffer cells, removing the existing precast deck panel above the existing concrete deadman, and excavating to the depth required for construction:
 1. Survey the exposed perimeter of the coffer cell sheeting at 5 ft increments.
 2. At the proposed interfaces between the new bulkhead wall and existing deadman and coffer cell piling, survey at 1 ft increments at all corners of the deadman beams and footings.
 3. For all points, report both plan location and vertical elevation.

- B. Submit the survey to the Engineer for review as an georeferenced electronic file which can be incorporate into AutoCAD software. The Engineer will incorporate the survey into the construction drawings and determine if existing conditions require alteration of the new bulkhead alignment or connection/closure details.
- C. Construction of the new bulkhead may not begin until the Engineer's review is complete.

1.08 SEQUENCING AND SCHEDULING

- A. The Work of this Specification shall not commence until Contractor's demolition/renovation plan has been approved by Engineer.
- B. Include the Work of this Specification in the progress schedule.

1.09 USE OF EXPLOSIVES

Not permitted.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 EXISTING FACILITIES TO BE DEMOLISHED OR RENOVATED

- A. Facilities:
 - 1. Not applicable.
- B. Structures:
 - 1. The wharf shall be removed entirely, except that the bulkhead shall remain. The existing bulkhead shall be cut down as required to construct the new bulkhead wall cap and tie rods.
 - a. Wharf piling shall be extracted. If piles break during extraction, they shall be cut off at the mudline.
 - 2. Remove rip rap at mudline under the north end of the wharf to enable installation of new bulkhead wall piling where shown on construction drawing SD-101. The rip rap is located under the wharf.
 - 3. Steel coffer cells (northern pair of cells) shall be cut down to mudline within the limits of removal, waterside of the new bulkhead, shown on the construction drawings.
 - 4. Remove floating dock.
- C. Relocation of Utilities and Related Equipment:
 - 1. Notify Owner or appropriate utilities to turn off affected services at least 48 hours before starting demolition or renovation activities.
 - 2. Remove existing utilities as indicated and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by Engineer.

3. When utility lines are encountered that are not indicated on the Drawings, notify Engineer and Owner prior to further work in that area.
 4. Provide a permanent leak-proof closure for water and gas lines.
 5. Plug sewer lines with concrete to a minimum plug length of 10 feet to prevent groundwater infiltration.
- D. Paving and Slabs:
1. Remove concrete and asphaltic concrete paving and slabs including aggregate base as indicated.
 2. Provide neat saw cuts at limits of pavement removal as indicated.
- E. Concrete:
1. Core drill corners of new openings to avoid overcutting adjacent reinforcing in existing concrete to remain. Saw concrete along straight lines to a depth of not less than 2 inches. Make each cut in walls perpendicular to the face and in alignment with the cut in the opposite face. Break out the remainder of the concrete provided that the broken area is concealed in the finished Work, and the remaining concrete is sound.
 2. At locations where the broken faces cannot be concealed, grind smooth or saw cut entirely through the concrete. Repair exposed rebar ends and embeds as shown on Drawings.
 3. Where new concrete adjoins existing concrete, thoroughly clean and mechanically roughen existing concrete surfaces to roughness profile of 3/16 inch. Rebar and small embeds at existing concrete may be required to be left to engage new concrete. Saturate surface with water for 24 hours prior to placing new concrete. The new Work shall tie into the existing construction as shown in the Drawings.
- F. Electrical:
1. Cut off concealed or embedded conduit, boxes, or other materials a minimum of 3/4 inch below final finished surface.
 2. Rework existing circuits or provide temporary circuits as necessary during renovation to maintain service to existing lighting and equipment not scheduled to be renovated. Existing equipment and circuiting shown are based upon limited field surveys. Verify existing conditions, make all necessary adjustments, and record the Work on the Record Drawings. This shall include, but is not limited to, swapping and other adjustments to branch circuits and relocation of branch circuit breakers within panelboards as required to accomplish the finished work.

3.02 PROTECTION

- A. Dust and Debris Control:
1. Prevent the spread of dust and debris and avoid the creation of nuisance or hazard in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution.
 2. Sweep pavements as often as necessary to control the spread of debris that may result in foreign object damage potential to vehicular traffic.
- B. Traffic Control Signs: Where pedestrian or driver safety are endangered in the area of removal Work, use traffic barricades with flashing lights.
- C. Existing Work:

1. Survey the site and examine the Drawings and Specifications to determine the extent of the Work before beginning any demolition or renovation.
 2. Take necessary precautions to avoid damage to existing items scheduled to remain in place, to be reused, or to remain the property of Owner; any Contractor-damaged items shall be repaired or replaced as directed by Engineer.
 3. Provide temporary weather protection during interval between removal of existing exterior surfaces and installation of new to ensure that no water leakage or damage occurs to structure or interior areas of existing building.
 4. Ensure that structural elements are not overloaded as a result of or during performance of the Work. Responsibility for additional structural elements or increasing the strength of existing structural elements as may be required as a result of any Work performed under this Contract shall be that of the Contractor. Repairs, reinforcement, or structural replacement must have Engineer approval.
 5. Do not overload pavements to remain.
- D. Weather Protection: Protect at all times materials and equipment from weather.
- E. Facilities:
1. Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities.
 2. Floors, roofs, walls, columns, pilasters, and other structural elements that are designed and constructed to stand without lateral support or shoring and are determined by Contractor to be in stable condition, shall remain standing without additional bracing, shoring, or lateral support until demolished, unless directed otherwise by the Engineer.
 3. Protect all facility elements not scheduled for demolition.
 4. Provide interior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished and adjacent facilities.
- F. Protection of Personnel:
1. During demolition, continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site.
 2. Provide temporary barricades and other forms of protection to protect Owner's personnel and public from injury due to demolition Work.
 3. Provide protective measures as required to provide free and safe passage of Owner's personnel and public to occupied portions of the structure.

3.03 BURNING

The use of burning at the Site for the disposal of refuse and debris will not be permitted.

3.04 RELOCATIONS

Perform the removal and reinstallation of relocated items as indicated with workmen skilled in the trades involved. Clean all items to be relocated prior to reinstallation, to the satisfaction of Engineer. Repair items to be relocated which are damaged or replace damaged items with new undamaged items as approved by Engineer.

3.05 BACKFILL

- A. Do not use demolition debris as backfill material, unless otherwise noted on the drawings.
- B. Fill excavations and other hazardous openings to existing ground level or level of new construction in accordance with Section 31 00 00, Earthwork.

3.06 TITLE TO MATERIALS

- A. All items designated to be removed shall become the property of Contractor.
- B. Title to equipment and materials resulting from demolition is vested in the Contractor upon approval by Engineer of Contractor's demolition/renovation plan, and the resulting authorization by Engineer to begin demolition.

3.07 DISPOSITION OF MATERIAL

- A. Do not remove equipment and materials without the Engineer's approval of the Contractor's demolition/renovation plan.
- B. Remove salvaged items designated as the property of Owner in a manner to prevent damage, and pack or crate to protect the items from damage while in storage or during shipment. Properly identify containers as to contents.
- C. Repair or replace, at the discretion of Engineer, items damaged during removal or storage.
- D. Deliver salvaged items that are designated as the property of Owner to a storage site as directed within 10 miles of the Site.
- E. Owner will not be responsible for the condition or loss of, or damage to, property scheduled to become Contractor's property after Engineer's authorization to begin demolition. Materials and equipment shall not be viewed by prospective purchasers or sold on the Site.

3.08 REUSE OF MATERIALS AND EQUIPMENT

- A. Remove and store materials and equipment listed to be reused or relocated to prevent damage and reinstall as the Work progresses.
- B. Properly store and maintain equipment and materials in same condition as when removed.
- C. Store equipment and material designated to be reused in a location designated by Owner.
- D. Equipment and material designated to be reused shall be cleaned, serviced and checked for proper operability before being put back into service.
- E. Engineer will determine the condition of equipment and materials prior to removal.

3.09 SPECIALIZED SALVAGE

Ozone Depleting Substances (ODS):

1. Class I and Class II ODS are defined in Section 602(a) and (b), of the Clean Air Act. Prevent discharge of Class I and Class II ODS to the atmosphere. Place recovered ODS in cylinders meeting AHRI Guideline K suitable for the type ODS (filled to no more than 80 percent capacity) and provide appropriate labeling.

3.10 UNSALVAGEABLE MATERIAL

- A. Concrete, masonry, and other noncombustible material, except concrete permitted to remain in place, shall be disposed off-site in a legal manner.
- B. Combustible material shall be disposed of off the Site.

3.11 CLEANUP

Debris and rubbish shall be removed from basement and similar excavations. Debris and rubbish shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

***** END OF SECTION *****

SECTION 03 31 30

MARINE CONCRETE

PART 1 - GENERAL

1.01 SCOPE

- A. The work includes the furnishing of all material and equipment and the performing of all labor necessary to provide marine cast-in-place concrete as shown on the Contract Drawings and as herein specified or directed by the Engineer.
- B. The work shall include but is not limited to:
 - 1. Bulkhead wall cap
 - 2. Deadman pipe pile concrete infill
 - 3. Concrete deck over existing deadman
 - 4. South coffer cell half-pipe infill

1.02 RELATED SECTIONS

Section 05 50 13	Miscellaneous Metal Fabrications
Section 31 41 16	Steel Sheet Piling
Section 31 62 16	Steel Pipe Piles

1.03 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.
- B. American Concrete Institute International (ACI)
 - ACI 117 (R2015) Specifications for Tolerances for Concrete Construction and Materials and Commentary
 - ACI 211.1 (1991; R 2009) Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete
 - ACI 301 (2020) Specifications for Structural Concrete
 - ACI 302.1R (2015) Guide for Concrete Floor and Slab Construction
 - ACI 304.2R (2017) Placing Concrete by Pumping Methods
 - ACI 304R (2000; R 2009) Guide for Measuring, Mixing, Transporting, and Placing Concrete
 - ACI 305R (2020) Guide to Hot Weather Concreting
 - ACI 306.1 (1990; R 2002) Standard Specification for Cold Weather Concreting
 - ACI 306R (2016) Guide to Cold Weather Concreting
 - ACI 308 (2016) Guide to External Curing of Concrete

- ACI 308.1 (2011) Specification for Curing Concrete
- ACI 318 (2019) Building Code Requirements for Structural Concrete and Commentary
- ACI 347 (2014) Guide to Formwork for Concrete
- ACI SP-2 (2011) ACI Manual of Concrete Inspection
- ACI SP-66 (2004) ACI Detailing Manual
- C. American Hardboard Association (AHA)
 - AHA A135.4 (1995; R 2004) Basic Hardboard
- D. American Welding Society (AWS)
 - AWS D1.4/D1.4M(2018) Structural Welding Code - Reinforcing Steel
- E. ASTM International (ASTM)
 - ASTM A615/A615M (2020) Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
 - ASTM A706/A706M (2016) Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
 - ASTM A934/A934M (2019) Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
 - ASTM A1064/A1064M (2018a) Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
 - ASTM C31/C31M(2021a) Standard Practice for Making and Curing Concrete Test Specimens in the Field
 - ASTM C33/C33M(2018) Standard Specification for Concrete Aggregates
 - ASTM C39/C39M(2021) Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
 - ASTM C42/C42M(2020) Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
 - ASTM C78/C78M(2021) Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
 - ASTM C94/C94M(2021b) Standard Specification for Ready-Mixed Concrete
 - ASTM C 109 Compressive Strength of Hydraulic Cement Mortars (Using 2 inch Cube Specimens)
 - ASTM C143/C143M (2020) Standard Test Method for Slump of Hydraulic-Cement Concrete
 - ASTM C150/C150M (2021) Standard Specification for Portland Cement
 - ASTM C172/C172M (2017) Standard Practice for Sampling Freshly Mixed Concrete
 - ASTM C173/C173M (2016) Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
 - ASTM C192/C192M (2019) Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory

- ASTM C231/C231M (2017a) Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
- ASTM C260/C260M (2016) Standard Specification for Air-Entraining Admixtures for Concrete
- ASTM C295/C295M (2019) Petrographic Examination of Aggregates for Concrete
- ASTM C311/C311M (2018) Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland-Cement Concrete
- ASTM C494/C494M (2019) Standard Specification for Chemical Admixtures for Concrete
- ASTM C595/C595M (2021) Standard Specification for Blended Hydraulic Cements
- ASTM C618(2019) Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- ASTM C920(2018) Standard Specification for Elastomeric Joint Sealants
- ASTM C989/C989M (2018a) Standard Specification for Slag Cement for Use in Concrete and Mortars
- ASTM C1017/C1017M (2013; E 2015) Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
- ASTM C1077 (2017) Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
- ASTM C1107/C1107M (2020) Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
- ASTM C1157/C1157M (2020a) Standard Specification for Hydraulic Cement
- ASTM C1260 (2021) Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
- ASTM C1567 (2021) Standard Test Method for Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
- ASTM C1602/C1602M (2018) Standard Specification for Mixing Water Used in Production of Hydraulic Cement Concrete
- ASTM D1751 (2018) Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
- ASTM D1752 (2018) Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion
- ASTM D2628 (2016) Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements
- ASTM D5759 (2020) Characterization of Coal Fly Ash and Clean Coal Combustion Fly Ash for Potential Uses
- ASTM D6690 (2021) Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
- ASTM E329(2021) Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

F. Concrete Reinforcing Steel Institute (CRSI)

- CRSI 10MSP (2009; 28th Ed) Manual of Standard Practice
- G. National Institute of Standards and Technology (NIST)
NIST PS 1 (2009) DOC Voluntary Product Standard PS 1-07, Structural Plywood
- H. U.S. Army Corps of Engineers
CRD-C661 (2006) Antiwashout Admixtures for Concrete

1.04 SUBMITTALS

- A. General: Submit the following in accordance with the 01 33 00, "Submittals" of these Specifications. Note that approval of submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the Specifications nor from responsibility of errors of any sort in the submittals.
- B. Preconstruction Submittals
 - 1. Concrete Curing Plan
 - 2. Concrete Pumping Plan
 - 3. Independent Testing Laboratory Accreditation
 - 4. Independent Concrete Testing Agency Qualification
 - 5. Concrete Field Technician
 - 6. Form Removal Schedule
 - 7. Hot Weather Concrete Plan
 - 8. Cold Weather Concrete Plan (if used)
- C. Shop Drawings
 - Reinforcing Steel
- D. Product Data
 - 1. Joint Sealants
 - 2. Joint Filler
 - 3. Aggregates
 - 4. Cementitious Materials
 - 5. Concrete Curing Materials
 - 6. Reinforcement
 - 7. Headed Bar Anchorages
 - 8. Admixtures
 - 9. Mechanical Reinforcing Bar Connectors
 - 10. Form Release Agent
 - 11. Pre-packaged Grout
- E. Design Data

Concrete Mix Design

Cast-in-Place Concrete

- F. Test Reports
 - 1. Concrete Mix Design
 - 2. Fly Ash
 - 3. Pozzolan
 - 4. Ground Granulated Blast-Furnace Slag
 - 5. Aggregates
 - 6. Admixtures
 - 7. Compressive Strength Tests
 - 8. Air Content
 - 9. Slump Tests
 - 10. Water
 - 11. Grout
- G. Certificates
 - 1. Reinforcing Bars
 - 2. Welder Qualifications
- H. Manufacturer's Instructions
 - Admixtures
- I. Batch Tickets: Submit a delivery ticket from the concrete supplier with each batch delivered to the site setting forth the following information:
 - 1. Name of supplier
 - 2. Name of batching plant and location
 - 3. Serial number of ticket
 - 4. Date
 - 5. Truck number and batch number
 - 6. Specific job designation
 - 7. Volume of concrete (cubic yards)
 - 8. Specific class of concrete
 - 9. Time loaded and amount of water added
 - 10. Type and brand of cement and cementitious material
 - 11. Weight of cement and cementitious material
 - 12. Maximum size of aggregates

13. Weights of coarse and fine aggregates, respectively
14. Type and amount of admixtures
15. Mix design designation
16. Weight of water and water-cement ratio

1.05 DEFINITIONS

- A. "Cementitious material" as used herein shall include all portland cement, pozzolan, fly ash, ground granulated blast-furnace slag, and silica fume.
- B. "Exposed to view" means situated so that it can be seen from eye level from a normally accessible location after completion of the facility.
- C. "Chemical admixtures" are materials in the form of powder or fluids that are added to the concrete to give it certain characteristics not obtainable with plain concrete mixes.
- D. "Supplementary cementing materials" (SCM) include coal fly ash, silica fume, granulated blast-furnace slag, natural or calcined pozzolans, and ultra-fine coal ash when used in such proportions to replace the portland cement that result in improvement to sustainability and durability and reduced cost.
- E. "Cast-in-place concrete" includes all structural concrete other than Tremie Concrete.
- F. "Design strength" (f'c) is the specified compressive strength of concrete at time(s) specified in this section to meet structural design criteria.
- G. "Mixture proportioning" is the process of designing concrete mixture proportions to enable it to meet the strength, service life and constructability requirements of the project while minimizing the initial and life-cycle cost.
- H. "Mixture proportions" are the masses or volumes of individual ingredients used to make a unit measure (cubic meter or cubic yard) of concrete.
- I. "Pozzolan" is a siliceous or siliceous and aluminous material, which in itself possesses little or no cementitious value but will, in finely divided form and in the presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form compounds possessing cementitious properties.
- J. "Tremie" concrete is concrete placed underwater by tremie methods.
- K. "Workability (or consistency)" is the ability of a fresh (plastic) concrete mix to fill the form/mold properly with the desired work (vibration) and without reducing the concrete's quality. Workability depends on water content, chemical admixtures, aggregate (shape and size distribution), cementitious content, and age (level of hydration).

1.06 MODIFICATION OF REFERENCES

Accomplish work in accordance with ACI publications except as modified herein. Consider the advisory or recommended provisions to be mandatory. Interpret reference to the "Building Official," the "Engineer," and the "Architect/Engineer" to mean the Engineer.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Follow ACI 301, ACI 304R, and ASTM A934/A934M requirements and recommendations. Do not deliver concrete until forms, reinforcement, embedded items, and chamfer strips are in place and ready for concrete placement. Do not store concrete sealers with materials that have a

high capacity to adsorb volatile organic compound (VOC) emissions. Do not store concrete sealers in occupied spaces.

- B. Reinforcement: Store reinforcement of different sizes and shapes in separate piles or racks raised above the ground to avoid excessive rusting. Protect from contaminants such as grease, oil, and dirt. Ensure bar sizes can be accurately identified after bundles are broken and tags removed.

1.08 QUALITY ASSURANCE

A. Design Data

- 1. Concrete Mix Design: Forty-five days minimum prior to concrete placement, submit a mix design for each strength and type of concrete. Submit a complete list of materials including type; brand; source and amount of cement, complementary cementitious materials, and admixtures; and applicable reference specifications. Submit mill test and all other tests for cement, complementary cementitious materials, aggregates, and admixtures. Provide documentation of maximum nominal aggregate size, gradation analysis, percentage retained and passing sieve, and a graph of percentage retained verses sieve size. Provide mix proportion data using at least three different water-cementitious material ratios for each type of mixture, which produce a range of strength encompassing those required for each type of concrete required. If source material changes, resubmit mix proportion data using revised source material. Provide only materials that have been proven by trial mix studies to meet the requirements of this specification, unless otherwise approved in writing by the Engineer. Indicate clearly in the submittal where each mix design is used when more than one mix design is submitted. Resubmit data on concrete components if the qualities or source of components changes. For previously approved concrete mix designs used within the past twelve months, the previous mix design may be re-submitted without further trial batch testing if accompanied by material test data conducted within the last six months. Obtain mix design approval from the Engineer prior to concrete placement.
- 2. All test reports and certificates submitted for concrete mix design approval shall be less than 6 months old.

B. Shop Drawings

- 1. Reinforcing Steel: ACI SP-66. Indicate bending diagrams, assembly diagrams, splicing and laps of bars, shapes, dimensions, and details of bar reinforcing, accessories, and concrete cover. Do not scale dimensions from structural drawings to determine lengths of reinforcing bars. Reproductions of contract drawings are unacceptable.

C. Control Submittals

- 1. Concrete Curing Plan: Submit proposed materials, methods, and duration for curing concrete elements in accordance with ACI 308.1.
- 2. Concrete Pumping Plan: Submit proposed materials and methods for pumping concrete. Submittal shall include mix designs, pumping equipment including type of pump and size and material for pipe, and maximum length and height concrete is to be pumped.
- 3. Tremie Concrete: Submit proposed materials and methods for tremie concrete.

- D. Material Safety Data Sheets: Submit Material Safety Data Sheets (MSDS) for all materials that are regulated for hazardous health effects. MSDS shall be readily accessible during each work shift to employees when they are at the construction site.

E. Test Reports

1. Fly Ash and Pozzolan: Submit test results in accordance with ASTM C618 for fly ash and pozzolan. Submit test results performed within 6 months of submittal date.
 2. Ground Granulated Blast-Furnace Slag: Submit test results in accordance with ASTM C989/C989M for ground granulated blast-furnace slag. Submit test results performed within 6 months of submittal date.
 3. Aggregates: ASTM C1260 for potential alkali-silica reactions, ASTM C295/C295M for petrographic analysis.
- F. Field Samples
- Field Testing Technician(s) and Independent Testing Agency must be provided by the Contractor.
- a. Work on concrete under this contract will be performed by an ACI Concrete Field-Testing Technician Grade 1 qualified in accordance with ACI SP-2 or equivalent. Equivalent certification programs will include requirements for written and performance examinations as stipulated in ACI SP-2.
 - b. Testing agencies that perform testing services on reinforcing steel must meet the requirements of ASTM E329.
 - c. Testing agencies that perform testing services on concrete materials must meet the requirements of ASTM C1077.
- G. Independent Testing Laboratory Qualifications for Concrete Qualification Testing: The Contractor-provided concrete testing laboratory must have the necessary equipment and experience to accomplish required testing. The laboratories performing the tests shall be accredited in accordance with ASTM C1077, including ASTM C78/C78M and ASTM C1260. The accreditation shall be current and shall include the required test methods, as specified. The laboratory must be Concrete Reference Laboratory (CCRL) inspected. Furthermore, the testing shall comply with the following requirements:
- Acceptance Testing: Furnish all materials, labor, and facilities required for molding, curing, testing, and protecting test specimens at the site and in the laboratory. Furnish and maintain boxes or other facilities suitable for storing and curing the specimens at the site while in the mold within the temperature range stipulated by ASTM C31/C31M.

1.09 QUALIFICATIONS FOR WELDING WORK

- A. Welding procedures shall be in accordance with AWS D1.4/D1.4M.
- B. Verify that Welder qualifications are in accordance with AWS D1.4/D1.4M or under an equivalent qualification test approved in advance. Welders are permitted to do only the type of welding for which each is specifically qualified.

PART 2 - PRODUCTS

2.01 MATERIALS FOR FORMS

- A. Provide wood, plywood, or steel. Use plywood or steel forms where a smooth form finish is required.
- B. Wood Forms: Provide lumber that is square edged or tongue-and-groove boards, free of raised grain, knotholes, or other surface defects. Provide plywood that complies with NIST PS 1, B-B concrete form panels or better or AHA A135.4, hardboard for smooth form lining.

- C. Concrete Form Plywood (Standard Rough): Provide plywood that conforms to NIST PS 1, B-B, concrete form, not less than 5/8-inch thick.
- D. Steel Forms: Provide steel form surfaces that do not contain irregularities, dents, or sags.

2.02 FORM TIES AND ACCESSORIES

Provide a form tie system that does not leave mild steel after break-off or removal any closer than 2 inches from the exposed surface. Do not use wire alone. Form ties and accessories shall not reduce the effective cover of the reinforcement.

2.03 CONCRETE MIX DESIGN

- A. Contractor-Furnished Mix Design: ACI 211.1, ACI 301, ACI 318 and ACI 304.2R except as otherwise specified. Indicate the compressive strength (f'c) of the concrete for each portion of the structure(s) as specified below.
 - 1. Cast-in-Place Concrete: Proportion normal-weight concrete mixture as follows:
 - a. Minimum Compressive Strength: 5000 psi at 28 days for cast-in-place concrete and tremie concrete and 6000 psi at 28 days for precast concrete).
 - b. Maximum Water-Cementitious Materials Ratio: 0.40.
 - c. Slump: Range of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, 6-8" after adding high-range water-reducing admixture.
 - d. Air Content: Range of 5 to 8 percent.
 - e. Water-reducing admixtures are required for all marine concrete.
 - f. Anti-washout admixture is required for bulkhead wall cap and south coffer cell half-pipe infill.
 - g. Corrosion-inhibiting admixture is required for bulkhead wall cap, deck, and south coffer cell half-pipe infill and cap/fascia concrete.
 - 2. Mix Proportions for Normal Weight Concrete: Trial design batches, mixture proportioning studies, and testing requirements for various classes and types of concrete specified are the responsibility of the Contractor. Base mixture proportions on compressive strength as determined by test specimens fabricated in accordance with ASTM C192/C192M and tested in accordance with ASTM C39/C39M. Samples of all materials used in mixture proportioning studies shall be representative of those proposed for use in the project and shall be accompanied by the manufacturer's or producer's test report indicating compliance with these specifications. Base trial mixtures having proportions, consistencies, and air content suitable for the work on methodology described in ACI 211.1. In the trial mixture, use at least three different water-cementitious material ratios for each type of mixture, which shall produce a range of strength encompassing those required for each class and type of concrete required on the project. The maximum water-cementitious material ratio allowed shall be based on equivalent water-cementitious material ratio calculations as determined by the conversion from the weight ratio of water to cement plus pozzolan by weight equivalency method. Design laboratory trial mixture for maximum permitted slump and air content. Each combination of material proposed for use shall have separate trial mixture, except for accelerator or retarder use can be provided without separate trial mixture. Report the temperature of concrete in each trial batch. For each water-cementitious material ratio, at least three test cylinders for each test age shall be made and cured in accordance with ASTM C192/C192M and tested in accordance with ASTM C39/C39M for 7 and 28 days. From these results, plot a

curve showing the relationship between water-cementitious material ratio and strength for each set of trial mix studies. In addition, plot a curve showing the relationship between 7- and 28-day strengths.

3. Required Average Strength of Mix Design: The selected mixture shall produce an average compressive strength exceeding the specified strength by the amount indicated in ACI 301 but may not exceed the specified strength at the same age by more than 20 percent. When a concrete production facility has a record of at least 15 consecutive tests, the standard deviation shall be calculated, and the required average compressive strength shall be determined in accordance with ACI 301.
- B. Ready-Mix Concrete
1. Provide concrete that meets the requirements of ASTM C94/C94M.
 2. Ready-mixed concrete manufacturer shall provide duplicate delivery tickets with each load of concrete delivered. Provide delivery tickets with all information required by ASTM C94/C94M as well as that required by Paragraph 1.04.I.
- C. Concrete Curing Materials: Provide concrete curing materials in accordance with ACI 301 Section 5 and ACI 308.1 Section 2.

2.04 MATERIALS

- A. Cementitious Materials: For exposed concrete, use one manufacturer and one source for each type of cement, ground slag, fly ash, and pozzolan. One of the following supplementary cementitious materials or a blended cement is required: fly ash, pozzolan, ground slag.
1. Fly Ash
 - a. ASTM C618, Class F, except that the maximum allowable loss on ignition shall not exceed 6 percent. Class F fly ash for use in mitigating Alkali-Silica Reactivity shall have a Calcium Oxide (CaO) content of less than 8 percent and a total equivalent alkali content less than 1.5 percent.
 - b. Add with cement. Fly ash content shall be a minimum of 25 percent by weight of cementitious material, provided the fly ash does not reduce the amount of cement in the concrete mix below the minimum requirements of local building codes. Where the use of fly ash cannot meet the minimum level, provide the maximum amount of fly ash permissible that meets the code requirements for cement content. Report the chemical analysis of the fly ash in accordance with ASTM C311/C311M. Evaluate and classify fly ash in accordance with ASTM D5759.
 2. Raw or Calcined Natural Pozzolan: Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have an ignition loss not exceeding 3 percent. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a Calcium Oxide (CaO) content of less than 13 percent and total equivalent alkali content less than 3 percent.
 3. Ground Granulated Blast-Furnace Slag: ASTM C989/C989M, Grade 100. Slag content shall be a minimum of 40 percent by weight of cementitious material.
 4. Portland Cement: Provide cement that conforms to ASTM C150/C150M, Type II, with tricalcium aluminates (C3A) content less than 10 percent and a maximum cement-alkali content of 0.80 percent Na₂O_e (sodium oxide) equivalent. Use one brand and type of cement for formed concrete having exposed-to-view finished surfaces.

5. Blended Cements: Blended cement shall conform to ASTM C595/C595M and ASTM C1157/C1157M, Type IP or IS, including the optional requirement for mortar expansion and consist of a mixture of ASTM C150/C150M Type I, or Type II cement and a complementary cementing material. The slag added to the Type IS blend shall be ASTM C989/C989M ground granulated blast-furnace slag. The pozzolan added to the Type IP blend shall be ASTM C618 Class F and shall be interground with the cement clinker. The manufacturer shall state in writing that the amount of pozzolan in the finished cement will not vary more than plus or minus 5 mass percent of the finished cement from lot-to-lot or within a lot. The percentage and type of mineral admixture used in the blend shall not change from that submitted for the aggregate evaluation and mixture proportioning.
- B. Water: Water shall comply with the requirements of ASTM C1602/C1602M. Minimize the amount of water in the mix. Improve workability by adjusting the grading rather than by adding water. Water shall be potable, free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances deleterious to concrete. Submit test report showing water complies with ASTM C1602/C1602M.
- C. Aggregates
 1. ASTM C33/C33M, except as modified herein. Furnish aggregates for exposed concrete surfaces from one source. Provide aggregates that do not contain any substance which may be deleteriously reactive with the alkalis in the cement. Submit test report showing compliance with ASTM C33/C33M.
 2. Fine and coarse aggregates shall show expansions less than 0.08 percent at 16 days after casting when testing in accordance with ASTM C1260. Should the test data indicate an expansion of 0.08 percent or greater, reject the aggregate(s) or perform additional testing using ASTM C1567 using the Contractor's proposed mix design and proposed supplementary cementitious materials percent weight to show less than 0.08 percent expansion at 16 days after casting when tested in accordance with ASTM C1567.
 3. Aggregates shall not possess properties or constituents that are known to have specific unfavorable effects in concrete when tested in accordance with ASTM C295/C295M.
 4. Provide maximum size of course aggregate and gradation to conform with requirements of ACI 318 and ACI 211.1.
- D. Nonshrink Non-Metallic Cementitious Grout: ASTM C1107/C1107M with a compressive strength of 7000 psi at 7 days in accordance with ASTM C 109.
- E. Admixtures: ASTM C494/C494M: Type A, water reducing; Type B, retarding; Type C, accelerating; Type D, water-reducing and retarding; and Type E, water-reducing and accelerating admixture. Do not use calcium chloride admixtures. Submit product data for admixtures used in concrete.
 1. Air-Entraining: ASTM C260/C260M.
 2. High Range Water Reducer (HRWR) (Superplasticizers): ASTM C494/C494M, Type F and ASTM C1017/C1017M.
 3. Anti-washout: CRD-C661; Master Builders (BASF) "MasterMatrix UW450", Sika "Sikament-100 SC", or approved equal. Provide at a rate of approximately 0.5 gallons per cubic yard, adjust dosage as necessary to achieve required results.
 4. Corrosion Inhibiting: ASTM C494 and C 1582.
 - a. Corrosion inhibiting admixture shall contain a minimum of 30% calcium nitrite by mass.

- b. Dosage of corrosion inhibitor shall not be less than 3.0 gallons per cubic yard in the mix design.
- F. Expansion/Contraction Joint Filler: ASTM D1751 or ASTM D1752 Type I or II. Material shall be 1/2 inch thick, unless otherwise indicated.
- G. Joint Sealants: Submit manufacturer's product data, indicating VOC content.
 - 1. Horizontal Surfaces, 3 Percent Slope, Maximum: ASTM D6690 or ASTM C920, Type M, Class 25, Use T.
 - 2. Vertical Surfaces Greater Than 3 Percent Slope: ASTM C920, Type M, Grade NS, Class 25, Use T. Use FS SS-S-200, no sag in areas subject to petroleum products.
 - 3. Preformed Polychloroprene Elastomeric Type: ASTM D2628.
- H. Biodegradable Form Release Agent: Provide form release agent that is colorless, biodegradable. Provide product that does not bond with, stain, or adversely affect concrete surfaces and does not impair subsequent treatments of concrete surfaces. Provide form release agent that does not contain diesel fuel, petroleum-based lubricating oils, waxes, or kerosene. Submit documentation indicating type of biobased material in product and biobased content.

2.05 REINFORCEMENT

- A. Reinforcing Bars: ACI 301 unless otherwise specified. Use deformed steel. ASTM A615/A615M for black steel with the bars marked A, Grade 60. Submit mill certificates for reinforcing bars.
 - Weldable Reinforcing Bars: Provide weldable reinforcing bars that conform to ASTM A706/A706M and ASTM A615/A615M and Supplement S1, Grade 60, except that the maximum carbon content shall be 0.55 percent.
- B. Mechanical Reinforcing Bar Connectors: ACI 301. Provide 125 percent minimum yield strength of the reinforcement bar.
- C. Wire
 - 1. Welded Wire Reinforcement: ASTM A1064/A1064M. Provide flat sheets of welded wire reinforcement for slabs and toppings, as indicated.
 - 2. Steel Wire: Wire shall conform to ASTM A1064/A1064M.
- D. Reinforcing Bar Supports
 - 1. Supports include bolsters, chairs, spacers, and other devices necessary for proper spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place.
 - 2. Provide wire bar type supports of coated or non-corrodible material conforming to ACI SP-66 and CRSI 10MSP. Precast concrete blocks shall not be less than 4" square when supporting reinforcing on the ground. Precast concrete blocks shall have compressive strength equal to the surrounding concrete and of the same approved concrete mix design as the surrounding element.
 - 3. Legs of supports in contact with formwork shall be plastic coated after fabrication.
 - 4. Concrete supports used in concrete exposed to view shall have the same color and texture as the finish surface.

E. Accessories

1. All steel wire ties, supports, standees, and all other reinforcing accessories comprised of steel, and in direct contact with uncoated reinforcing, shall be uncoated. Reinforcing accessories in direct contact with reinforcing shall not introduce dissimilar metals or coatings within the concrete include bolsters, chairs, spacers, and other devices necessary for proper spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place.
2. Accessories shall conform to the ACI Detailing Manual SP-66.
3. Wire ties for uncoated reinforcing shall be 16 gauge or heavier black annealed steel wire.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly constructed and prepared.
- B. Check field dimensions before beginning installation. If dimensions vary too much from design dimensions for proper installation, notify Engineer and wait for instructions before beginning installation.

3.02 PREPARATION

- A. Determine quantity of concrete needed and minimize the production of excess concrete. Designate locations or uses for potential excess concrete before the concrete is placed.
- B. General
 1. Surfaces against which concrete is to be placed shall be free of debris, loose material, standing water (except for tremie concrete), snow, ice, and other deleterious substances before start of concrete placing.
 2. Remove standing water without washing over freshly deposited concrete. Divert flow of water through side drains provided for such purpose.
- C. Subgrade Under Foundations and Footings: When subgrade material is semiporous and dry, sprinkle subgrade surface with water as required to eliminate suction at the time concrete is deposited, or seal subgrade surface by covering surface with specified vapor retarder. When subgrade material is porous, seal subgrade surface by covering surface with vapor barrier.
- D. Subgrade Under Slabs on Ground
 1. Before construction of slabs on ground, have underground work on pipes and conduits completed and approved.
 2. Previously constructed subgrade or fill shall be cleaned of foreign materials.
 3. Finished surface of subgrade or fill under exterior slabs on ground shall not be more than 0.02-foot above or 0.10-foot below elevation indicated.
- E. Edge Forms and Screed Strips for Slabs: Set edge forms or bulkheads and intermediate screed strips for slabs to obtain indicated elevations and contours in finished slab surface and shall be strong enough to support vibrating bridge screeds or roller pipe screeds if nature of specified slab finish requires use of such equipment. Align concrete surface to elevation of screed strips by use of strike-off templates or approved compacting-type screeds.

- F. Reinforcement and Other Embedded Items: Secure reinforcement, joint materials, and other embedded materials in position, inspected, and approved before start of concrete placing.

3.03 FORMS

- A. Provide forms, shoring, and scaffolding for concrete placement in accordance with ACI 301 Section 2 and 5 and ACI 347. Set forms mortar-tight and true to line and grade. Chamfer above grade exposed joints, edges, and external corners of concrete 0.75 inch unless otherwise indicated. Provide formwork with clean-out openings to permit inspection and removal of debris.
- B. Coating: Before concrete placement, coat the contact surfaces of forms with a form release agent.
- C. Reshoring: Reshore concrete elements as required in accordance with ACI 301 Section 2.
- D. Reuse: Reuse forms providing the structural integrity of concrete and the aesthetics of exposed concrete are not compromised. Wood forms shall not be clogged with paste and shall be capable of absorbing high water-cementitious material ratio paste.
- E. Forms for Standard Rough Form Finish: Provide formwork in accordance with ACI 301 Section 5 with a surface finish, SF-1.0, for formed surfaces that are to be concealed by other construction.
- F. Form Ties: Provide ties in accordance with ACI 301 section 2.
- G. Tolerances for Form Construction: Construct formwork to ensure that after removal of forms and prior to patching and finishing of formed surfaces, provide concrete surfaces in accordance with tolerances specified in ACI 301 Section 5 and ACI 117.
- H. Removal of Forms and Supports: After placing concrete, removal of forms shall be in accordance with ACI 301 Section 2 except as modified by approved form removal schedule.
- I. Design of Formwork: Formwork for the bulkhead wall cap will be partially submerged. Design for external environmental loading including hydrostatic and wave pressure.

3.04 PLACING REINFORCEMENT AND MISCELLANEOUS MATERIALS

- A. ACI 301 and ACI SP-66. Provide bars, welded wire reinforcement, wire ties, supports, and other devices necessary to install and secure reinforcement. Reinforcement shall not have rust, scale, oil, grease, clay, or foreign substances that would reduce the bond. Rusting of reinforcement is a basis of rejection if the effective cross-sectional area or the nominal weight per unit length has been reduced. Remove loose rust prior to placing steel. Tack welding is prohibited.
- B. General: Provide details of reinforcement that are in accordance with ACI 301 and ACI SP-66 and as specified.
- C. Reinforcement Supports: Support reinforcement in accordance with ACI 301 Section 3.
- D. Splicing: As indicated. For splices not indicated ACI 301. Do not splice at points of maximum stress. Overlap welded wire reinforcement the spacing of the cross wires, plus 2 inches. Welded splices shall be provided in accordance with AWS D1.4/D1.4M. Approve welded splices prior to use.
- E. Future Bonding: Plug exposed, threaded, mechanical reinforcement bar connectors with a greased bolt. Provide bolt threads that match the connector. Countersink the connector in the concrete. Caulk the depression after the bolt is installed.

- F. Setting Miscellaneous Material: Place and secure anchors and bolts, pipe sleeves, conduits, and other such items in position before concrete placement and support against displacement. Plumb and level anchor bolts and check location and elevation. Temporarily fill voids in sleeves with readily removable material to prevent the entry of concrete.
- G. Fabrication: Shop fabricate reinforcing bars to conform to shapes and dimensions indicated for reinforcement, and as follows:
1. Provide fabrication tolerances that are in accordance with ACI 318 and ACI SP-66.
 2. Provide hooks and bends that are in accordance with ACI 318 and ACI SP-66. Reinforcement shall be bent cold to shapes as indicated. Bending shall be done in the shop. Rebending of a reinforcing bar that has been bent incorrectly is not permitted. Bending shall be in accordance with standard approved practice and by approved machine methods.
 3. Tolerance on nominally square-cut, reinforcing bar ends shall be in accordance with ACI SP-66.
 4. Deliver reinforcing bars bundled, tagged, and marked. Tags shall be metal with bar size, length, mark, and other information pressed in by machine. Marks shall correspond with those used on the placing drawings.
 5. Do not use reinforcement that has any of the following defects:
 - a. Bar lengths, depths, and bends beyond specified fabrication tolerances
 - b. Bends or kinks not indicated on drawings or approved shop drawings
 - c. Bars with reduced cross-section due to rusting or other cause
 6. Replace defective reinforcement with new reinforcement having required shape, form, and cross-section area.
- H. Placing Reinforcement
1. Place reinforcement in accordance with ACI 301 and ACI SP-66.
 2. For slabs on grade (over earth or over capillary water barrier) and for footing reinforcement, support bars or welded wire reinforcement on precast concrete blocks, spaced at intervals required by size of reinforcement, to keep reinforcement the minimum height specified above the underside of slab or footing.
 3. For slabs other than on grade, supports for which any portion is less than 1 inch from concrete surfaces that are exposed to view or to be painted shall be of precast concrete units, plastic-coated steel, or stainless-steel protected bar supports. Precast concrete units shall be wedge shaped, not larger than 3-1/2 by 3-1/2 inches, and of thickness equal to that indicated for concrete protection of reinforcement.
 4. Provide reinforcement that is supported and secured together to prevent displacement by construction loads or by placing of wet concrete, and as follows:
 5. Provide supports for reinforcing bars that are sufficient in number and have sufficient strength to carry the reinforcement they support, and in accordance with ACI 318, ACI SP-66 and CRSI 10MSP. Do not use supports to support runways for concrete conveying equipment and similar construction loads.
 - a. Equip supports on ground and similar surfaces with sand-plates.
 - b. Support welded wire reinforcement as required for reinforcing bars.

- c. Secure reinforcements to supports by means of tie wire. Wire shall be black, soft iron wire, not less than 16 gage.
 - d. Reinforcement shall be accurately placed, securely tied at intersections, and held in position during placing of concrete by spacers, chairs, or other approved supports. Point wire-tie ends away from the form. Unless otherwise indicated, numbers, type, and spacing of supports shall conform to ACI SP-66.
 - e. Bending of reinforcing bars partially embedded in concrete is permitted only as specified in ACI SP-66 and ACI 318.
- I. Spacing of Reinforcing Bars
- 1. Spacing shall be as indicated. If not indicated, spacing shall be in accordance with the ACI 318 and ACI SP-66.
 - 2. Reinforcing bars may be relocated to avoid interference with other reinforcement, or with conduit, pipe, or other embedded items. If any reinforcing bar is moved a distance exceeding one bar diameter or specified placing tolerance, resulting rearrangement of reinforcement is subject to preapproval by the Engineer.
- J. Concrete Protection for Reinforcement: Concrete protection shall be in accordance with the ACI 318 and ACI SP-66; provide 3" minimum clear cover as indicated on the plans.
- K. Welding: Welding shall be in accordance with AWS D1.4/D1.4M.

3.05 BATCHING, MEASURING, MIXING, AND TRANSPORTING CONCRETE

- A. ASTM C94/C94M, ACI 301, ACI 302.1R and ACI 304R, except as modified herein. Batching equipment shall be such that the concrete ingredients are consistently measured within the following tolerances: 1 percent for cement and water, 2 percent for aggregate, and 3 percent for admixtures. Furnish mandatory batch ticket information for each load of ready-mix concrete.
- B. Measuring: Make measurements at intervals as specified in paragraphs SAMPLING and TESTING.
- C. Mixing: ASTM C94/C94M, ACI 301 and ACI 304R. Machine mix concrete. Begin mixing within 30 minutes after the cement has been added to the aggregates. Place concrete within 90 minutes of either addition of mixing water to cement and aggregates or addition of cement to aggregates if the air temperature is less than 84 degrees F. Reduce mixing time and place concrete within 60 minutes if the air temperature is greater than 84 degrees F except as follows: if set retarding admixture is used and slump requirements can be met, limit for placing concrete may remain at 90 minutes. Additional water may be added, provided that both the specified maximum slump and water-cementitious material ratio are not exceeded and the required concrete strength is still met. When additional water is added, an additional 30 revolutions of the mixer at mixing speed is required. If the entrained air content falls below the specified limit, add a sufficient quantity of admixture to bring the entrained air content within the specified limits. Dissolve admixtures in the mixing water and mix in the drum to uniformly distribute the admixture throughout the batch. Do not reconstitute concrete that has begun to solidify.
- D. Transporting: Transport concrete from the mixer to the forms as rapidly as practicable. Prevent segregation or loss of ingredients. Clean transporting equipment thoroughly before each batch. Do not use aluminum pipe or chutes. Remove concrete that has segregated in transporting and dispose of as directed.

3.06 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301 Section 5 with the following additions.

1. Form ties shall be of a type that will conform to the reinforcing steel clearance requirements given in the Contract Drawings. Form ties that are to be completely withdrawn shall be coated with a nonstaining bond breaker. Wire ties shall not be permitted.
 2. Forms shall not be reused if there is any evidence of surface wear and tear or defects, which would impair the quality of the surface. Surfaces of forms to be reused shall be cleaned of mortar from previous concreting and of all other foreign material before reuse.
 3. Except as otherwise shown, external corners that will be exposed shall be chamfered by moldings placed in the forms.
- B. Pumping: ACI 304R and ACI 304.2R. Pumping shall not result in separation or loss of materials nor cause interruptions sufficient to permit loss of plasticity between successive increments. Loss of slump in pumping equipment shall not exceed 2 inches at discharge/placement. Do not convey concrete through pipe made of aluminum or aluminum alloy. Avoid rapid changes in pipe sizes. Limit maximum size of course aggregate to 33 percent of the diameter of the pipe. Limit maximum size of well rounded aggregate to 40 percent of the pipe diameter. Take samples for testing at both the point of delivery to the pump and at the discharge end.
- C. Underwater (Tremie) Concrete
1. Tremie concrete is required for underwater placement, where forms or pilings, are not otherwise dewatered to receive concrete. Tremie concrete placement is anticipated for the south coffer cell half-pipe infill, as well as the pipe pile plugs and bulkhead cap if cap concrete is placed at high tide or the plugs are not dewatered.
 2. Deposit underwater (tremie) concrete in a continuous operation.
 3. Tremie concrete shall be deposited in the tremie hopper and in so depositing there shall be no vertical drop greater than 4 feet except where suitable equipment is provided to prevent segregation and where specifically authorized. Sufficient placing capacity shall be provided so that concrete placement can be kept plastic and free of horizontal cold joints while concrete is being placed.
 4. Tremie concrete shall be deposited by a tremie or by a valved tremie. The methods and equipment used shall be subject to approval. Concrete buckets will not be permitted for placement of tremie concrete, although they may be used to transport concrete to the tremie hoppers. The tremie shall be watertight and sufficiently large to permit a free flow of concrete, but it shall not be less than 8 inches in diameter. A funnel-shaped hopper of at least 2 cubic yards in volume shall be required at the top of the tremie. Hoisting equipment for raising and lowering the tremie pipe as the concrete is placed and tools for connecting the tremie pipe sections shall be continuously available and on hand. In lieu of use of a tremie, concrete may be placed using a positive displacement pump and pump line provided the entire operation is approved in writing after a demonstration of its use.
 5. Tremie pipe sections shall be suitably secured together and a gasket used at each joint to prevent leakage. A retrievable traveling plug (go-devil) or a dry pipe with a plate and gasket wired to the bottom to prevent contact of the concrete and the slurry in the tremie shall be required to start each placement. The tremie assembly shall be lowered to rest within 6 inches of the bottom of the excavated socket and/or pile plug bottom form prior to beginning placement. During placement of the concrete, any unnecessary movement of the pipe shall be avoided. The bottom of the tremie pipe shall remain submerged in fresh concrete at all times. Batches of concrete shall be supplied to the tremie pipe at a uniform rate for a continuous flow. The tremie pipe shall be lifted during placement at a rate that will maintain the bottom of the pipe embedded in fresh concrete. It may be

necessary to reduce the amount of embedment as the differential head decreases between the concrete in the tremie pipe and the concrete in the casing. The repeated raising and lowering of the tremie pipe in the fresh concrete to facilitate placement shall be minimized. Placement shall proceed without interruption until the concrete has been brought to the required height.

6. The Contractor shall continuously measure and record the flow during placement with the use of a sounding line. The tremie shall not be moved horizontally during a placing operation except that as the required is reached. Special care shall be taken to ensure that the bottom of the tremie pipe is not lifted out of the fresh concrete. If this occurs, the Contractor shall remove the tremie pipe, insert a dry pipe with a temporary bottom plug, and restart the placement.
 7. Laitance, residual water, and other foreign material rising within the pile casing may be removed while the concrete is still in a plastic state by means of muck bucket or other approved means, as directed by the Engineer. Capture and dispose of removed materials in an approved manner.
 8. Pile plug and shaft tremie concrete that is placed within the forms or pile to full height shall be free of laitance, scum, or other contaminants at the top of the pour. All scum, laitance, and contaminated concrete shall be removed from the top of the concrete as the placement is nearing completion and shall be disposed of properly. The top surface shall be roughened as described in paragraph "Bonding" if another concrete pour will be placed above.
 9. Avoid overfilling and provide measure of capturing concrete that might otherwise be spilled from overfilling.
- D. Cold Weather: ACI 306.1. Do not allow concrete temperature to decrease below 50 degrees F. Obtain approval prior to placing concrete when the ambient temperature is below 40 degrees F or when concrete is likely to be subjected to freezing temperatures within 24 hours. Cover concrete and provide sufficient heat to maintain 50 degrees F minimum adjacent to both the formwork and the structure while curing. Limit the rate of cooling to 37 degrees F in any 1 hour and 50 degrees F per 24 hours after heat application.
- E. Hot Weather: Maintain required concrete temperature using Figure 4.2 in ACI 305R to prevent the evaporation rate from exceeding 1 kg per square meter 0.2 pound of water per square foot of exposed concrete per hour. Concrete, when placed in the forms, shall have a maximum temperature of 90 degrees F. Cool ingredients before mixing or use other suitable means to control concrete temperature and prevent rapid drying of newly placed concrete. Shade the fresh concrete as soon as possible after placing. Start curing when the surface of the fresh concrete is sufficiently hard to permit curing without damage. Provide water hoses, pipes, spraying equipment, and water hauling equipment, where job site is remote to water source, to maintain a moist concrete surface throughout the curing period. Provide burlap cover or other suitable, permeable material with fog spray or continuous wetting of the concrete when weather conditions prevent the use of either liquid membrane curing compound or impervious sheets. For vertical surfaces, protect forms from direct sunlight and add water to top of structure once concrete is set.
- F. Bonding
1. Surfaces of set concrete at joints shall be roughened to an amplitude of 1/4 inches and cleaned of laitance, coatings, loose particles, and foreign matter. Roughen surfaces in a manner that exposes the aggregate uniformly and does not leave laitance, loosened particles of aggregate, nor damaged concrete at the surface.
 2. Obtain bonding of fresh concrete that has set as follows:

- a. At joints between footings and walls or columns, between walls or columns and the beams or slabs they support, and elsewhere unless otherwise specified; roughened and cleaned surface of set concrete shall be dampened, but not saturated, immediately prior to placing of fresh concrete.
- b. At joints in exposed-to-view work; at vertical joints in walls; at joints near midpoint of span in girders, beams, supported slabs, other structural members; in work designed to contain liquids; the roughened and cleaned surface of set concrete shall be dampened but not saturated and covered with a cement grout coating.
- c. Provide cement grout that consists of equal parts of portland cement and fine aggregate by weight with not more than 6 gallons of water per sack of cement. Apply cement grout with a stiff broom or brush to a minimum thickness of 1/16 inch. Deposit fresh concrete before cement grout has attained its initial set.

3.07 WASTE MANAGEMENT

Clean-up of wasted concrete is the Contractor's responsibility.

3.08 SURFACE FINISHES EXCEPT SLAB FINISHES

- A. Defects: Repair surface defects in accordance with ACI 301 Section 5.
- B. Not Against Forms (Top of Walls): Surfaces not otherwise specified shall be finished with wood floats to even surfaces. Finish shall match adjacent finishes.
- C. Formed Surfaces
 1. Tolerances: ACI 117 and as indicated.
 2. As-Cast Rough Form: Provide for surfaces not exposed to view, a surface finish SF-1.0. Patch holes and defects in accordance with ACI 301.
 3. Standard Smooth Finish: Provide for surfaces exposed to public view a surface finish SF-3.0. Patch holes and defects in accordance with ACI 301.

3.09 SLAB FINISHES AND MISCELLANEOUS CONSTRUCTION

- A. ACI 301 and ACI 302.1R, unless otherwise specified. Where straightedge measurements are specified, Contractor shall provide straightedge.
- B. Finish
 1. Place, consolidate, and immediately strike off concrete to obtain proper contour, grade, and elevation before bleedwater appears. Permit concrete to attain a set sufficient for floating and supporting the weight of the finisher and equipment. If bleedwater is present prior to floating the surface, drag the excess water off or remove by absorption with porous materials. Do not use dry cement to absorb bleedwater.
 2. Floated: Use for exterior slabs where not otherwise specified. Finish concrete in accordance with ACI 301 Section 5 for a floated finish.

3.10 JOINTS

Construction Joints: Make and locate joints not indicated so as not to impair strength and appearance of the structure, as approved. Joints shall be perpendicular to main reinforcement. Reinforcement shall be continued and developed across construction joints. Locate construction joints as follows:

1. Maximum Allowable Construction Joint Spacing
 - a. In bulkhead wall cap not more than 60 feet in any horizontal direction.
 - b. In slabs on ground, so as to divide slab into areas not in excess of 1,200 square feet.
2. Approved bulkheads may be used for slabs.

3.11 CURING AND PROTECTION

- A. ACI 301 Section 5, unless otherwise specified. Membrane-forming curing compounds shall not be permitted.
- B. Begin curing immediately following form removal. Avoid damage to concrete from vibration created by blasting, pile driving, movement of equipment in the vicinity, disturbance of formwork or protruding reinforcement, and any other activity resulting in ground vibrations. Protect concrete from injurious action by sun, rain, flowing water, frost, mechanical injury, tire marks, and oil stains. Do not allow concrete to dry out from time of placement until the expiration of the specified curing period. If forms are removed prior to the expiration of the curing period, provide another curing procedure specified herein for the remaining portion of the curing period.
- C. Curing Periods: ACI 301 Section 5. Begin curing immediately after placement. Protect concrete from premature drying, excessively hot temperatures, and mechanical injury; and maintain minimal moisture loss at a relatively constant temperature for the period necessary for hydration of the cement and hardening of the concrete. The materials and methods of curing are subject to approval by the Engineer.
- D. Curing Formed Surfaces: Accomplish curing of formed surfaces, including undersurfaces of girders, beams, supported slabs, and other similar surfaces by moist curing with forms in place for full curing period or until forms are removed. If forms are removed before end of curing period, accomplish final curing of formed surfaces by any of the curing methods specified above, as applicable.
- E. Curing Unformed Surfaces
 1. Accomplish curing of unformed surfaces, such as slabs and other flat surfaces, by moist curing.
 2. To reduce plastic or drying shrinkage cracks, comply with ACI 302.1R, ACI 308, and ACI 305R.
 3. When weather conditions are dry and windy, continue fogging above surface of concrete after the finishing operation until prewetted burlap can be placed over the flatwork surface. Use prewetted burlap to cover all flatwork and keep wet for a minimum of seven days or until the time necessary to attain 85% of the specified compressive strength, as recommended by ACI 308 Section 3.1.3.
 4. Remove water without erosion or damage to the structure.
 5. Ponding or Immersion: Continually immerse the concrete throughout the curing period. Water shall not be more than 20 degrees F less than the temperature of the concrete. For temperatures between 40 and 50 degrees F, increase the curing period by 50%.
 6. Fog Spraying or Sprinkling: Apply water uniformly and continuously throughout the curing period. For temperatures between 40 and 50 degrees F, increase the curing period by 50%.

7. Pervious Sheeting: Completely cover surface and edges of the concrete with two thicknesses of wet sheeting. Overlap sheeting 6 inches over adjacent sheeting. Sheeting shall be at least as long as the width of the surface to be cured. During application, do not drag the sheeting over the finished concrete or over sheeting already placed. Wet sheeting thoroughly and keep continuously wet throughout the curing period.
 8. Protection of Treated Surfaces: Prohibit pedestrian and vehicular traffic and other sources of abrasion at least 72 hours.
- F. Temperature of Concrete During Curing
1. When temperature of atmosphere is 41 degrees F and below, maintain temperature of concrete at not less than 55 degrees F throughout concrete curing period or 45 degrees F when the curing period is measured by maturity. When necessary, make arrangements before start of concrete placing for heating, covering, insulation, or housing as required to maintain specified temperature and moisture conditions for concrete during curing period.
 2. When the temperature of atmosphere is 80 degrees F and above or during other climatic conditions which cause too rapid drying of concrete, make arrangements before start of concrete placing for installation of wind breaks, of shading, and for fog spraying, wet sprinkling, or moisture-retaining covering of light color as required to protect concrete during curing period.
 3. Changes in temperature of concrete shall be uniform and not exceed 37 degrees F in any 1 hour nor 80 degrees F in any 24-hour period.
- G. Protection from Mechanical Injury: During curing period, protect concrete from damaging mechanical disturbances, particularly load stresses, heavy shock, and excessive vibration, and from damage caused by rain or running water.
- H. Protection After Curing: Protect finished concrete surfaces from damage by construction operations.

3.12 FIELD QUALITY CONTROL

- A. Sampling: ASTM C172/C172M. The Contractor-provided Independent Testing Agency will collect samples of fresh concrete to perform tests specified. ASTM C31/C31M for making test specimens. The making of all concrete specimens, slump, temperature, and air content tests shall be performed by an ACI Certified Field Technician.
- B. Testing: All testing shall be performed by the Contractor-provided Independent Testing Agency.
1. Slump Tests: ASTM C143/C143M. Take concrete samples during concrete placement/discharge. The maximum slump may be increased as specified with the addition of an approved admixture provided that the water-cementitious material ratio is not exceeded. Perform tests at commencement of concrete placement, when test cylinders are made, and either for each batch or every 20 cubic yards of concrete (whichever is the greater number of tests).
 2. Temperature Tests: Test the concrete delivered and the concrete in the forms. Perform tests in hot or cold weather conditions (below 50 degrees F and above 80 degrees F) either for each batch or every 20 cubic yards of concrete (whichever is the greater number of tests), until the specified temperature is obtained, and whenever test cylinders and slump tests are made.

3. Compressive Strength Tests: ASTM C39/C39M. Make seven 6 inch by 12 inch or 4 inch by 8 inch test cylinders for each set of tests in accordance with ASTM C31/C31M, ASTM C172/C172M and applicable requirements of ACI 305R and ACI 306R. Take precautions to prevent evaporation and loss of water from the specimen. Test two cylinders at 7 days, two cylinders at 28 days and hold three cylinder in reserve. Take samples for strength tests of each mix design of and for concrete placed each day not less than once a day, nor less than once for each 100 cubic yards of concrete for the first 500 cubic yards, then every 500 cubic yards thereafter, nor less than once for each 5400 square feet of surface area for slabs or walls. For the entire project, take no less than five sets of samples and perform strength tests for each mix design of concrete placed. Each strength test result shall be the average of two cylinders from the same concrete sample tested at 28 days. Concrete compressive tests shall meet the requirements of ACI 318 Section 5.6. Retest locations represented by erratic core strengths. Where retest does not meet concrete compressive strength requirements, submit a mitigation or remediation plan for review and approval by the contracting officer. Repair core holes with nonshrink grout. Match color and finish of adjacent concrete.
4. Air Content: ASTM C173/C173M or ASTM C231/C231M for normal weight concrete. Test air-entrained concrete for air content at the same frequency as specified for slump tests.
5. Strength of Concrete Structure: The strength of the concrete structure will be considered to be deficient if any of the following conditions are identified:
 - a. Failure to meet compressive strength tests as evaluated.
 - b. Reinforcement not conforming to requirements specified.
 - c. Concrete which differs from required dimensions or location in such a manner as to reduce strength.
 - d. Concrete curing and protection of concrete against extremes of temperature during curing, not conforming to requirements specified.
 - e. Concrete subjected to damaging mechanical disturbances, particularly load stresses, heavy shock, and excessive vibration.
 - f. Poor workmanship likely to result in deficient strength.
 - g. Where the strength of the concrete structure is considered deficient submit a mitigation or remediation plan for review and approval by the Engineer.
6. Non-Conforming Materials
 - a. Factors that indicate that there are non-conforming materials include (but not limited to) inadequate compressive strength, excessive slump, excessive voids and honeycombing, concrete delivery records that indicate excessive time between mixing and placement, or excessive water was added to the mixture during delivery and placement. Any of these indicators alone are sufficient reason for the Engineer to request additional sampling and testing.
 - b. Investigations into non-conforming materials shall be conducted at the Contractor's expense. The Contractor shall be responsible for the investigation and shall make written recommendations to adequately mitigate or remediate the non-conforming material. The Engineer may accept, accept with reduced payment, require mitigation, or require removal and replacement of non-conforming material at no additional cost to the Owner.
7. Testing Concrete Structure for Strength

- a. When there is evidence that strength of concrete structure in place does not meet specification requirements or there are non-conforming materials, make cores drilled from hardened concrete for compressive strength determination in accordance with ASTM C42/C42M, and as follows:
- b. Take at least three representative cores from each member or area of concrete-in-place that is considered potentially deficient. Location of cores will be determined by the Engineer.
- c. Test cores after moisture conditioning in accordance with ASTM C42/C42M if concrete they represent is more than superficially wet under service.
- d. Air dry cores, (60 to 80 degrees F with relative humidity less than 60 percent) for 7 days before test and test dry if concrete they represent is dry under service conditions.
- e. Strength of cores from each member or area are considered satisfactory if their average is equal to or greater than 85 percent of the 28-day design compressive strength of the class of concrete.
- f. Fill core holes solid with patching mortar and finished to match adjacent concrete surfaces.
- g. Correct concrete work that is found inadequate by core tests in a manner approved by the Engineer.

3.13 REPAIR, REHABILITATION AND REMOVAL

- A. Before the Engineer accepts the structure, the Contractor shall inspect the structure for cracks, damage, and substandard concrete placements that may adversely affect the service life of the structure. A report documenting these defects shall be prepared which includes recommendations for repair, removal or remediation shall be submitted to the Engineer for approval before any corrective work is accomplished.
- B. Crack Repair: Prior to final acceptance, all cracks in excess of 0.02 inches wide shall be documented and repaired. The proposed method and materials to repair the cracks shall be submitted to the Engineer for approval. The proposal shall address the amount of movement expected in the crack due to temperature changes and loading.
- C. Repair of Weak Surfaces: Weak surfaces are defined as mortar-rich, rain-damaged, uncured, or containing exposed voids or deleterious materials. Concrete surfaces with weak surfaces less than 1/4 inch thick shall be diamond ground to remove the weak surface. Surfaces containing weak surfaces greater than 1/4 inch thick shall be removed and replaced or mitigated in a manner acceptable to the Engineer.
- D. Rejection of Concrete: Concrete with extensive honeycomb including exposed steel reinforcement, cold joints, entrapped debris, separated aggregate, or other defects which affect the serviceability or structural strength will be rejected, unless correction of defects is approved. Obtain approval of corrective action prior to repair.
- E. Failure of Quality Assurance Test Results: Proposed mitigation efforts by the Contractor shall be approved by the Engineer prior to proceeding.

PART 4 - COMPENSATION

4.01 MEASUREMENT

4.02 PAYMENT

***** END OF SECTION *****

SECTION 05 50 13

MISCELLANEOUS METAL FABRICATIONS

PART 1 - GENERAL

1.01 SCOPE

- A. The work covered by this Section includes the furnishing of all material and equipment and the performing of all labor necessary to complete fabrication and installation of miscellaneous metal fabrications as shown on the Contract Drawings and as herein specified or directed by the Engineer.
- B. The Contractor shall coordinate the requirements of all fabricated, embedded, and attached devices, including but not limited to fenders, mooring cleats, anchorages, light poles, ladders, structural framing, and all other items, indicated or not, requiring embedment and/or accommodation of devices made integral with the work.
- C. This work shall include but is not limited to:
 - 1. Mooring cleats/anchorages.
 - 2. Bulkhead wall tie rods and bearing plates.
 - 3. Anchor bolts for light poles, cleats, fenders, and other devices attached to the structures.
 - 4. Ladders fixed to the bulkhead wall cap.

1.02 RELATED SECTIONS

Section 03 31 30	Marine Concrete
Section 31 41 16	Metal Sheet Piling
Section 31 62 16	Steel Pipe Piles

1.03 REFERENCES

- A. The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by the basic designation only.
- B. Unless otherwise indicated the most recent edition of the publication, including any revisions, shall be used.
- C. American Association of State Highway and Transportation Officials (AASHTO)
 - AASHTO M306 (2019) Drainage, Sewer, Utility and Related Castings
- D. American Institute of Steel Construction (AISC)
 - AISC 303 (2016) Steel Construction Manual, 15th Edition, Code of Standard Practice for Steel Buildings and Bridges
- E. American National Standards Institute (ANSI)
 - ANSI A10.3 (2020) Safety Requirements for Powder-Actuated Fastening Systems

ANSI B18.2.1 (2012 (R2021)) Square, Hex, Heavy Hex and Askew Head Bolts and Hex, Heavy Hex, Hex Flange, Lobed Head and Lag Screws (Inch Series), Includes Errata (2013)

ANSI B18.2.2 (2015) Nuts for General Applications: Machine Screw Nuts, Hex, Square, Hex Flange, and Coupling Nuts (Inch Series)

ANSI B18.6.2 (2020) Square Head Set Screws and Slotted Headless Set Screws (Inch Series)

ANSI B18.6.3 (2013) Machine Screws, Tapping Screws, and Metallic Drive Screws (Inch Series)

ANSI B18.21.1 (2009; R 2016) Washers: Helical Spring-Lock, Tooth Lock and Plain Washers (Inch Series)

ANSI B18.22.1 (1965; R2008) Washers: Plain Washers (Inch Series)

F. American Society of Mechanical Engineers (ASME)

ASME BPVC.II.C (2021) Boiler and Pressure Vessel Code: Section II Material Specifications Part C - Welding Rods, Electrodes, and Filler Metals

G. American Society for Nondestructive Testing (ASNT)

ASNT SNT-TC-1A (2020) Recommended Practice

H. ASTM International (ASTM)

ASTM A 6/A 6M (2021) General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling

ASTM A 27/A 27M (2020) Steel Castings, Carbon, for General Application

ASTM A 29/A 29M (2020) General Requirements for Steel Bars, Carbon and Alloy, Hot-Wrought

ASTM A 36/A 36M (2019) Carbon Structural Steel

ASTM A 48/A 48M (2021) Gray Iron Castings

ASTM A 53/A 53M (2020) Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless

ASTM A 123 (2017) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

ASTM A 153 (2016a) Zinc Coating (Hot-Dip) on Iron and Steel Hardware

ASTM A 276 (2013a) Standard Specification for Stainless Steel Bars and Shapes

ASTM A 354 (2017e2) Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners

ASTM A 449 (2020) Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use

ASTM A 514 (2018) High-Yield-Strength Quenched and Tempered Alloy Steel Plate, Suitable for Welding

ASTM A 536 (2019)e1 Ductile Iron Castings

- ASTM A 563 (2021A) Carbon and Alloy Steel Nuts
- ASTM A 572 (2021e1) High-Strength Low-Alloy Columbium-Vanadium Structural Steel
- ASTM A 575 (2020) Steel Bars, Carbon, Merchant Quality, M-Grades
- ASTM A 653 (2020) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- ASTM A 666 (2015) Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
- ASTM A 709 (2018) Structural Steel for Bridges
- ASTM A 722 (2018) High-Strength Steel Bars for Prestressed Concrete
- ASTM A 780 (2020) Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
- ASTM A 992 (2020) Structural Steel Shapes
- ASTM B 221 (2021) Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
- ASTM B 308 (2020) Aluminum-Alloy 6061-T6 Standard Structural Profiles
- ASTM C 881 (2020A) Epoxy-Resin-Base Bonding Systems for Concrete
- ASTM D 1187 (2018) Asphalt-Base Emulsions for Use as Protective Coatings for Metal
- ASTM F 436 (2019) Hardened Steel Washers
- ASTM F 593 (2022) Stainless Steel Bolts, Hex Cap Screws, and Studs
- ASTM F 594 (2022) Stainless Steel Nuts
- ASTM F 1554 (2020) Anchor Bolts, Steel, 36, 55, and 105 ksi Yield Strength
- ASTM F 3125 (2019e2) High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength

I. American Welding Society, Inc. (AWS)

- AWS D1.1 (2020) Structural Welding Code Steel
- AWS D1.2 (2014) Structural Welding Code Aluminum
- AWS D1.5 (2020) Bridge Welding Code
- AWS D3.6 (2017) Underwater Welding
- AWS QC1 (2007) AWS Certification of Welding Inspectors

J. Federal Specifications (FS)

- FS TT-P-664 (Rev. D) Primer Coating, Alkyd, Corrosion-Inhibiting, Lead and Chromate Free, VOC-Compliant

K. Military Specifications and Standards

MIL-PRF-907 (2020) Antiseize Thread Compound, High Temperature

- L. National Association of Architectural Metal Manufacturers (NAAMM)
 - NAAMM AMP 521 (2012) Pipe Railing Manual
 - NAAMM MBG 531 (2017) Metal Bar Grating Manual
- M. Society for Protective Coatings (SSPC)
 - SSPC-SP1(2015; R 2016) Solvent Cleaning
 - SSPC-SP6(2007) Commercial Blast Cleaning

1.04 SUBMITTALS

- A. General: Submit the following in accordance with Section 01 33 00, "Submittals" of these Specifications. Note that approval of submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the Specifications nor from responsibility of errors of any sort in the submittals.
- B. Certifications, test procedures, and other submittals shall show the appropriate ASTM test(s) for each material.
- C. Product Data
 - 1. Adhesive and mechanical (expansion) anchors
 - 2. Anchor bolts and headed anchors
 - 3. Mooring cleats
- D. Submit manufacturer's certified test reports, for each heat, indicating that materials have been tested and certified to meet the specified chemical, mechanical, and section properties prior to delivery at the site. Certifications shall be submitted for all materials, including but not limited to:
 - 1. Adhesive and mechanical (expansion) anchors
 - 2. Anchor bolts and headed anchors
 - 3. High strength structural steel
 - 4. Structural carbon steel
 - 5. Cast steel
- E. Drawings
 - 1. Mooring cleats and anchorage
 - 2. Embedded anchorages, including light poles
 - 3. Ladders
 - 4. Bulkhead tie rods and bearing plates
- F. Instructions
 - Adhesive anchors
- G. Statements
 - 1. Welding procedure qualifications

2. Nondestructive examination (NDE) procedures
 3. NDE personnel certification procedures
 4. Weld inspector certification
 5. Submit inspector certification and NDE personnel certification for record
- H. Certified Welding Inspector, Welding Procedures, Welder, and Welding Operator Qualifications
1. Certified Welding Inspector: Submit qualifications of third-party AWS Certified Welding Inspectors (CWI) proposed for welder qualifications and visual/NDE inspections. Inspectors shall be qualified and certified in accordance with the provisions of AWS QC1, Standard for Qualification and Certification of Welding Inspectors. Do not proceed with welder or welding operator qualifications prior to approval of CWI qualifications.
 2. Specifications and Test Results: Submit copies of the welding procedure specifications, procedure qualifications, welder and welding operator qualifications test results for each type of welding required. Approval of any procedure does not relieve the Contractor of the responsibility for producing acceptable welds.
 3. Certification: Before assigning welders or welding operators to the work, submit their names, together with certification that each individual is performance qualified as specified in paragraph 1.6. Do not start welding work prior to procedure, welder and welding operator qualification approval. The certification shall state the type of welding and positions for which each welding procedure welder and welding operator is qualified, the code and procedure under which each is qualified, date qualified, and the firm and individual certifying the qualification tests.
- I. Records
- Weld Identifications: Submit a list of the welder's names and symbol for each welder. To identify welds, submit written records indicating the location of welds made by each welder or welding operator.

1.05 QUALIFICATION OF WELDERS

Qualify welders in accordance with AWS D1.1, or AWS D3.6 where applicable, using procedures, materials, and equipment of the type required for the work.

1.06 QUALITY ASSURANCE

- A. Welding Procedures, Welders and Welder Qualifications: Develop and qualify procedures for welding metals included in the work. Do not start welding until welding procedures, welders, and welding operators have been qualified. Perform qualification testing by a Certified Weld Inspector (CWI) or testing laboratory approved by the Engineer. Notify the Engineer at least 24 hours in advance of the time and place of the tests. When practicable, perform the qualification tests at or near the work site. Maintain current records of the test results obtained in welding procedure, welder and welding operator performance qualifications, and nondestructive examination (NDE) procedures. These records shall be readily available at the site for examination by the Engineer. Qualify the procedures for making transition welds between different materials or between plates or pipes of different wall thicknesses. The choice of welding process shall be the responsibility of the Contractor.
- B. Previous Welding Procedures and Welder Qualifications: See Paragraph 1.6.C.2 for requirements of previously qualified welding procedures and Paragraph 1.6.C.4 for requirements of previously qualified welders and welding operators.

- C. Performance: The Contractor shall be responsible for the quality of joint preparation, welding, and examination. Clearly identify and record materials used in the welding operations. The examination and testing defined in this Specification are minimum requirements. Provide additional examination and testing as necessary to achieve the quality required.
1. Welding Procedures Qualification: Qualification of the welding procedures for each group of materials to be welded is required as indicated in AWS D1.1. Qualification of the underwater welding procedures for each group of materials to be welded is required as indicated in AWS D3.6. Welding procedure qualifications shall be newly qualified procedures done and observed under the supervision of a certified weld inspector (CWI) or approved independent testing laboratory, except as noted below. Record in detail and qualify the "Welding Procedure Specification" for every welding procedure proposed. Qualification for each welding procedure shall conform to the requirements of AWS Standards and to this Specification. The welding procedures shall specify end preparation for weld, including cleaning, alignments, and root openings. Preheat, inter-pass temperature control, and post-heat treatment of welds shall be as required by AWS, unless otherwise indicated or specified. Welding procedure qualifications shall be identified individually and referenced on the shop drawings or suitably keyed to the contract drawings.
 2. Previous Welding Procedures Qualification: Evidence of previous welding procedure qualifications shall be accepted for review if the procedure was qualified under AWS D1.1 or AWS D3.6 standard prequalified weld procedure.
 3. Welder and Welding Operator Performance Qualification: Qualify each welder and welding operator assigned to work covered by this Specification by performance tests using equipment, positions, procedures, base metals, and electrodes or bare filler wires from the same specification, classification, or group number that will be encountered on his assignment. All welders and welding operator shall be newly qualified for this project under AWS D1.1 or AWS D3.6 requirements and all performance qualifications and testing shall be under the observation of CWI or approved testing laboratory. The CWI shall document observation of the qualification process, including cleaning, preparation, preheat, deposition, and post-heat treatment, in a signed report, including daily logs and photographs, to be submitted with the welder qualification certifications that are submitted for approval. Welders or welding operators who make acceptable procedure qualification tests will be considered performance-qualified for the welding procedure used. Determine performance qualification in accordance with AWS D1.1 and as specified herein. Determine performance qualification for underwater welding in accordance with AWS D3.6 and as specified herein.
 4. Renewal of Welders and Welding Operators Qualification: Evidence of previous welder or welding operator qualifications will not be accepted for approval. All welders and welding operators shall be newly certified under AWS D1.1 or AWS D3.6 procedures described herein for this Contact following Notice to Proceed. Qualification shall be conducted under supervision of third party AWS Certified Welding Inspector (CWI) qualified and certified in accordance with the provisions of AWS QC1, Standard for Qualification and Certification of Welding Inspectors.
 5. Qualification of Inspection and Nondestructive Examination (NDE) Personnel.
 6. Qualify Inspection and nondestructive examination personnel in accordance with the following requirements:
 - a. Inspector Certification: Qualify welding inspectors in accordance with AWS QC1.
 - b. NDE Personnel Certification Procedures: Certify NDE personnel and establish a written procedure for the control and administration of NDE personnel training, examination, and certification. Base procedures on appropriate specific and

general guidelines of training and experience recommended by ASNT SNT-TC-1A, Supplement C-Ultrasonic.

1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Protect from corrosion, deformation, and other types of damage. Store items in an enclosed area free from contact with soil and weather. Remove and replace damaged items with new items.
- B. Weld Material: Deliver filler metals, electrodes, fluxes, and other welding materials to the site in manufacturer's original packages and store in a dry space until used. Label and design packages properly to give maximum protection from moisture and to assure safe handling.

1.08 ENVIRONMENTAL

Do not perform welding when the quality of the completed weld could be impaired by the prevailing work or weather conditions per AWS D1.1. The approved weld inspector will determine when the weather or working conditions are unsuitable for welding.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Anchor Bolts, Nuts and Washers
 - 1. Adhesive Anchor Bolts: Adhesive formula shall conform to the requirements of paragraph 2.1 M, below. Minimum pull out and shear capacity of the adhesive system shall exceed the ultimate capacity of the anchor.
 - 2. Anchor bolts for Light Poles and Mooring Cleats shall conform to the requirements of ASTM F 1554, Grade 55 or better, as required by design.
 - 3. Anchor bolts unless otherwise noted or specified, shall conform to ASTM A 449. Where exposed, shall be of the same material, color, and finish as the metal to which applied.
 - 4. Bolts, Nuts, Studs and Rivets: ASMC/ANSI B18.2.2 or ASTM F 3125/F 3125M as noted
 - 5. Powder Driven Fasteners: Follow safety provisions of ANSI A10.3
 - 6. Screws: ANSI B18.2.1, ANSI B18.6.2, and ANSI B18.6.3
 - 7. Washers: Provide plain washers to conform to ANSI B18.22.1. Provide beveled washers for American Standard beams and channels, square or rectangular, tapered in thickness, and smooth. Provide lock washers to conform to ANSI B18.21.1
- B. High Strength Structural Steel: ASTM A 572, Grade 50
- C. Hot-rolled Carbon Steel Bars and Bar-shapes: ASTM A 575, Grade as selected by the fabricator.
- D. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B and AWS D1.1
- E. Structural Carbon Steel: ASTM A 992 – Unless otherwise noted.
- F. Welded Studs: AWS D1.1, Section 7 and AWS D1.5
- G. Plate Washers: ASTM A 514, Grade 100

- H. Bulkhead wall tie rods: ASTM A615, Grade 75 or 80
- I. Bulkhead wall tie rod anchor plates: ASTM A572 Grade 50
- J. Nuts and turnbuckles for bulkhead wall tie rods: Per manufacturer recommendation. Provide 100% of rod ultimate strength.
- K. Ladder framing and hardware: See Paragraph 2.05 of this Section.
- L. Fenders and hardware: See Paragraph 2.06 of this Section.
- M. Adhesive Formula

Adhesive Formula: Minimum pull out and shear capacity of the adhesive system shall exceed the ultimate capacity of the anchor. The adhesive formula shall meet one of the following adhesive types:

- a. Epoxy Adhesives: Adhesives shall be a cartridge type, two-component, solid epoxy-based system dispensed and mixed through a static mixing nozzle supplied by the manufacturer. The adhesive shall meet the minimum requirements of ASTM C 881 Type I, II, IV and V, Grade 3, Class B and C. Acceptable installation and performance temperature ranges shall be verified with manufacturer's literature prior to installation. Epoxy adhesives shall have an evaluation report issued by ICC-ES and be tested in accordance with ICC-ES's Acceptance Criteria for Adhesive Anchors in Concrete and Masonry Elements (AC 58) for the following:
 - i. Seismic and wind loading
 - ii. Long term creep at elevated temperatures
 - iii. Static loading at elevated temperatures
 - iv. Damp and water-filled holes
 - v. Freeze-thaw conditions
 - vi. Critical and minimum edge distance and spacing
- b. Encapsulated Adhesives: Capsule shall be a two-component, vinylester based adhesive capsule-within-a-capsule system supplied in manufacturer's standard packaging. The capsule is placed in the hole and the resin and initiator components are combined when the rod or rebar is driven to the bottom of the hole through the capsule. No spinning or insert end preparation shall be required for proper installation. Acceptable installation and performance temperature ranges shall be verified with manufacturer's literature prior to installation. Capsule adhesives shall be tested in accordance with ICC-ES's Acceptance Criteria for Adhesive Anchors in Concrete and Masonry Elements (AC 58) for the following:
 - i. Long term creep at elevated temperatures
 - ii. Critical and minimum edge distance and spacing
- c. Adhesive Limitations:
- d. Installation Temperature: When the base material temperature drops below 40 degrees F, only Acrylic Adhesives shall be used for adhesive installations. See manufacturer's instructions for additional minimum temperature requirements.

- iii. Installation Temperature: When the base material temperature drops below 40 degrees F, only Acrylic Adhesives shall be used for adhesive installations. See manufacturer's instructions for additional minimum temperature requirements.
- iv. Hollow Substrates: The adhesive manufacturer's screen tubes shall be used for adhesive installations into hollow substrate. Encapsulated Adhesives shall not be used in hollow substrate applications.
- v. Moisture: Encapsulated Adhesives shall not be used when moisture is present in or around hole.
- vi. Oversized Holes: Refer to manufacturer's information if drilled hole size is larger than what is recommended.
- vii. Core-Drilled Holes: Refer to manufacturer's information if holes are drilled with a core-drill bit.

N. Mooring Cleats

1. Metals

- a. Mooring cleats shall be new, cast steel cleats with the length specified in the Contract Drawings. Cleat material shall be stress-relieved cast steel conforming to ASTM A 27.

2. Coatings

- a. Mooring cleats shall not be galvanized and shall be delivered to the site in a primed condition.
- b. Surface Preparation: Prepare surfaces to be painted and/or coated in accordance with coating manufacturer's recommendations. Wash cleaned surfaces, which have become contaminated with rust, dirt, oil, grease, or other contaminants with solvents until thoroughly clean. Cleats shall be cleaned of any grease or other foreign matter with a suitable degreaser before applying coatings.
- c. Priming: Shop apply one coat of zinc-rich primer.
- d. Top Coat: Field apply one coat or more top coats as needed to provide complete coverage, in accordance with manufacturer's printed instructions. Top coat shall be an Acrylic Aliphatic Polyurethane, Carboline Carbothane 134 HS, or approved equal, applied to a DFT of 2 mils, in accordance with the manufacturer's recommendations. Color: Safety Yellow.

2.02 FABRICATION FINISHES

A. Galvanize: All steel fabrications and hardware, unless indicated otherwise.

B. Galvanizing

- 1. Bolts, Tie rods, Nuts, and Washers: ASTM A 153, Class C or D as applicable

2. Plates and Structural Shapes: ASTM A 123, Thickness Grade 100
 3. Hot-dip galvanize items specified to be zinc-coated, after fabrication where practicable
- C. Surface Preparation: Blast clean surfaces in accordance with SSPC-SP6. Clean surfaces which become contaminated with rust, dirt, oil, grease, or other contaminants with solvents in accordance with SSPC-SP1. Steel to be embedded in concrete shall be free of dirt and grease. Do not galvanize bearing surfaces, including contact surfaces within friction-type joints, but coat with rust preventative applied in the shop.
- D. Repair of Zinc-Coated Surfaces: Repair damaged surfaces with galvanizing repair method and paint conforming to ASTM A 780 or by the application of stick or thick paste material specifically designed for repair of galvanizing, as approved by the Engineer. Clean areas to be repaired and remove the slag from the welds. Heat surfaces to which stick or paste material is applied, with a torch to a temperature sufficient to melt the metallics in stick or paste; spread the molten material uniformly over surfaces to be coated and wipe the excess material off.
- E. Nonferrous Metal Surfaces: Protect by plating, anodic, or organic coatings.
- F. Bearing surfaces for prestressed concrete bearing plates and beam seat bearing surfaces shall be finished with epoxy-resin with integral grit. See plans for additional requirements.

2.03 MISCELLANEOUS PLATES AND SHAPES

- A. Provide for items that do not form a part of the structural steel framework, such as miscellaneous mountings, frames, and connections. Provide with connections and fastener welds as indicated.
- B. Mounting plates and plate washers shall conform to ASTM A 514, Grade 100, galvanized.

2.04 WELDING MATERIALS

Comply with ASME BPVC SEC II-C. Welding equipment, electrodes, welding wire, and fluxes shall be capable of producing satisfactory welds when used by a qualified welder or welding operator using qualified welding procedures.

2.05 LADDERS

- A. Hardware shall be stainless steel Type 316. Bolts shall be ASTM F593, Group 2. Nuts shall be ASTM F594, Group 2. Flat washers shall be cut from Type 316 stainless steel plate that conforms to the provisions in ASTM A666.
- B. Steel shapes and plates shall conform to stainless steel Type 316 and ASTM A276.

2.06 FENDERS

- A. Hardware shall be stainless steel Type 316. Bolts shall be ASTM F593, Group 2. Nuts shall be ASTM F594, Group 2. Flat washers shall be cut from Type 316 stainless steel plate that conforms to the provisions in ASTM A666.
- B. Fenders shall be new rubber D-bore of the size specified in the Contract Drawings.

PART 3 - EXECUTION

3.01 QUALITY CONTROL

- A. Fabrication: Prior to shipment, all miscellaneous metal fabrications shall be examined by the fabricator and/or manufacturer for compliance with the appropriate requirements of this Specification. Noncompliance with any specified requirement or presence of any defects preventing or lessening maximum efficiency shall constitute cause for rejection.
- B. The Contractor shall examine each miscellaneous metal fabrication prior to installation and note any damage or defects. Any rejected material shall be segregated and removed from the project site. Any material damaged during Contractor handling and installation shall be repaired in accordance with manufacturer's recommendations or replaced at no additional cost to the Owner.

3.02 INSTALLATION

Install items at locations indicated, according to manufacturer's instructions. Items listed below require additional procedures.

3.03 ANCHORAGE, FASTENINGS, AND CONNECTIONS

- A. Provide anchorage where necessary for fastening miscellaneous metal items securely in place. Include for anchorage not otherwise specified or indicated: expansion shields or adhesive anchors for concrete; machine and carriage bolts for steel. Do not use wood plugs in any material. Provide non-ferrous attachments for non-ferrous metal. Make exposed fastenings of compatible materials, generally matching in color and finish, to which fastenings are applied. Conceal fastenings where practicable.
- B. Frames: The Contractor shall provide all reinforcing steel, as recommended by the manufacturer, required for properly mounting frames in concrete, whether shown or not on the contract drawings.

3.04 BUILT-IN WORK

Form for anchorage metal work built-in with concrete, or provide with suitable anchoring devices as indicated or as required. Furnish metal work in ample time for securing in place as the work progresses.

3.05 FINISHES

- A. Galvanize and paint items as indicated on the Contract Drawings and as specified herein. Surfaces shall be cleaned per the coating manufacturer's recommendations. Paint shall be applied at a thickness as recommended by the manufacturer for exposure to a marine environment.
- B. Field Preparation: Remove rust preventive coating just prior to field erection, using a remover approved by the rust preventive manufacturer. Surfaces, when assembled, shall be free of rust, grease, dirt and other foreign matter.
- C. Environmental Conditions: Do not clean or paint surfaces when damp or exposed to foggy or rainy weather, when metallic surface temperature is less than 5 degrees F above the dew point of the surrounding air, or when surface temperature is below 45 degrees F or over 95 degrees F, unless approved by the Engineer.

- D. Dissimilar Materials: Where dissimilar metals are in contact, protect surfaces with a coat conforming to FS TT-P-664 to prevent galvanic or corrosive action. Where aluminum is in contact with concrete, mortar, or absorptive materials subject to wetting, protect with ASTM D 1187, asphalt-base emulsion.

3.06 BOLTED CONSTRUCTION

- A. Field treat damaged galvanized finish with two coats of high zinc dust oxide paint, cold galvanizing compounds or approved equal conforming to the requirements of ASTM A 780. In addition, all exposed threaded surfaces shall be painted with two coats of high zinc dust oxide paint after installation of unit.
- B. Anti-Seize Compound: The Contractor shall coat threads of all attachment bolts with an anti-seize compound, conforming to MIL-PRF-907, prior to applying washers and nuts. Recoat any bolt thread projection beyond nut after final tightening.

3.07 WELDING

- A. Perform welding, welding inspection, and corrective welding, in accordance with AWS D1.1 unless noted below. Use continuous welds on all exposed connections. Grind visible welds smooth in the finished installation.
- B. Welding: Do not deviate from applicable codes, approved procedures and approved shop drawings without prior written approval from the Engineer. Materials or components with welds made off the site will not be accepted if the welding does not conform to the requirements of this Specification unless otherwise specified. Assign each welder or welding operator an identifying number, letter, or symbol that shall be used to identify his welds. Each welder or welding operator shall apply his mark adjacent to his weld using an approved rubber stamp or felt-tipped marker with permanent, weatherproof ink or other approved methods that do not deform the metal. For seam welds, place identification marks adjacent to the welds at 3-foot intervals. Confine identification by die stamps or electric etchers to the weld reinforcing crown, preferably in the finished crater.
- C. Welding Operators: Perform welding in accordance with qualified procedures using qualified welders and welding operators.
- D. Examinations and Tests
 1. The Contractor is responsible for providing all weld tests.
 2. Visual and nondestructive examinations shall be performed by a third party AWS Certified Welding Inspector (CWI) qualified and certified in accordance with the provisions of AWS QC1, Standard for Qualification and Certification of Welding Inspectors to detect surface and internal discontinuities in completed welds. The CWI shall be approved by the Engineer prior to the start of welding operations. Visual and ultrasonic examination shall be required as specified. When examination and testing indicates defects in a weld joint, a qualified welder shall repair the weld in accordance with the Paragraph "Corrections and Repairs" of this Section.
 3. Visual Examination: Visually examine 100% of welds as follows:
 - a. Before Welding: For compliance with requirements for joint preparation, placement of backing rings or consumable inserts, alignment and fit-up, and cleanliness.
 - b. During Welding: For conformance to the qualified welding procedure.

- c. After Welding: For cracks, contour and finish, bead reinforcement, undercutting, overlap, and size of fillet welds.
 4. Nondestructive Examination (NDE): NDE shall be in accordance with written procedures. Procedures for ultrasonic tests and methods shall conform to AWS D1.1 and for underwater welding procedures for ultrasonic tests and methods shall conform to AWS D3.6. In addition to the information required in AWS, the written procedures shall include:
 - a. Timing of the nondestructive examination in relation to the welding operations
 - b. Safety precautions
 5. 10 Percent NDE: All steel welding shall be subjected to 10 percent NDE unless noted otherwise. Additional testing may be required if unsatisfactory results are obtained.
- E. Acceptable Standards
 1. Visual: The following indications are unacceptable:
 - a. Cracks – external surface
 - b. Undercut on surface which is greater than 1/32 inch deep
 - c. Lack of fusion on surface
 - d. Convexity of fillet weld surface greater than 10 percent of longest leg plus 1/32 inch
 - e. Concavity in fillet welds greater than 1/16 inch
 - f. Fillet weld size less than indicated or greater than 1-1/4 times the minimum specified fillet leg length
 2. Ultrasonic Examination: Linear type discontinuities are unacceptable if the amplitude exceeds the reference level and discontinuities have lengths which exceed 3/4-inch. Discontinuities interpreted to be cracks, lack of fusion, or incomplete penetration are unacceptable regardless of length.
- F. Corrections and Repairs

Remove defects and replace welds as specified. Repair defects discovered between weld passes before additional weld material is deposited. Wherever a defect is removed, a repair by welding is required, and the affected area shall be blended into the surrounding surface eliminating sharp notches, crevices, or corners. After defect removal is complete and before rewelding, reexamine the area by the same test methods which first revealed the defect to ensure that the defect has been eliminated. After rewelding, reexamine the repaired area by the same test methods originally used for that area. For repairs to base material, the minimum examination shall be the same as required for butt welds. Indication of a defect shall be regarded as a defect unless reevaluation by NDE or by surface conditioning shows that no unacceptable indications are present. The use of foreign material to mask, fill in, seal, or disguise welding defects will not be permitted.

3.08 FIELD QUALITY CONTROL

- A. Contractor shall perform field tests, and provide labor, equipment, and incidentals required for testing. The Engineer shall be notified in writing of defective welds within 7 working days of the date of the weld inspection.
- B. Welds

1. Visual Inspection: AWS D1.1. Furnish the services of AWS-certified welding inspectors for fabrication and erection inspection and testing and verification inspections. Welding inspectors shall visually inspect and mark welds, including fillet welds and returns.
2. Non-Destructive Testing: If more than 20% of welds made by a welder contain defects identified by testing, then all welds made by that welder shall be tested by radiographic or ultrasonic testing, as approved by the Engineer. When all welds made by an individual welder are required to be tested, magnetic particle testing shall be used only in areas inaccessible to either radiographic or ultrasonic testing. Retest defective areas after repair.

PART 4 - COMPENSATION

4.01 MEASUREMENT

4.02 PAYMENT

***** END OF SECTION *****

SECTION 09 97 13

COATING OF STEEL WATERFRONT STRUCTURES

PART 1 - GENERAL

1.01 SCOPE

Coating of steel waterfront structures consists of the installation of a coating component to protect steel waterfront structures from oxidation, marine growth, and other environment-related phenomena.

1.02 RELATED WORK

Section 31 41 16

Metal Sheet Piling

1.03 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. Unless otherwise indicated, the most recent edition of the publication, including any revisions, shall be used.
- B. American Institute of Steel Construction (AISC)
 - AISC SPE Sophisticated Paint Endorsement
- C. ASTM International (ASTM)
 - ASTM D7091 (2021) Standard Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nondestructive Coatings Applied to Non-Ferrous Metals
 - ASTM E376 (2019) Measuring Coating Thickness by Magnetic-Field or Eddy-Current (Electromagnetic) Test Methods
- D. National Association of Corrosion Engineers (NACE)
 - NACE RP0188 (2006) Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrate
- E. Association for Materials Protection and Performance (AMPP)
 - SSPC PS 11.01 (1982; E 2004) Black (or Dark Red) Coal Tar Epoxy Polyamide Painting System
 - SSPC Paint 16 (2006; E 2004) Coal Tar Epoxy Polyamide, Black (or Dark Red) Coating
 - AMPP QP 3 (2010) Shop Application of Complex Protective Coating
 - SSPC SP 1 (2015) Solvent Cleaning
 - SSPC SP 10/NACE No. 2 (2007) Near-White Blast Cleaning

1.04 SUBMITTALS

- A. General: Submit the following in accordance with Section 01 33 00, "Submittals" of these Specifications. Note that approval of submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the Specifications nor from responsibility of errors of any sort in the submittals.
- B. Product Data
 - 1. Coating material manufacturer's data
 - 2. Coating material manufacturer's application instructions
- C. Procedures
 - 1. Coating repair procedures
 - 2. Quality control procedures
- D. Inspection Reports
 - 1. Dry film thickness measurements
 - 2. Holiday test results
- E. Certificates
 - 1. Shop coating contractor qualifications
 - 2. Shop coating inspector qualifications

1.05 QUALITY ASSURANCE

Shop coating contractor shall possess a current AMPP QP 3 or AISC SPE certification. Application of coating in the shop and in the field shall be done under the supervision of an experienced coating inspector. Contractor shall submit Coating Manufacturer/Installer dry film thickness measurements and holiday testing results prior to delivery of steel pile or pipe to site. Contractor shall visually inspect steel pile and pipe for damaged coating prior to installation. Testing and inspection shall be in accordance with paragraph titled "Quality Control" of this section.

Shop coating inspector shall be an AMPP Certified Coatings Inspector (CIP Level 2).

1.06 ENVIRONMENTAL CONDITIONS

Start work only when ambient and curing temperatures are within limits of coating manufacturer's recommendations and at least 5 degrees F above dew point temperature. Do not clean or apply exterior coatings when damp or exposed to foggy, rainy, or snowy weather, when relative humidity is outside the humidity ranges required by the coating manufacturer, when metallic surface temperature is less than 5 degrees above the dew point of the surrounding air, or when surface temperature is below 45 degrees F or over 95 degrees F, unless approved by the Owner's Representative.

1.07 SAFETY AND HEALTH PRECAUTIONS

Materials listed in this section contain coal tar pitch volatiles, which are toxic. Follow safety procedures as recommended by manufacturer. Work in a well-ventilated area. Provide, and require workers to use impervious clothing, gloves, face shields (8-inch minimum), and other appropriate protective clothing necessary to prevent eye and skin contact with coating materials. Keep coatings away from heat, sparks, and flame.

PART 2 - PRODUCTS

2.01 COATING SYSTEMS

- A. Coating: Provide catalyst component(s) for coating(s) specific for resin component(s). Where allowed, use thinners which are compatible with the coating. All coating materials must be supplied by one supplier.
- B. Coal Tar Epoxy-Polyamide:
 - 1. System: SSPC PS 11.01
 - 2. Paint: SSPC Paint 16 Black

PART 3 - EXECUTION

3.01 CLEANING AND PREPARATION OF SURFACES

- A. Solvent Cleaning: SSPC SP 1. Remove visible oil or grease first by scraper. Then remove the remaining oil and grease by wiping or scrubbing the surface with rags or brushes wetted with solvent. Use clean solvent and clean rags or brushes for the final wiping.
- B. Blast Cleaning: SSPC SP 10/NACE No. 2. After solvent cleaning, complete surface preparation by near-white blast cleaning. Remove residual dust from blasted surface by blowing with dry, oil-free air, vacuuming, or sweeping. Provide surface profile of at least 1 1/2-mil thickness.
- C. Additional Preparation: After blast cleaning, surface imperfections that remain shall be removed as necessary to provide a holiday-free coating. After blast cleaning and any additional preparation, remove visible oil, grease, and drawing and cutting compounds by solvent cleaning in accordance with SSPC SP 1.

3.02 PROPORTIONING AND MIXING OF COATING SYSTEM

- A. Proportioning of Epoxy-Polyamide System: Epoxy-polyamide coatings shall consist of a two-component system that includes a pigmented polyamide resin, Component A and an epoxy resin, Component B. Mix both components in a ratio of 1 to 1 by volume. Do not thin coatings when doing so will result in total volatile organic compounds exceeding limits enacted by local air pollution control district. When thinning is allowed and is necessary, such as during cold temperature application or to improve application characteristics, add up to one pint of ethylene glycol monoethyl (EGM) ether for each gallon of the coating.
- B. Mixing of Epoxy-Polyamide System: Mix components of coating by power stirring until a smooth, uniform consistency results. Stir coating periodically during its induction period. Follow Table 1 for induction time and pot life of mixed batches.

3.03 COATING APPLICATION

- A. Apply primer coating to dry surfaces not more than 4 hours after near-white blast cleaning. Apply coats of each system so that finished surfaces are free from runs, sags, brush marks, and variations in color.
- B. Application Method: Allow previous coat to dry to tack-free condition but not more than 72 hours before applying next coat. Under conditions of direct sunlight or elevated ambient temperatures of 90 degrees F or greater, limit inter-coat drying period to a maximum of 24 hours.

- C. Repair of Defects: Repair detected coating holidays, thin areas, and exposed areas damaged prior to or during installation by surface treatment and application of additional coating or by manufacturer's recommendations. Allow a period of at least 72 hours to pass following final coat before placing in immersion service.
- D. Coal Tar Epoxy-Polyamide System: Apply a minimum of two (2) coats, each coat at a dry film thickness (DFT) of no less than 8-mils.
- E. Dry Film Thickness: Provide total system minimum dry film thickness of 16 mils. Measure using a magnetic gage.

3.04 SURFACES TO BE COATED

- A. Steel Bulkhead Wall Piling: Coat steel sheet piles within the limits specified on construction drawing S-001.
- B. Steel Pipe Pile Deadman Piling: Deadman piling shall not be coated.
- C. South Cofferd Cell Steel Half-Pipe Piling: Half-pipe piling shall not be coated.

3.05 QUALITY CONTROL

- A. Holiday Testing: Prior to shipping, test 100% of coated surfaces for holidays in total coating system in accordance with NACE RP0188. Noted holidays shall be repaired in accordance with the Manufacturer's procedures.
- B. Dry Film Thickness: After repair of holidays, measure dry film thickness using a magnetic dry film thickness gage in accordance with ASTM D7091 and ASTM E376. If any region of coated surface has insufficient coating thickness or holidays, the coating on that region shall be repaired with an approved coal tar epoxy product. Re-measure after an additional coat is applied, if necessary to meet minimum coating thickness requirements.
- C. Test Results: Submit report of coating test results. Note defective areas and corrective measures taken.

END OF SECTION

SECTION 31 00 00

EARTHWORK

PART 1 - GENERAL

1.01 SCOPE

- A. The work covered by this Section includes furnishing all material and equipment and performing all labor to complete all earthwork as shown on the Contract Drawings and as herein specified or directed by the Engineer.
- B. The work covered by this Section includes but is not limited to the following:
 - 1. Excavating behind existing bulkhead and coffer cells for new construction and for pressure relief.
 - 2. Excavating inside existing coffer cells for construction and to enable their demolition
 - 3. Removing from the site and disposing of temporary sheeting and shoring and excess Excavation including unsuitable material, construction debris, and demolition.
 - 4. Installation and removal of temporary guardrails and barricades around excavations.
 - 5. All excavations required for underground vaults, utilities, or other structures.
 - 6. Backfilling of excavations behind the new bulkhead and other existing structures to remain.
 - 7. Sediment, erosion, and turbidity control measures.
 - 8. Excavation and backfill progress and completion surveys.

1.02 RELATED SECTIONS

Section 02 41 00

Demolition

1.03 DEFINITIONS

- A. Excavation consists of the removal of material encountered to subgrade elevations and the reuse or disposal of materials removed, not provided under Section 205 of ALDOT specifications" or called for under demolition on the Contract Drawings.
- B. Unclassified Excavation: The removal of all soil, paving materials, shale, rock, boulders, existing foundations, fill and every kind of subsurface condition encountered in the contract area, whether manmade or naturally occurring.
- C. Miscellaneous Excavation: The digging of extra test pits as approved by the Engineer.
- D. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, or sub-ballast.
- E. Suitable Onsite Material: Soil material obtained on-site that meets or exceeds the criteria listed in subparagraph 2.01.B of this Section.
- F. Select Borrow: Soil material obtained off-site when sufficient approved soil material – Suitable Onsite Material – is not available from on-site excavations.

- G. Undercutting of Unsuitable Material: The authorized Excavation of material classified as unsuitable below the sub-grade elevation.
- H. Unauthorized Excavation: The removal of materials beyond indicated subgrade elevations, trench payment width, or dimensions without direction by the Engineer. Unauthorized Excavation, as well as remedial work directed by the Engineer, shall be at the Contractor's expense.
- I. Structures: Footings, foundations, slabs and electrical appurtenances, or other man-made stationary features constructed above or below ground surface.
- J. Utilities: Onsite underground pipes, conduits, ducts, and cables, as well as underground services within -the project limit.
- K. Dust Control: Controlling dust blowing and other movement on construction sites and roads due to construction equipment.

1.04 REFERENCES

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M36	Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains
AASHTO M43	Sizes of Aggregate for Road and Bridge Construction
AASHTO T180	Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and 457-mm (18-in.) Drop

American Society for Testing and Materials (ASTM)

ASTM D 2487	Classification of Soils for Engineering Purposes (Unified Soil Classification System)
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1.05 SUBMITTALS

- A. General: Submit the following in accordance with the 01 33 00, "Submittals" of these Specifications. Note that approval of submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the Specifications nor from responsibility of errors of any sort in the submittals.
- B. Certificate of supply from borrow source, approved by, ALDOT soil testing lab that the material meets the Specification requirements.
- C. Test Reports: In addition to test reports required under Field Quality Control, submit the following:
 - 1. Laboratory analysis of each soil material proposed for fill and backfill from on-site and borrow sources.
 - 2. One optimum moisture-maximum density curve and sieve analysis results for each soil material
- D. Material certifications for Sediment and Erosion Control Devices.
- E. Submit the design of any required support of excavation systems for the approval of the Engineer. Provide layout drawings for the designed system and other data prepared and sealed

by a Registered Professional Engineer licensed in the State of Alabama. System design and calculations shall be in accordance with AASHTO standards and acceptable to local authorities having jurisdiction. Submit trench box manufacturer certification that the equipment will sustain the anticipated loading and comply with AASHTO standards.

- F. Delivery Tickets: When requested by the Engineer, submit delivery tickets with each load of backfill material.
- G. Qualifications of the Independent Third-Party Inspection Agency to be employed by the Contractor.
- H. Description of guardrails and barricades used to protect the sides of trenches and excavations.
- I. Disposal logs for excavated material deemed unsuitable for backfill and disposed offsite. Logs shall be accompanied by the test reports for the material.
- J. Progress and Final Excavation/Backfill Surveys:
 - 1. Submit progress surveys of excavated grades and backfilled grades accompanying each request for payment based on progress made in excavation or backfilling.
 - 2. At the completion of excavation to the grades specified in the Contract Drawings, submit final excavation survey to confirm conformance with the Drawings and establish the required backfill volume based on actual excavation performed.
 - 3. At the completion of backfilling to the grades specified in the Contract Drawings, submit final backfilling survey to confirm conformance with the Drawings.

1.06 QUALITY ASSURANCE

- A. Inspection Agency: An independent third party, for inspection of soil compaction shall be provided by the Contractor. Agency shall employ National Institute for Certification in Engineering Technologies (NICET) Level II technicians certified in geotechnical engineering technology/construction or construction materials testing/soils to perform testing specified herein.
- B. The Agency's responsibilities shall include:
 - 1. Having an Inspector present on-site during all earthwork operations.
 - 2. Approving all backfilling procedures and mechanical compaction equipment.
 - 3. Verifying compaction by in-place density tests. Tests shall be submitted to the Engineer for review. A minimum of one density test per lift shall be performed for each 2,500 square feet of lift area, or more often if directed by the Engineer.
 - 4. The Contractor shall notify the Inspection Agency three days before the beginning of work so that the Inspection Agency can have a soils engineer and/or soils technician on the site during the work. All costs of this Inspection Agency incurred due to lack of coordination by the Contractor of the earthwork, causing unnecessary visits by the Inspection Agency, shall be paid for by the Contractor.
 - 5. Maintaining accurate records in regard to Excavation and fill or backfill for approved undercutting or over-excavation.
- C. Structures, paving, landscaping, and other site improvements damaged by settlement, shall be removed and replaced at no extra cost to the Owner.

1.07 SYSTEM DESCRIPTION

- A. Excavation work under this contract is unclassified, and includes (without limitation) Excavation and removal of all soil, paving materials, shale, rock, boulders, existing foundations, fill and every kind of subsurface condition encountered in the contract area, whether manmade or naturally occurring.
- B. Maintain carefully all benchmarks, monuments, and other reference points and, if disturbed or destroyed, replace as directed by Engineer.
- C. All work specified herein shall be done in a safe, approved manner and in accordance with all governing codes, ordinances, and regulations.
- D. Suitable onsite material excavated from within the existing coffer cells or behind the existing wharf and cells shall be stockpiled, then used as fill. Only material meeting the requirements for suitable onsite material, as specified in Paragraph 2.01 and as determined by the Inspection Agency shall be placed in this stockpile.
- E. All unsuitable material and excess shall be disposed of off-site.

1.08 SUBSURFACE INFORMATION

A Boring Plan and Subsurface Profiles are presented in the Contract Drawings. The Contractor, at his own expense, may make additional investigations he considers justified.

1.09 PROJECT CONDITIONS

- A. Demolish and completely remove from site existing underground utilities and structures indicated to be removed within the limits of demolition. Contractor shall verify that existing utilities noted as abandoned on the plans are in fact abandoned and not active prior to demolition. Coordinate with utility companies to shutoff services if lines are active.
- B. The Contractor is responsible for verifying the location of underground utilities.
- C. The single south coffer cell is believed to be filled with a combination of sand and 9"-12" stone. The northern pair of adjacent coffer cells are believed to be filled with sand.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. The Contractor shall reuse suitable onsite material for backfill material. If additional material is required, the Contractor shall use Select Borrow as specified in subparagraph 2.01.C of this Section.
- B. Classification of suitable onsite material for general site grading and backfill shall be determined solely by the Engineer using the following criteria:
 - 1. The material shall not contain wood, organics, or debris.
 - 2. Maximum particle size less than 4 inches.
 - 3. Moisture content less than 20%.
 - 4. Liquid Limit less than 40.

5. Plastic Index less than 15.
- C. Select borrow material shall conform to the following:
1. United Soil Classification soil groups GW, GP, GM, SW, SP, SM, in accordance with ASTM D 2487.
 2. The percent of material passing the No. 200 sieve shall not exceed 20%.
 3. The Liquid Limit shall not exceed 40 and the Plastic Index shall not exceed 10.
 4. The maximum dry density of the material shall exceed 105 lb/ft³ as determined by AASHTO T180, Method C.
 5. Material shall be free of rock or gravel larger than 2-inches in any dimension, debris, waste, frozen materials, vegetation, or other deleterious materials.
 6. Recycled asphalt, concrete, or slag product shall not be used.
- D. The Contractor shall reuse the stockpiled material as backfill, providing the material meets the requirements of subparagraph 2.01.B of this Section.

2.02 SEDIMENT AND EROSION CONTROL

Material furnished for sediment and erosion control shall comply with applicable articles of Section 665 of ALDOT specifications, including revisions thereof and additions thereto, unless otherwise specified herein, and summarized as follows:

1. Corrugated metal pipe for stabilized construction entrance shall conform to AASHTO M36. The pipe shall have a minimum thickness of 14 gauge.
2. Geotextile for stabilized construction entrances shall conform to the requirements of Section 600's of ALDOT and also ADEM specification.
3. Mulch shall conform to the requirements of Section 920.05 of the MDOT-SHA Standard Specifications for straw mulch.
4. Removable Pumping Station shall be in accordance with the standard detail shown on the Contract Drawings.
5. Sediment basin spillway riser plate shall be 1/2-inch-thick galvanized steel, with a draw down device of 6-inch perforated corrugated metal pipe.
6. Soil stabilization matting shall conform to the requirements of ALDOT specification section 200's.
7. Stone for stabilized construction entrances shall conform to the requirement of AASHTO M43, Size No. 2.
8. Temporary and Permanent Seed shall conform to the requirements of the Contract Drawings.
9. Turbidity Curtain shall be in accordance with the standard detail shown on the Contract Drawings.
 - a. Fabric: 22 oz. – 500 lb/in tensile strength vinyl coated nylon.
 - b. Floatation: 12" marine quality rolled microfoam.
 - c. Main Load Lines: 5/16" vinyl sheathed galvanized steel cables (over 19,000 lb break strength).

- d. Ballast: 1.5 lb/ft enclosed 3/8" galvanized chain
 - e. General construction of curtain shall comply with DOD specification MIL-B-29617(YD).
- 10. Fabric for Inlet Protection shall conform to the requirements of Section 600.
 - 11. Fabric for Silt Fence shall conform to the requirements of Section 6001 of the ALDOT Specifications.
 - 12. Stone for Inlet Protection shall be No. 2 stone in accordance with AASHTO M43.

2.03 ACCESSORIES

Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick minimum, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep.

Tape Colors: Provide tape colors for utilities as follows:

- a. Red: Electric.
- b. Yellow: Gas, oil, steam, and dangerous materials.
- c. Orange: Telephone and other communications.
- d. Blue: Water systems.
- e. Green: Sewer systems.

2.04 SUPPORT OF EXCAVATION

Use manufacturers and materials for shoring, sheeting, and bracing as recommended by the Contractor's licensed Professional Engineer who designed the shoring, sheeting, and bracing.

PART 3 - EXECUTION

3.01 GENERAL

- A. Excavation, grading, and fill construction shall conform to the ALDOT Section 200 except as modified herein.
- B. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- C. Provide erosion control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- D. Ground surfaces after completion of Unclassified Excavation shall conform to the lines and grades shown on the Contract Drawing to within 0.1-foot.
- E. Excavation of unsuitable material below proposed subgrade elevations shall only be performed as directed by the Engineer; the Contractor shall be responsible for maintaining records of such work.

3.02 EXCAVATION

- A. Explosives: Explosives are not permitted.
- B. Sheeting and Shoring: Sheeting and shoring shall be considered unclassified Excavation and incidental to any earthwork operation.
 - 1. Sheeting and shoring shall be employed by the contractor where required to protect existing site features and structures from damage due to layback excavations.
 - 2. The Contractor shall support the sides and ends of all excavations with braces, trench boxes, sheeting shores, or stingers which meet accepted engineering requirements. All sheeting shall be put in place and/or driven by persons skilled in such work and shall be so arranged that it may be withdrawn as backfilling proceeds, without injury to the structures built under the contract or to any roadbed, adjacent structure, or property. If, in the opinion of the Engineer, the material furnished for sheeting Excavation is not of proper quality or sufficient size, or not properly placed to ensure the safety of the work or of adjacent structures or property, the Contractor shall, upon notice, forthwith procure and place suitable shoring materials or the work may be ordered stopped until said notice shall have been carried out and without entitling the Contractor to any claim for extra compensation, damage, or delay. Nothing in this Specification shall be read or interpreted as permitting lesser degrees of support than required by Federal regulations under OSHA. At all times, Federal requirements shall be met, as a minimum.
 - 3. All sheeting in Excavation shall be withdrawn as the backfilling proceeds. If the Contractor requests to leave the sheeting in place and the Engineer approves, it shall be cut-off at least 18 inches below the finished grade. All cut-off material shall be removed. The sheeting left in place and the cut-off and removal shall be at the Contractor's own expense.
 - 4. Wherever necessary, in quicksand or soft ground, or for the protection of any property, sheeting shall be driven to such depth below the bottom of the Excavation as may be required or directed without extra compensation.
 - 5. Guardrail or barricades shall be provided at or near the sides of excavations as necessary to protect the workmen and the public. The description of the type of guardrail or barricades to be used shall be submitted to and approved by the Engineer prior to starting any work.
 - 6. Excavated material and superimposed loads shall not be nearer than 18 inches to the sides of an excavation, unless bracing has been installed that is designed to withstand the load.
- C. Unclassified Excavation: Excavation is unclassified and includes Excavation to required subgrade elevations regardless of the character of materials and obstructions encountered. Unclassified Excavation shall be confined to the Excavation, backfill, compaction, hauling, and disposal for pavements on fast land. Excavation for demolition and removal work, as well as installation of utilities, shall be considered incidental to that work.
- D. Suitable onsite material encountered within the limits of excavation shall be reused as backfill. The Contractor shall carefully excavate to avoid contamination with unsuitable materials. Stockpiled material shall be protected to prevent loss or contamination with other materials. Surplus material shall be disposed of offsite. The Contractor shall keep a disposal log to be submitted to the Engineer.
- E. The Contractor shall exercise care in his excavation operations so as not to damage existing pavement and structures to remain.

- F. Pavement materials, concrete foundations, wood, trash, debris, and unsuitable soils encountered shall be disposed of offsite in a legal manner.

3.03 STORAGE OF EXCAVATED MATERIALS

- A. Following removal of existing landscaping features, the Contractor shall excavate where required for construction, and stockpile all suitable onsite material for reuse as backfill. The Contractor shall segregate and remove any debris resulting from demolition from the material to be stockpiled.
- B. The suitable onsite material shall be hauled and stockpiled in as indicated on the drawings. The stockpile embankment will be no more than twenty (20) feet in height with maximum 2:1 side slopes. The Engineer shall make the sole determination as to the suitability or unsuitability of the excavated material for reuse as structural fill for the new wharf based on soil classification and moisture content.
- C. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent wind-blown dust.

Stockpile soil materials away from edge of excavations and provide silt fence to retain any sediment from running offsite.

3.04 BACKFILLING

Contractor shall recover and reuse the stockpiled material to backfill excavations. The Contractor shall be responsible for making sure enough quantity is available for all required backfilling areas prior to disposal of any suitable excavated material.

This fill may be supplemented with material meeting the requirements of Select Borrow as specified in Paragraph 2.01.C of this Section.

Backfill material shall be layered and compacted above EL+1.5, which is just above the tidal range.

3.05 COMPACTED FILL

- A. Fills shall be constructed in accordance with Section 204.03 of ALDOT Specifications Section 200 unless otherwise specified.
- B. Place backfill and fill materials in layers not more than 8-inches in loose depth for material compacted by heavy compaction equipment, and not more than 4-inches in loose depth for material compacted by hand-operated tampers.
- C. Place backfill and fill materials evenly on all sides of structures to required elevations.
- D. Percentage of Maximum Dry Density Requirements: Compact soil to not less than the following percentages of maximum dry density according to AASHTO T180:
 - 1. Across the project site, compact the top 12 inches below subgrade and each layer of backfill or fill material at 97% maximum dry density.
- E. When necessary, the layer shall be wetted or dried in order to compact the layer to the required density. The resultant moisture content, when finally compacted to required density, shall be within two (2) percentage points of optimum.
- F. Top of fill grade shall conform to the elevations shown in the Contract Drawings to within 1/2-inch.

- G. Compaction shall be by suitable mechanical compaction equipment subject to the approval of the Inspection Agency.
- H. Areas inaccessible to mechanical rollers shall be compacted with mechanical tampers to the required density.

3.06 PROTECTION

Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

3.07 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and all unsatisfactory waste material, including soil, trash, and debris, and legally dispose of it off the property.
- B. Pavement materials, concrete foundations, wood, trash, track materials, debris and unsuitable soils encountered shall be disposed of in accordance with all local, State and Federal regulations governing their disposal.

3.08 EROSION AND SEDIMENT CONTROL

- A. Installation of erosion and sediment control structures is phased in accordance with the construction sequencing plan set forth on the Contract Drawings. If the Contractor proposes any changes to the Erosion and Sediment Control Plans, they must be submitted at least 14 days prior to the Notice to Proceed to -
- B. Any standing water within the Excavation that the Contractor chooses to pump shall be diverted to a sediment control filtering structure or device before allowing it to drain into any manmade or natural waterway.
- C. The Contractor shall maintain Stabilized Construction Entrances in a serviceable condition by removing debris, adding stone, or other methods as approved by the Engineer.
- D. Silt Fence and Inlet Protection shall be maintained throughout construction.
- E. Temporary and permanent seeding and mulching schedule and rates of application shall be made in accordance with ALDOT specifications.
- F. Turbidity curtain shall be anchored at 50-foot intervals. Provide a buoy at each anchor location.

3.09 FIELD QUALITY CONTROL

Field Density

1. In-place density shall be measured in accordance with ALDOT specifications Section 300.
2. A minimum of one (1) density and moisture content test shall be performed for each 2,500 square feet per lift of backfill above the water table.

END OF SECTION

SECTION 31 41 16

METAL SHEET PILING

PART 1 - GENERAL

1.01 DESCRIPTION

The work covered by this Section includes the furnishing of all material and equipment and the performing of all labor to complete the steel sheet pile bulkhead wall and deadmen (steel sheet piling) as shown on the Contract Drawings and as herein specified or directed by the Engineer.

1.02 RELATED SECTIONS

Section 05 50 13	Miscellaneous Metal Fabrications
Section 09 97 13	Coating of Steel Waterfront Structures

1.03 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.
- B. American Welding Society (AWS)
 - AWS D1.1/D1.1M (2020) Structural Welding Code - Steel
- C. ASTM International (ASTM)
 - ASTM A6/A6M (2021) General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
 - ASTM A572/A572M (2021e1) High-Strength Low-Alloy Columbium-Vanadium Structural Steel

1.04 SUBMITTALS

- A. General: Submit the following in accordance with Section 01 33 00, "Submittals" of these Specifications. Note that approval of submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the Specifications nor from responsibility of errors of any sort in the submittals.
- B. Preconstruction Submittals
 - Driving Procedures
 - Pulling and Redriving Procedures
 - Installation Plan
 - a. Submit information on the proposed methods of installation, pile driving plan including sequence of driving, and details of all pile driving equipment and accessories.
- C. Shop Drawings

Steel Sheet Piling (z-shaped) sheets, interlocks, connectors, and all other all fabrications, coated lengths

- D. Product Data
 - Pile Driving Equipment
- E. Test Reports
 - Materials Tests
- F. Closeout Submittals
 - Pile Driving Records
 - As-Built Survey/Drawings

1.05 QUALITY ASSURANCE

Material Certificates: For each shipment, submit certificates identified with specific lots prior to installing piling. Include in the identification data piling type, dimensions, chemical composition, mechanical properties, section properties, heat number, and mill identification mark.

1.06 DELIVERY, STORAGE, AND HANDLING

Materials delivered to the site shall be new and undamaged and shall be accompanied by certified test reports. Provide the manufacturer's logo and mill identification mark on the sheet piling as required by the referenced specifications. Store and handle sheet piling in the manner recommended by the manufacturer to prevent permanent deflection, distortion or damage to the interlocks; as a minimum, support on level blocks or racks spaced not more than 10 feet apart and not more than 2 feet from the ends. Storage of sheet piling shall also facilitate required inspection activities and prevent corrosion due to damage to coatings prior to installation.

PART 2 - PRODUCTS

2.01 STEEL SHEET PILING

- A. Submit detail drawings for steel sheet piling, including z-shaped sections, connectors, and interlocks, showing complete piling dimensions and details, driving sequence, coated length, and location of installed piling.

Include in the drawings, details of top protection, special reinforcing tips, tip protection, lagging, splices, fabricated additions to plain piles, cut-off method, corrosion protection, and dimensions of templates and other temporary guide structures for installing piling. Provide details of the method for handling piling to prevent permanent deflection, distortion, damage to piling interlocks, and damage to coating systems.

Steel sheet piling shall be hot-rolled steel sections conforming to ASTM A572/A572M, Grade 60.

For protection of sheet piling, coat it in accordance with Section 09 97 13, "Coating of Steel Waterfront Structures."

- B. Interlocks: The interlocks of sheet piling shall be free-sliding, provide a swing angle suitable for the intended installation but not less than 5 degrees when interlocked, and maintain continuous interlocking when installed.

- C. General Requirements: Sheet piling, including z-shaped sections, interlocks, and connectors, shall be full-length sections of the dimensions shown. Provide sheet piling with standard pulling holes. Fabrication for sheet piling shall be as specified herein and as specified in Section 05 50 13, "Miscellaneous Metal Fabrications," as applicable.

2.02 APPURTENANT METAL MATERIALS

Provide tie rods, metal plates, shapes, bolts, nuts, and other appurtenant fabrication and installation materials conforming to manufacturer's standards and to the requirements specified in the respective sheet piling standards and in Section 05 50 13, "Miscellaneous Metal Fabrications."

2.03 TESTS, INSPECTIONS, AND VERIFICATIONS

- A. Requirements for material tests, workmanship and other measures for quality assurance shall be as specified and in Section 05 50 13, "Miscellaneous Metal Fabrications."
- B. Materials Tests: Submit certified materials tests reports showing that sheet piling and appurtenant metal materials meet the specified requirements, for each shipment and identified with specific lots prior to installing materials. Material test reports shall meet the requirements of ASTM A6/A6M. Perform materials tests conforming to the following requirements. Sheet piling and appurtenant materials shall be tested and certified by the manufacturer to meet the specified chemical, mechanical and section property requirements prior to delivery to the site. Testing of sheet piling for mechanical properties shall be performed after the completion of all rolling and forming operations. Testing of sheet piling shall meet the requirements of ASTM A6/A6M.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Pile Driving Equipment

Submit complete descriptions of sheet piling driving equipment including vibratory and impact hammers, extractors, protective caps and other installation appurtenances, at least 30 days prior to commencement of work. Descriptive information includes manufacturer's name, model numbers, capacity, rated energy, hammer details, cushion material, helmet, and templates. Provide pile driving equipment conforming to the following requirements.

Driving Hammers: Hammers shall be steam, air, or diesel drop, single-acting, double-acting, differential-acting, or vibratory type. The driving energy of the hammers shall be as recommended by the manufacturer for the piling weights and subsurface materials to be encountered. Repair damage to piling caused by use of a pile hammer with excess delivered force or energy.

Jetting Equipment: Jetting will not be permitted.

Predrilling Equipment: Predrilling will not be permitted.

- B. Placing and Driving

Any excavation and removals required within the area where sheet pilings are to be installed shall be completed prior to placing sheet pilings. Pilings properly placed and driven shall be interlocked throughout their length with adjacent pilings to form a continuous diaphragm throughout the length or run of piling wall.

- a. Sheet piling shall be carefully located as indicated or as otherwise directed by the Engineer. Pilings shall be placed plumb with out-of-plumbness not exceeding 1/8 inch per foot of length and true to line. Place the pile so the face will not be more than 6 inches from vertical alignment at any point. Top of pile at elevation of cut-off shall be within 1/2 inch horizontally and 2 inches vertically of the location indicated. Extents of piles shall be within 6 inches of locations shown on the drawings. Manipulation of piles to force them into position will not be permitted. Check all piles for heave. Redrive all heaved piles to the required tip elevation.
- b. Provide temporary wales, templates, or guide structures to ensure that the pilings are placed and driven to the correct alignment. Use a system of structural framing sufficiently rigid to resist lateral and driving forces and to adequately support the sheet piling until design tip elevation is achieved. Use two templates, at least, when placing each piling not less than 20 feet apart. Templates shall not move when supporting sheet piling. Fit templates with wood blocking, UHME-PE, or other suitable material to bear against the web of each alternate sheet pile and hold the sheet pile at the design location alignment. Provide outer template straps or other restraints as necessary to prevent the sheets from warping or wandering from the alignment. Mark template for the location of the leading edge of each alternate sheet pile. If in view, also mark the second level to assure that the piles are vertical and in position. If two guide marks cannot be seen, other means shall be used to keep the sheet pile vertical along its leading edge.

Driving: Submit records of the completed sheet piling driving operations, including a system of identification which shows the disposition of approved piling in the work, driving equipment performance data, piling penetration rate data, piling dimensions and top and bottom elevations of installed piling. Drive pilings with the proper size hammer and by approved methods so as not to subject the pilings to damage and to ensure proper interlocking throughout their lengths.

- c. Maintain driving hammers in proper alignment during driving operations by use of leads or guides attached to the hammer.
- d. Employ a protecting cap in driving when using impact hammers to prevent damage to the tops of pilings. Remove and replace pilings damaged during driving or driven out of interlock at the Contractor's expense.
- e. Drive pilings without the aid of a water jet.
- f. Take adequate precautions to ensure that pilings are driven plumb. Where possible, drive Z-pile with the ball end leading. If an open socket is leading, a bolt or similar object placed in the bottom of the interlock will minimize packing material into it and ease driving for the next sheet. If at any time the forward or leading edge of the piling wall is found to be out-of-plumb in the plane of the wall the piling being driven shall be driven to the required depth and tapered pilings shall be provided and driven to interlock with the out-of-plumb leading edge or other approved corrective measures shall be taken to insure the plumbness of succeeding pilings. The maximum permissible taper for any tapered piling shall be 1/8 inch per foot of length.
- g. Pilings in each run or continuous length of piling wall shall be driven alternately in increments of depth to the required depth or elevation. No piling shall be driven to a lower elevation than those behind it in the same run except when the pilings behind it cannot be driven deeper. Incrementally sequence driving of individual piles such that the tip of any sheet pile shall not be more than 4 feet below that of any adjacent sheet pile. When the penetration resistance exceeds five blows per inch, the tip of any sheet pile shall not be more than 2 feet below any adjacent

sheet pile. If the piling next to the one being driven tends to follow below final elevation it may be pinned to the next adjacent piling.

- h. If obstructions restrict driving a piling to the specified penetration, the obstructions shall be removed or penetrated with a chisel beam. If the Contractor demonstrates that removal or penetration is impractical, make changes in the design alignment of the piling structure as directed to ensure the adequacy and stability of the structure. Pilings shall be driven to depths shown and shall extend up to the elevation indicated for the top of pilings. A tolerance of 2 inches above the indicated top elevation will be permitted. Pilings shall not be driven within 100 feet of concrete less than 7 days old.
 - i. Pre-augering or spudding of piles will not be permitted.
- C. Cutting-Off and Splicing: Pilings driven to refusal or to the point where additional penetration cannot be attained and are extending above the required top elevation in excess of the specified tolerance shall be cut off to the required elevation. Pilings driven below the required top elevation and pilings damaged by driving and cut off to permit further driving shall be extended as required to reach the top elevation by splicing when directed at no additional cost to the Owner. If directed, pilings shall be spliced as required to drive them to depths greater than shown and extend them up to the required top elevation.

Pilings adjoining spliced pilings shall be full length unless otherwise approved. If splices are allowed in adjoining pilings, the splices shall be spaced at least 4 feet apart in elevation. Splicing of pilings shall be as indicated. Ends of pilings to be spliced shall be squared before splicing to eliminate dips or camber. Pilings shall be spliced together with concentric alignment of the interlocks so that there are no discontinuities, dips, or camber at the abutting interlocks. Spliced pilings shall be free sliding and able to obtain the maximum swing with contiguous pilings. Welding and inspection of splices shall conform to the requirements of Section 05 50 13, "Miscellaneous Metal Fabrications". Shop and field welding, qualification of welding procedures, welders, and welding operators shall be in accordance with AWS D1.1/D1.1M.

The tops of pilings excessively battered during driving shall be trimmed when directed, at no cost to the Owner. Piling cut-offs shall become the property of the Contractor and shall be removed from the site.

Cut holes in pilings for bolts, rods, drains, reinforcing, and utilities in a neat and workmanlike manner, as shown or as directed. Use a straight edge in cuts made by burning to avoid abrupt nicks. Bolt holes in steel piling shall be drilled or may be burned and reamed by approved methods which will not damage the surrounding metal. Holes other than bolt holes shall be reasonably smooth and the proper size for rods and other items to be inserted. Do not use explosives for cutting.

- D. Inspection of Driven Piling: Perform continuous inspection during pile driving. Inspect all piles for compliance with tolerance requirements. Bring any unusual problems which may occur to the attention of the Engineer. Inspect the interlocked joints of driven pilings extending above ground. Pilings found to be out of interlock shall be removed and replaced at the Contractor's expense.
- E. Pulling and Redriving: Submit the proposed method of pulling sheet piling, prior to pulling any piling. Pull, as directed, selected pilings after driving to determine the condition of the underground portions of pilings. Any piling so pulled and found to be damaged, to the extent that its usefulness in the structure is impaired, shall be removed and replaced at the Contractor's expense. Pilings pulled and found to be in satisfactory condition shall be redriven when directed.

3.02 INSTALLATION RECORDS & AS-BUILT SURVEY/DRAWINGS

- A. The Contractor shall maintain a pile driving record for each sheet pile component driven as specified herein. Indicate on the installation record: installation dates and times, pile locations, tip elevations, cut-off elevations, and any reheading or cutting of piles. Record any unusual pile driving problems during driving. Submit complete records in a timely manner to the Engineer.
- B. After all wall piling has been driven, perform an as-built survey of the wall's plan location, recording the location of the waterside face of the sheet piling at every other interlock. At the closure locations, survey the locations of the terminating interlocks and pile flange corners at each side of the closure. Survey must be prepared and certified by a qualified land surveyor licensed in the State of Alabama. Prepare drawings showing the wall alignment according to the survey and the as-built details of each wall closure.
- C. Concrete for the wall cap shall not be placed until the Engineer has reviewed and accepted the pile driving records and as-built survey/drawings. The survey and drawings shall be provided in a georeferenced AUTOCAD format.

PART 4 - COMPENSATION

4.01 MEASUREMENT

4.02 PAYMENT

END OF SECTION

SECTION 31 62 16

STEEL PIPE PILES

PART 1 - GENERAL

1.01 SCOPE

Steel Pipe Piles consist of the installation of driven steel pipe piles by use of vibratory and/or impact hammers, and the installation of steel half-pipes without the use of a hammer.

1.02 RELATED WORK

- A. Marine Concrete – Section 03 31 30
- B. Coating of Steel Waterfront Structures – Section 09 97 13
- C. Miscellaneous Metal Fabrications – Section 05 50 13

1.03 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only. The most recent edition of this publication, including any revisions, shall be used.

- A. AMERICAN WELDING SOCIETY (AWS)
 - AWS D1.1/D1.1M (2020) Structural Welding Code - Steel
- B. ASTM INTERNATIONAL (ASTM)
 - ASTM A6/A 6M (2021) Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
 - ASTM A 27 (2020) Steel Castings, Carbon, for General Applications
 - ASTM A252 (2019) Standard Specification for Welded and Seamless Steel Pipe Piles
 - ASTM D3966/D3966M (2022) Standard Test Methods for Deep Foundations Under Lateral Load

1.04 SUBMITTALS

The following shall be submitted to the Owner's Representative in accordance with the Contract Documents. Note that approval of the submittals by the Owner's Representative shall not be construed as relieving the Contractor from responsibility for compliance with the specification nor from responsibility of errors of any sort in the submittals.

- A. Preconstruction Submittals

Installation procedures

Submit information on the proposed methods of installation, pile driving plan including sequence of driving, and details of all pile driving equipment and accessories.

- B. Shop Drawings
 - 1. Pile splices: Submit detail drawings of pile splices prior to fabrication.
 - 2. Pile placement: Submit pile placement plan at least 30 days prior to delivery of piles to the job site.
- C. Product Data
 - 1. Pile Driving Shoes: Submit detail drawings of pile driving shoes, if required for pile drivability, prior to fabrication.
 - 2. Delivery, Storage, and Handling: Submit delivery, storage, and handling plans for piles at least 30 days prior to delivery of piles to the job site.
 - 3. Pile Driving Record: Submit the proposed form for compiling pile driving records 30 days prior to the commencement of work.
 - 4. Pile Caps
- D. Test Reports
 - 1. Materials Tests (Mill Certificates)
- E. Design Data
 - Wave Equation Analysis: Submit wave equation analysis for each pipe pile size and type being driven.
- F. Closeout Submittals
 - 1. Pile Driving Records: Submit complete and accurate job pile driving records as specified in paragraph entitled "Pile driving records" of this section, within 15 calendar days after completion of driving.
 - 2. As-Driven Survey: Submit pile as-driven location survey as specified in paragraph entitled "Survey Data" of this section, within 15 calendar days after completion of driving.

1.05 DELIVERY, STORAGE, AND HANDLING

Conform all delivery, storage, and handling of materials to the requirements specified herein. Develop and submit plans for the delivery, storage, and handling of piles.

- A. Delivery and Storage
 - Stack piles during delivery and storage so that each pile is maintained in a straight position and is supported every 10 feet or less along its length and not more than 2 feet from ends to prevent exceeding the maximum camber or sweep. Do not stack piles more than 5 feet high.
- B. Handling
 - 1. Piles shall be lifted using a cradle or multiple points pick-up to ensure that the maximum permissible camber is not exceeded due to insufficient support, except that a one-point pick-up may be used for lifting piles that are not extremely long into the driving leads. Piles shall be handled so as to protect pile coatings. Nylon slings shall be used to handle coated steel piles during shipment, delivery to the site, and handling. Repair damage or defects in pile coatings as specified.

2. Piles shall not be dragged across the ground. The Contractor shall inspect piles for excessive camber and for damage before transporting them from the storage area to the driving area and immediately prior to placement in the driving leads.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Pipe Piles

Pile to be manufactured to meet the requirements of ASTM A252, Type 3 Modified, Grade 50. In addition to the ASTM A252, the pipe shall be welded using a qualified AWS D1.1/D1.1M Sec. 4 weld procedure (WPS) that will yield a complete joint weld and will be backed by a tested procedure qualification test record (PQR). Also, 100% of all welds shall receive a visual inspection per AWS D1.1/D1.1M Sec. 6 Table 6.1. The straightness of each pile shall be held to 0.02% of the length maximum deviation. All pile shall be stenciled per ASTM A252 Sec. 22.1. MTRs and a certificate of compliance (COC) shall be provided. Pile shall not deviate more than 1% of specified diameter. Splice ends shall be within 1/16 inch of specified diameter. If two sections of piles are welded together to meet the full length specified, weld shall be located below the mudline.

B. Driving Shoes

If required for driving, provide hardened pile shoes conforming to ASTM A 27, Grade 65/35 cast steel. Points shall be open-ended inside cutting shoe.

C. Pile Coating

Piles shall not be coated.

D. Concrete Infill for Bulkhead Deadman Piles and South Cofferd Cell Half-Pipes

Concrete infill shall be in accordance with Section 03 31 30 MARINE CONCRETE.

PART 3 - EXECUTION

3.01 PRELIMINARY WORK

A. Wave Equation Analysis of Pile Drivability

1. Prior to driving any pile, the Contractor shall submit to the Owner's Representative a pile Wave Equation Analysis, performed by Contractor's Geotechnical Consultant who shall be a qualified Professional Engineer licensed in the State of Alabama, for each size pile and distinct subsurface profile condition. These analyses shall take into account the proposed hammer assembly, pile cap block and cushion characteristics, the pile properties and estimated lengths and the soil properties anticipated to be encountered throughout the installed pile length based on static capacity analysis with consideration of driving gain/loss factors. Only one specific model of pile hammer may be used for each pile type and capacity.
2. The Wave Equation Analysis shall demonstrate that the piles will not be damaged during driving, shall indicate that the driving stresses will be maintained within the limits below and indicate the blow count necessary to achieve the required ultimate static pile capacities.

Allowable Driving Stresses – Steel Piles	
Compression	0.9 fy
Tension	0.9 fy
Where fy is yield strength of the steel	

3. All pile-driving equipment furnished by the Contractor shall be subject to the approval of the Contractor's Geotechnical Consultant.

3.02 PILE DRIVING EQUIPMENT

Select the proposed pile driving equipment, including hammers and other required items, and submit complete descriptions of the proposed equipment in accordance with paragraph "Submittals."

A. Pile Driving Hammers

Provide impact or vibratory type pile driving hammers.

1. Impact Hammers

Provide steam, air, or diesel-powered impact pile hammers of the single-acting, double-acting, or differential-acting type. The size or capacity of hammers must be as recommended by the hammer manufacturer for the total pile weight and the character of the soil formation to be penetrated. Provide boiler, compressor, or engine capacity sufficient to operate hammers continuously at the full rated speed. Hammers must have a gage to monitor hammer bounce chamber pressure for diesel hammers or pressure at the hammer for air and steam hammers. This gage must be operational during the driving of piles and be mounted in an accessible location for monitoring by the Contractor. Obtain driving energy by use of a heavy ram and a short stroke with low impact velocity, rather than a light ram and a long stroke with high impact velocity. Position a pile cap or drive cap between the pile and hammer. Place hammer cushion or cap block between ram and the pile cap or drive cap. Hammer cushion or cap block must have consistent elastic properties, minimize energy absorption, and transmit hammer energy uniformly and consistently during the entire driving period. In accordance with paragraph "Submittals," submit the following information for each impact hammer proposed:

- i. Make and model.
- ii. Ram weight (pounds).
- iii. Anvil weight (pounds).
- iv. Rated stroke (inches).
- v. Rated energy range (foot-pounds).
- vi. Rated speed (blows per minute).
- vii. Steam or air pressure, hammer, and boiler and/or compressor(psi).
- viii. Pile driving cap, make, and weight (pounds).
- ix. Cushion block dimensions and material type.
- x. Power pack description.

2. Vibratory Hammers

The use of vibratory hammers is dependent upon satisfactory driving of piles. The size or capacity of hammers must be as recommended by the hammer manufacturer for the total pile weight and the character of the soil formation to be penetrated. The hammer must provide for maintaining a rigid connection between the hammer and the pile. In accordance with paragraph "Submittals," submit the following information for each vibratory hammer proposed:

- i. Make and model.
 - ii. Eccentric moment (inch-pounds).
 - iii. Dynamic force (tons).
 - iv. Steady state frequency or frequency range (cycles per minute).
 - v. Vibrating weight (pounds).
 - vi. Amplitude (inches).
 - vii. Maximum pull capacity (tons).
 - viii. Non-vibrating weight (pounds).
 - ix. Power pack description.
3. Pile Driving Leads
- Support and guide hammers with fixed extended leads or fixed underhung leads. Operate vibratory hammers free hanging without leads. Provide two intermediate supports for the pile in the leads to reduce the unbraced length of the pile during driving and pulling.
4. Pile Extractors
- Pile extractors may be vibratory and/or impact pile driving hammers. Impact hammers are required for pulling piles not extractable with vibratory hammers.

3.03 INSTALLATION

Inspect piles when delivered and when in the leads immediately before driving. Handle piles so as to protect pile coatings. Repair damage or defects in pile coatings as specified. Cut piles at cutoff grade by an approved method.

A. Pile Driving Records

1. Compile and submit accurate records of the pile driving operations on the approved form in accordance with paragraph "Submittals." Include in driving records for each pile the date driven, pile identification number, cross section shape and pile dimensions, location, deviations from design location, original length, ground elevation, top elevation, tip elevation, batter alignment, description of hammer used, number of blows required for each foot of penetration throughout the entire length of the pile and for each inch of penetration in the last foot of penetration, total driving time in minutes and seconds, and any other pertinent information as required or requested, such as unusual driving conditions, interruptions or delays during driving, damage to pile resulting from driving, heave in adjacent piles, re-driving, weaving, obstructions, jetting and predrilling (where approved), and depth and description of voids formed adjacent to the pile.
2. Additional data required to be recorded for impact hammers includes the rate of hammer operation, make, size, and the length of the bounce hose. Additional data required to be recorded for vibratory hammers includes hammer power pack description, make, size, horsepower applied to pile, and hammer operating frequency.

B. Pile Placement and Tolerances in Driving

1. Develop and submit a pile placement plan which shows the installation sequence and the methods proposed for controlling the location and alignment of piles. Accurately place piles in the correct location and alignments, both laterally and longitudinally, and to the vertical or batter lines indicated. Establish a permanent base line to provide for inspection of pile placement by the Engineer during pile driving operations prior to driving job piles and maintain during the installation of the job piles.
2. A final lateral deviation from the correct location at the cutoff elevation of not more than 3 inches will be permitted for vertical piles. Manipulation of piles will not be permitted. A variation of not more than 0.25 inch per foot of pile length from the vertical for vertical piles. Redesign of pile caps or additional work required due to improper location of piles is the responsibility of the Contractor. Inspect piles for heave. Redrive heaved piles to the required tip elevation. Maintain the correct relative position of all piles by the use of templates or by other approved means. Piles damaged or not located properly or exceeding the maximum limits for rotation, lateral and vertical deviation, and/or variation in alignment must be extracted and new piles driven, or additional piles provided at a location directed at no additional cost to the Owner.

C. Survey Data

After the driving of each pile group is complete, provide the Owner's Representative with an as-driven survey showing actual location and top elevation of each pile. Present a survey in such form that it gives deviation from plan location in two perpendicular directions and elevations of each pile to nearest half inch. Survey must be prepared and certified by a qualified land surveyor licensed in the State of Alabama.

The survey shall be provided in a georeferenced AUTOCAD format.

D. Pile Driving

Notify the Owner's Representative 30 days prior to the date pile driving is to begin. Do not drive piles within 100 feet of concrete less than 7 days old. Drive piles with hammers of the same model and manufacturer, same energy and efficiency, and using the same driving system. Operate hammers at all times at the speed and under the conditions recommended by the manufacturer. Prior to driving and with the pile head seated in the hammer, check each pile to ensure that it has been aligned correctly. Once pile driving has begun, keep conditions such as alignment and batter constant. Drive each pile continuously and without interruption until the required tip elevation has been attained. Deviation from this procedure will be permitted only when driving is stopped by causes that reasonably could not have been anticipated. A pile that cannot be driven to the required depth because of an obstruction, as indicated by a sudden unexplained change in blow count or drifting, must be pulled and redriven or cut off and abandoned, whichever is directed. After piles are driven, cut off square as required at the indicated cutoff elevation. Backfill any voids around piles or abandoned holes for pulled piles with sand and compact to the same density as the surrounding soil. If, in driving, it is found that a pile is not of sufficient length to give the capacity specified, notify the Owner's Representative, who will determine the procedure to be followed.

E. Splicing Piles

When approved, provide splices of the full penetration butt weld type. Use only one splice per length of pile. Avoid field splices for lengths under 80 feet. Construct splices to maintain the true alignment and position of the pile sections. Splices must develop the full strength of the pile in both bearing, bending, and tension.

F. Jetting

Jetting of piles is not permitted.

G. Predrilling

Predrilling is not permitted.

H. Heaved Piles

When driving piles in clusters or under conditions of relatively close spacing, perform observations to detect heave of adjacent piles. Backdrive heaved piles to original tip elevation without additional cost to the Owner.

I. Extracted Piles

Extract and replace piles damaged or impaired for use during driving with new piles, or cut off and abandon and drive new piles as directed without additional cost to the Owner. The Owner's Representative may require that any pile be extracted for inspection. Redrive extracted piles when found to be in suitable condition at another location as directed. Replace piles extracted as directed and found to be damaged with new piles at the Contractor's expense.

J. Long Piles

Handle and drive piles of a high slenderness ratio carefully to prevent overstress. Provide pile driving rig with rigid supports so that leads remain accurately aligned. Where a high degree of accuracy is required, erect templates or guide frames at or close to the ground or water surface.

K. Welding

All welding shall conform to AWS D1.1/D1.1M and Section 05 50 13 "Miscellaneous Metal Fabrications".

L. Concrete Infill for Pipe Piles

Remove all water, soil and debris from inside of piles before placing concrete. The pile inside diameter shall be clean of all soils or other contaminants.

*****END OF SECTION*****

SECTION 33 51 43

INSTRUMENTATION AND PERFORMANCE MONITORING OF STRUCTURES

PART 1 - GENERAL

1.01 SCOPE

- A. The Contractor shall monitor vibrations associated with all construction operations involving hauling and placement of any construction materials, movement of heavy equipment, or any activity likely to cause high vibration levels. These features of work shall include pile driving, demolishing existing structure, excavating earth and placing earth into hauling equipment, hauling earth, placing backfill material, and compacting backfill material. Prior to the start of operations, the Contractor shall submit his plan for the number and location of his vibration monitoring equipment, and calibration reports for all of his vibration monitoring equipment for the approval of the ENGINEER. The vibration monitoring equipment shall be calibrated as recommended by the equipment manufacturer.
- B. This work covers the following items:
- C. Furnishing, installing, protecting, and maintaining vibration monitoring and movement monitoring instrumentation; collecting vibration and movement data; and interpreting and reporting the results of vibration monitoring and movement monitoring.
- D. Implementation of any required preventive and remedial measures, using the vibration and movement monitoring data, to protect the following buildings, structures, properties, and facilities (referred to from now on as "structures") from movement or excess vibration during construction activities:
 - 1. The George Wallace Tunnel (vibration monitoring)
 - 2. Existing Cofferdams (movement monitoring)
 - 3. Existing Wharf (movement monitoring)
- E. Development and preparation of a vibration and movement monitoring control program.
- F. Recording baseline survey, other movement monitoring readings, and ambient vibration levels at structures to be monitored.
- G. Supplying qualified personnel or a qualified subcontractor meeting the requirements of this Specification.
- H. The Owner is not responsible for the safety of the work based on vibration or movement monitoring data, and compliance with this Specification does not relieve the Contractor of full responsibility for damage caused by the Contractor's operations.

1.02 SUBMITTALS

- A. General: Submit the following in accordance with the 01 33 00, "Submittals" of these Specifications. Note that approval of submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the Specifications nor from responsibility for errors of any sort in the submittals.
- B. Preconstruction Submittals
 - 1. Vibration and Movement Monitoring Plan

2. Desktop Vibration Estimate and Analysis
- C. Product Data
 1. Seismographs
 2. Geophones
 3. Displacement Monitoring Equipment
- D. Test Reports
 1. Pre-Construction Baseline Movement/Vibration Report
 2. Construction Vibration Monitoring Report
 - a. Submit weekly regardless of whether recorded vibration reached the monitoring threshold. At the completion of construction, submit a summary report of observed vibrations and the corresponding construction activities occurring at the time of observation.
- E. Construction Movement Monitoring Report
 1. Submit weekly regardless of whether recorded movement reached the monitoring threshold. At the completion of construction, submit a summary report of observed movements and the corresponding construction activities occurring at the time of observation.
 2. The report shall include the job title; name of registered professional engineer and vibration monitoring firm; type of vibration monitoring equipment used including type, model and method of measuring vibrations; date of monitoring; location and sketch of monitoring operations; distance from operations; type and location of construction operation(s) being monitored; minimum and maximum readings (any readings above the maximum peak particle velocity) with dates, durations and times, including copies of vibration recording tapes with the documentation of corrective actions taken and the interpretation/ assessment that these vibrations would have had on the structure; and the original copies of the executed rights-of-entry agreements for property on which vibration monitoring occurred during that assessment Period. The ENGINEER may check the vibration monitoring operations by performing its own independent vibration monitoring.
- F. Certificates
 1. Equipment Calibration Certificates
 2. Vibration and Movement Monitoring Specialist Qualifications

PART 2 - PRODUCTS

2.01 MATERIAL

- A. Seismograph. Provide three-component direct-reading velocity instrument (seismograph), having a frequency range of 2 cycles per second to 250 cycles per second, or greater, a velocity range of 0.02 to 4.0 in./sec, and adhering to design criteria for portable seismograph as outlined in USBM RI 5708 and USBM RI 6487. Provide appropriate up-to-date calibration certification for the instruments. Provide hardware, enclosures and other necessary items to secure and protect the seismograph in the designated location.

- B. Geophone. Provide geophone which is compatible with seismograph. Geophone for monitoring vibration at the George Wallace Tunnel must be located with the tunnel's northern lane at the location specified on construction drawings S-003 and S-103.
- C. Displacement Monitoring Equipment. Provide optical survey points where specified on construction drawings S-002 and S-103.
- D. Provide current calibration certificates for all survey instruments and other instruments to be used for movement monitoring.

PART 3 - EXECUTION

3.01 CONSTRUCTION

- A. Qualifications.
 - 1. Employ a Professional Engineer or Geologist licensed in the State of Alabama to perform vibration and movement monitoring work (Vibration and Movement Monitoring Specialist). The Vibration and Movement Monitoring Specialist is to have at least five years of experience installing, using, and interpreting vibration monitoring and movement monitoring instrumentation, with at least (3) projects of similar size and complexity in the previous 5 years.
 - 2. Movement monitoring point surveys shall be conducted by a Professional Land Surveyor licensed in the State of Alabama.
 - 3. Submit the names and qualifications of the Vibration and Movement Monitoring Specialist and Professional Land Surveyor to the Owner for approval, at least 30 days prior to the installation of the instruments or monitoring points.
- B. Desktop Vibration Analysis and Estimate.
 - 1. The Contractor's Geologist shall prepare and submit 30 days prior to the installation of any piling.
 - 2. Using information regarding the specific equipment to be used for the installation of bulkhead sheet piling and deadman pipe piling, estimate vibrations produced from these activities at the vibration monitoring locations specified in the construction drawings.
- C. Vibration and Movement Monitoring Plan.
 - 1. Submit the Vibration and Movement Monitoring Plan to the Owner for review and approval, at least twenty-one (21) days prior to commencement of proposed construction activities. The Vibration and Movement Monitoring Plan will include, at a minimum:
 - a. Ambient vibration levels at the locations shown on construction drawing S-101 are proposed for monitoring during construction. This monitoring should continuously record the maximum single-component peak particle velocities for one-minute intervals, displayed in a bar graph format. Perform ambient vibration monitoring for at least two non-consecutive workdays, spanning the hours in which construction activities will occur.
 - b. Location sketches depicting the proposed vibration and displacement monitoring points.
 - c. Proposed list of equipment to be used on the project, including the number and type of seismographs, survey instruments, other movement monitoring instruments, and the type of number and location of survey points.

- d. Proposed movement monitoring methods and instrumentation. At a minimum, movement monitoring uses optical survey points to monitor vertical and lateral displacements of identified structures.
 - e. Should vibration estimates indicate anticipated vibrations greater than the threshold limit, describe in the vibration monitoring plan means and methods to be implemented during construction to limit vibrations.
2. Do not commence site work until the Vibration and Movement Monitoring Plan is approved.
- D. Monitoring Requirements
1. Obtain baseline survey readings of movement/vibration monitoring points and baseline readings of other movement/vibration monitoring instruments at locations to be monitored during construction. Provide at least three (3) sets of readings, with readings taken at intervals of at least 24 hours apart. Submit baseline readings to the Owner at least three (3) business days before commencing construction activities. For monitoring points or instruments that cannot be installed until after construction starts, submit baseline readings within five (5) calendar days of the installation.
 2. Vibration and Movement Monitoring
 - a. Install seismographs at specified locations before commencing vibration-producing construction operations. Move seismograph locations as required by changes in construction activities and as approved by the Owner.
 - b. Perform vibration monitoring continuously during construction operations.
 - c. The threshold vibration peak particle velocity limit is 0.5 inches per second.
 - d. Monitor movement monitoring points before and during the construction activities. Monitor all survey points at least twice daily when construction occurs, once at the start and once at the end of the workday. Continue monitoring accessible monitoring points and instruments for at least one week after completing construction-related activities.
 - e. The threshold movement limit shall be either of:
 - 1) Cumulative movement in any direction reaching a total of 1" of movement in that direction.
 - f. Seismographs should be configured to operate continuously, capable of displaying peak particle velocity measurements in a bar graph. Measurement intervals should not exceed 15 seconds during vibration-producing construction operations.
 - g. Take necessary precautions to prevent damage and disturbance to the survey points, seismographs, and other instruments during the project's duration. Replace points or equipment damaged or vandalized during the Contract's life at no cost to the Owner.
 - h. Perform construction operations and vibration and movement monitoring following the approved Vibration and Movement Monitoring Plan. The Owner must authorize changes to the plan before implementation.
 - i. The Vibration and Movement Monitoring Specialist interprets the collected data, including correlating instrumentation data and specific construction activities. For specific instrumentation used to protect existing structures, evaluate the instrumentation data to determine whether the response to construction activities is accurately captured or if additional monitoring instrumentation is required.

- j. If a vibration or displacement monitoring Threshold Value is reached, immediately stop work and contact the Owner to discuss appropriate response actions required, if any, so that a Limiting Value is not exceeded. No work is to be performed within the project limits until the Owner has reviewed and approved the Contractor's proposed response action. If required, the Vibration and Movement Monitoring Specialist to install additional instrumentation as directed by the Owner.
- k. Damage due to the Contractor's construction activities is the Contractor's sole responsibility. It is to be repaired to the satisfaction of the Owner and the affected property owner. The Contractor will repair Any construction-related damage at no cost to the Owner.

*****END OF SECTION*****

EM 1110-2-2302	Construction with Large Stone
CRD-C 144-73	Method of Testing Stone for Resistance to Freezing and Thawing

1.03 SUBMITTALS

- A. General: Submit the following in accordance with the 01 33 00, "Submittals" of these Specifications. Note that approval of submittals by the Engineer shall not be construed as relieving the Contractor from responsibility for compliance with the Specifications nor from responsibility of errors of any sort in the submittals.
- B. A copy of the records of inspections and reports of operations as well as any corrective actions taken will be furnished to the Engineer.
- C. Stone:
 - 1. The Contractor shall submit his proposed method of construction, to include the sequence of riprap placement, methods of placement, and equipment to be used during each construction phase, to the Engineer for approval.
 - 2. Prior to riprap placement, the Contractor shall submit test results from a certified laboratory, which demonstrate that all rock products meet the specified gradation, sulfate soundness, Los Angeles abrasion, petrography, absorption, and specific gravity requirements. Test results shall be dated within 90 days of the date submitted.
 - 3. The Contractor shall submit one or more samples of rock material from each distinctive stratum, bed, or change of material type in the quarry. A sufficient number of samples shall be furnished to adequately represent the whole quarry or that part of the quarry from which the material will be obtained.
- D. Geotextile:
 - 1. Submit product data and evidence of ALDOT pre-approval for the specified list.
- E. Buoys:
 - 1. Submit product data and shop drawings demonstrating compliance with the buoy requirements on Contract Drawing S-103.
 - 2. Submit shop drawings for anchor and chain according to buoy manufacturer recommendations.

PART 2 - PRODUCTS

2.01 RIPRAP

- A. General: Rock shall consist of fresh, sound, hard, dense, durable stone of crystalline igneous or metamorphic rock which shall be separated from bedrock by quarrying. No sedimentary rock, schistose rock or any highly foliated rock will be acceptable. Rock shall be free of seams and thin layers of soft, decomposed, weak, or water-soluble materials.
- B. Armor Stone: Riprap shall be Alabama Department of Transportation (ALDOT) Class 3 Riprap, which shall consist of reasonably well graded stones ranging from 25 pounds to 500 pounds {10 kg to 250 kg} with not over 10% having a weight {mass} over 500 pounds {250 kg}, at least 50% having a weight {mass} over 200 pounds {100 kg} and not more than 15% having a weight {mass} under 25 pounds {10 kg}.

- C. Size and Shape of Stone: Riprap shall be furnished in blocky and angular shapes, with its greatest dimension not greater than three times its least dimension. Flat stones, slabs, boulders and parts of boulders will be rejected. Not more than 5 percent by weight of clean spalls resulting from loading and shipment will be allowed in any one vessel.
- D. Petrography: Stone shall be subjected to petrographic and x-ray diffraction analysis in accordance with ASTM C 295. Rock shall be fresh, interlocking crystalline structure, free of objectionable material such as expansive clays.
- E. Evaluation Testing: Rock shall meet the following test criteria:

<u>Property</u>	<u>Method</u>	<u>Test Value</u>
Specific Gravity	ASTM C 97	2.65 minimum
Absorption	ASTM C 127	Less than 2%
Abrasion	ASTM C 535	Less than 20% loss for 500 revolutions
Sulfate Soundness	ASTM C 88	Less than 18% for 5 cycles
Freezing and Thawing		Less than 10% loss for 12 cycles

2.02 GEOTEXTILE

- A. Geotextile shall be pre-approved by ALDOT for usage according to ALDOT Standard Specifications section 608 from list II-3.

2.03 SOURCES OF RIPRAP

- A. The Contractor may utilize one or more sources of riprap. The Contractor shall provide documentation that rock from these sources meets the requirements of these specifications. The Engineer reserves the right to reject stone from sources that does not meet these specifications. It is the Contractor’s responsibility to determine that sources can produce the specified quantity and gradation of riprap.
- B. The sources from which the Contractor proposes to obtain armor stone and quarry run required for the features covered in these specifications shall be selected and identified to the Engineer well in advance of the time when the materials will be required in the work, a minimum of 60 days. Suitable samples of the proposed stone shall be submitted for testing and approval of the quality of the rock, thirty (30) days prior to delivery of any such material to the site of the work. The Contractor shall furnish the Engineer at least five (5) days advance notice of the time and place at which samples will be selected in order that at his option, the Engineer may have a representative present during the sampling. All test samples shall be obtained by the Contractor and delivered to the jobsite for inspection by the Engineer, thirty (30) days in advance of the time when delivery of the stone to the project is first expected to begin.
- C. The Contractor shall submit one or more samples of material from each distinctive stratum, bed, or change of material type in the quarry. A sufficient number of samples shall be furnished to adequately represent the whole quarry or that part of the quarry from which the material will be obtained. A sample for approval as armor stone shall consist of the following: a minimum of 50 pounds of crushed stone, 3 inches maximum size to 1-inch minimum size; and, a minimum of 5 pieces of rock ranging from 50 to 100 pounds each. Where stockpiles of the material produced are available, the crushed aggregate may be obtained from the stockpile. The riprap will be obtained from the expected production face area within the quarry that is being tested. In non-producing quarries with exposed faces where stockpiles of processed material are not available, samples shall consist of not less than 25 pounds from each distinctive stratum or bed with no pieces weighing less than 1 pound. If it is proposed to furnish rock from more than one quarry, samples, as required above, shall be furnished from each quarry. The samples shall be suitably identified by numbers and quarry name. Submittal of samples shall be made by letter, in

triplicate, setting forth sample designations, name of quarry, ownership of quarry, location of samples from within the quarry, method of sampling and, if available, record and method of previous tests, geologic descriptions, and history of use in marine construction. In the event the Contractor proposes to furnish rock from an undeveloped source, or a source opened by minor quarrying or prospecting, the area proposed for development shall be adequately explored and sampled to the satisfaction of the Engineer by means of "NX" (7.3 centimeters) size core-drilling to the limits and full depth of expected production. The Contractor shall locate the borings by survey and the entire length of recovered cores shall constitute the samples and shall be suitably bored and marked as to elevations, depths, and core losses. Submittal of core samples shall be accompanied by 3 copies of a plan showing location and elevations of borings together with detailed logs of borings operations. Drilling, blasting, and sampling of stripped or naturally exposed areas of bedrock surface which present prominent faces suitable for trial quarrying may serve as a partial alternative to the core-drilling method of exploration and sampling as approved by the Engineer.

2.04 TESTING AND APPROVAL FOR ROCK QUALITY

The acceptability of the rock may be determined from existing test reports, service records from similar marine usage, by geologic examination of samples and of the quarry and/or by testing. In all cases of sources not having suitable test reports or service records, such as newly opened, long-abandoned quarries, or undeveloped sources, the material will be subjected to such tests as are necessary to determine its acceptability in the work. All other sources may require testing at the option of the Engineer. The tests to which the materials will be subjected include petrographic analysis, specific gravity, abrasion, absorption, unit weight determination, sulfate soundness, wetting and drying, freezing and thawing and unconfined compressive strength, and such other tests as may be considered necessary to demonstrate to the satisfaction of the Engineer that the materials are acceptable for use in the work. The minimum rock quality criteria which must be met are those specified in Paragraph 2.2 Riprap. In addition to the minimum criteria, other criteria determined from the tests or inspections listed above may be used to establish the acceptability of the stone. All tests will be made by or under the supervision of the Engineer and at the Contractor's expense. As a minimum, the tests identified in Paragraph 2.2 of this Section shall be performed once for every 500 tons of stone. Approval of any source of stone shall not be construed as approval of all of the stone from that source. The right is reserved to reject certain localized areas, strata, or channels within the approved source when in the opinion of the Engineer, the stone is disintegrated, badly weathered, contains incipient planes of weakness or hidden joints/fractures, or is otherwise unsatisfactory for use in the work. All stone will be subject to inspection during loading at the source, at intermediate transfer points and at the site of work prior to placement.

2.05 RIPRAP NOT MEETING THE SPECIFICATIONS

- A. If, during the progress of the work, it is found that the stone being furnished and/or placed by the Contractor does not fully meet all the requirements of the specifications, the Contractor shall be required to furnish other rock of a quality acceptable to the Engineer. Any rock rejected at the site of the work as not meeting the requirements of these specifications for quality, condition, size, gradation or otherwise shall be removed from the site by and at the expense of the Contractor, and rock of suitable quality shall be furnished and/or placed at no additional cost to the Owner. The Contractor shall dispose of all rejected rock in a manner approved by the Engineer.
- B. Rocks which are broken during shipment to the work site or during placement shall be re-weighed and may be reassigned to a new weight category using the specified gradation. Rocks broken in placement shall be removed from the structure and returned to the stockpile area to accomplish the re-weighing.

PART 3 - EXECUTION

3.01 PLACEMENT OF RIPRAP AND GEOTEXTILE

- A. General: The Contractor shall submit his proposed method of construction, to include the sequence of rock placement, methods of placement, and equipment to be used during each construction phase, to the Engineer for approval. Care shall be taken to place the rock to make a compact mass, and form as nearly as practicable a cross-section of uniform height, width, and slopes as shown on the Contract Drawings. Rocks shall be carefully placed so as to leave no large voids between them. Riprap shall be placed in accordance with the construction sequence. The riprap layers shall be placed to the full specified thickness in one operation.
- B. The rock/riprap shall be individually placed with a rock grab, orange peel grab, grapple, crane or similar equipment. The stone shall not be dropped or tipped into position, but shall be placed carefully into the layer and shall be interlocked or keyed in juxtaposition with adjacent armor stones by rotating or setting them for maximum contact based on their angular shape with no continuous void through two armor layers where waves could work against inner layers of rock work and cause damage. The stone shall be placed as fast as practical following the shaping of the slopes and installation of the sheet piles. The Contractor shall be responsible for erosion due to wave, current, wind, precipitation, or other actions and shall place additional fill as required at his own expense. Riprap shall be placed in such manner as to produce a reasonably well-distributed mass of rock with the minimum practicable percentage of voids, and shall be constructed within the specified tolerance to the lines and grades shown on the Contract Drawings or staked out in the field.
- C. The geotextile shall be placed with a sewn overlap of 9". The Contractor shall prepare the surface to receive the geotextile, ensuring the surface is relatively smooth and free of obstructions, depressions, debris, etc. which could damage the geotextile during placement. The geotextile shall be protected from damage during placement of the riprap.

3.02 QUALITY CONTROL

- A. The Contractor shall establish and maintain quality control for construction of the revetment and all other operations in connection therewith to assure compliance with contract requirements. The Contractor shall inspect for compliance with contract requirements and record the inspection of all operations, including but not limited to the following:
 - 1. Riprap complies with the specifications for quality and gradation.
 - 2. Riprap placed to the lines and grades shown on the Contract Drawings and within allowable tolerance of one (1) foot plus or minus, except as follows:
 - At the top of the revetment, where it is visible above water and overlaps the encasement fascia, the tolerance shall be 6 inches plus or minus. Under no circumstances shall the bottom of the fascia be visible.
 - 3. All rock carefully placed in a dense, compact mass.
 - 4. Rejected rock materials properly marked and disposition recorded.
- B. Records: A copy of the records of inspections and reports of operations as well as any corrective actions taken will be furnished to the Engineer as directed by the Engineer.

END OF SECTION

APPENDIX A - RIVERSIDE UNDERWATER INSPECTION FINDINGS



11 North Water Street, Suite 20220
Mobile, AL 366012

(251) 378-9000
www.moffattnichol.com

September 1, 2022

Jim DeLapp, Executive Director
Public Works, City of Mobile
205 Government Street
Mobile, AL 36603-1827

Attn: Jim DeLapp, Public Works; Cassie Boatright, Real Estate / Asset Management;
Ricardo Woods, City of Mobile Attorney

**Subject: Immediate Action Recommendation – Mobile Riverfront Redevelopment
Cooper Riverside Park Underwater Inspection Findings**

Reference: Mobile Riverfront Redevelopment
M&N Project No.: 10961-04

Dear Mr. DeLapp,

Moffatt & Nichol (M&N) conducted an underwater condition survey of Cooper Riverside Park's bulkheads and relieving platform structures on 22-24 August 2022. The survey is in support of the ongoing Mobile Riverfront Redevelopment project. During the survey, M&N observed severe defects that limit the capacities of several structural components. These defects could cause safety hazards to park patrons and is currently limiting the functionality and capacity of the bulkhead system. This Immediate Action Letter (IAL) outlines the conditions observed, the possible safety hazards, and recommendations to address the deteriorated conditions until a permanent solution is adopted.

Throughout the entirety of the inspection, there were numerous holes observed with voids behind the retaining wall structures. These voided areas are due to holes in the steel sheet pile bulkhead structures and gaps in the timber pile bulkhead structure that allow fill material to exit the structure. At the low-level relieving platform, active fill loss is present in-between the timber piles along the backwall, which is due to section loss in the piles creating openings for the fill material to migrate through. This results in the current active rotation of the planter walls and areas of settlement along the entirety of the bulkhead as shown in Photos 1 & 2. In the steel sheet plies, the observed typical holes averaged 12"x12" in size with voided areas behind the wall. During the cleaning process, incidental to the inspection of the structure, the holes would often expand in size up to 50% due to the significant section loss on the surrounding steel. These holes had 3'-0"+ deep voids behind the sheet pile and is directly related to the areas of settlement topside as shown in

Photos 3 & 4. These active defects are precursors for severe settlement and potential formation of deep sinkholes in the near future.

In review and comparison of the 2019 routine inspection report, M&N confirmed the conditions noted in the report still exist and in many cases have significantly worsened. Photos 5 through 8 show the typical defects observed during the underwater inspection. It should be noted that multiple defects have grown in size and the remaining thickness of steel has been reduced from the previously noted report.

M&N recommends cordoning off a minimum 20'-0" wide area along the entire length of wall adjacent to the aforementioned structures. It is recommended to utilize temporary chain link fencing atop concrete jersey barriers to restrict unauthorized traffic and park patrons from entering areas where there is a possibility of fill loss and further development of additional severe defects including but not limited to topside settlement concerns (*see Appendix B*). The barrier is recommended to be implemented as soon as possible and to remain in place until a permanent solution is complete. M&N also recommends topside inspections on a weekly basis to monitor any changes in conditions that would require the repositioning on any barriers.

Attached to this letter you will find Appendices A and B of which include photographs and cordoned off area recommendation drawings respectively.

M&N appreciates the opportunity to provide underwater structural inspections and professional engineering services to our city. If you should have any questions, please do not hesitate to contact our office.

Sincerely,
MOFFATT & NICHOL



Jonathan Hird, PE
Principal-in-Charge

Attachments

APPENDIX A – Photographs





Photo 1 Planter wall rotation and areas of settlement. Northern end of relieving platform, looking south.



Photo 2 Areas of settlement behind timber bulkhead. Southern end of relieving platform, looking northeast.

P8250035.JPG

TOPSIDE - PLATFORM

P8250052.JPG

TOPSIDE - SHEET PILE



P8250066.JPG

TOPSIDE - SHEET PILE

Photo 3 Areas of settlement adjacent to north sheet pile bulkhead. North end of floating dock area, looking northeast.



P8250074.JPG

TOPSIDE - SHEET PILE

Photo 4 Areas of settlement adjacent to south sheet pile bulkhead. On structure, looking northeast.

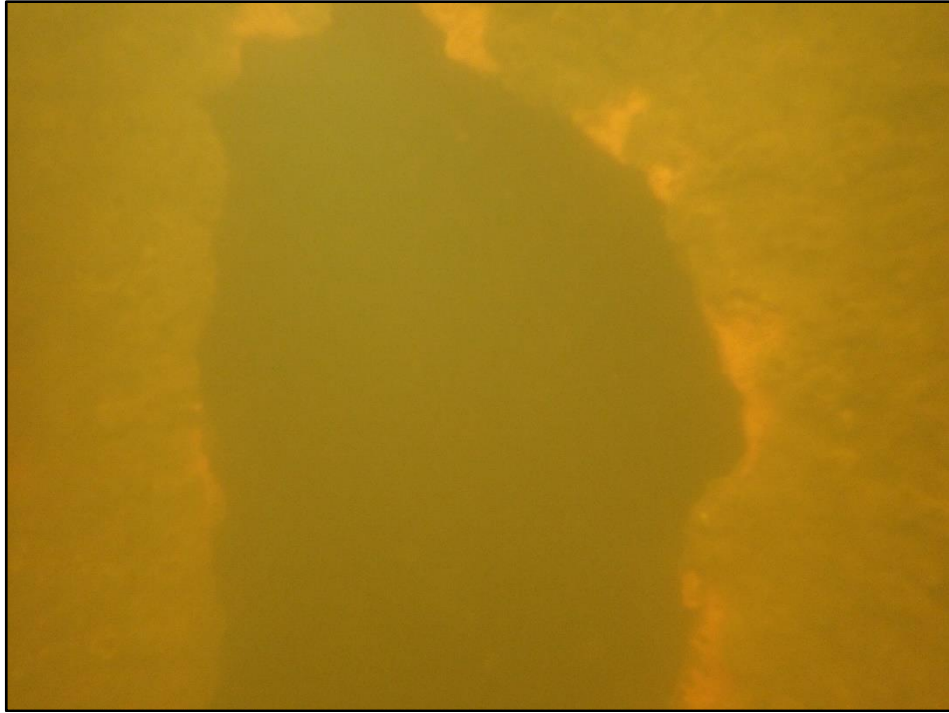


Photo 5 Typical sheet pile hole with 3'-0"+ void behind (Top portion of 5'-0" tall hole).

P8230044.JPG

UNDERWATER - SHEET PILE

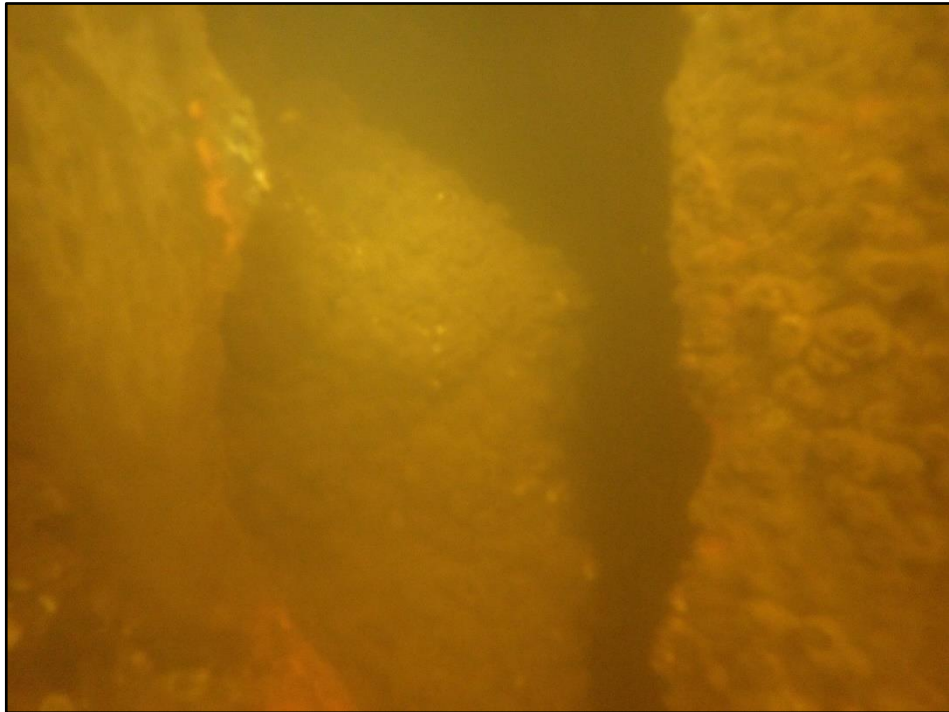


Photo 6 Typical sheet pile hole with 3'-0"+ void behind (Middle portion of 5'-0" tall hole).

P8230045.JPG

UNDERWATER - SHEET PILE

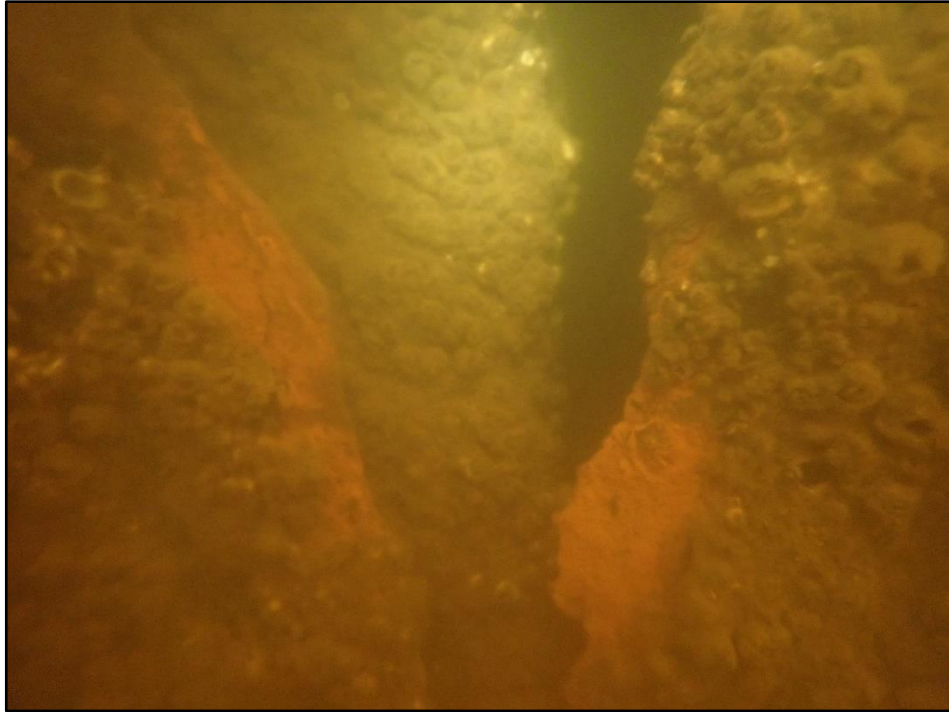


Photo 7 Typical sheet pile hole with 3'-0"+ void behind (Bottom portion of 5'-0" tall hole).

P8230047.JPG

UNDERWATER - SHEET PILE

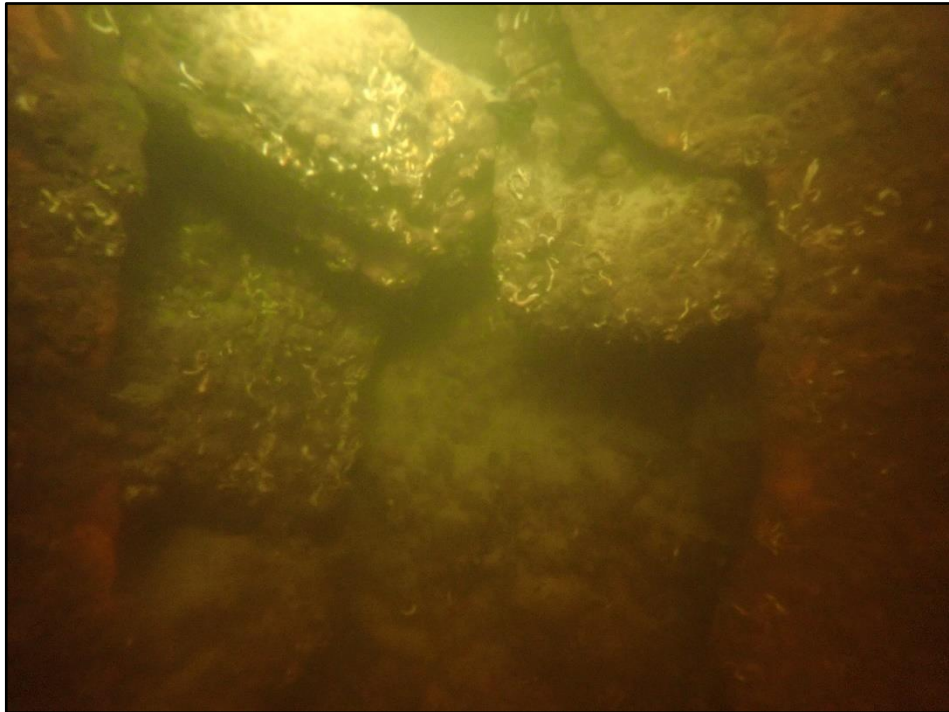


Photo 8 Typical sheet pile hole with rip rap behind.

P8230029.JPG

UNDERWATER - SHEET PILE

APPENDIX B – Recommendation Sketch



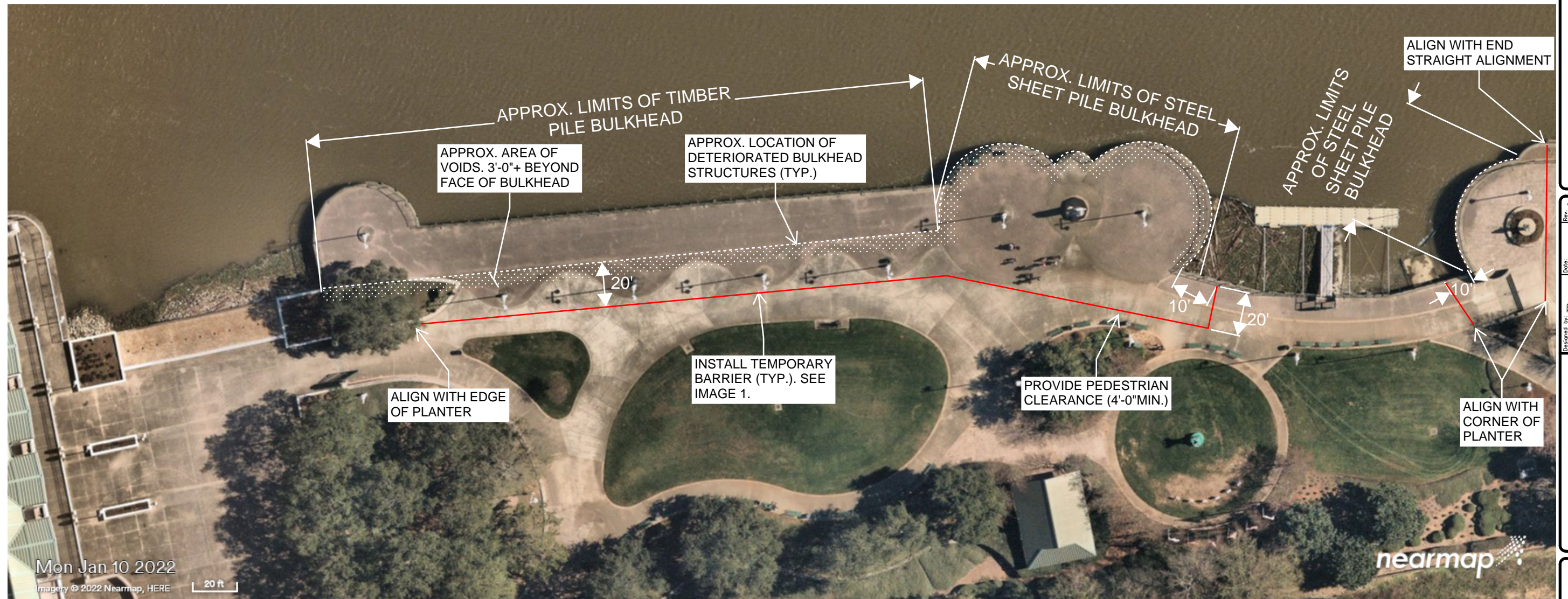


SOURCE: wieserconcrete.com

IMAGE 1 - TYPICAL PROPOSED BARRIER

IMAGE NOTES:

1. BARBED WIRE TOP SHOWN HERE IS NOT INCLUDED IN THE IAL RECOMMENDATION.



PLAN 1 - SITE DEFECTS AND RECOMMENDED REMEDIATION



Mark	Description	Date	Appr.

MOBILE RIVERFRONT REDEVELOPMENT
 COOPER RIVERSIDE PARK UNDERWATER
 INSPECTION FINDINGS
 IMMEDIATE ACTION LETTER

Designed by: TD	Rev: 0
Dwn by: TD	M&N Project No: 10391-04
Reviewed by:	Drawing code:
Submitted by:	Drawing Scale: NTS
MOFFATT & NICHOL Plot scale: 1:1 (B SHEET)	

11 N. WATER ST.
 SUITE 20220
 MOBILE, AL 36602
 (251) 378-9006



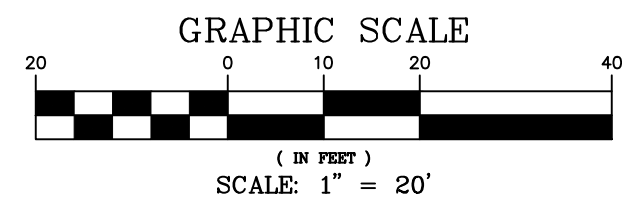
SEAL

Sheet Reference Number:

51		-8	L								
52		-9	R								
53		-10	L	None found, typical						31'	12:15 PM
54		1								6" exposure	
55		to		clean							
56		5									
57		6,7		centered	6.0	6.0				Fill ends in center	18" exp.
58	Cell 2 (Southern of the Pair of North Coffers)	8		centered	12.0	6.0	0.180	0.210			25% nuckles throughout, 1/2" deep
59		11		4.0	6.0	6.0					4' water = top at cap
60		12,13		knuckle corroded 100%, starting 8" down							
61		13		4.0	6.0	6.0					
62		15		4.0	12.0	12.0	.210@2	.35@4		3+' deep	
63		17		typ	8.0	12.0				riprap behind on hole, sand at bottom of hole	3' exposure
64		18		typ	6.0	6.0					
65		21		typ	24.0	10.0					
66		onward			clean						14" w confirmed
67		cell 2									
68	pt 2										
69	2+60			4.0	8.0	8.0				soft silty fill w/ some rocks just behind	
70	2+68			4.0	6.0	6.0				soft silty fill w/ some rocks just behind	
71	2+73			8.0	6.0	6.0	.205@2	.335@4		soft silty fill w/ some rocks just behind	
72	2+80			6.0	8.0	8.0				soft silty fill w/ some rocks just behind	
73	2+90	1		4.0	2.0	6.0				3+' deep	
74		2		4.0	6.0	8.0				3+' deep	
75		2		8.0	6.0	6.0				large fill directly behind	
76	Cell 2 (Southern of the Pair of North Coffers)	3		8.0	18.0	6.0				large fill directly behind	
77		6		7.0	72.0	12.0				debris behind bottom half,	
78		4		4.0	4.0	4.0				3+' deep	
79		5		4.0	6.0	6.0				3+' deep	
80		7		4.0	18.0	10.0				3+' deep	
		10		9.0	18.0	10.0				large fill directly behind	
81		10		4.0	8.0	8.0	.200@2	.305@4		3+' deep	
82	Cell 3	3		9.0	18.0	10.0					
83	3+15	1		4.0	3.0	3.0				3+' deep	
84	(Small quarter-circle closure between northern pair of cells)	2		4.0	18.0	8.0	.155@2	.305@4		3+' deep	
85		6		10.0	84.0	10.0				debris behind	
86		7		5.0	18.0	8.0				debris behind	
87		6		3.0	18.0	10.0				3+' deep	
88		10		3.0	12.0	6.0				3+' deep	
89											
90											
91	Cell 4 (Northern of the Pair of North Coffers)	1		4.0	1.0	1.0				w/ fill	100% coating loss
92		2		3.0	4.0	4.0				debris behind on hole, sand at bottom of hole	
93		3		3.0	5.0	7.0				loose fill behind bottom half only	
94		5		4.0	1.0	1.0				loose fill behind	
95	3+45			knuckle split and 100% section loss, .5" w, top 4'							
96	start 3+50	14 gaps		knuckle split and 100% section loss, .5" w, top 8'							
97		1(would be 15 gap)		2.0	8.0	12.0	.200@2	.295@4			2:46 PM
98		2		4.0	36.0	12.0				timber debris behind, fill starts at bottom	
99	3+70	1		5.0	3.0	10.0				3+' deep fill starts at bottom	
100		1		8.0	12.0	12.0				rock blocking hole	
101		2,3,4,5		2.0	24.0	11.0	.200@2	.225@4	panel 5	3+' deep	
102		2		5.0	10.0	10.0				3+' deep fill starts at bottom	
103		6		1.0	30.0	8.0				3+' deep	
104		6		8.0	36.0	8.0				3+' deep fill starts at bottom	
105		7,8,9,10		1.0	30.0	10.0				3+' deep	
106		11		1.0	18.0	10.0				3+' deep	
107		11		4.0	72.0	10.0				loose fill behind	

APPENDIX B – TOPOGRAPHIC & BOUNDARY SURVEYS

MATCHLINE - SEE SHEET 2



NOTES

THIS SURVEY WAS PREPARED FOR THE CLIENT'S USE AND PURPOSE AS SHOWN. USAGE FOR ANY OTHER PURPOSE, REPRODUCTIONS (IN WHOLE OR IN PART) SHALL NOT BE MADE WITHOUT THE EXPLICIT WRITTEN PERMISSION OF THE SURVEYOR.

THE RELATIVE ERROR OF CLOSURE OF THIS SURVEY & PLAT IS WITHIN THE ALLOWABLE TOLERANCE FOR COMMERCIAL SURVEYS (1" IN 10,000') ACCORDING TO THE STANDARDS OF PRACTICE SET FORTH BY THE BOARD OF LICENSURE OF THE STATE OF ALABAMA.

THIS DRAWING DOES NOT REFLECT ANY TITLE, EASEMENT OR RIGHT-OF-WAY RESEARCH OTHER THAN WHAT IS READILY VISIBLE ON THE SURFACE OR PROVIDED BY THE CLIENT.

NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THE COUNTY.

PROPERTY MAY BE SUBJECT TO ZONING SETBACKS AND RESTRICTIONS OF RECORD.

BEARINGS BASED ON STATE PLANE ALABAMA WEST ZONE NAD83 DERIVED FROM GPS OBSERVATIONS UTILIZING CORS STATION AL-59.

ELEVATIONS WERE DERIVED FROM GPS OBSERVATIONS UTILIZING CORS STATION AL-59 NAVD 88.

FIELD WORK COMPLETED ON 12/15/2022

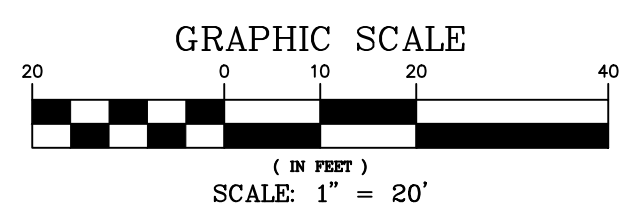
LEGEND	
●	ALUMINUM CAPPED REBAR SET
■	POWER POLE
□	ELECTRICAL SERVICE
◆	LIGHT POLE
⊠	WATER METER
⚠	WATER VALVE
⦿	FIRE HYDRANT
⊕	IRRIGATION CONTROL VALVE
⊙	CLEAN OUT
⊚	DRAINAGE MANHOLE
⊞	DRAINAGE INLET (GRATE)
⊗	BURIED UTILITY MARKER
✳	VARIOUS TREES
⊙	VARIOUS TREES
🌴	PALM TREE
⊙	SHRUBBERY
□	SERVICE CABINET
⊕	SERVICE POLE
⊙	SIGN
○	POST
⊞	FLAG POLE
⚡	FLOOD LIGHT
—○—○	GUARD RAIL
—WL—	WATER LINE
—FOC—	FIBER OPTIC CABLE
—X—	METAL FENCE
—UE—	UNDERGROUND ELECTRIC
---101---	1' CONTOUR
---100---	5' CONTOUR
-----	DRAINAGE PIPE

APPROXIMATE LOCATION OF PROPERTY LINE TAKEN FROM CITY OF MOBILE GIS

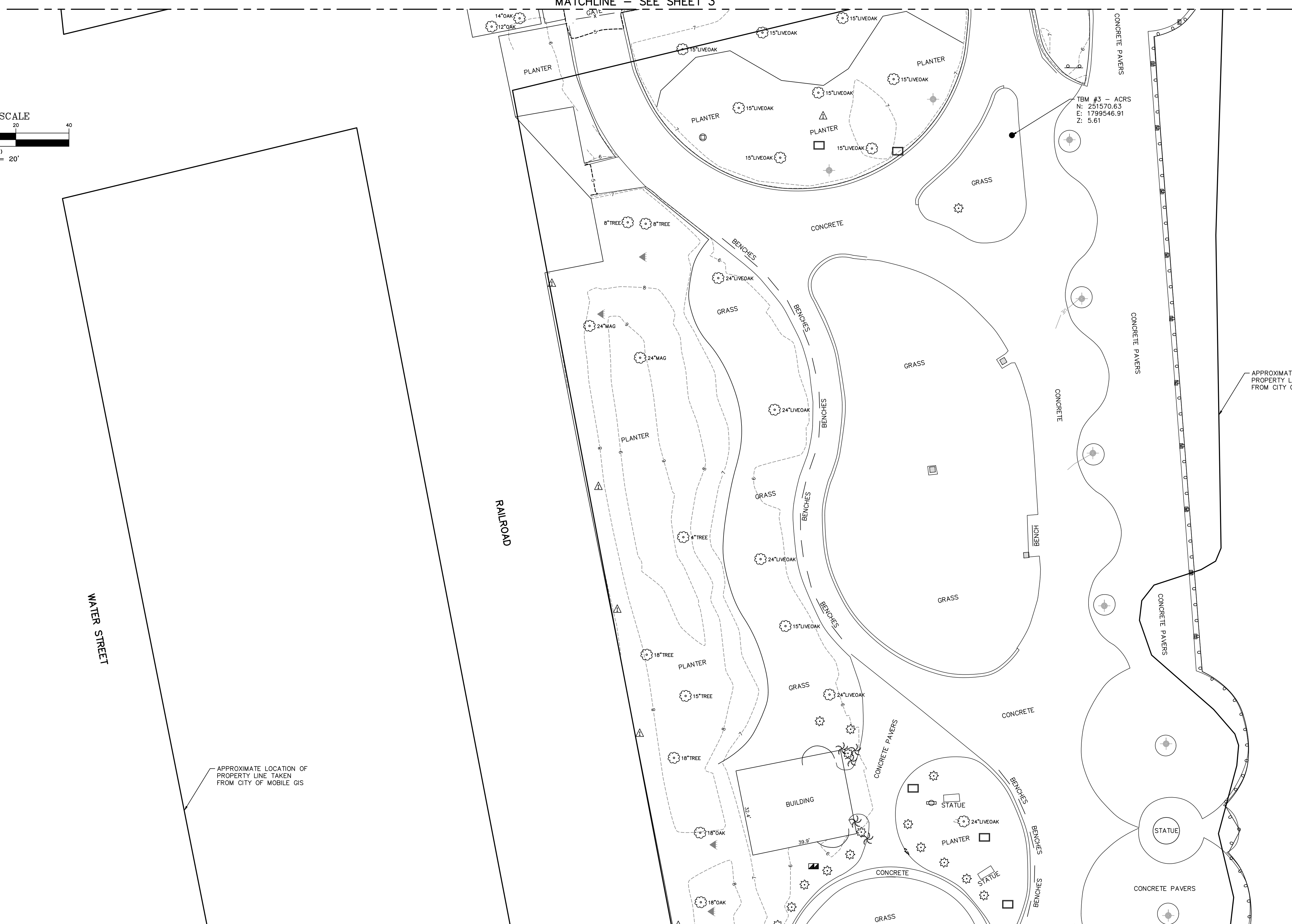
APPROXIMATE LOCATION OF PROPERTY LINE TAKEN FROM CITY OF MOBILE GIS

RAILROAD

TBM #4 - ACRS
N: 251135.980
E: 1799523.980
Z: 5.26



MATCHLINE - SEE SHEET 3



MATCHLINE - SEE SHEET 1

McCrorry Williams
INCORPORATED
Engineers Surveyors

3207 INTERNATIONAL DRIVE, SUITE G
MOBILE, ALABAMA
36606
PHONE: (251) 476-4720
FAX: (251) 476-4721
EMAIL: mail@mcwinc.com

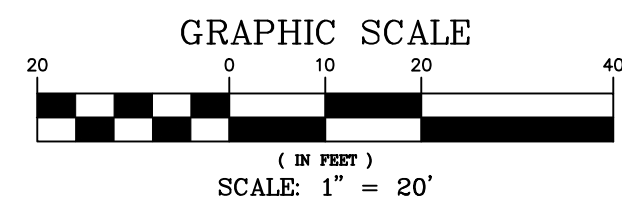
M5998-2001
M5998-2001 TOPO.dwg

TOPOGRAPHIC MAP
FOR
MOFFATT & NICHOL

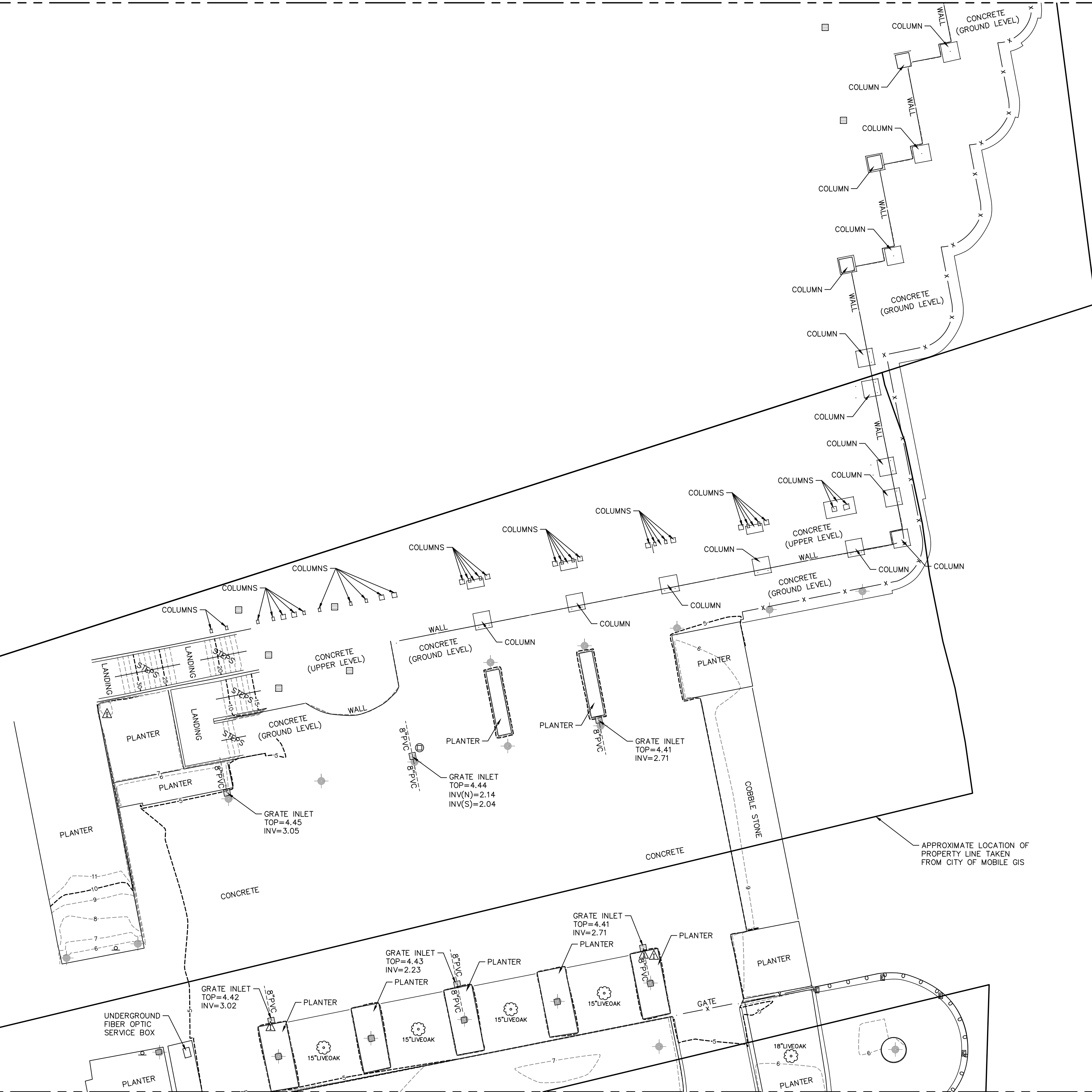
MOBILE RIVERFRONT DEVELOPMENT

SCALE: 1"=20'	DATE: Jan 13, 2023	DRAWN BY: NAR	APPROVED BY:	SHEET 2 OF 5
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MATCHLINE - SEE SHEET 4



APPROXIMATE LOCATION OF PROPERTY LINE TAKEN FROM CITY OF MOBILE GIS

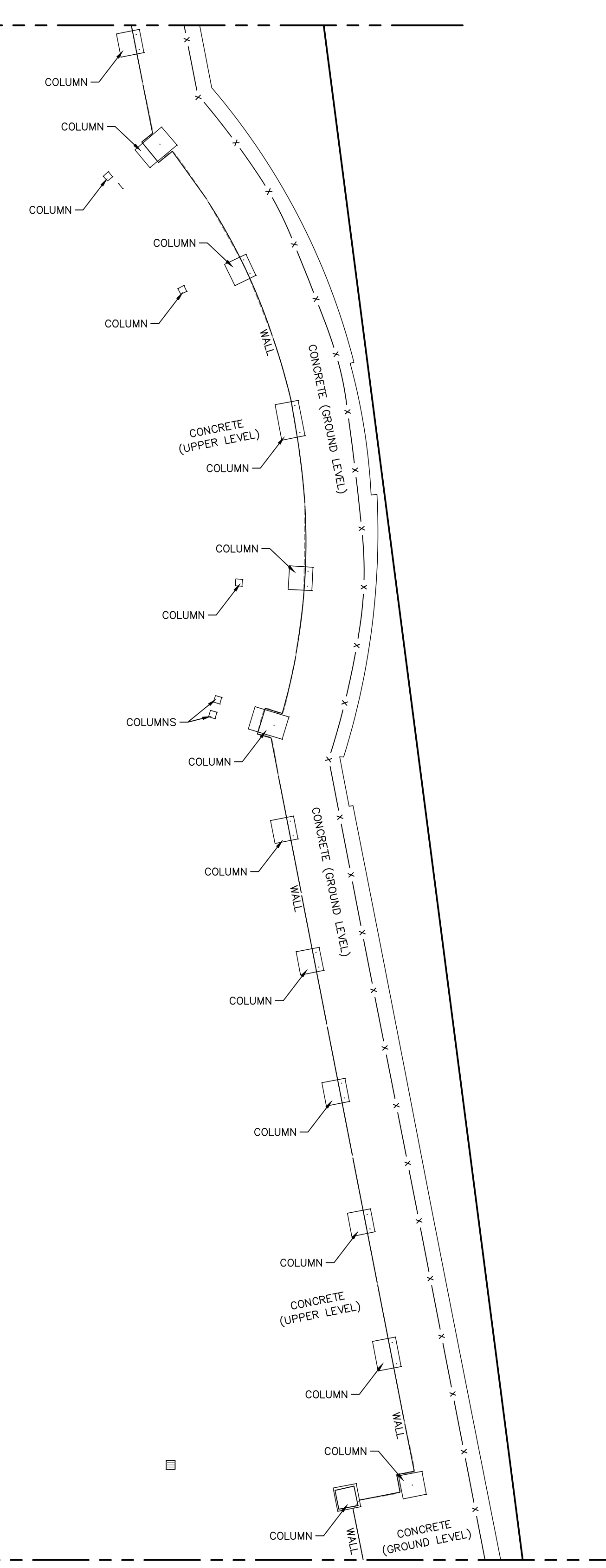
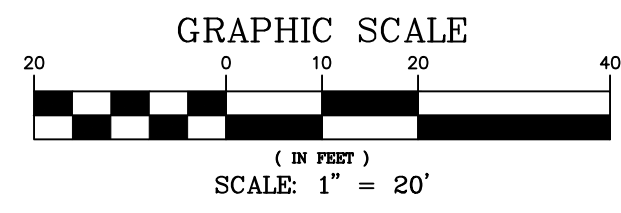


APPROXIMATE LOCATION OF PROPERTY LINE TAKEN FROM CITY OF MOBILE GIS

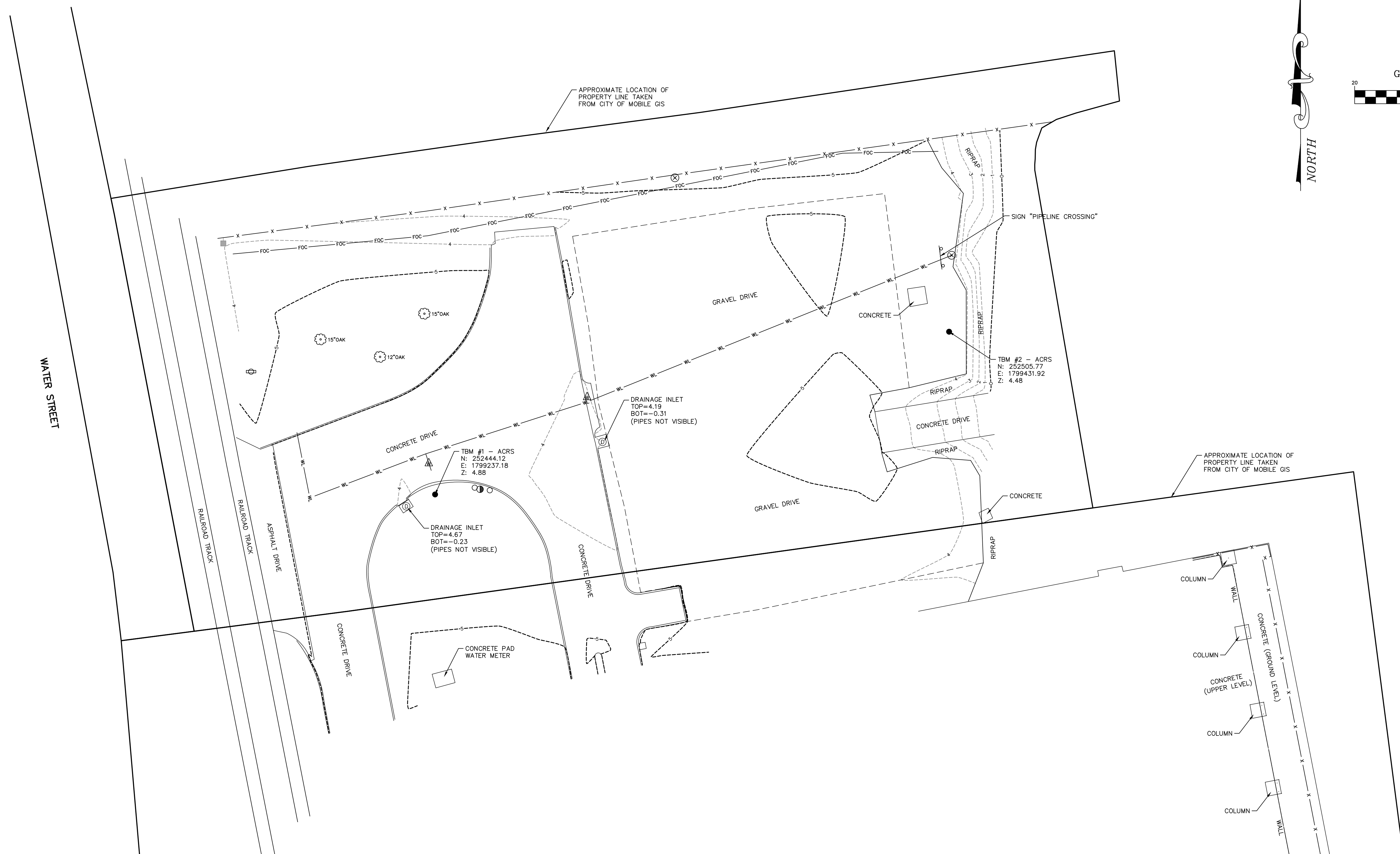
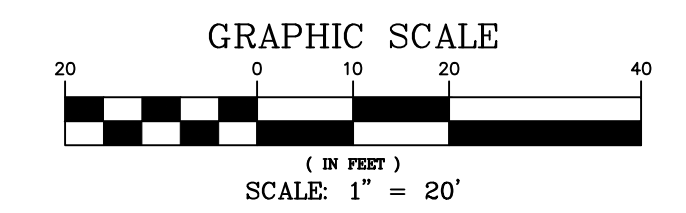
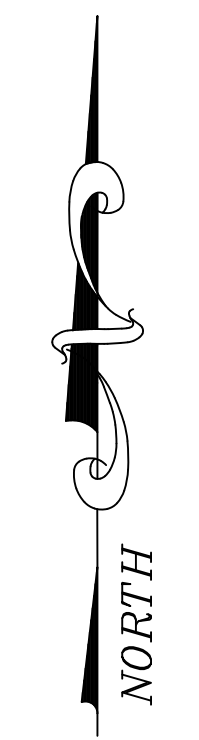
MATCHLINE - SEE SHEET 2

MATCHLINE - SEE SHEET 5

APPROXIMATE LOCATION OF PROPERTY LINE TAKEN FROM CITY OF MOBILE GIS



MATCHLINE - SEE SHEET 3



MATCHLINE - SEE SHEET 4

McCrorry Williams
INCORPORATED
Engineers Surveyors

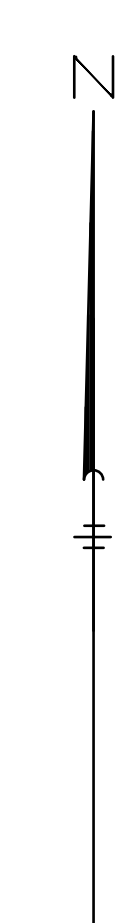
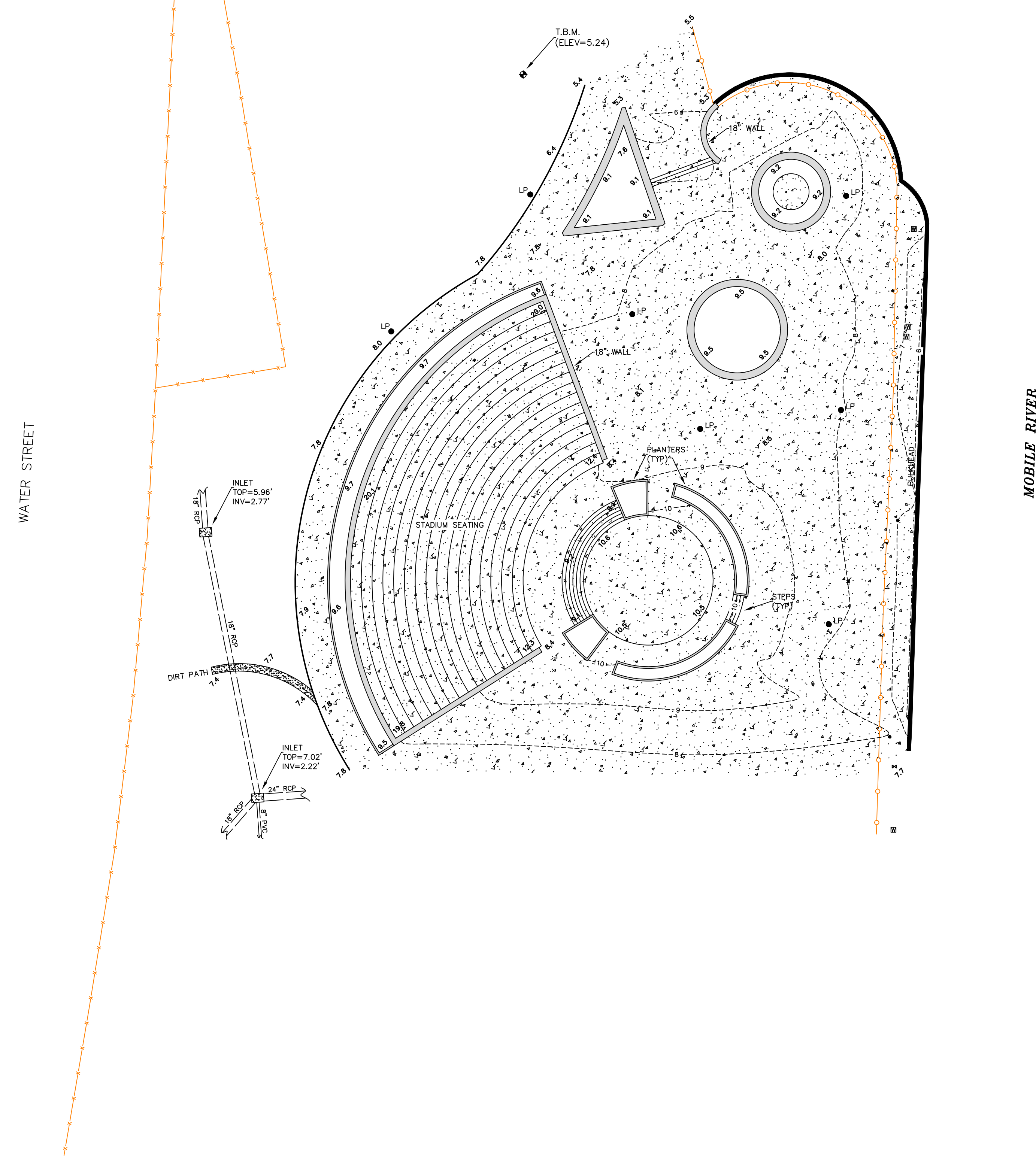
3207 INTERNATIONAL DRIVE, SUITE G
MOBILE, ALABAMA
36606
PHONE: (251) 476-4720
FAX: (251) 476-4721
EMAIL: mail@mcwinc.com

M5998-2001
M5998-2001 TOPO.dwg

TOPOGRAPHIC MAP
FOR
MOFFATT & NICHOL

MOBILE RIVERFRONT DEVELOPMENT

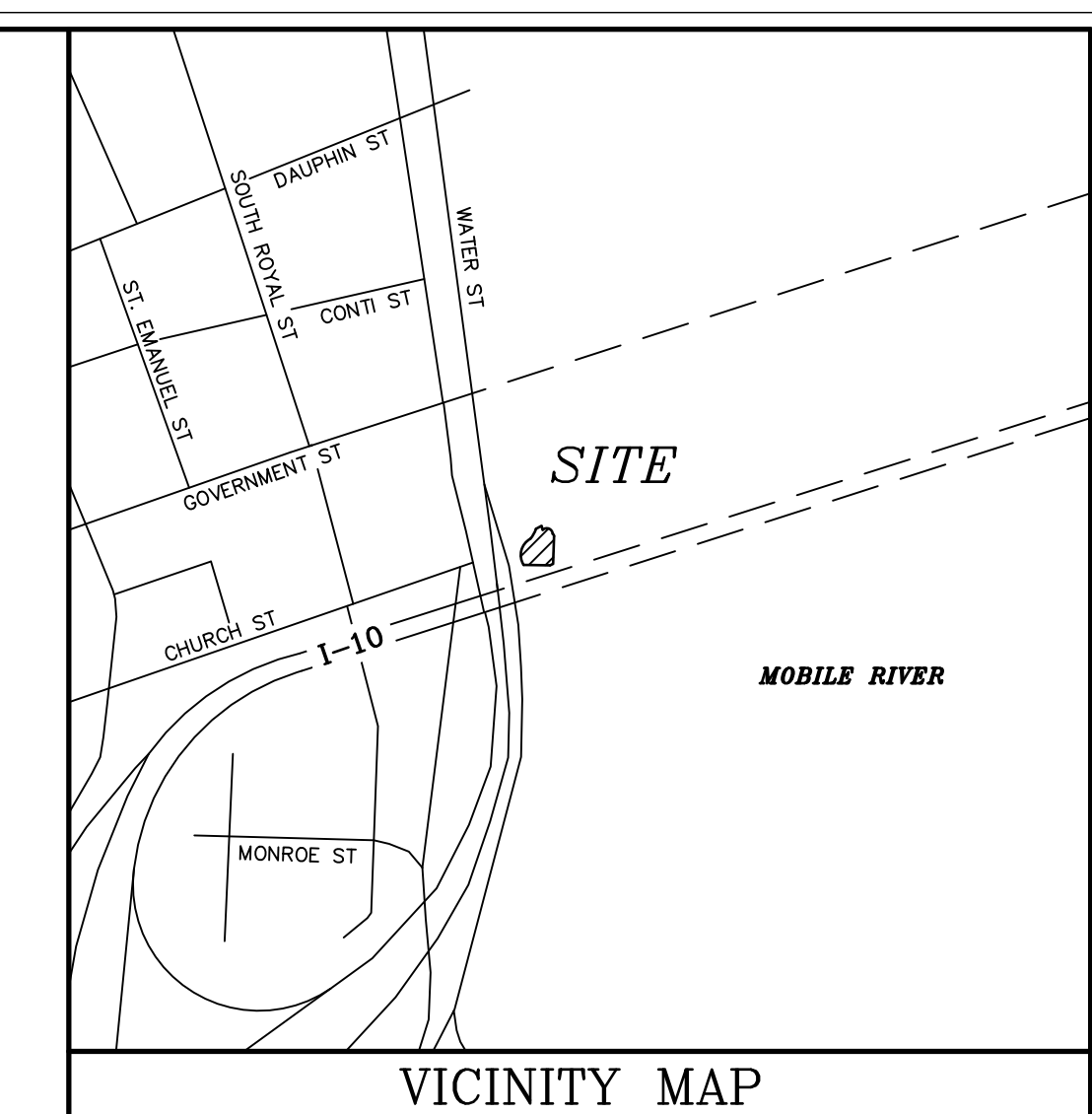
SCALE: 1"=20'	DATE: Jan 13, 2023	DRAWN BY: NAR	APPROVED BY:	SHEET 5 OF 5
---------------	--------------------	---------------	--------------	--------------



LEGEND

- X- FENCE LINE
- O- GUARD RAIL
- LP LIGHT POLE
- ⊠ WATER METER
- ⊕ WATER VALVE
- ◆ TEMPORARY BENCH MARK
- BOLLARD
- S- GROUND CONTOUR
- ∧ GROUND ELEVATION
- STORM DRAIN LINE
- ▨ CONCRETE

SCALE: 1" = 20'

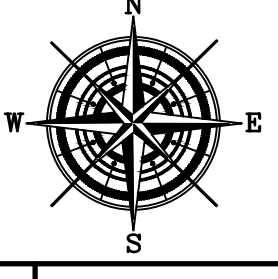


- NOTES:**
- 1.) Type of Survey: Topographic.
 - 2.) Field Date(s): May 10, 2023.
 - 3.) Bearing Basis: Referenced to Alabama State Plane Coordinate System West Zone (102) NAD 83(2011) established by RTK GPS utilizing ALDOT Net as a continuously operating reference station.
 - 4.) This drawing does not reflect an easement or title search by the surveyor. Easements or Claims of easements may exist.
 - 5.) Elevations on this plot are referenced to NAVD 88, established by RTK GPS utilizing ALDOT Net as a continuously operating reference station.

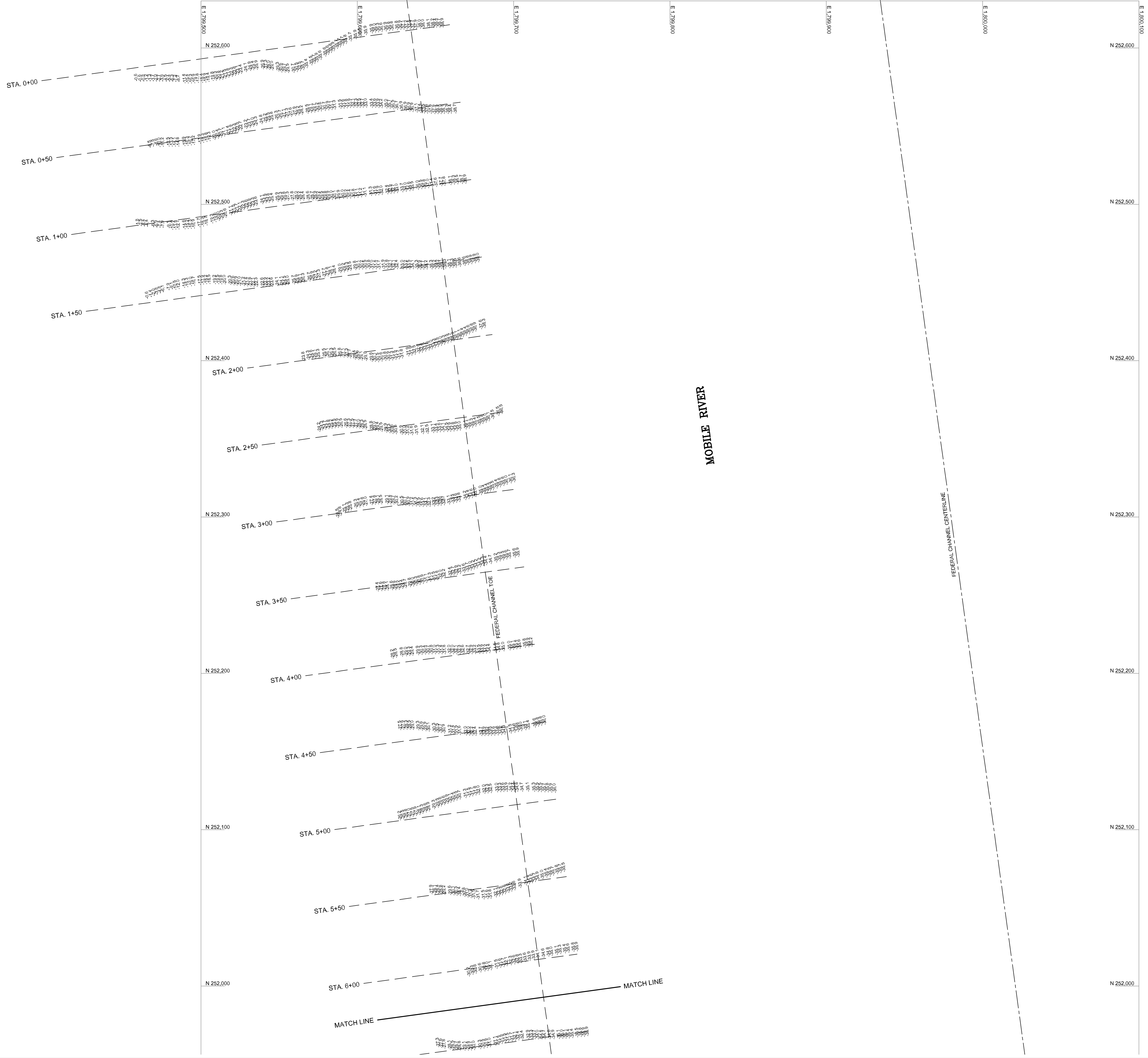
I hereby state that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Alabama to the best of my knowledge, information and belief.

Cecil T. Hudson, PLS
 Alabama Licensed Professional
 Land Surveyor No. 29983-S
 Prints not valid unless
 they bear an original seal

Date: 05/10/2023

REVISIONS:	TOPOGRAPHIC SURVEY			
	PREPARED FOR MOFFATT & NICHOL			
	 ROWE ENGINEERING & SURVEYING CONSULTING ENGINEERS <small>3502 LAUHLIN DR • SUITE B • MOBILE, AL 36688 PHONE 251-666-2766 • FAX 251-660-1040</small>			
DRAWING: 52598-BL.dwg	JOB: 52598	PLAT DATE: May 17, 2023	SCALE: 1" = 20'	SHEET NO. 1 OF 1
DRAWN BY: BWL	FB: 2058/22			
CHECKED BY: CTH				

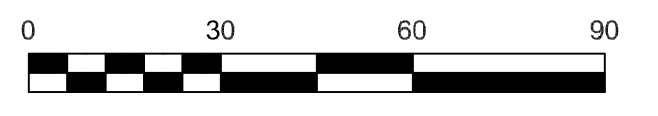
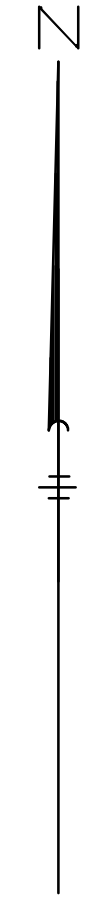
APPENDIX C – BATHYMETRIC SURVEY



VICINITY MAP

LEGEND

- | | |
|--|--|
| GLDB ■ GREEN LIGHTED DAYBOARD | RLDB ▲ RED LIGHTED DAYBOARD |
| GDB ■ GREEN DAYBOARD | RDB ▲ RED DAYBOARD |
| GPCDB ■ GREEN PREFERRED CHANNEL DAYBOARD | RPCDB ▲ RED PREFERRED CHANNEL DAYBOARD |
| GCDB ◆ GREEN CROSSING DAYBOARD | ◆ RED CROSSING DAYBOARD |
| GC ■ GREEN CAN | ■ RED NUN |
| GLB ▲ GREEN LIGHTED BUOY | ▲ RED LIGHTED BUOY |
| SA ■ SWIM AREA | ● BEACON |
| R ■ ROCK | 20.5 SOUNDINGS |
| SNW ■ SLOW NO WAKE | ▨ DREDGE AREA |



NOTES:

- 1.) This survey was accomplished utilizing an automated sounding system. The decimal point in the sounding also represents the location the sounding was acquired. All soundings shown without a "+" sign are depths below zero M.L.L.W. datum. All soundings that appear with a "+" sign are elevations above zero M.L.L.W. datum.
- 2.) Vertical Control: The NOAA Auto gauge Station ID: 8737848. Located at the Alabama State Docks Mean Lower Low Water (M.L.L.W. datum).
- 3.) Horizontal control: Horizontal coordinates on this plat are referenced to Alabama State Plane Coordinate System West Zone (0102), established by RTK.
- 4.) Field work was performed on: October 03, 2022
- 5.) Water surface readings during the course of the survey were +1.7 @ 08:27 and +1.4 @ 10:07 M.L.L.W. Datum.
- 6.) Soundings were acquired with HYPACK 2022 Software and a Teledyne Odom Echotrac CV-100-DF sounder with a 200 KHz transducer.
- 7.) Background imagery: If shown is imported through carlsons 2020 software, utilizing esri arcgis services.
- 8.) Type of survey: Hydrographic

I hereby state that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Alabama to the best of my knowledge, information, and belief.

Cecil T. Hudson
 Cecil T. Hudson, PLS
 Alabama Licensed Professional Land Surveyor No. 29983-S
 Prints not valid unless they bear an original seal
 Survey Date: OCTOBER 3, 2022

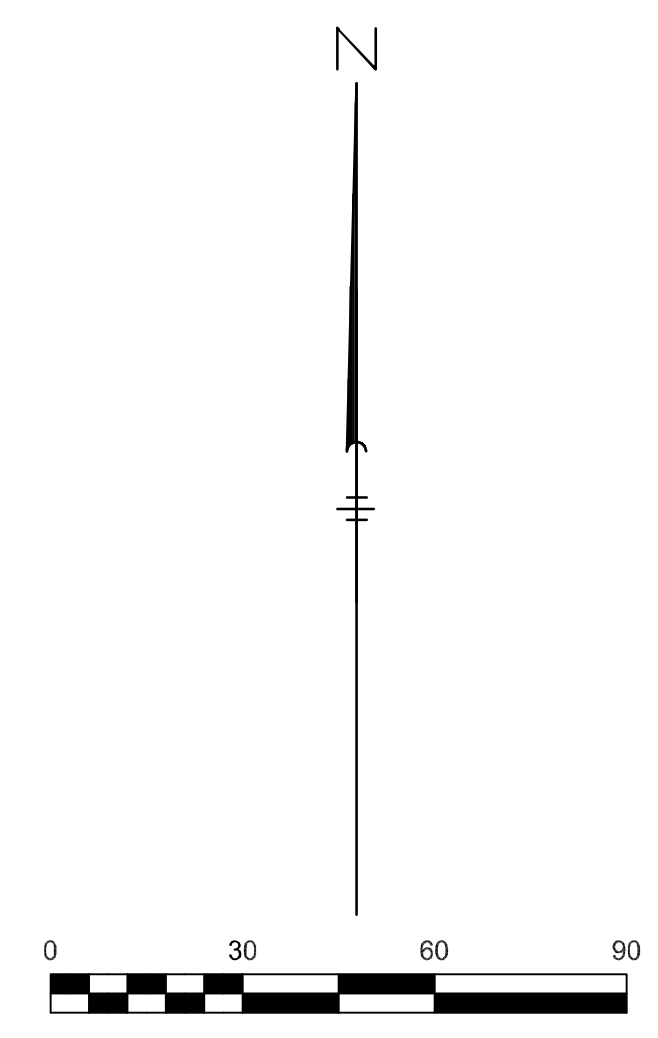


REVISIONS:	HYDROGRAPHIC CONDITION SURVEY OF MOBILE RIVER FRONT REDEVELOPMENT PROJECT			
	PREPARED FOR MOFFATT & NICHOL			
	ROWE ENGINEERING & SURVEYING CONSULTING ENGINEERS			
	3502 LAUGHLIN DR • SUITE B • MOBILE, AL 36693 PHONE 251-666-2766 • FAX 251-660-1040			
	ACAD: 52321 Dwg DRAWN BY: WJM CHECKED BY: CTH	JOB: 52321 FB: 2028/30 KEY:	PLAT DATE: OCTOBER 03, 2022	SCALE: 1" = 30'
				SHEET NO. 1 OF 3

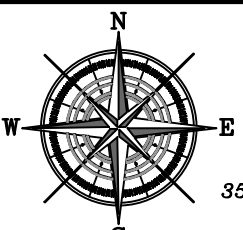


LEGEND

- | | |
|--|--|
| GLDB ■ GREEN LIGHTED DAYBOARD | RLDB ▲ RED LIGHTED DAYBOARD |
| GDB ■ GREEN DAYBOARD | RDB ▲ RED DAYBOARD |
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| SA ■ SWIM AREA | ● BEACON |
| R ■ ROCK | 20.5 SOUNDINGS |
| SNW ■ SLOW NO WAKE | ⊠ DREDGE AREA |

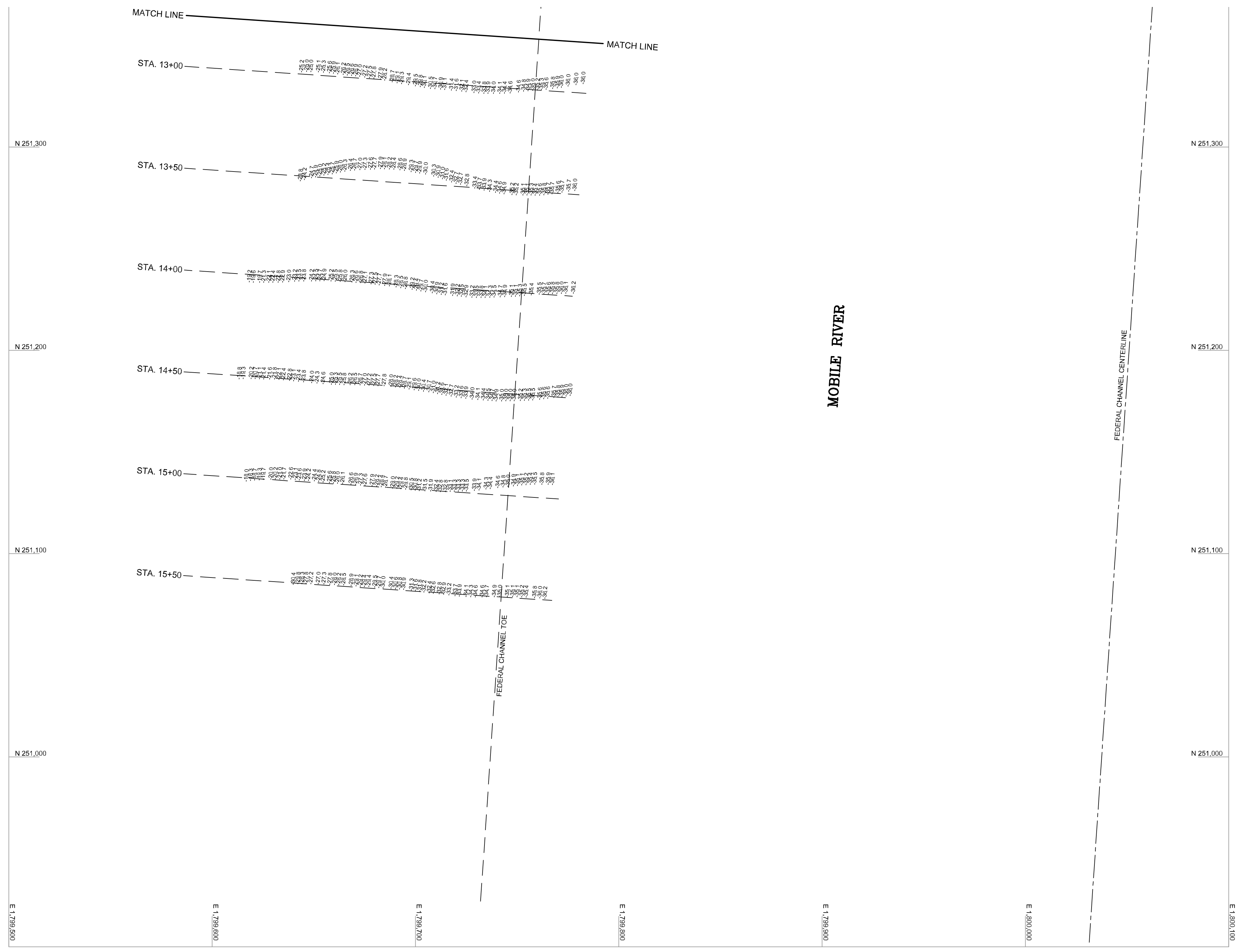
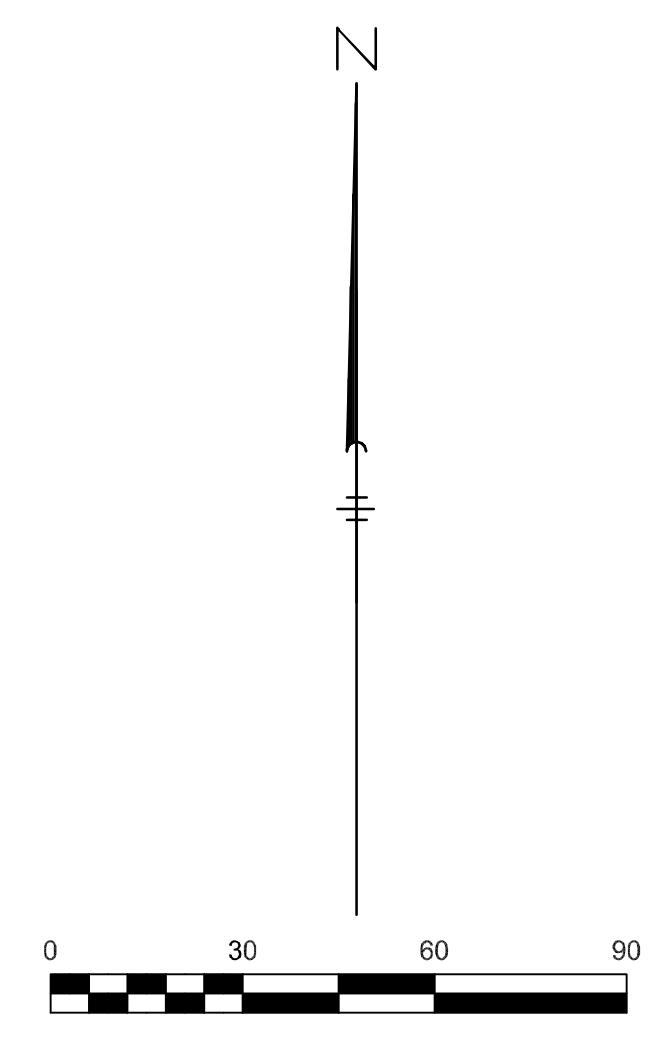


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ROWE ENGINEERING & SURVEYING

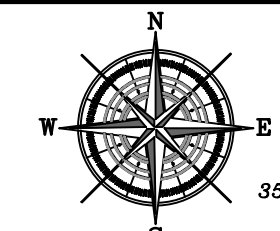
REVISIONS:	HYDROGRAPHIC CONDITION SURVEY OF MOBILE RIVER FRONT REDEVELOPMENT PROJECT		
	PREPARED FOR MOFFATT & NICHOL		
			
	ROWE ENGINEERING & SURVEYING CONSULTING ENGINEERS 3502 LAUGHLIN DR. • SUITE B • MOBILE, AL 36693 PHONE 251-666-2766 • FAX 251-660-1040		
	ACAD: 52321.Dwg	JOB: 52321	PLAT DATE: OCTOBER 03, 2022
DRAWN BY: WJM	FB: 2028/30	SCALE: 1" = 30'	
CHECKED BY: CTH	KEY:	SHEET NO. 2 OF 3	

LEGEND

- | | |
|--|--|
| GLDB ■ GREEN LIGHTED DAYBOARD | RLDB ▲ RED LIGHTED DAYBOARD |
| GDB ■ GREEN DAYBOARD | RDB ▲ RED DAYBOARD |
| GPCDB ■ GREEN PREFERRED CHANNEL DAYBOARD | RPCDB ▲ RED PREFERRED CHANNEL DAYBOARD |
| GCDB ◆ GREEN CROSSING DAYBOARD | ◆ RED CROSSING DAYBOARD |
| GC ■ GREEN CAN | ■ RED NUN |
| GLB ▲ GREEN LIGHTED BUOY | ▲ RED LIGHTED BUOY |
| SA ■ SWIM AREA | ● BEACON |
| R ■ ROCK | 20.5 SOUNDINGS |
| SNW ■ SLOW NO WAKE | ⊠ DREDGE AREA |

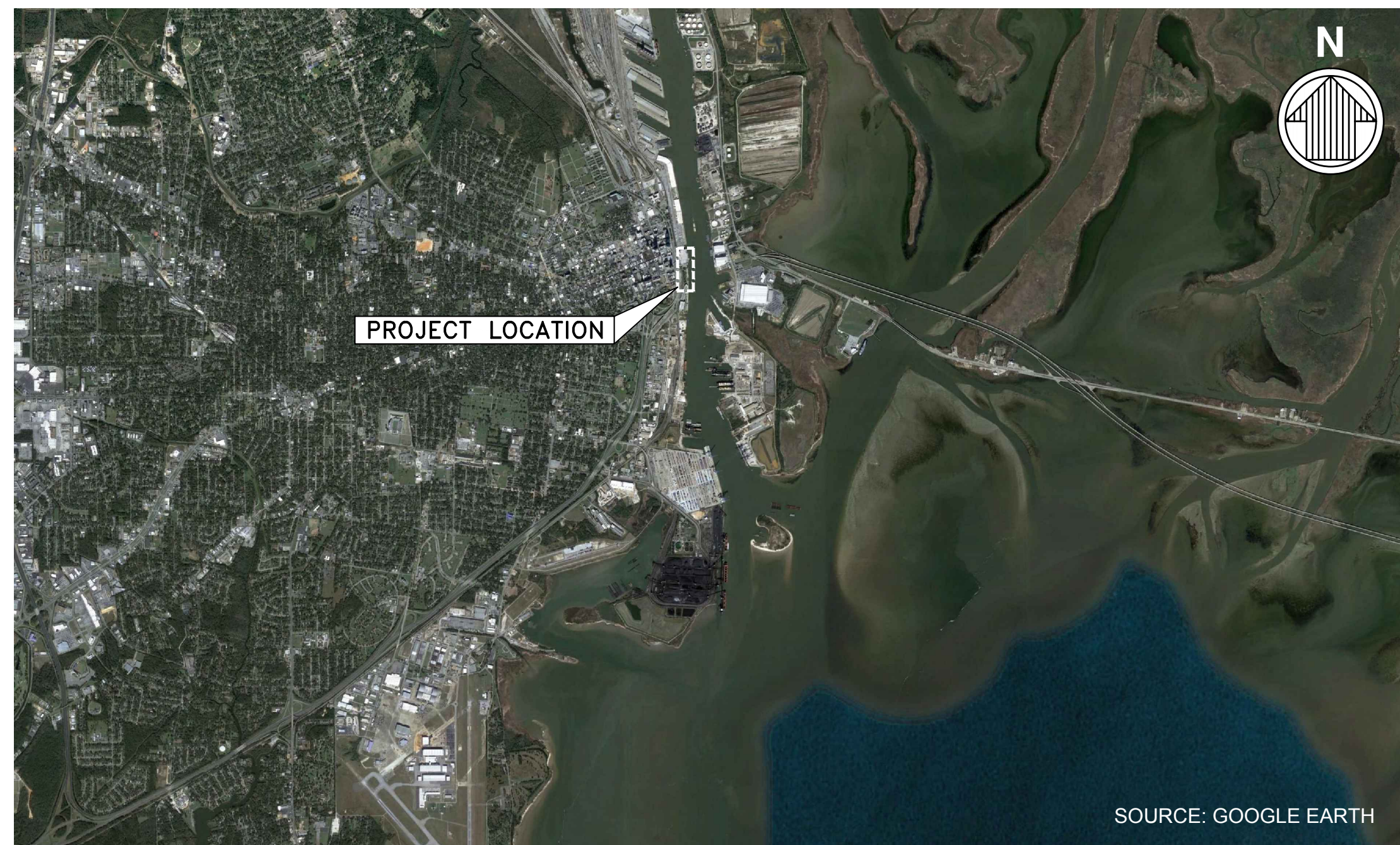


MOBILE RIVER

REVISIONS:	HYDROGRAPHIC CONDITION SURVEY OF MOBILE RIVER FRONT REDEVELOPMENT PROJECT		
	PREPARED FOR MOFFATT & NICHOL		
	 ROWE ENGINEERING & SURVEYING CONSULTING ENGINEERS 3502 LAUGHLIN DR. • SUITE B • MOBILE, AL 36683 PHONE 251-666-2766 • FAX 251-660-1040		
	ACAD: 52321.Dwg	JOB: 52321	PLAT DATE: OCTOBER 03, 2022
DRAWN BY: WJM	FB: 2028/30	SCALE: 1" = 30'	SHEET NO. 3 OF 3
CHECKED BY: CTH	KEY:		

MOBILE RIVERFRONT REDEVELOPMENT BULKHEAD REPLACEMENT CITY OF MOBILE, ALABAMA

SECTION 40; TOWNSHIP 4 SOUTH; RANGE 1 WEST
1 SOUTH WATER STREET
MOBILE, AL 36603

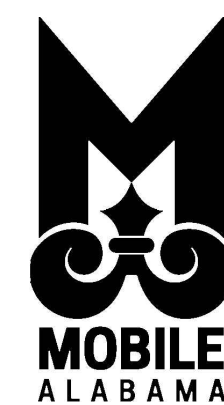


VICINITY MAP
NTS



PROJECT LOCATION
NTS

PREPARED FOR:



205 GOVERNMENT STREET
MOBILE, AL 36602-0001
WWW.CITYOFMOBILE.ORG

PREPARED BY:



moffatt & nichol

11 N. WATER ST., STE. 20220
MOBILE, AL 36602
(251) 378-9000
WWW.MOFFATTNICHOL.COM
CERTIFICATE OF AUTHORIZATION #: ECA2676

CITY OF MOBILE REPRESENTATIVES:

SANDY SIMPSON

MAYOR

CITY COUNCIL

CORY PENN
WILLIAM CARROLL
C.J. SMALL
BEN REYNOLDS
JOEL DAVES
JOSH WOODS
GINA GREGORY

DISTRICT 1
DISTRICT 2
DISTRICT 3
DISTRICT 4
DISTRICT 5
DISTRICT 6
DISTRICT 7

JAMES A. "JIM" DELAPP

EXECUTIVE DIRECTOR, PUBLIC WORKS

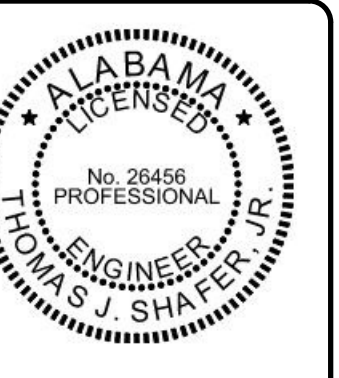


Rev.	Date	Description	Mark

MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT

COVER SHEET

11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. #: ECA2676 	Date: 2023-09-08 M&N Project No. 10961-04 Drawing code:	Designed by: Drawn by: RW Reviewed by: MR Submitted by: MEG GOECKER Drawing Scale: AS INDICATED Plot Scale: 1" = 10' (0 SHEET)
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SEAL

ISSUED FOR BID
ISSUED: 2023-09-08
NOT TO BE USED FOR CONSTRUCTION

Sheet Reference No.
G-001

INDEX: 1 OF 60

INDEX OF DRAWINGS		
SHEET INDEX	DRAWING NO.	SHEET TITLE
GENERAL		
1	G-001	COVER SHEET
2	G-002	INDEX OF DRAWINGS, LEGENDS, & ABBREVIATIONS
3	G-003	GENERAL NOTES
4	G-101	OWNER WORK PLAN
5	G-102	CONSTRUCTION STAGING AND PHASING PLAN
6	GA101	GENERAL ARRANGEMENT PLAN
SURVEY & MAPPING		
7	V-101	EXISTING CONDITIONS PLAN
GEOTECHNICAL		
8	B-601	BORING LOGS - LANDSIDE
9	B-602	BORING LOGS - WATERSIDE
CIVIL		
10	CD101	LANDSIDE DEMOLITION PLAN
11	CD501	CIVIL DEMO DETAILS (1 OF 2)
12	CD502	CIVIL DEMO DETAILS (2 OF 2)
13	CE501	CIVIL EROSION DETAILS
14	CG101	CIVIL GRADING PLAN
STRUCTURAL		
15	S-001	STRUCTURAL NOTES
16	S-002	CONSTRUCTION PHASING & STAGING - BULKHEAD AND NORTH COFFER CELL
17	S-003	CONSTRUCTION PHASING - SOUTH COFFER CELL
18	S-004	VIBRATION MONITORING LOCATION
19	SD101	DEMOLITION PLAN
20	SD301	DEMOLITION SECTIONS (1 OF 2)
21	SD302	DEMOLITION SECTIONS (2 OF 2)
22	S-100	PLAN - MONITORING POINTS
23	S-101	PLAN - PILING BEFORE DEMOLITION OF NORTH CELLS
24	S-102	PLAN - DECK AFTER DEMOLITION
25	S-103	ENLARGED PLAN - SOUTH BULKHEAD
26	S-201	ELEVATION - BULKHEAD
27	S-301	SECTIONS - BULKHEAD (1 OF 2)
28	S-302	SECTIONS - BULKHEAD (2 OF 2)
29	S-303	SECTIONS - SOUTH COFFER CELL (1 OF 2)
30	S-304	SECTIONS - SOUTH COFFER CELL (2 OF 2)
31	S-305	REVTMENT CROSS SECTIONS (1 OF 2)
32	S-306	REVTMENT CROSS SECTIONS (2 OF 2)
33	S-501	DETAILS - BULKHEAD (1 OF 4)
34	S-502	DETAILS - BULKHEAD (2 OF 4)
35	S-503	DETAILS - BULKHEAD (3 OF 4)
36	S-504	DETAILS - BULKHEAD (4 OF 4)
37	S-505	DETAILS - MISCELLANEOUS
38	S-506	DETAILS - DEADMAN DECK
39	S-507	DETAILS - SOUTH COFFER CELL (1 OF 2)
40	S-508	DETAILS - SOUTH COFFER CELL (2 OF 2)
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41	R-1	WALLACE TUNNEL AND COFFER CELLS (1 OF 2)
42	R-2	WALLACE TUNNEL AND COFFER CELLS (2 OF 2)
43	R-3	PARK WHARF AND DEADMAN (1 OF 15)
44	R-4	PARK WHARF AND DEADMAN (2 OF 15)
45	R-5	PARK WHARF AND DEADMAN (3 OF 15)
46	R-6	PARK WHARF AND DEADMAN (4 OF 15)
47	R-7	PARK WHARF AND DEADMAN (5 OF 15)
48	R-8	PARK WHARF AND DEADMAN (6 OF 15)
49	R-9	PARK WHARF AND DEADMAN (7 OF 15)
50	R-10	PARK WHARF AND DEADMAN (8 OF 15)
51	R-11	PARK WHARF AND DEADMAN (9 OF 15)
52	R-12	PARK WHARF AND DEADMAN (10 OF 15)
53	R-13	PARK WHARF AND DEADMAN (11 OF 15)
54	R-14	PARK WHARF AND DEADMAN (12 OF 15)
55	R-15	PARK WHARF AND DEADMAN (13 OF 15)
56	R-16	PARK WHARF AND DEADMAN (14 OF 15)
57	R-17	PARK WHARF AND DEADMAN (15 OF 15)
58	R-18	MUSEUM WHARF AND BULKHEAD (1 OF 3)
59	R-19	MUSEUM WHARF AND BULKHEAD (2 OF 3)
60	R-20	MUSEUM WHARF AND BULKHEAD (3 OF 3)

SHEET TYPE DESIGNATORS	
0	GENERAL (COVER SHEET, LEGEND, NOTES)
1	PLANS (HORIZONTAL VIEWS)
2	ELEVATIONS (NOT TYPICALLY USED)
3	SECTIONS (OVERALL VIEWS)
4	LARGE-SCALE VIEWS (PLANS, SECT. OR ELEV. - NOT DETAILS)
5	DETAILS (MAY BE PLAN, SECT. OR ELEV. VIEWS)
6	SCHEDULES
7	USER DEFINED
8	USER DEFINED
9	3D ISOMETRIC

DISCIPLINE DESIGNATORS	
DISCIPLINE	DESIGNATOR
GENERAL	G
SURVEY/MAPPING	V
GEOTECHNICAL	B
CIVIL WORKS	W
CIVIL	C
STRUCTURAL	S
MECHANICAL	M
ELECTRICAL	E
REFERENCE	R
OTHER DISCIPLINES	X

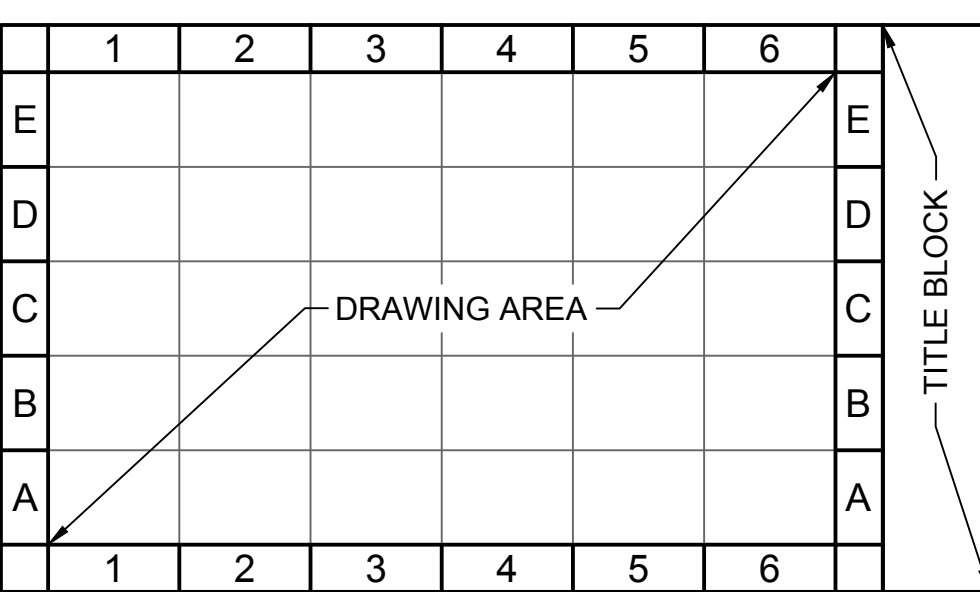
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DEMOLITION	D
GENERAL	G
SUBSTRUCTURE	B
FRAMING	F
COMPONENT	C
SITE	S

REVISION NUMBERING	
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B00, B01...	BID SUBMITTALS
000, 001...	CONSTRUCTION SUBMITTALS

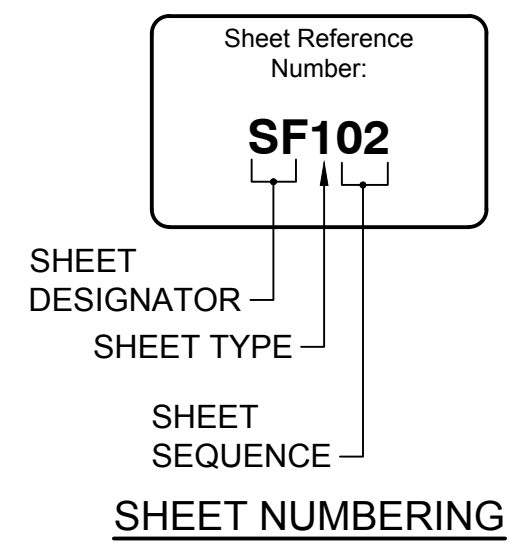
GENERAL ABBREVIATIONS

AB	ANCHOR BOLT	fy	YIELD STRENGTH	PL	PROPERTY LINE
ADDL	ADDITIONAL	FP	FULL PENETRATION	PL	PLATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FPS	FEET PER SECOND	PSI	POUNDS PER SQUARE INCH
ALDOT	ALABAMA DEPARTMENT OF TRANSPORTATION	FEMA	FEDERAL EMERGENCY MANAGEMENT ASSOCIATION	PSF	POUNDS PER SQUARE FOOT
ALT	ALTERNATE	FS	FAR SIDE	QTY	QUANTITY
APPROX	APPROXIMATE	FT	FOOT	R	RADIUS
API	AMERICAN PETROLEUM INSTITUTE	GA	GAUGE	REF	REFERENCE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	GALV	GALVANIZED	REINF	REINFORCING
ASSY	ASSEMBLY	GR	GRADE	REQ'D	REQUIRED
AUTH	AUTHORIZATION	HORIZ	HORIZONTAL	SCH/	SCHEDULE
AWS	AMERICAN WELDING SOCIETY	ID	INSIDE DIAMETER	SCHD	SCHEDULE
BM	BEAM	"	INCH	SE	SOUTHEAST
B&T	BULB & TAIL	JT	JOINT	SF	SQUARE FEET
BOT	BOTTOM	K	KIP (1000 POUNDS)	SHT	SHEET
BTWN	BETWEEN	KSI	KIP PER SQUARE INCH	SIM	SIMILAR
BH	BORING HOLE	KTS	KNOTS	SOE	SUPPORT OF EXCAVATION
CIP	CAST-IN-PLACE	L	ANGLE	SPA	SPACES
CITY	CITY OF MOBILE	LB(S)	POUND(S)	SQ	SQUARE
CERT.	CERTIFICATE	LG	LONG	SSP	STEEL SHEET PILE
CJ	CONSTRUCTION JOINT	LLV	LONG LEG VERTICAL MAINTENANCE	STA	STATION
CJP	COMPLETE JOINT PENETRATION GROOVE WELD	MAINT	MAINTENANCE	STAGG	STAGGERED
CG	CENTER OF GRAVITY	MFR	MANUFACTURER	STD	STANDARD
CL	CENTERLINE	MAX	MAXIMUM	STL	STEEL
CLR	CLEAR, CLEARANCE	MHW	MEAN HIGH WATER	STIFF	STIFFENER
COL	COLUMN	MHHW	MEAN HIGHER HIGH WATER	SW	SOUTHWEST
CONC	CONCRETE	MIN	MINIMUM	SYMM	SYMMETRIC
CONN	CONNECTION	MLW	MEAN LOW WATER	T	TON
CONST	CONSTRUCTION	MLLW	MEAN LOWER LOW WATER	TBD	TO BE DETERMINED
CONT	CONTINUOUS, CONTINUED	MSL	MEAN SEA LEVEL	TEMP	TEMPORARY
d	BAR DIAMETER	mm	MILLIMETER	TOC	TOP OF CONCRETE
DBL	DOUBLE	MT	METRIC TON	TOS	TOP OF STEEL
DIA	DIAMETER	NAD	NORTH AMERICAN DATUM	TYP	TYPICAL
DMP	DISPLACEMENT MONITORING POINT	NAVD	NORTH AMERICAN VERTICAL DATUM	T&B	TOP AND BOTTOM
DWG	DRAWING	NE	NORTHEAST	UON	UNLESS OTHERWISE NOTED
EA	EACH	NW	NORTHWEST	USACE	UNITED STATES ARMY CORPS OF ENGINEERS
EF	EACH FACE	NS	NEAR SIDE	VERT	VERTICAL
EL, ELEV	ELEVATION	No.	NUMBER	VMP	VIBRATION MONITORING POINT
EMBED	EMBEDMENT	NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	W/	WITH
EQ	EQUAL	NTS	NOT TO SCALE	WF	WIDE FLANGE
EW	EACH WAY	OC	ON CENTER	WP	WORK POINT
EX, EXIST	EXISTING	OD	OUTSIDE DIAMETER	WT	WALL THICKNESS
EXP JT	EXPANSION JOINT	OH	OPPOSITE HAND	ε	CENTERLINE
fc	COMPRESSIVE STRENGTH	OPNG	OPENING	'	MINUTES OR FEET
		P/C	PRECAST	"	INCHES
		PCF	POUNDS PER CUBIC FOOT	&	AND
				°	DEGREE
				±	PLUS OR MINUS
				∅	DIAMETER
				†	PLATE
				@	AT
				#	NUMBER

* VIEW NUMBER IS BASED ON THE (DACS) LOCATION OF THE LOWER-LEFT EXTENTS OF THE VIEW ON THE REFERENCED SHEET. WHEN REFERENCING DRAWING INFORMATION BETWEEN SHEETS, BOTH THE VIEW AND SHEET NUMBERS MUST BE QUOTED TOGETHER - EITHER IN A CALLOUT FORMAT AS SHOWN ABOVE OR IN THE FORM: "VIEW NO./SHEET NO." (EG A1/CS-5001)



DRAWING AREA COORDINATE SYSTEM (DACS)



SHEET NUMBERING

LEGEND

- VIEW DESIGNATION
- PLAN SCALE: 1/4"=1'-0"
- SHEET NUMBER VIEW REFERENCED TO
- DETAIL DESIGNATION
- SHEET NUMBER VIEW REFERENCED TO
- SECTION DESIGNATION
- SHEET NUMBER VIEW REFERENCED TO
- SECTION CALLOUT
- SECTION DESIGNATION
- SHEET NUMBER VIEW REFERENCED TO
- ELEVATION VIEW

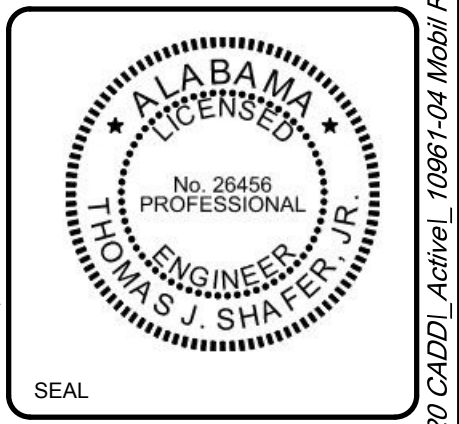


Rev.	Date	Description	Mark

MOBILE RIVERFRONT REDEVELOPMENT BULKHEAD REPLACEMENT

INDEX OF DRAWINGS, LEGENDS, & ABBREVIATIONS

11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-8000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	Date: 2023-09-08 M&N Project No: 10961-04 Drawing code: Per scale: 1" = 10' (0 SHEET)
Designed by: MOTT & NICHOL Drawn by: RW Reviewed by: MR Submitted by: MEG GOECKER	AS INDICATED 1" = 10' (0 SHEET)



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Sheet Reference No. **G-002**
INDEX: 2 OF 60

GENERAL NOTES:

1. REMOVED FURNISHINGS SHALL BE STORED AND PROTECTED AT CITY DESIGNATED LOCATION AND FURNISHED TO PARK CONTRACTOR FOR REINSTALLATION.
2. ALL ITEMS DESIGNATED FOR REMOVAL BY OWNER SHALL BE FURNISHED TO PARK CONTRACTOR AS OWNER FURNISHED ITEMS.
3. IT IS THE INTENT OF OWNER REMOVAL ITEMS TO NOT REQUIRE CONC SAW CUTTING OR EXCAVATION.
4. ALL OWNER REMOVED STATUES AND PLAQUES WILL BE REINSTALLED AT DESIGNATED LOCATIONS AS PART OF COOPER PARK RESTORATION DRAWINGS. THE FOLLOWING OWNER REMOVED ITEMS MAY HAVE QUANTITIES THAT EXCEED PARK RESTORATION DESIGN REQUIREMENTS. ALL MATERIALS WHICH EXCEED QUANTITIES REQUIRED FOR PARK RESTORATION WILL REMAIN PROPERTY OF THE CITY.
 - STEEL HANDRAIL POSTS, ASSOCIATED STEEL CABLES AND CONNECTORS
 - LIGHT POLES
 - GRANITE PAVERS
 - BRICK PAVERS

OWNER REMOVAL NOTES:

- A. OWNER REMOVAL OF ERVIN COOPER STATUE AND ASSOCIATED STATUE IRON BENCH AND TWO (2) BRONZE DEDICATION PLAQUES ADJACENTLY LOCATED.
- B. OWNER REMOVAL OF TWO (2) BRONZE SCULPTURES. CONC PAD FOUNDATION TO BE REMOVED BY OTHERS.
- C. OWNER REMOVAL OF LIGHT POLE FIXTURE, LUMINAIRE, BRACKETS AND ALL ASSOCIATED APPURTENANCES. POLE CONC FOUNDATION TO BE REMOVED BY OTHERS.
- D. OWNER REMOVAL OF ONE (1) POST MOUNTED DEDICATION PLAQUE.
- E. OWNER REMOVAL OF PORTAL STAINLESS STEEL SCULPTURE AND GRANITE BASE PEDESTAL. IF BASE PEDESTAL REQUIRES SAWING OR INCREASED CONC DEMOLITION TO REMOVE SAID BASE THEN BASE PEDESTAL WILL BE REMOVED BY OTHERS AND PROVIDED TO CITY FOR TEMPORARY STORAGE.
- F. OWNER REMOVAL OF BENCHES AND TRASH CANS LOCATED THROUGHOUT COOPER PARK SITE.
- G. OWNER REMOVAL OF TWO (2) COLUMN ORNAMENT CAPS. REMAINING BRICK COLUMN TO BE REMOVED BY OTHERS.
- H. OWNER REMOVAL OF GRANITE PAVERS LOCATED ALONG EDGE OF CONC SIDEWALKS. UNBROKEN PAVERS SHALL BE CLEANED AND PALETIZED BY CITY AND FURNISHED TO PARK CONTRACTOR FOR REINSTALLATION.
- I. OWNER REMOVAL OF HANDRAIL POSTS AND CABLES. SEE GENERAL NOTE 3.
- J. OWNER REMOVAL OF SECURITY FENCING AND/OR SWING GATES. IF APPLICABLE, FENCE POSTS FOUNDATIONS SHALL BE REMOVED BY OTHERS.
- K. OWNER REMOVAL OF FLOATING DOCK, GANGWAY AND MOORING CONNECTION LINES.



OWNER REMOVAL OF BRICK PAVERS. INTACT PAVERS SHALL BE CLEANED AND PALETIZED BY CITY AND FURNISHED TO PARK CONTRACTOR FOR RE-INSTALLATION.

OWNER REMOVAL OF BENCHES / TRASH RECEPTACLES

OWNER REMOVAL OF STATUES



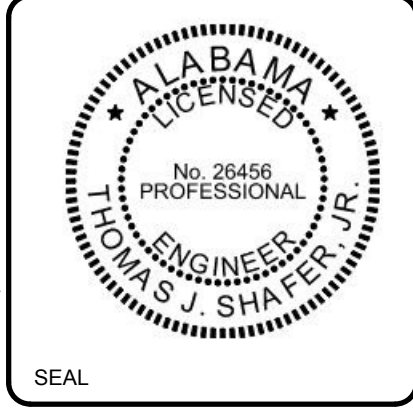
Rev.	Date	Description

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**OWNER WORK PLAN
(FOR INFORMATION ONLY)**

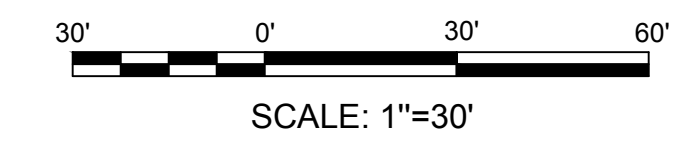
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Designed by:	DSGN	Drawn by:	RW	Checked by:	CHKR
Reviewed by:	REVYR	Submitted by:	MEG GOECKER	Drawing code:	AS-INDICATED
11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676			Per Scale: 1" = (0 SHEET)		

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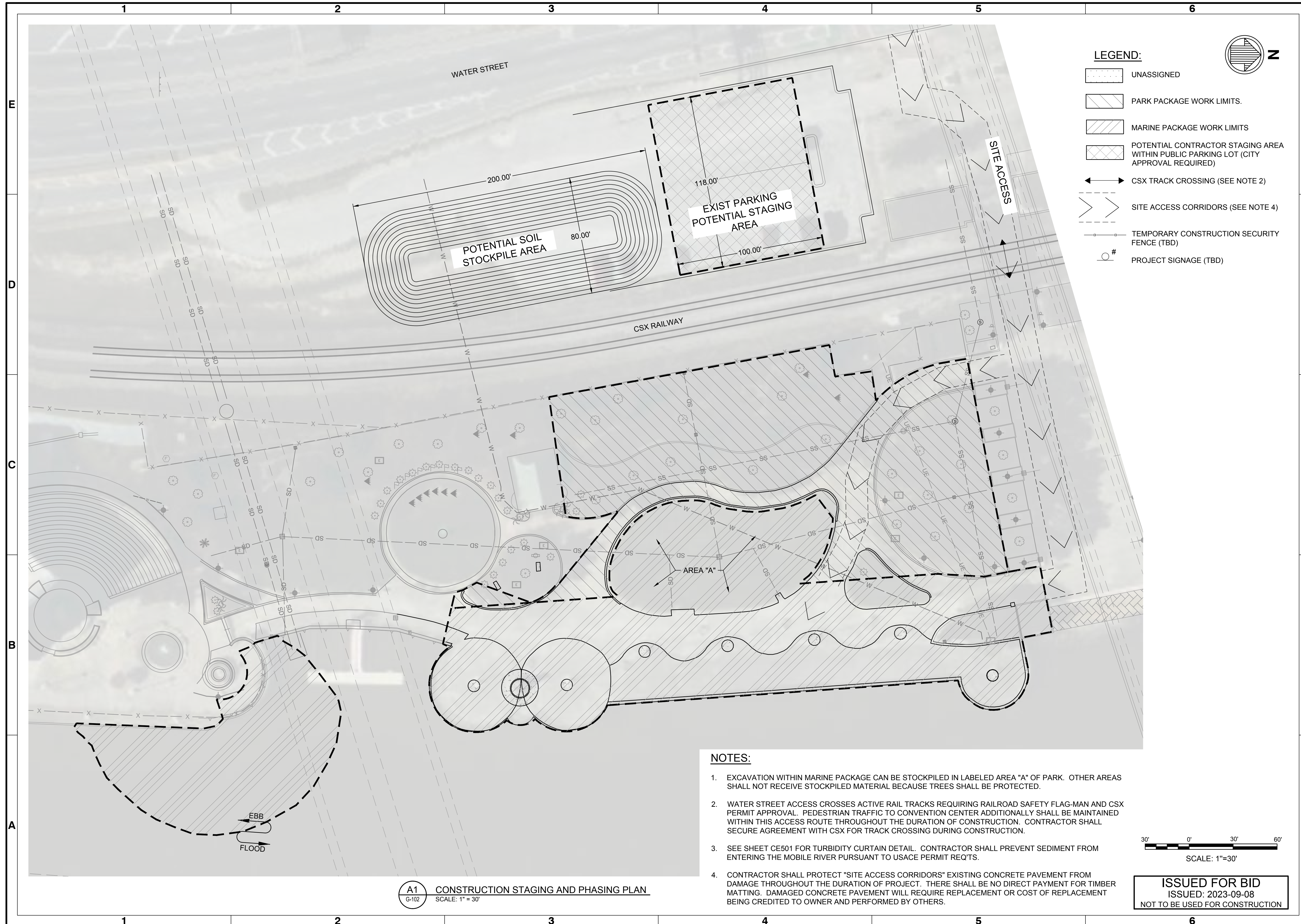
Sheet Reference No.
G-101
INDEX: 4 OF 60

A1 OWNER WORK PLAN
G-101 SCALE: 1"=30'



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File: C:\BRI10961-04\20 CAD\DWG\Bulldock\10961-04 Mobil River Bulkhead Replacement\1096104G-101.rvt; Plotter: 9/13/2023 3:54 PM by SAMPSON, ISAIAH; Saved: 9/13/2023 10:31 AM by JDURAN



- LEGEND:**
- UNASSIGNED
 - PARK PACKAGE WORK LIMITS.
 - MARINE PACKAGE WORK LIMITS
 - POTENTIAL CONTRACTOR STAGING AREA WITHIN PUBLIC PARKING LOT (CITY APPROVAL REQUIRED)
 - CSX TRACK CROSSING (SEE NOTE 2)
 - SITE ACCESS CORRIDORS (SEE NOTE 4)
 - TEMPORARY CONSTRUCTION SECURITY FENCE (TBD)
 - PROJECT SIGNAGE (TBD)



Rev.	Date	Description

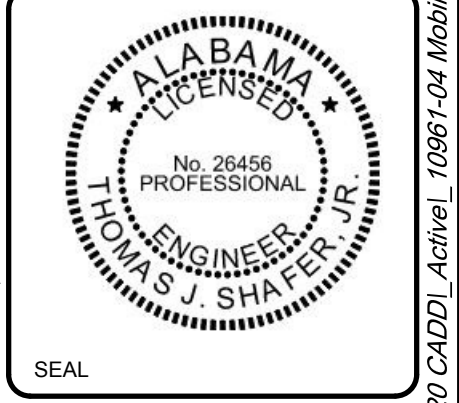
**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**CONSTRUCTION AND PHASING
STAGING AND PHASING
PLAN**

Date: 2023-09-08 M&N Project No.: 10961-04 Drawing code:	Rev. No.: AS-INDICATED Per Scale: 1" = (0 SHEET)
Designed by: DSGN Drawn by: RW Reviewed by: REV/R	Submitted by: MEG GOECKER

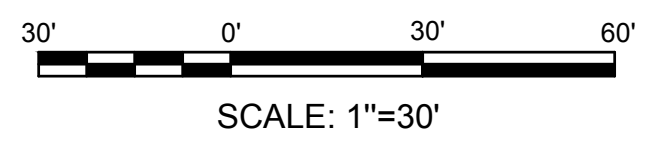
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moffatt & nichol



NOTES:

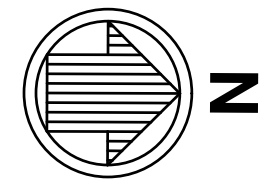
1. EXCAVATION WITHIN MARINE PACKAGE CAN BE STOCKPILED IN LABELED AREA "A" OF PARK. OTHER AREAS SHALL NOT RECEIVE STOCKPILED MATERIAL BECAUSE TREES SHALL BE PROTECTED.
2. WATER STREET ACCESS CROSSES ACTIVE RAIL TRACKS REQUIRING RAILROAD SAFETY FLAG-MAN AND CSX PERMIT APPROVAL. PEDESTRIAN TRAFFIC TO CONVENTION CENTER ADDITIONALLY SHALL BE MAINTAINED WITHIN THIS ACCESS ROUTE THROUGHOUT THE DURATION OF CONSTRUCTION. CONTRACTOR SHALL SECURE AGREEMENT WITH CSX FOR TRACK CROSSING DURING CONSTRUCTION.
3. SEE SHEET CE501 FOR TURBIDITY CURTAIN DETAIL. CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING THE MOBILE RIVER PURSUANT TO USACE PERMIT REQ'TS.
4. CONTRACTOR SHALL PROTECT "SITE ACCESS CORRIDORS" EXISTING CONCRETE PAVEMENT FROM DAMAGE THROUGHOUT THE DURATION OF PROJECT. THERE SHALL BE NO DIRECT PAYMENT FOR TIMBER MATTING. DAMAGED CONCRETE PAVEMENT WILL REQUIRE REPLACEMENT OR COST OF REPLACEMENT BEING CREDITED TO OWNER AND PERFORMED BY OTHERS.



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A1
 G-102 CONSTRUCTION STAGING AND PHASING PLAN
 SCALE: 1" = 30'

Sheet Reference No.
G-102
 INDEX: 5 OF 60

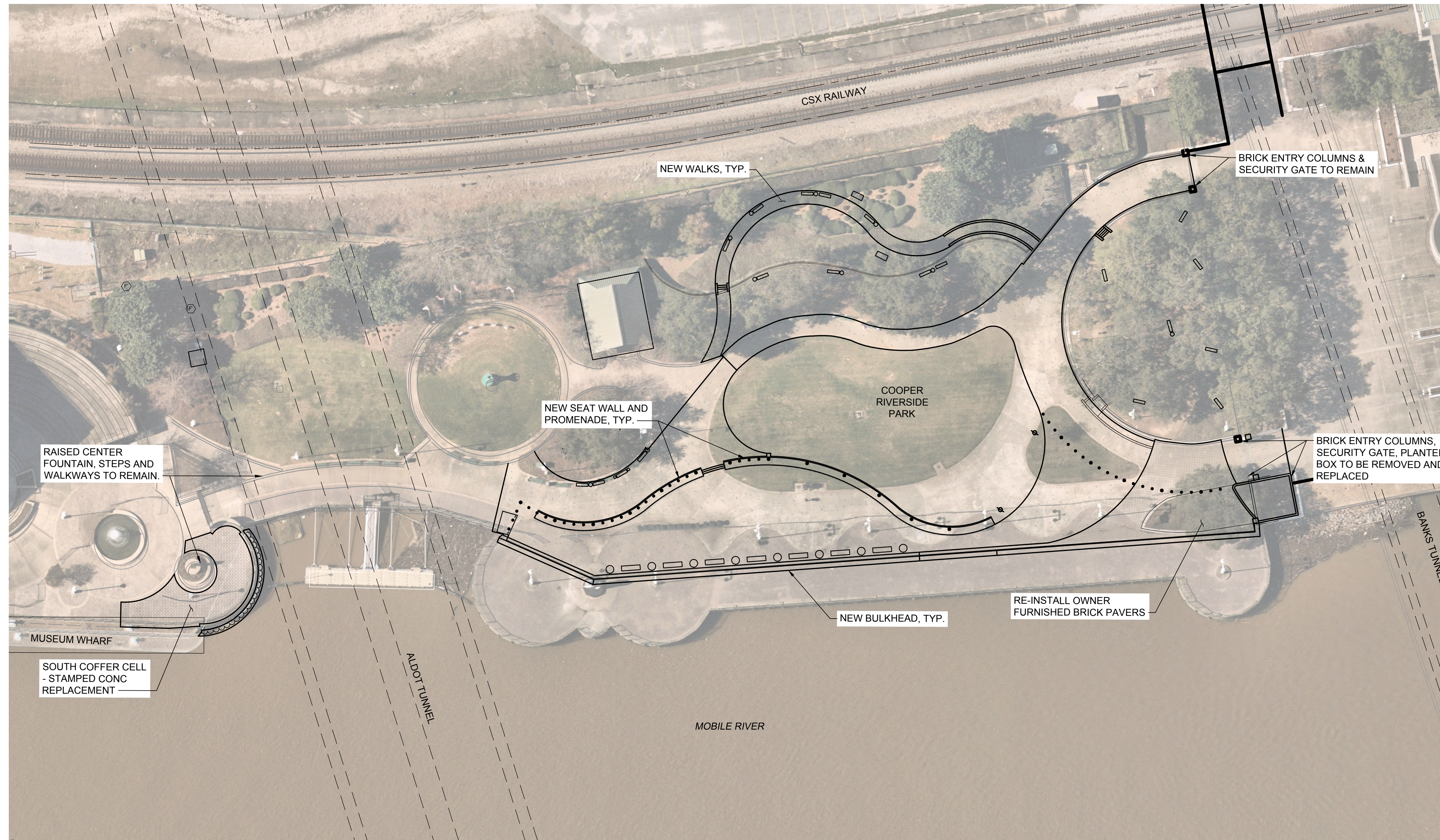


NOTES:

1. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND, SEE SHEET G-003.
2. FOR BULKHEAD WORK, SEE SD### AND S-### SHEET SERIES.
3. FOR LANDSCAPING AND CIVIL WORKS, SEE L-### AND C-### SHEET SERIES.
4. FOR ELECTRICAL WORK, SEE E-### SHEET SERIES.



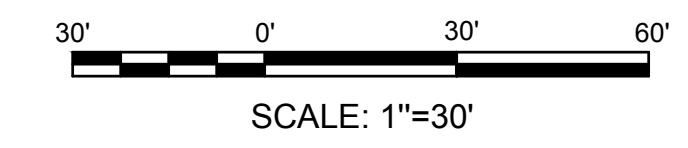
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**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

GENERAL ARRANGEMENT PLAN

111 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 moffatt & nichol WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	Date: 2023-09-08 M&N Project No. 10961-04 Drawing code: Drawing Scale: AS-SHOWN Plot Scale: 1" = 30' (0 SHEET)	Designed by: DSGN Drawn by: CHKR Reviewed by: REVJR Submitted by: MEG GOECKER	Date: 2023-09-08 M&N Project No. 10961-04 Drawing code: Drawing Scale: AS-SHOWN Plot Scale: 1" = 30' (0 SHEET)
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A1
 GA101 GENERAL ARRANGEMENT PLAN
 SCALE: 1" = 30'

Sheet Reference No.
GA101
 INDEX: 6 OF 60

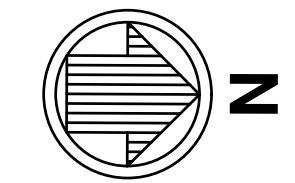
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LANDSIDE SURVEY NOTES:

1. LANDSIDE SURFACE FEATURES ARE BASED ON TOPOGRAPHIC SURVEYS DESCRIBED IN THE SURVEY NOTES ON SHEET G-003.
2. THE RELATIVE ERROR OF CLOSURE OF THE TOPOGRAPHIC SURVEY WAS WITHIN 1' IN 10,000'.
3. THE SURVEY DID NOT REFLECT ANY TITLE, EASEMENT OR RIGHT-OF-WAY RESEARCH OTHER THAN WHAT WAS READILY VISIBLE ON THE SURFACE.
4. BEARINGS BASED ON STATE PLANE ALABAMA WEST ZONE NAD83 DERIVED FROM GPS OBSERVATIONS UTILIZING CORS STATION AL-59.
5. ELEVATIONS WERE DERIVED FROM GPS OBSERVATIONS UTILIZING CORS STATION AL-59 NAVD 88.

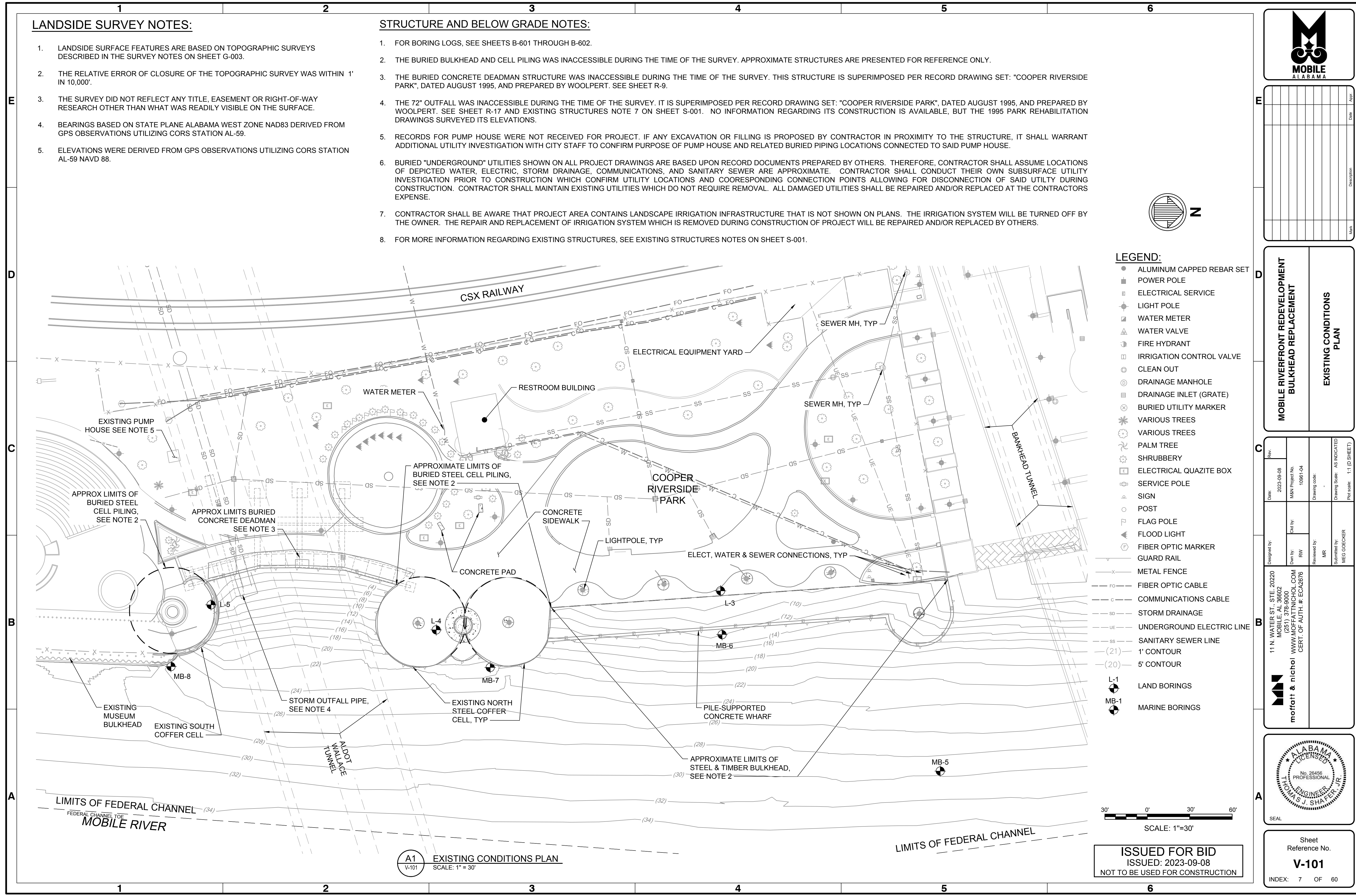
STRUCTURE AND BELOW GRADE NOTES:

1. FOR BORING LOGS, SEE SHEETS B-601 THROUGH B-602.
2. THE BURIED BULKHEAD AND CELL PILING WAS INACCESSIBLE DURING THE TIME OF THE SURVEY. APPROXIMATE STRUCTURES ARE PRESENTED FOR REFERENCE ONLY.
3. THE BURIED CONCRETE DEADMAN STRUCTURE WAS INACCESSIBLE DURING THE TIME OF THE SURVEY. THIS STRUCTURE IS SUPERIMPOSED PER RECORD DRAWING SET: "COOPER RIVERSIDE PARK", DATED AUGUST 1995, AND PREPARED BY WOOLPERT. SEE SHEET R-9.
4. THE 72" OUTFALL WAS INACCESSIBLE DURING THE TIME OF THE SURVEY. IT IS SUPERIMPOSED PER RECORD DRAWING SET: "COOPER RIVERSIDE PARK", DATED AUGUST 1995, AND PREPARED BY WOOLPERT. SEE SHEET R-17 AND EXISTING STRUCTURES NOTE 7 ON SHEET S-001. NO INFORMATION REGARDING ITS CONSTRUCTION IS AVAILABLE, BUT THE 1995 PARK REHABILITATION DRAWINGS SURVEYED ITS ELEVATIONS.
5. RECORDS FOR PUMP HOUSE WERE NOT RECEIVED FOR PROJECT. IF ANY EXCAVATION OR FILLING IS PROPOSED BY CONTRACTOR IN PROXIMITY TO THE STRUCTURE, IT SHALL WARRANT ADDITIONAL UTILITY INVESTIGATION WITH CITY STAFF TO CONFIRM PURPOSE OF PUMP HOUSE AND RELATED BURIED PIPING LOCATIONS CONNECTED TO SAID PUMP HOUSE.
6. BURIED "UNDERGROUND" UTILITIES SHOWN ON ALL PROJECT DRAWINGS ARE BASED UPON RECORD DOCUMENTS PREPARED BY OTHERS. THEREFORE, CONTRACTOR SHALL ASSUME LOCATIONS OF DEPICTED WATER, ELECTRIC, STORM DRAINAGE, COMMUNICATIONS, AND SANITARY SEWER ARE APPROXIMATE. CONTRACTOR SHALL CONDUCT THEIR OWN SUBSURFACE UTILITY INVESTIGATION PRIOR TO CONSTRUCTION WHICH CONFIRM UTILITY LOCATIONS AND CORESPONDING CONNECTION POINTS ALLOWING FOR DISCONNECTION OF SAID UTILITY DURING CONSTRUCTION. CONTRACTOR SHALL MAINTAIN EXISTING UTILITIES WHICH DO NOT REQUIRE REMOVAL. ALL DAMAGED UTILITIES SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTORS EXPENSE.
7. CONTRACTOR SHALL BE AWARE THAT PROJECT AREA CONTAINS LANDSCAPE IRRIGATION INFRASTRUCTURE THAT IS NOT SHOWN ON PLANS. THE IRRIGATION SYSTEM WILL BE TURNED OFF BY THE OWNER. THE REPAIR AND REPLACEMENT OF IRRIGATION SYSTEM WHICH IS REMOVED DURING CONSTRUCTION OF PROJECT WILL BE REPAIRED AND/OR REPLACED BY OTHERS.
8. FOR MORE INFORMATION REGARDING EXISTING STRUCTURES, SEE EXISTING STRUCTURES NOTES ON SHEET S-001.

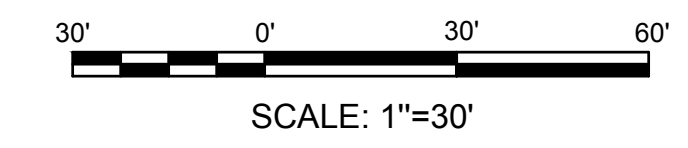


LEGEND:

- ALUMINUM CAPPED REBAR SET
- POWER POLE
- ELECTRICAL SERVICE
- LIGHT POLE
- WATER METER
- ▲ WATER VALVE
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- CLEAN OUT
- DRAINAGE MANHOLE
- DRAINAGE INLET (GRATE)
- ⊗ BURIED UTILITY MARKER
- ★ VARIOUS TREES
- ★ VARIOUS TREES
- ★ PALM TREE
- ★ SHRUBBERY
- ELECTRICAL QUAZITE BOX
- SERVICE POLE
- SIGN
- POST
- FLAG POLE
- ▲ FLOOD LIGHT
- FIBER OPTIC MARKER
- GUARD RAIL
- METAL FENCE
- - - FO - - - FIBER OPTIC CABLE
- - - C - - - COMMUNICATIONS CABLE
- - - SD - - - STORM DRAINAGE
- - - UE - - - UNDERGROUND ELECTRIC LINE
- - - SS - - - SANITARY SEWER LINE
- (21) 1' CONTOUR
- (20) 5' CONTOUR
- L-1 LAND BORINGS
- MB-1 MARINE BORINGS



A1 EXISTING CONDITIONS PLAN
SCALE: 1" = 30'



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	2023-09-08	10961-04		1" = 30'	(0 SHEET)

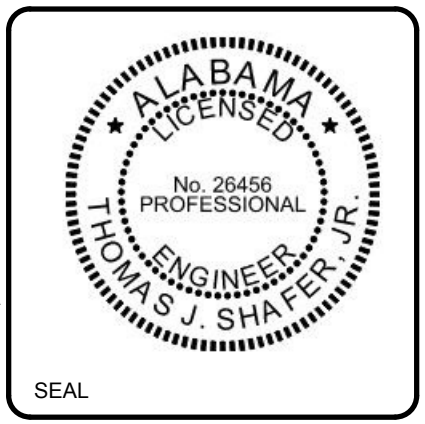
**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**EXISTING CONDITIONS
PLAN**

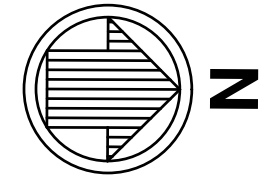
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CERT. OF AUTH. # ECA2676

Designed by: [Blank]
Drawn by: RW
Reviewed by: MR
Submitted by: MEG GOECKER

Per Scale: 1" = 30'



Sheet Reference No.
V-101
INDEX: 7 OF 60



LANDSIDE DEMO QUANTITIES			
DESCRIPTION	LOCATION LABEL	QUANTITY	UNITS
SAWCUT PVMT	D3	200	LF
CONC PVMT REMOVAL	HATCH	1640	SY
LIGHT POLE FNDTN REMOVAL	D4	8	EA
TREE REMOVAL	D6	7	EA
BRICK COLUMN REMOVAL	D10	2	EA
SEAT WALL REMOVAL	D2	170	LF
DRAINAGE BOX	D1	2	EA

QUANTITY NOTES:

- REFER TO SHEET SD101 FOR STRUCTURAL MARINE DEMOLITION QUANTITIES INCLUDING BUT NOT LIMITED TO EXISTING CONCRETE DECK AND COFFER CELL WORK AND EXCAVATION FOR NEW BULKHEAD INSTALLATION.
- UTILITY LINES LOCATED WITHIN BULKHEAD EXCAVATION WORK LIMITS GENERALLY CONSIST OF SMALL DIAMETER PLASTIC SDR DRAINAGE PIPES, PVC ELECTRICAL CONDUITS, PVC WATERLINE, AND PVC SEWER SERVICE. REMOVAL OF THESE LINES AND PROPERLY TERMINATING THESE LINES AT THE LIMITS OF WORK WILL NOT BE MEASURED OR PAID FOR DIRECTLY.
- REQUIRED FENCING REMOVAL TO SALVAGE AND PROVIDE TO OWNER FOR REINSTALLATION WILL NOT BE MEASURED OR PAID FOR DIRECTLY.
- QUANTITIES SHOWN ON PLANS ARE FOR ESTIMATING PURPOSES ONLY. CONTRACTOR SHALL VERIFY ALL REQUIRED QUANTITIES PRIOR TO BIDDING.

GENERAL NOTES:

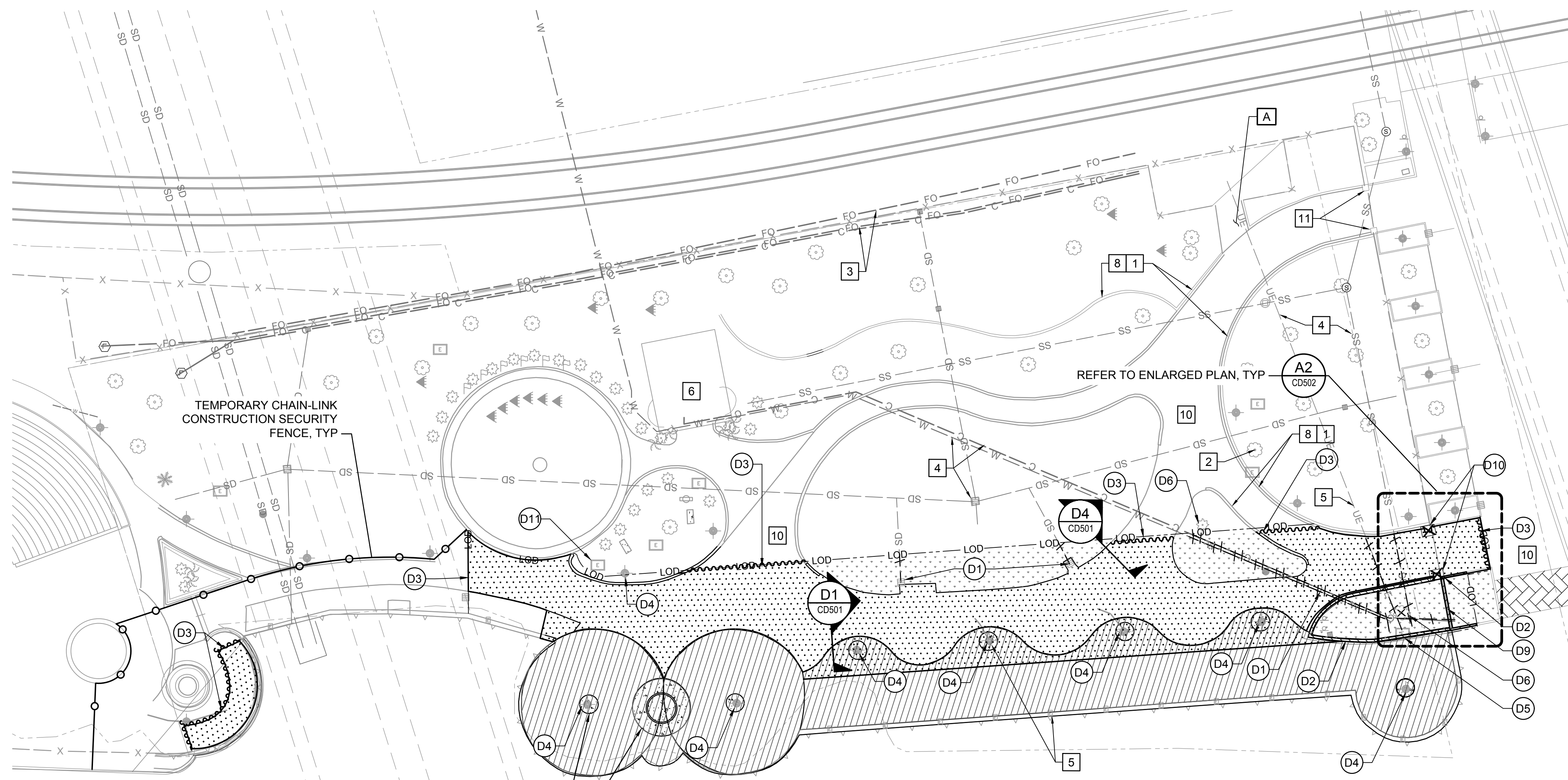
- REFER TO LAYOUT PLAN FOR REQUIRED DEMOLITION WORKING POINTS.
- REFER TO SHEET SD101 FOR STRUCTURAL MARINE DEMOLITION.
- REMOVAL OF EXIST HANDRAILS ALONG WHARF STRUCTURE NOT LABELED. CONTRACTOR SHALL REMOVE AND SALVAGE HANDRAILS, CABLES, ETC., AND FURNISH TO OWNER UNLESS OTHERWISE NOTED.
- PULL BACK CONDUCTORS TO NEAREST EXIST LIGHT POLE OR HANDHOLD UPSTREAM OF THE CIRCUIT OUTSIDE OF DEMOLITION LIMITS. ABANDON CONDUIT IN PLACE.

PLAN NOTES:

- UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROTECT ALL EXISTING CMU SEAT WALLS, CONCRETE / BRICK COLUMNS, LANDSCAPE PLANTERS, ETC...
- UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROTECT ALL EXISTING TREES INCLUDING TREE ROOT ZONES. REFER TO LANDSCAPE PLANS FOR TREE PROTECTION REQUIREMENTS.
- CONTRACTOR SHALL NOTE LOCATION OF KNOWN FIBER OPTIC UTILITY CONDUITS AND/OR DUCT BANK LOCATED ALONG THE PARKS WESTERN PERIMETER FENCING.
- EXISTING PARK UTILITIES COMPRISED OF WATER SERVICE PIPING, STORM DRAINAGE AND SANITARY SEWER INFRASTRUCTURE.
- CONTRACTOR SHALL VERIFY EXISTING SITE ELECTRICAL CIRCUITS AND FEEDS TO DISCONNECT ELECTRICAL TO ALL EQUIPMENT PRIOR TO DEMOLITION. CITY WILL REMOVE EXISTING LIGHT POLES PRIOR TO DEMOTION WORK SHOWN ON SD101.
- EXISTING RESTROOM BUILDING TO REMAIN
- EXISTING BULKHEAD CONCRETE CAP AND STEEL PIPE PILES INSTALLED IN PREVIOUS WORK PACKAGE.
- EXISTING CMU SEAT WALL TO REMAIN
- EXISTING LIGHT POLE AND FOUNDATION TO REMAIN
- EXISTING PAVEMENT TO REMAIN
- EXISTING BRICK COLUMN TO REMAIN

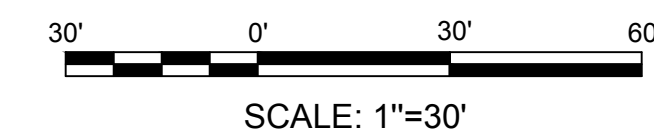
DEMOLITION NOTES:

- (D1) PARTIAL DEMOLITION OF CMU SEAT WALL FOR STEP INSTALLATION, TYP (SEE DETAIL CD-501)
- (D2) COMPLETE DEMOLITION OF CMU SEAT WALL FOR STEP INSTALLATION, TYP (SEE DETAIL CD-501)
- (D3) SAWCUT FULL DEPTH CONCRETE PAVEMENT, TYP
- (D4) REMOVE EXISTING LIGHT POLE FOUNDATION, TYP SEE GENERAL NOTE 4.
- (D5) REMOVE EXISTING ELECTRICAL BOX
- (D6) REMOVE EXISTING TREE
- (D7) CLEAR EXISTING GROUND COVER WHTOUT EXCAVATION. REFER TO LANDSCAPE PLANS.
- (D8) UTILITY LINES TO BE REMOVED AS REQUIRED FOR WHARF CONSTRUCTION. SEE PLAN NOTE 5.
- (D9) REMOVE FOUNDATION WALL AND SALVAGE FENCE FOR REINSTALLATION.
- (D10) REMOVE BRICK COLUMN AND FOUNDATION.
- (D11) REMOVE AND SALVAGE STAINLESS CABINET CONTAINING WATER HOSE REEL.



LEGEND:

- REMOVE SOD AND VEGETATION
- EXISTING CONCRETE PAVERS REMOVED BY OWNER
- REMOVE EXISTING CONCRETE PAVING
- REMOVE UTILITIES, AS REQUIRED FOR BULKHEAD CONSTRUCTION
- REMOVE SPECIAL OBJECT
- LIMITS OF DISTURBANCE



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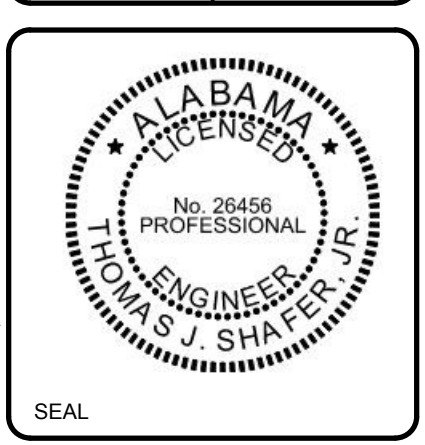
A1 LANDSIDE DEMOLITION PLAN
 SCALE: 1"=30'



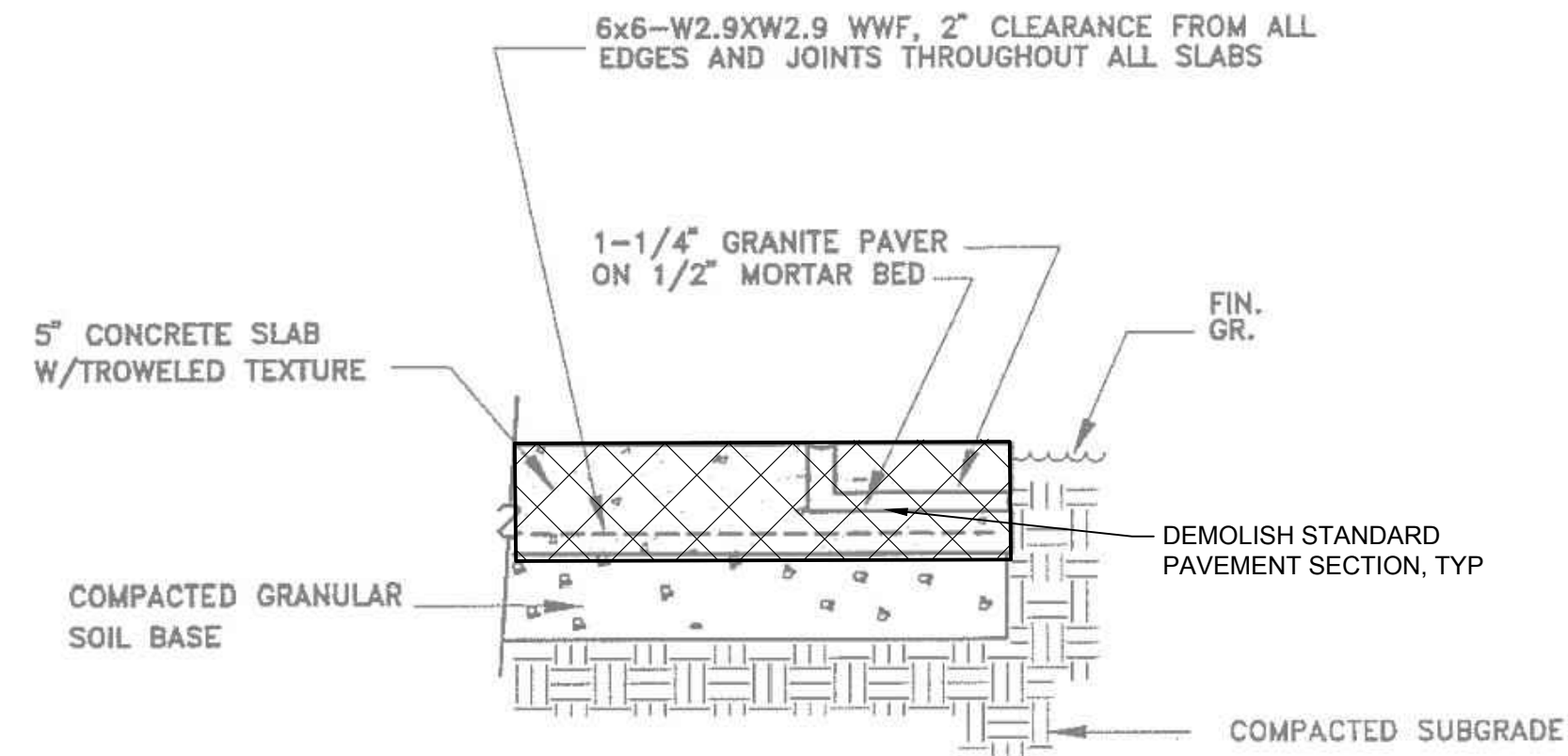
Rev	Date	Description

MOBILE RIVERFRONT REDEMPTION BULKHEAD REPLACEMENT
LANDSIDE DEMOLITION PLAN

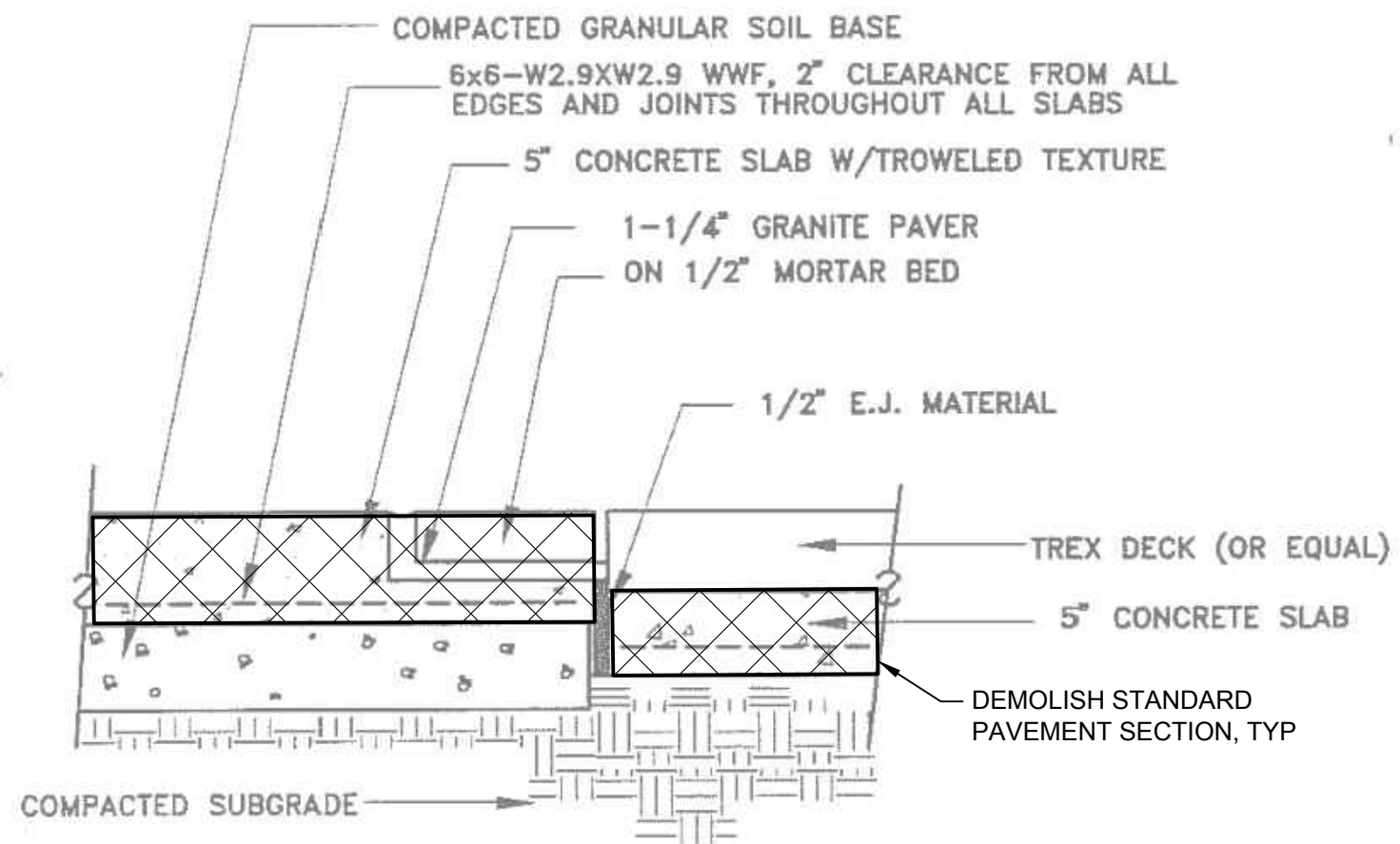
11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	Date: 2023-09-08 M&N Project No: 10961-04 Drawing code:	Designed by: DSGN Drawn by: CHKR Reviewed by: REVR Submitted by: MEG GOECKER	AS-INDICATED Per Scale: 1" = (0 SHEET)
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Sheet Reference No.
CD101
 INDEX: 10 OF 60



D1 DEMOLISH STANDARD PAVEMENT SECTION
CD101 SCALE: NTS



D4 DEMOLISH PAVER SLAB SECTION
CD101 SCALE: NTS

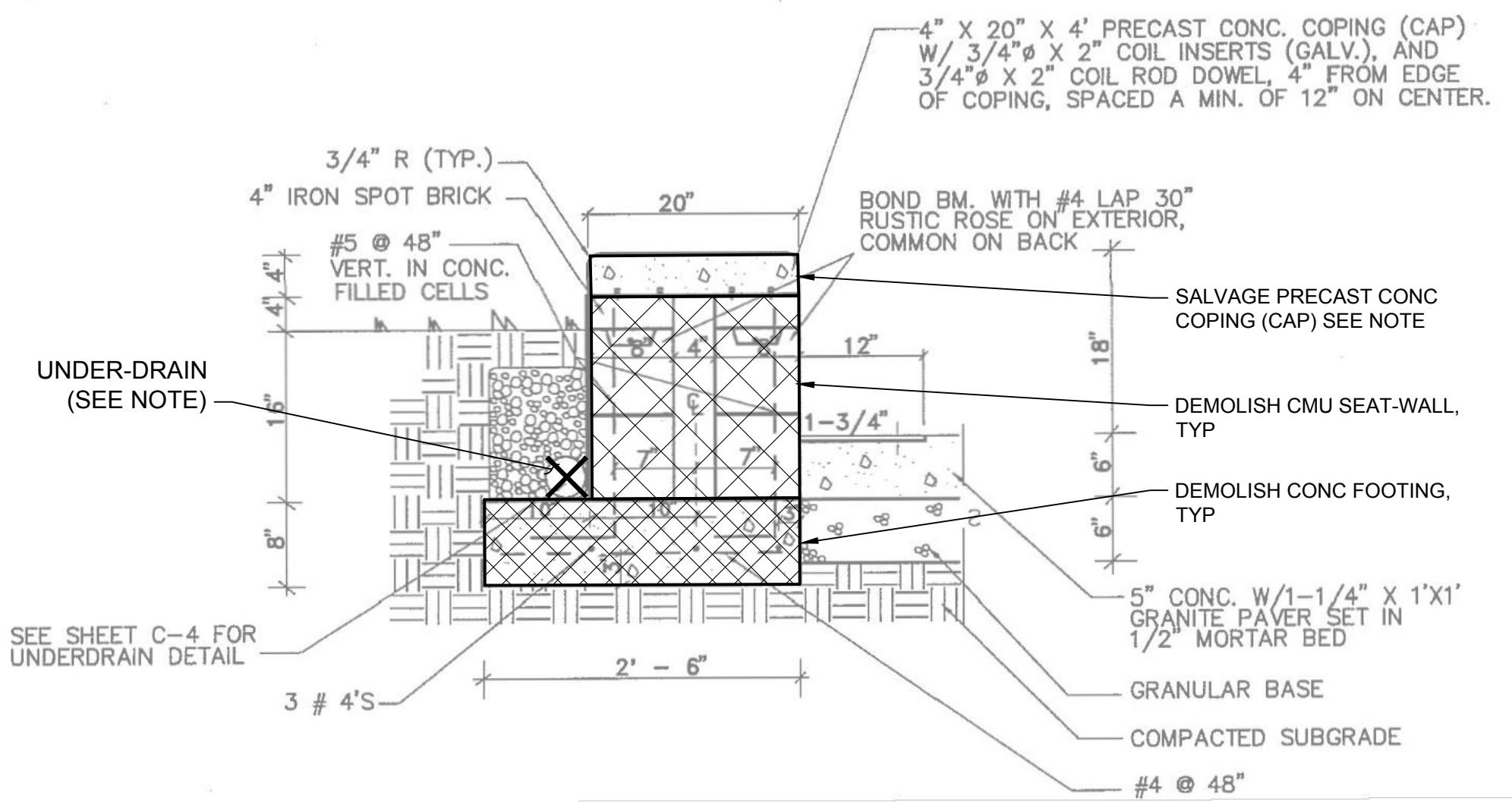
- GENERAL NOTES**
- EXISTING SITE DETAILS PROVIDED ON THIS PLAN REFERENCE RECORD PARK AS-BUILT DRAWINGS AS PREPARED BY WOOLPERT ENGINEERING FOR THE 1995 COOPER PARK RENOVATION. INFORMATION PROVIDED IS FOR CONTRACTOR PRICING OF DEMOLITION WORK.
 - MOFFATT AND NICHOL PROVIDES NO ASSURANCE PLAN DETAILS MATCH ACTUAL EXISTING STRUCTURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING SITE CONDITIONS PRIOR TO BIDDING.
 - DEMOLITION OF CMU SEAT WALLS SHALL SALVAGE EXIST PRECAST CONC COPING (CAP). REMOVE AND FURNISHED TO OWNER.
 - OWNER WILL REMOVE WROUGHT IRON FENCING AND GATES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL REMAINING FENCING AND NOTIFY ENGINEER OF CONFLICT.



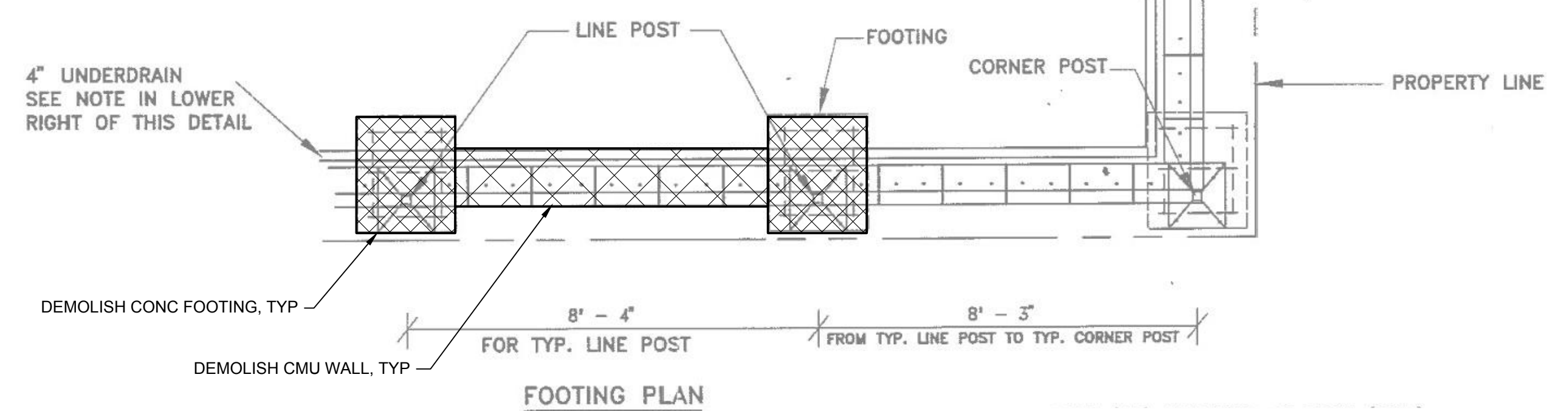
Rev.	Date	Description

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

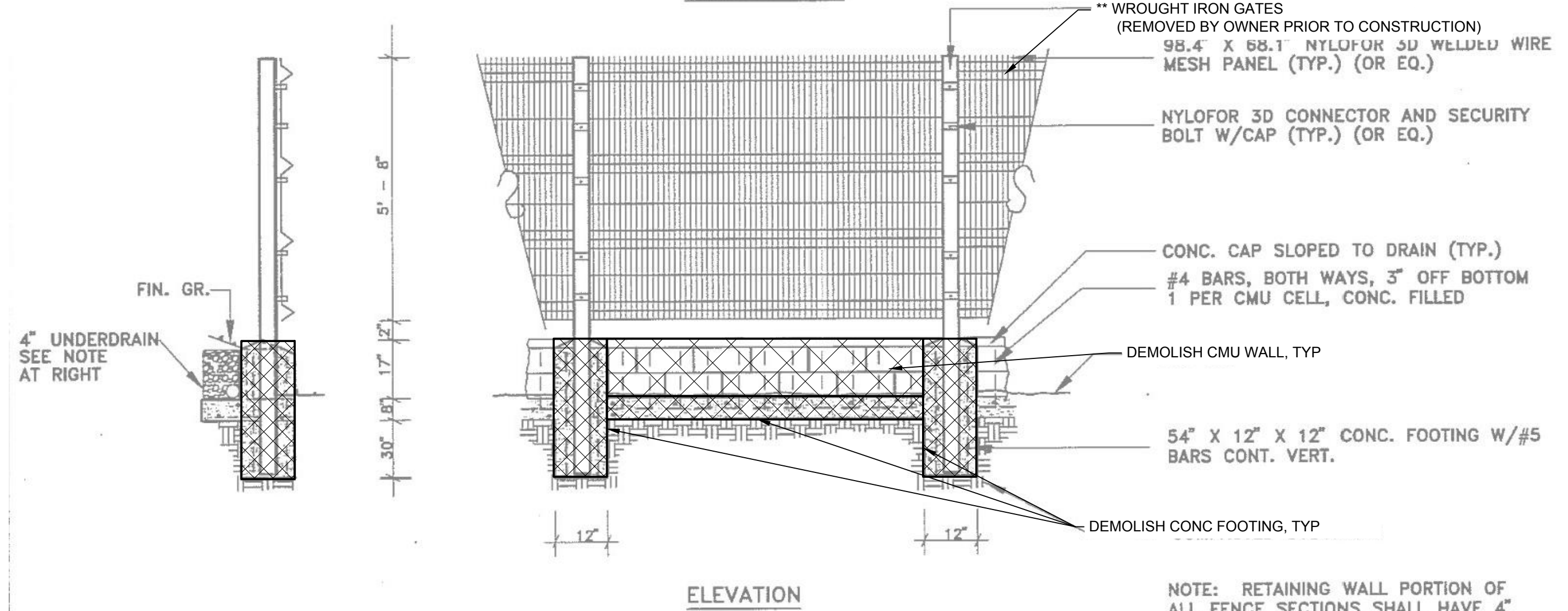
**CIVIL DEMO DETAILS (1
OF 2)**



C1 DEMOLISH CMU SEAT-WALL SECTION
CD501 SCALE: NTS

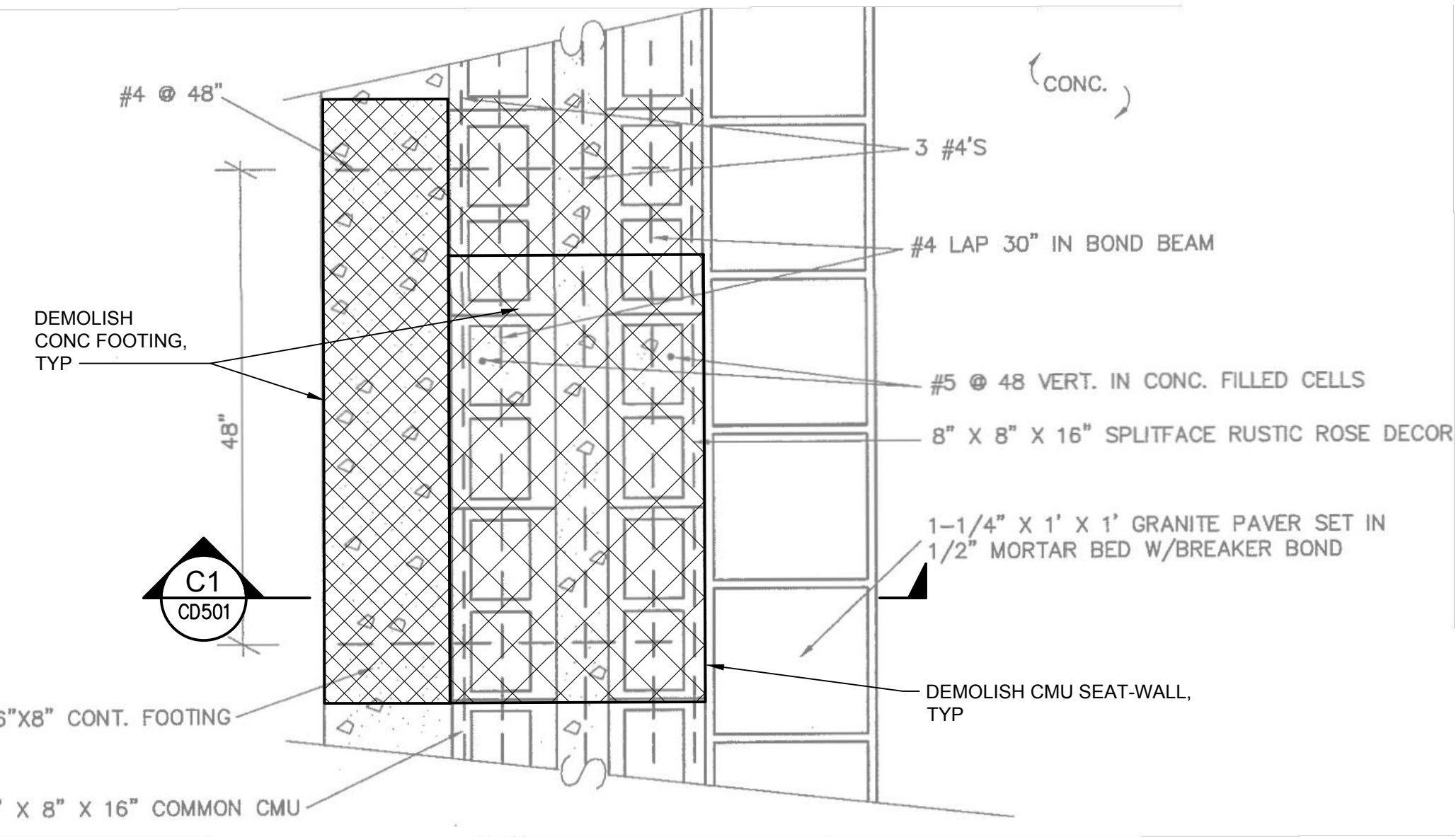


FOOTING PLAN

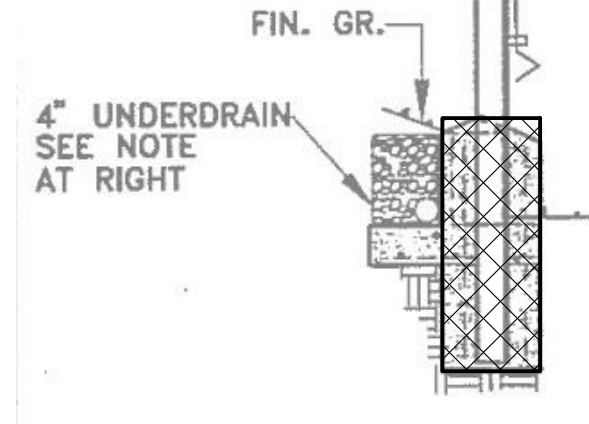


ELEVATION

NOTE: RETAINING WALL PORTION OF ALL FENCE SECTIONS SHALL HAVE 4\"/>

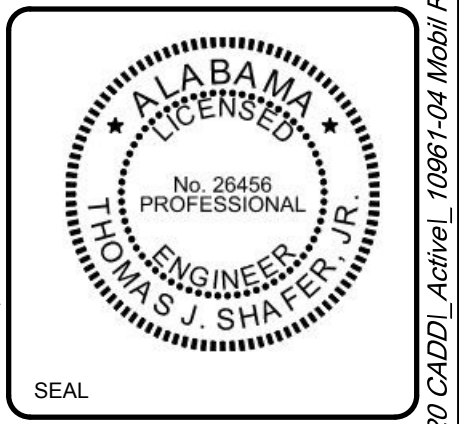


A1 DEMOLISH CMU SEAT-WALL
CD101 SCALE: NTS



A4 DEMOLISH FENCE FOUNDATION SECTION
CD502 SCALE: NTS

Date: 2023-09-08 M&N Project No: 10961-04 Drawing code:	Designed by: DSGN Drawn by: CHKR Reviewed by: REVVR Submitted by: MEG GOECKER	Per scale: 1" = 10' (0 SHEET)
11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	Date: 2023-09-08 M&N Project No: 10961-04 Drawing code:	Designed by: DSGN Drawn by: CHKR Reviewed by: REVVR Submitted by: MEG GOECKER



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Sheet Reference No.
CD501
INDEX: 11 OF 60

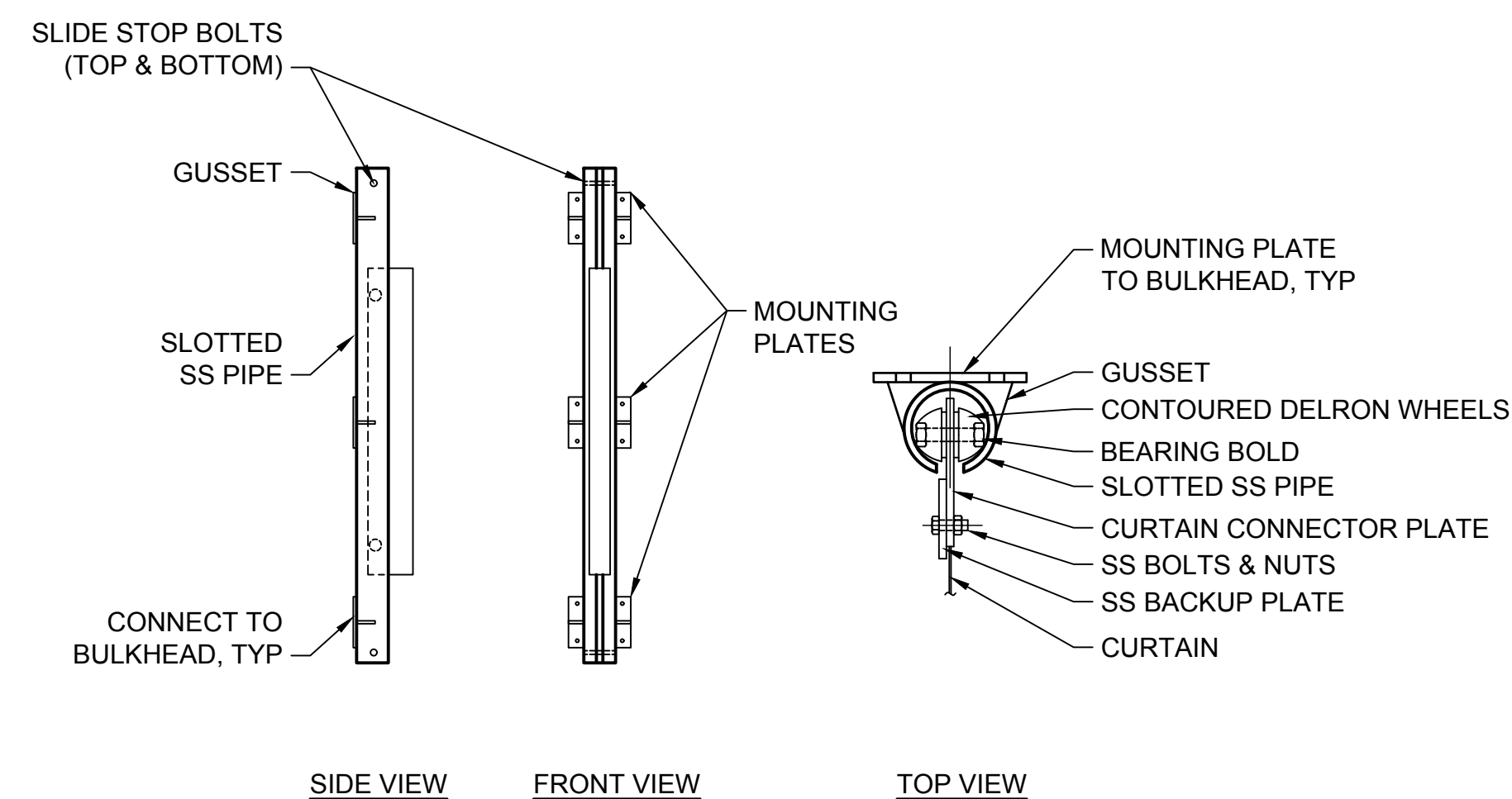
ENVIRONMENTAL NOTES

- DURING WATERSIDE CONSTRUCTION, THE CONTRACTOR SHALL MONITOR THE TURBIDITY LEVELS TO ENSURE THAT STATE WATER QUALITY STANDARDS ARE MAINTAINED AND CONSTRUCTION METHODS ARE IN ACCORDANCE WITH THE ENVIRONMENTAL PERMITS.
- AS REQUIRED, THE CONTRACTOR SHALL PLACE EROSION CONTROL DEVICES AND MEASURES AROUND THE PROJECT AREA AND OTHER AREA(S) NEEDED TO PREVENT EROSION AND THE MIGRATION OF SEDIMENT TO POINTS OUTSIDE THE DEMOLITION/CONSTRUCTION AREA(S).
- ALL LAND BASED EROSION CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ALDOT STANDARD PLANS AND SPECIFICATIONS.

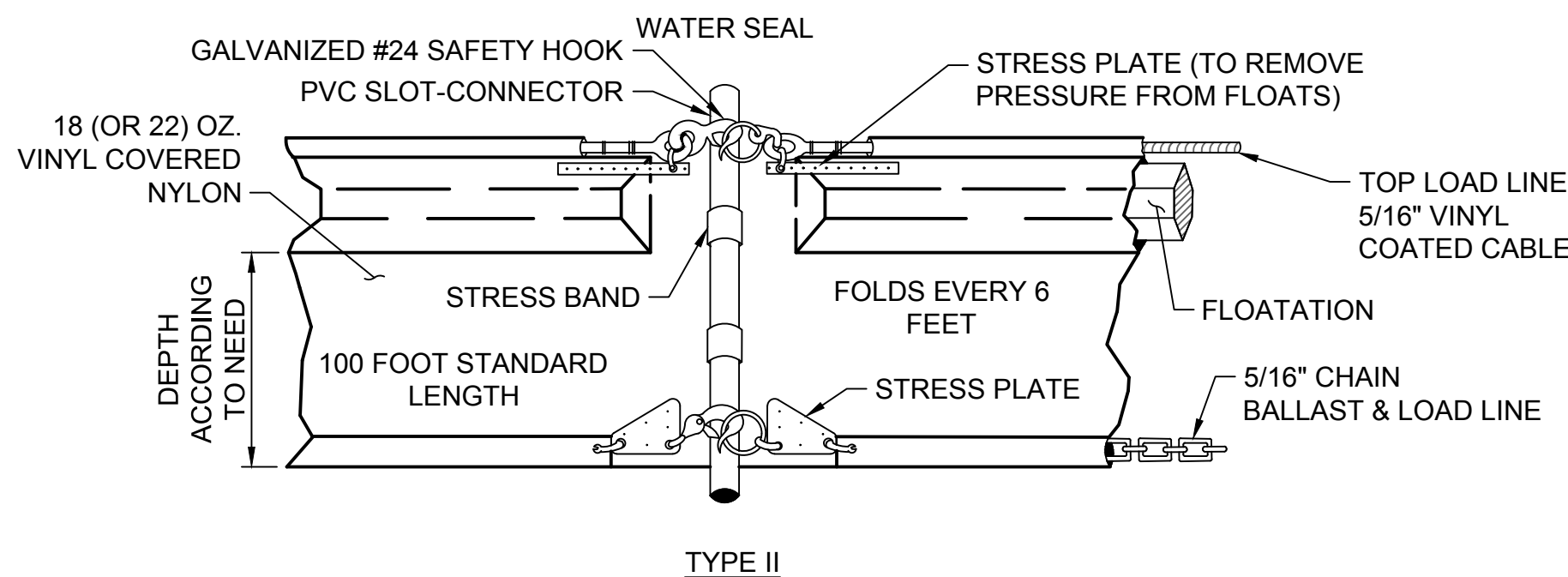
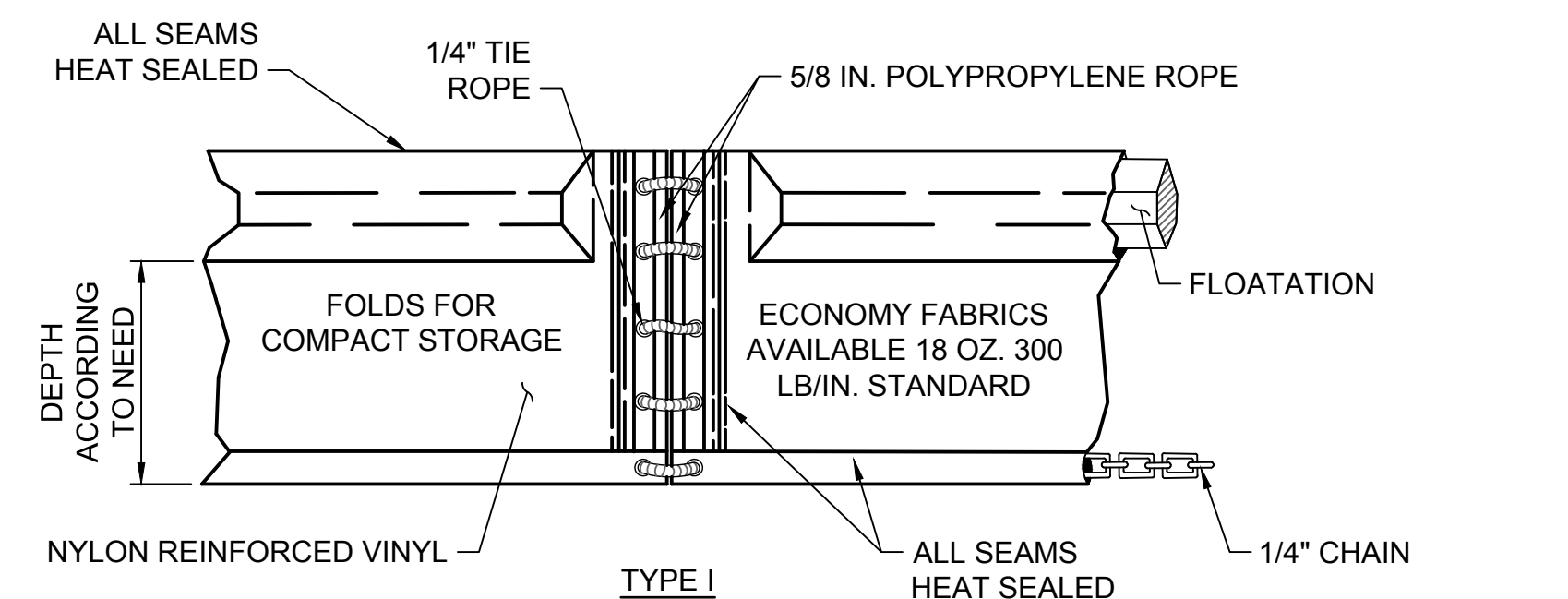
TURBIDITY AND SEDIMENT AND EROSION CONTROL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH, INSTALL, AND MAINTAIN TURBIDITY BARRIERS IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH AROUND THE WORK AREA DURING ALL MARINE CONSTRUCTION ACTIVITIES. THE CONTRACTOR HAS THE OPTION TO ENCLOSE THE ENTIRE WATERSIDE OF THE SITE, WITHIN THE LIMITS OF DISTURBANCE, OR TO INSTALL AND MOVE THE TURBIDITY BARRIERS IN STAGES.
- THE APPROPRIATE TURBIDITY AND EROSION CONTROL METHODOLOGIES SELECTED BY THE CONTRACTOR FOR THIS PROJECT SHOULD BE MADE FOLLOWING ASSESSMENT OF THE PLANS AND PROJECT SITE SPECIFIC FACTORS AND AFTER CONSULTATIONS AS NEEDED WITH THE PROJECT ENGINEER AND APPROPRIATE AGENCIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ANY AND ALL NECESSARY PERMITS FOR SUCH ACTIVITY; SEVERAL FACTORS TO CONSIDER ARE LISTED BELOW:
 - A. CLAY CONTENT IN EXCAVATED MATERIALS AND/OR PERMEABILITY'S RATES
 - B. DEPTH OF CUT
 - C. AMBIENT GROUND WATER LEVELS
 - D. ACTUAL RAINFALL AMOUNTS AND TIME OF YEAR RELATIVE TO NORMAL RAINY SEASON
 - E. PROXIMITY TO WETLANDS, WATER BODIES, OR OFFSITE PROPERTIES
 - F. CLASS DESIGNATION OF RECEIVING WATER BODY (OUTSTANDING FLORIDA WATERS, SHELLFISH HARVESTING AREAS, ETC.)
 - G. DENSITY, TYPE, AND PROXIMITY OF UPLAND VEGETATION TO BE RETAINED DURING CONSTRUCTION (FOR USE AS POSSIBLE FILTRATION AREAS)
 - H. FILL HEIGHT RELATIVE TO NATURAL GRADE AND LENGTH AND STEEPNESS OF THE PROPOSED SLOPES
 - I. EXISTING TOPOGRAPHY AND DIRECTIONS OF SURFACE FLOW
 - J. TYPE OF EQUIPMENT USED
 - K. PROJECT TYPE
 - L. DURATION OF CONSTRUCTION ACTIVITIES
 - M. SEPARATION DISTANCE OF ONSITE PONDS
 - N. AMBIENT QUALITY OF SURFACE AND GROUNDWATER
 - O. TEMPORARY STOCKPILE LOCATIONS AND DIMENSIONS
- AT THE ONSET OF CONSTRUCTION, THE CONTRACTOR, AS THE PARTY RESPONSIBLE FOR IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN, SHALL ASSESS THE ABOVE CONDITIONS AND FACTORS AND SELECT THE APPROPRIATE METHODS OF PROTECTION. CONSTRUCTION SEQUENCING SHOULD BE PLANNED PRIOR TO INITIATION TO PROVIDE ADEQUATE PROTECTION OF WATER QUALITY.
- THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL MAY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO SURFACE WATERS. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES, AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
- WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE. TREATMENT METHODS INCLUDE, FOR EXAMPLE, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE UPLAND VEGETATED AREAS (OTHER THAN UPLAND PRESERVATION AREAS AND WETLAND BUFFERS), SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS OR LOW BERMS, AND KEPT CONFINED UNTIL TURBIDITY LEVELS MEET STATE WATER QUALITY STANDARDS.
- THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATION. THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND PERFORMED SUCH THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER. GRADING OPERATIONS SHALL BE SO SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.
- THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN CONSTRUCTION DEBRIS CONTROL DEVICES, TURBIDITY CURTAINS, BOOMS, TARPULINS, FLOATS, STAGING, AND OTHER DEVICES AS NECESSARY TO PREVENT CONSTRUCTION DEBRIS FROM ENTERING THE WATER. THE CONTRACTOR SHALL MAINTAIN SUCH CURTAINS AT ALL TIMES IN THE AREAS WHERE WORK IS IN PROGRESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ALL MATERIALS DEPOSITED OUTSIDE THE WORK AREA. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH CITY, ADEM AND USACE PERMITS.
- CONTRACTOR SHALL SUBMIT A TURBIDITY CONTROL PLAN FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION IN ACCORDANCE WITH ENVIRONMENTAL REGULATORY PERMITS.
- TURBIDITY SHALL BE MONITORED AS OUTLINED IN THE ENVIRONMENTAL REGULATORY PERMITS.

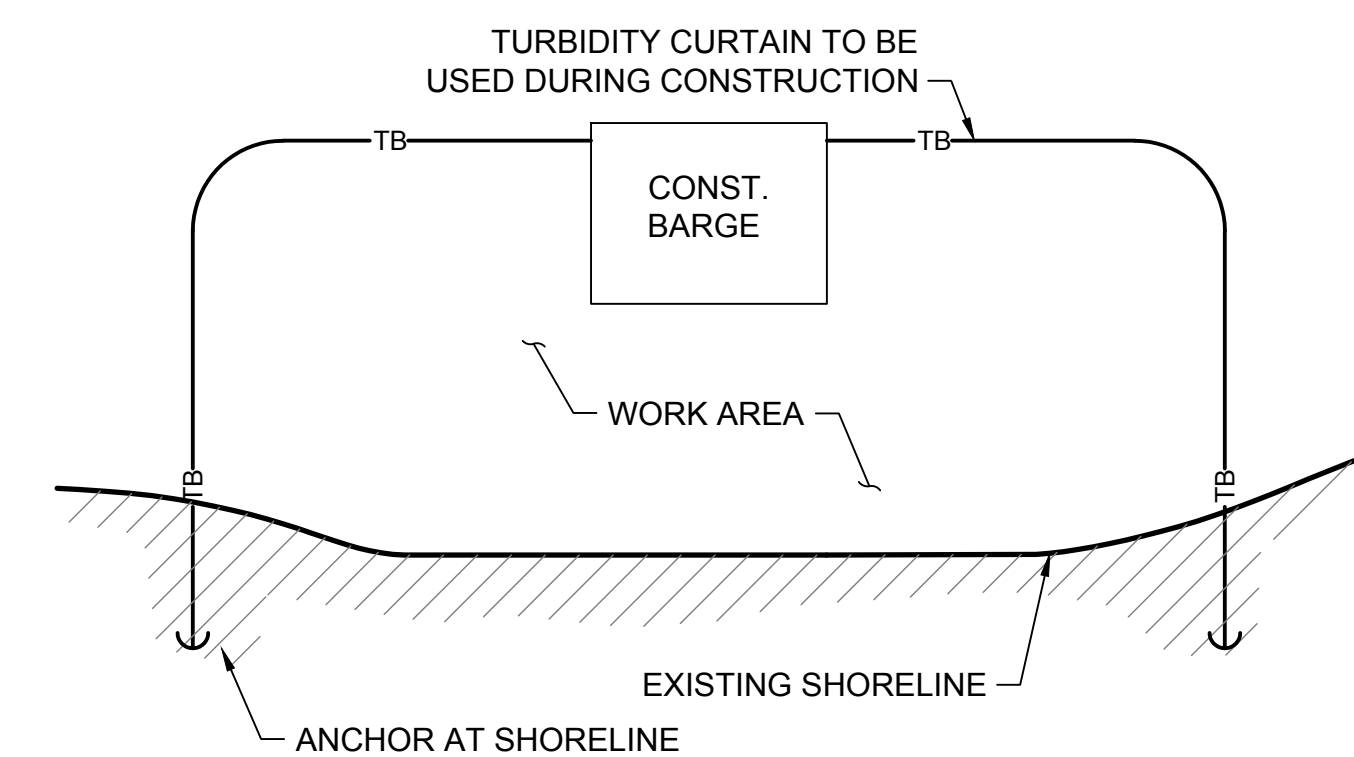
- IF THE COMPLIANCE SAMPLE MEASURES ABOVE THE BACKGROUND SAMPLE, ALL OPERATIONS THAT ARE CAUSING THE WATER QUALITY VIOLATION WILL CEASE, AND THE ENVIRONMENTAL AGENCIES SHALL BE NOTIFIED OF THE VIOLATION (AS REQUIRED IN THE ENVIRONMENTAL PERMITS ISSUED FOR THE PROJECT). WORK THAT IS CAUSING THE WATER QUALITY VIOLATION WILL NOT RECOMMENCE UNTIL SUCH TIME AS THE WATER QUALITY READINGS RETURN TO LEVELS MEETING STATE WATER QUALITY STANDARDS AND WITH THE APPROVAL OF THE ENVIRONMENTAL REGULATORY AGENCIES.
- THE CONTRACTOR SHALL COMPILER AND SUBMIT MONITORING REPORTS TO THE OWNER AND TO THE AGENCIES, AS REQUIRED IN THE ENVIRONMENTAL PERMITS.
- SEDIMENT AND EROSION CONTROL IN ADDITION TO TURBIDITY MONITORING AND/OR REQUIRED TURBIDITY CURTAINS SHALL NOT BE MEASURED OR PAID FOR DIRECTLY.



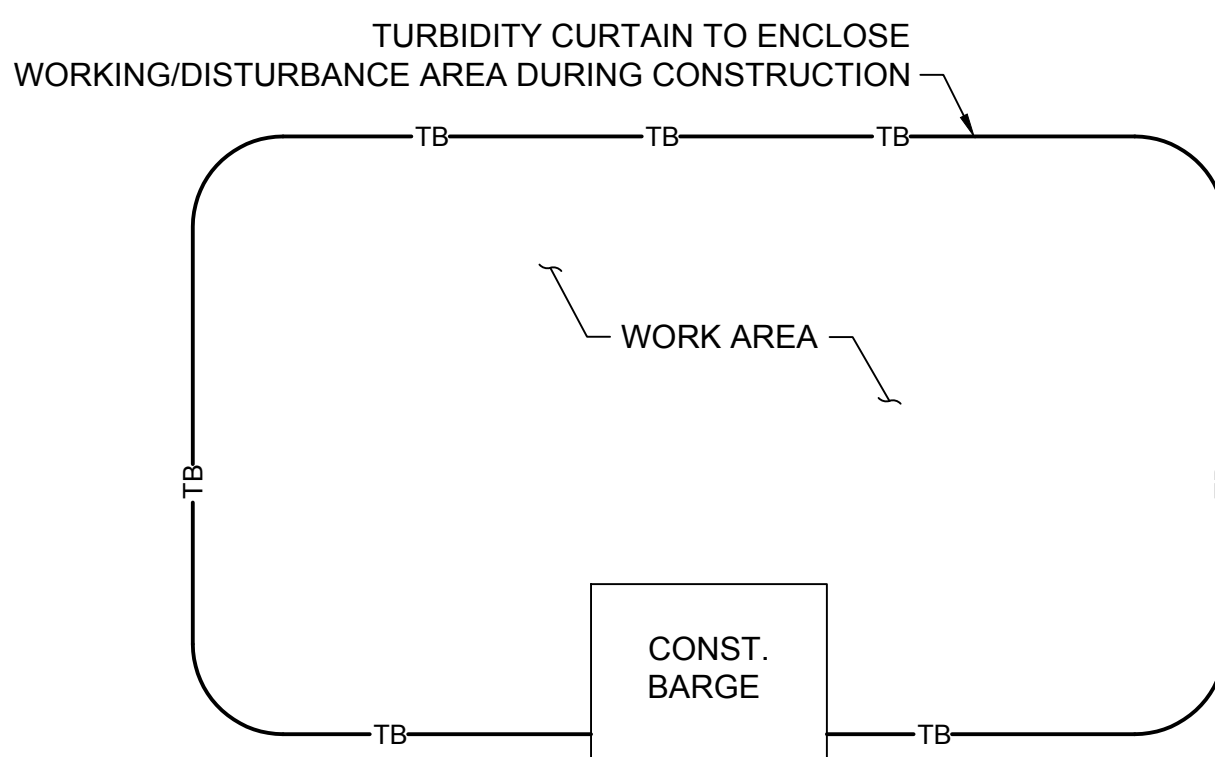
D5
CE501 **DETAIL - TURBIDITY CURTAIN**
SCALE: N.T.S



B5
CE501 **SECTION - TURBIDITY CURTAIN**
SCALE: N.T.S



ALONG SHORE
PLAN



OFF SHORE
PLAN

A3
CE501 **DETAIL - TURBIDITY CONTROL BARRIER**
SCALE: N.T.S



Rev.	Date	Description

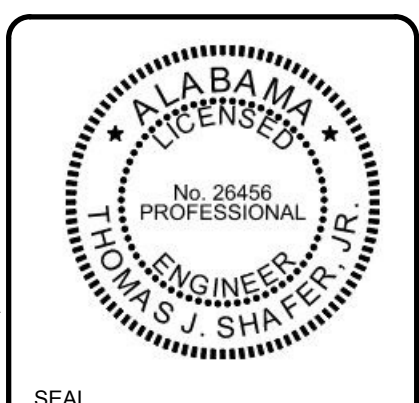
**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

CIVIL EROSION DETAILS

Rev. No.	10961-04
Date	2023-09-08
MAN Project No.	10961-04
Drawn by	CHKR
Checked by	MEG
Submitted by	MEG
Per Scale	AS INDICATED
Sheet	13 OF 60

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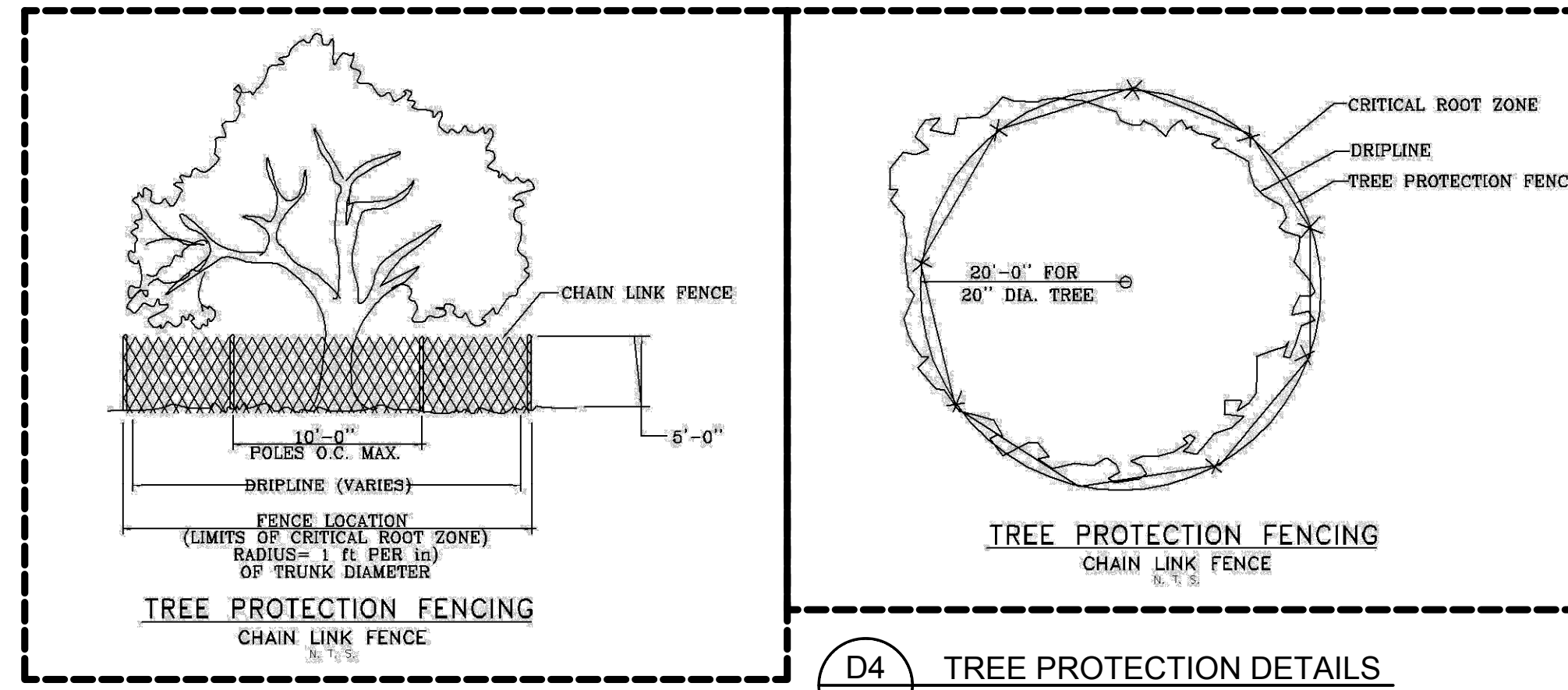
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TREE PROTECTION NOTES:

1. CONTRACTOR SHALL COMPLY WITH ALL CITY OF MOBILE FORESTRY DEPARTMENT FACILITY DESIGN STANDARDS AND SPECIFICATIONS FOR TREE PROTECTION AND MITIGATION.
2. PRESERVE ALL EXISTING TREES UNLESS OTHERWISE INDICATED.
3. TREE PROTECTION ZONE SHALL BE SECURED PRIOR TO BEGINNING CONSTRUCTION WITH 4' MIN. FENCING. AREA MUST REMAIN SECURED THROUGHOUT CONSTRUCTION.
4. MODIFICATION OF TREE PROTECTION MEASURES MAY BE ALLOWED FOR SPECIFIC ITEMS AND DURATIONS AS APPROVED BY THE LANDSCAPE ARCHITECT.

5. PLANS SHOW APPROXIMATE LOCATION OF TREE PROTECTION FENCING. FENCING SHOULD BE LOCATED ALONG THE FURTHEST EDGE OF THE DRIP LINE OF ALL EXISTING TREES.
6. CONSTRUCTION ACTIVITY TAKING PLACE WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES SHALL BE CONDUCTED WITH HANDHELD EQUIPMENT. NO HEAVY MACHINERY OR SUPPLIES SHALL BE USED OR STORED WITHIN TREE PROTECTION ZONES.
7. WHERE ROOTS OR LIMBS MUST BE PRUNED TO ACCOMMODATE CONSTRUCTION, WORK MUST BE COMPLETED BY A CERTIFIED ARBORIST AND IN COORDINATION WITH THE CITY OF MOBILE FORESTRY DEPARTMENT. COORDINATE WITH LANDSCAPE ARCHITECT TO DETERMINE IF ADJUSTMENTS CAN BE MADE TO OTHER ELEMENTS INSTEAD OF PRUNING EXISTING TREES.

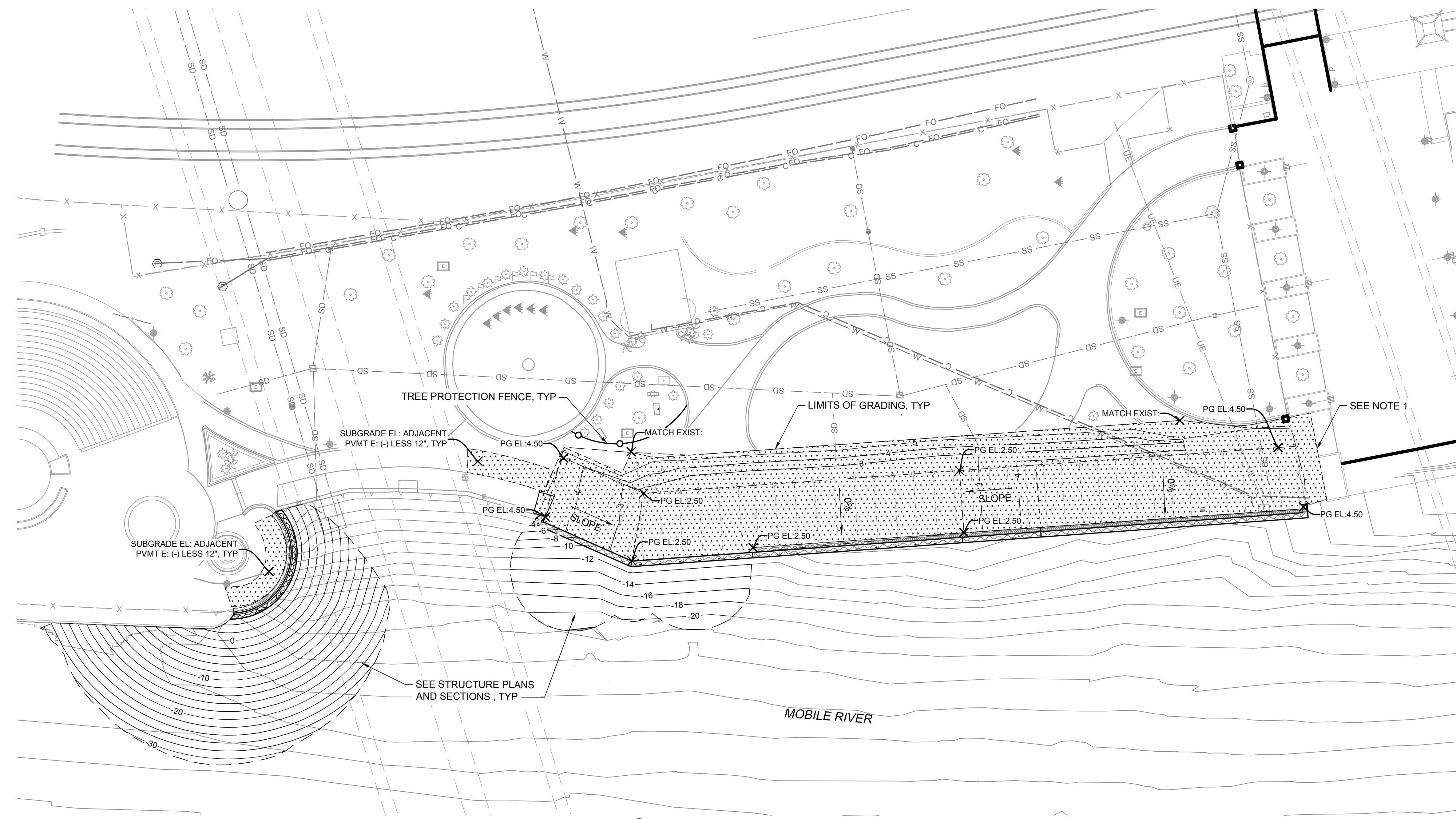
8. 18X24" WEATHERPROOF WARNING SIGN SHALL BE PLACED ON TREE PROTECTION FENCING.
 - 8.1. SIGNS SHALL BE VISIBLE ON ALL SIDES OF FENCED AREA AND SHALL BE SPACED NO MORE THAN 50' O.C. FOR TREE PROTECTION FENCING LESS THAN 50' LF. CONTRACTOR SHALL PROVIDE ONE (1) SIGN. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REQUIRE ADDITIONAL WARNING SIGNS BASED UPON ACTUAL FIELD CONDITIONS.
 - 8.2. TEXT ON WARNING SIGNS SHALL BE 3" HIGH MIN. AND SHALL BE CLEARLY LEGIBLE. NOTICES SHALL READ "WARNING, PROTECTIVE TREE FENCING, DO NOT ENTER, MOVE, OR REMOVE."



D4 TREE PROTECTION DETAILS
CG101 NTS

NOTES:

1. SEE SHEET CD502 FOR WORK IN THIS AREA. SUBGRADE SHALL BE RESTORED TO GENERAL PRE-CONSTRUCTION ELEVATIONS. PLANTER WALLS, FENCING AND PAVING WILL BE REPLACED BY OTHERS.



A1 CIVIL GRADING PLAN
CG101 SCALE: 1"=30'



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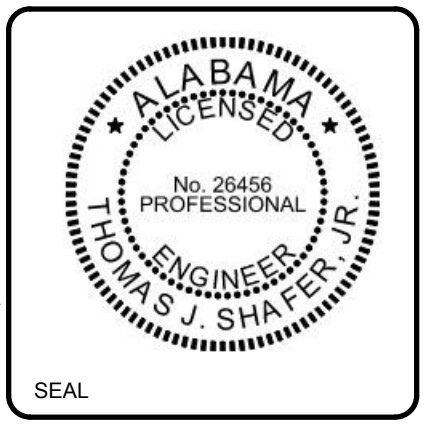
**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

CIVIL GRADING PLAN

Designed by: DSGN	Date: 2023-09-08	Rev: REVNO
Drawn by: RW	MAN Project No: 10961-04	
Reviewed by: REVYR	Checked by: CHKR	Drawing code:
Submitted by: MEG GOECKER		Drawing Scale: AS INDICATED
		Per Scale: 1"=30' (0 SHEET)

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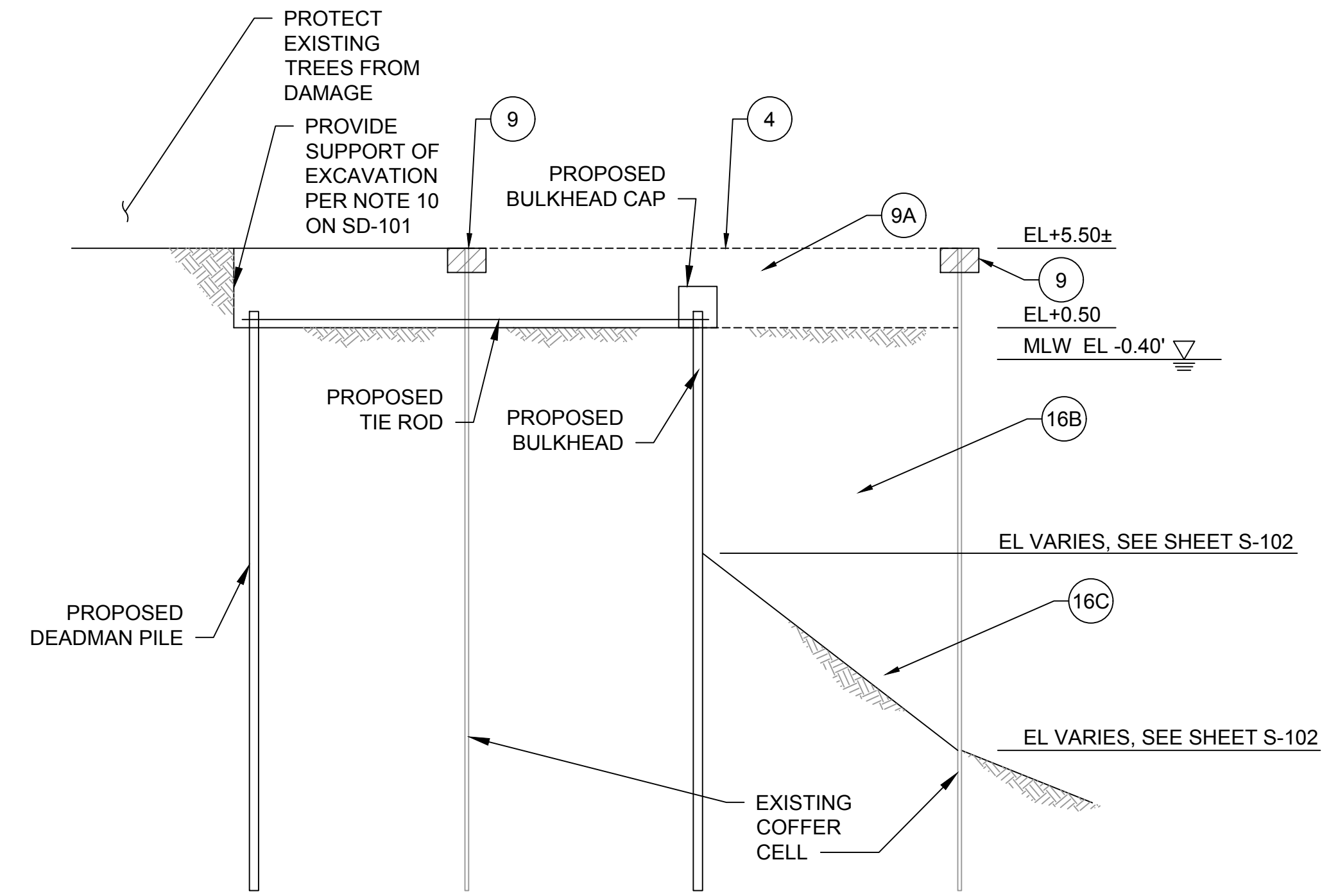
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GENERAL CONSTRUCTION PHASING NOTES:

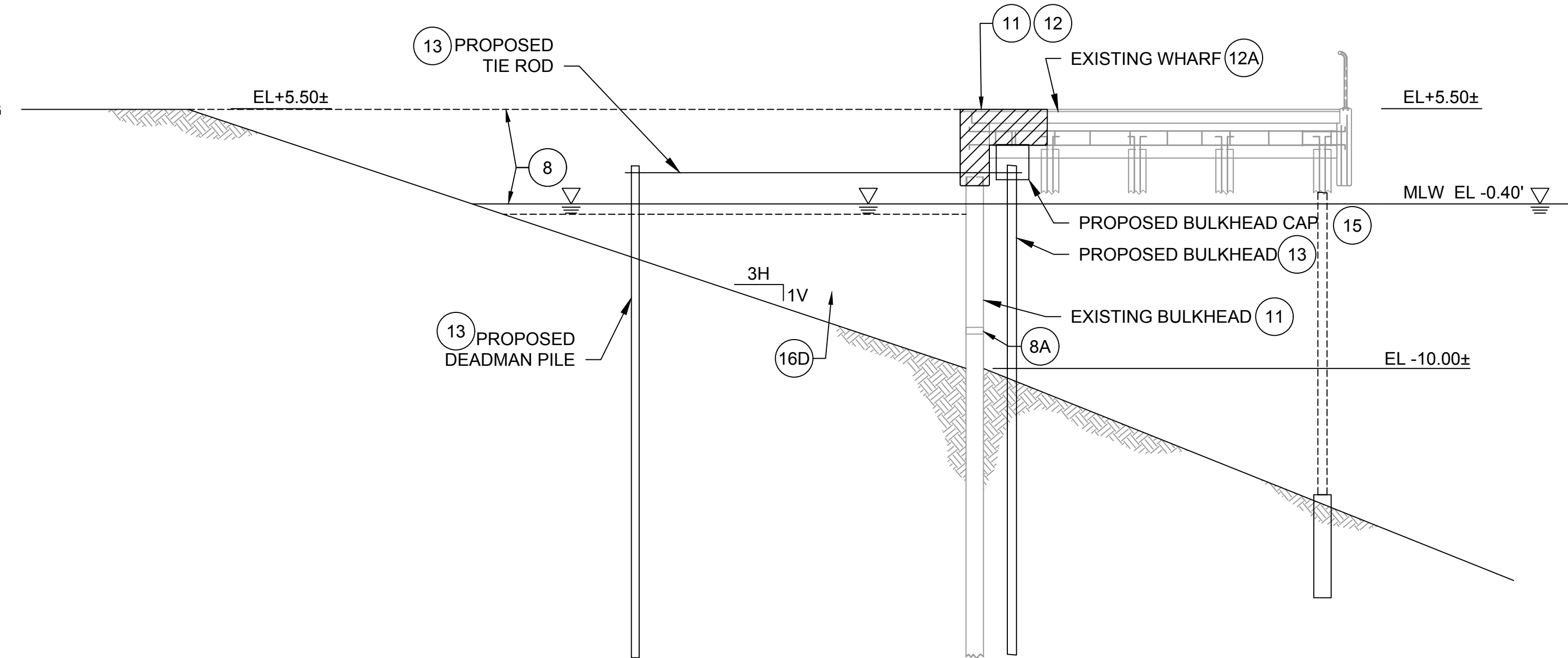
- CONSTRUCTION PHASING IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN MEANS AND METHODS. THE CONTRACTOR SHALL SUBMIT A THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION PHASING PLAN AND A DEMOLITION PLAN PRIOR TO THE START OF CONSTRUCTION AS NOTED IN SPECIFICATION SECTION 02 41 00.
- WORK SHALL COMPLY WITH THE STIPULATIONS OUTLINED IN ALL PERMITS AND APPROVALS, INCLUDING BUT NOT LIMITED TO:
 - USACE NATIONWIDE PERMIT #SAM-2023-00241-LML
- THE FOLLOWING PHASING NOTES ARE GENERAL IN NATURE RELATED TO SEQUENCING WORK ACTIVITIES AND THEREFORE ARE NEITHER COMPREHENSIVE NOR DICTATING CONTRACTOR'S MEANS AND METHODS FOR PERFORMING CONSTRUCTION OR REQUIRED WORK.

CONSTRUCTION PHASING NOTES - BULKHEAD & NORTH COFFER CELLS:

- PREPARE SITE FOR WORK REFER TO SHEETS SD101, SD301, AND SD302 FOR DETAILED STRUCTURE DEMOLITION INFORMATION. SECTIONS SHOWN ON THIS PLAN ARE GENERAL IN NATURE TO DESCRIBE THE FOLLOWING REQUIRED WORK ACTIVITIES.
- LOCATE UTILITIES WITHIN THE LIMITS OF WORK USING UTILITY ONE CALLS. DESIGN TEMPORARY STRUCTURES, SOE, UTILITY SUPPORTS, AND ALL WORKS REQUIRED TO CONSTRUCT THE NOTED STRUCTURE AND SUBMIT FOR ENGINEER'S REVIEW AND APPROVAL. IF UTILITY ARE ENCOUNTERED THAT REQUIRE SHUTDOWNS, COORDINATE WITH THE UTILITY'S OWNER FOR SHUTDOWNS, REPLACEMENTS, OR TEMPORARY FACILITIES.
- SUBMIT DEMOLITION PLAN AND CONSTRUCTION PHASING PLAN IDENTIFYING THE PROPOSED MEANS AND METHODS OF DEMOLITION/CONSTRUCTION AS WELL AS IDENTIFYING ANY CONCERNS AND RISKS ARISING FROM THE PRE-CONSTRUCTION SURVEYS WHICH ARE NOT NOTED BY THE CONSTRUCTION DRAWINGS.
- COORDINATE ALL SHUTDOWNS, UTILITY OR OTHERWISE, REQUIRED TO COMPLETE THE WORK
- FOLLOWING THE APPROVAL OF THE DEMOLITION AND CONSTRUCTION PHASING PLANS, BEGIN EXCAVATION.
- INSTALL APPROVED TEMPORARY STRUCTURES AND TEMPORARY WORKS. SOE PLANS SHALL BE PREPARED BY AN ENGINEER, LICENSED IN THE STATE OF ALABAMA, WITH A MINIMUM 5 YEARS OF SOE DESIGN EXPERIENCE.
- INSTALL DISPLACEMENT MONITORING INSTRUMENTATION ON TOP OF THE EXISTING BULKHEAD WALL CAP AS SHOWN ON S-100. INSTALL VIBRATION MONITORING INSTRUMENTATION AT THE LOCATIONS SHOWN ON S-100 AND S-004.
- EXCAVATE BEHIND THE EXISTING BULKHEAD WALL TO RELIEVE THE DRIVING EARTH PRESSURE ON THE EXISTING PILING. SEE SECTION A3 ON THIS SHEET.
 - ONCE THE EXCAVATION DEPTH REACHES 1'-0" BELOW MLLW, DRILL 2" DIAMETER HOLES IN THE EXISTING BULKHEAD AT 2'-0" HORIZONTAL INTERVALS AT THAT ELEVATION TO ALLOW FOR WATER LEVEL EQUALIZATION ON BOTH SIDES OF THE WALL THROUGHOUT THE TIDAL RANGE.
 - DO NOT BACKFILL SOIL BEHIND NEW BULKHEAD WALL (BELOW THE BOTTOM OF THE NEW WALL CAP) UNTIL THE NEW BULKHEAD, DEADMEN, TIE RODS, AND WALL CAP ARE FULLY CONSTRUCTED.
 - CONTRACTOR MAY USE SOE MEANS AND METHODS TO LIMIT THE EXTENTS OF THE RELIEF EXCAVATION. SOE PLANS SHALL BE PREPARED BY AN ENGINEER, LICENSED IN THE STATE OF ALABAMA, WITH A MINIMUM 5 YEARS OF SOE DESIGN EXPERIENCE.
- DEMOLISH CONCRETE CAPS ABOVE COFFER CELLS, INSTALL DISPLACEMENT MONITORING INSTRUMENTATION AT CELLS AS SHOWN ON S-100, THEN EXCAVATE INSIDE AND BEHIND THE CELLS TO THE BOTTOM OF THE NEW BULKHEAD WALL CAP. EXCAVATE BEHIND EXISTING CONCRETE DEADMAN AND DEMOLISH DEADMAN PRECAST PANEL. SEE SECTION D4 ON THIS SHEET AND SHEET SD101.
 - DO NOT BACKFILL SOIL BEHIND NEW BULKHEAD WALL OR EXCAVATE WATERSIDE OF NEW BULKHEAD WALL (BELOW THE BOTTOM OF THE NEW WALL CAP). UNTIL THE NEW BULKHEAD, DEADMEN, TIE RODS, AND WALL CAP ARE FULLY CONSTRUCTED.
- PERFORM AND SUBMIT SURVEY OF EXISTING COFFER CELL SHEETING AND EXISTING CONCRETE DEADMAN FOR COMPARISON TO THE NEW BULKHEAD WALL ALIGNMENT AND CLOSURE DETAILS.
- REMOVE DISPLACEMENT MONITORING INSTRUMENTATION FROM EXISTING BULKHEAD WALL CAP, DEMOLISH CAP AND TOP OF EXISTING PILING AS REQUIRED TO CONSTRUCT THE NEW BULKHEAD WALL CAP, AND REINSTALL THE INSTRUMENTATION ON THE EXISTING WALL PILING.
- PARTIALLY DEMOLISH EXISTING WHARF SUPERSTRUCTURE WATERSIDE OF THE EXISTING BULKHEAD AND CUT DOWN THE TOP OF THE EXISTING COFFER CELL SHEETING AS REQUIRED TO INSTALL THE NEW BULKHEAD WALL AND TIEBACK SYSTEM.
 - THE EXISTING WHARF MAY BE FULLY DEMOLISHED DURING THIS STAGE OR DURING ANY STAGE THEREAFTER.
 - ALL PILING SHALL BE FULLY EXTRACTED. IF PILING BREAKS DURING EXTRACTION, CUT IT OFF AT THE MUDLINE.
 - REFER TO A1/SD301 FOR EXISTING WHARF DEMO INFO.
- AFTER THE ENGINEER APPROVES THE COFFER CELL AND DEADMAN SURVEY, INSTALL NEW PERMANENT STEEL SHEETING, STEEL DEADMAN PILES, AND TIE RODS. SUPPORT THE TIE RODS DURING ERECTION TO MINIMIZE DEFLECTION OF THE RODS. TIGHTEN TIE RODS TO REMOVE SLACK IN CONNECTIONS BETWEEN NUTS, WASHERS, AND PILING SURFACES.
- PERFORM AND SUBMIT SURVEY OF NEW BULKHEAD WALL ALIGNMENT.
- INSTALL CIP CONCRETE BULKHEAD WALL CAP AFTER THE ENGINEER APPROVES THE BULKHEAD WALL SURVEY.
- AFTER BULKHEAD WALL CAP CONCRETE HAS CURED TO A COMPRESSIVE STRENGTH OF 3000 PSI MINIMUM:
 - REMOVE ALL DISPLACEMENT MONITORING INSTRUMENTATION.
 - EXCAVATE WITHIN EXISTING COFFER CELLS WATERSIDE OF THE NEW BULKHEAD AS SHOWN ON SHEET S-102. SEE SECTION D4 ON THIS SHEET.
 - CUT AND DISPOSE OF EXISTING COFFER CELLS OFFSHORE OF THE NEW BULKHEAD AT THE EXISTING MUDLINE.
 - INSTALL GRAVEL BETWEEN NEW AND EXISTING BULKHEAD WALLS, BACKFILL EXCAVATIONS, GRADE AS REQUIRED BY THE PARK PACKAGE DRAWINGS, AND COMPACT FILL.
 - UPON COMPLETION OF WORK, REMOVE AND DISPOSE OF ALL DEBRIS, EQUIPMENT, AND UNUSED MATERIALS FROM CITY PROPERTY. STAGING, STOCKPILE, OR OTHERWISE DISTURBED AREAS MAY BE LEFT DISTURBED FOR REUSE UNDER THE PARK PACKAGE.



D4 SECTION - EXCAVATION DURING CONSTRUCTION - NORTHERN (2) COFFER CELLS
SD101 SCALE: NTS



A3 SECTION - RELIEF EXCAVATION DURING CONSTRUCTION - WHARF & BULKHEAD
SD101 SCALE: NTS

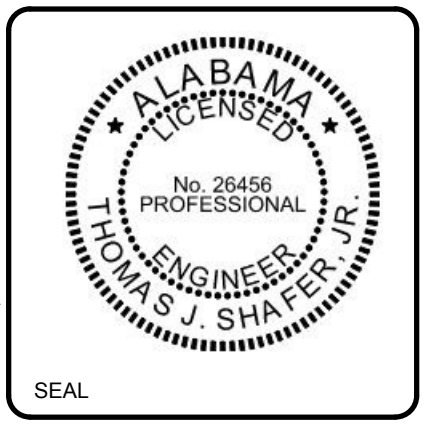


Rev.	Date	Description

MOBILE RIVERFRONT REDEVELOPMENT BULKHEAD REPLACEMENT

CONSTRUCTION PHASING & STAGING - BULKHEAD AND NORTH COFFER CELL

Date: 2023-09-08	MAN Project No: 10961-04	Drawing code:	Drawing Scale: AS INDICATED	Per Scale: 1" = (0 SHEET)
Designed by:	Drawn by: RW	Reviewed by: MR	Submitted by: MEG GOECKER	
11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 www.moffattnichol.com CERT. OF AUTH. #: ECA2676				



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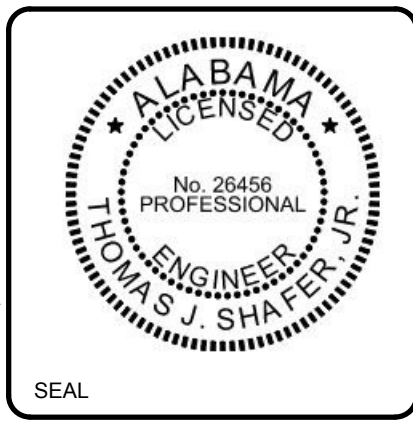
Rev.	Date	Description

**MOBILE RIVERFRONT REDEMPTION
BULKHEAD REPLACEMENT
DEMOLITION PLAN**

Rev.	Date	Description

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Designed by: 2023-09-08
Drawn by: M&N Project No. 10961-04
Reviewed by: RW
Submitted by: MR
Per Scale: 1" = 30' (0 SHEET)
MEG GOECKER

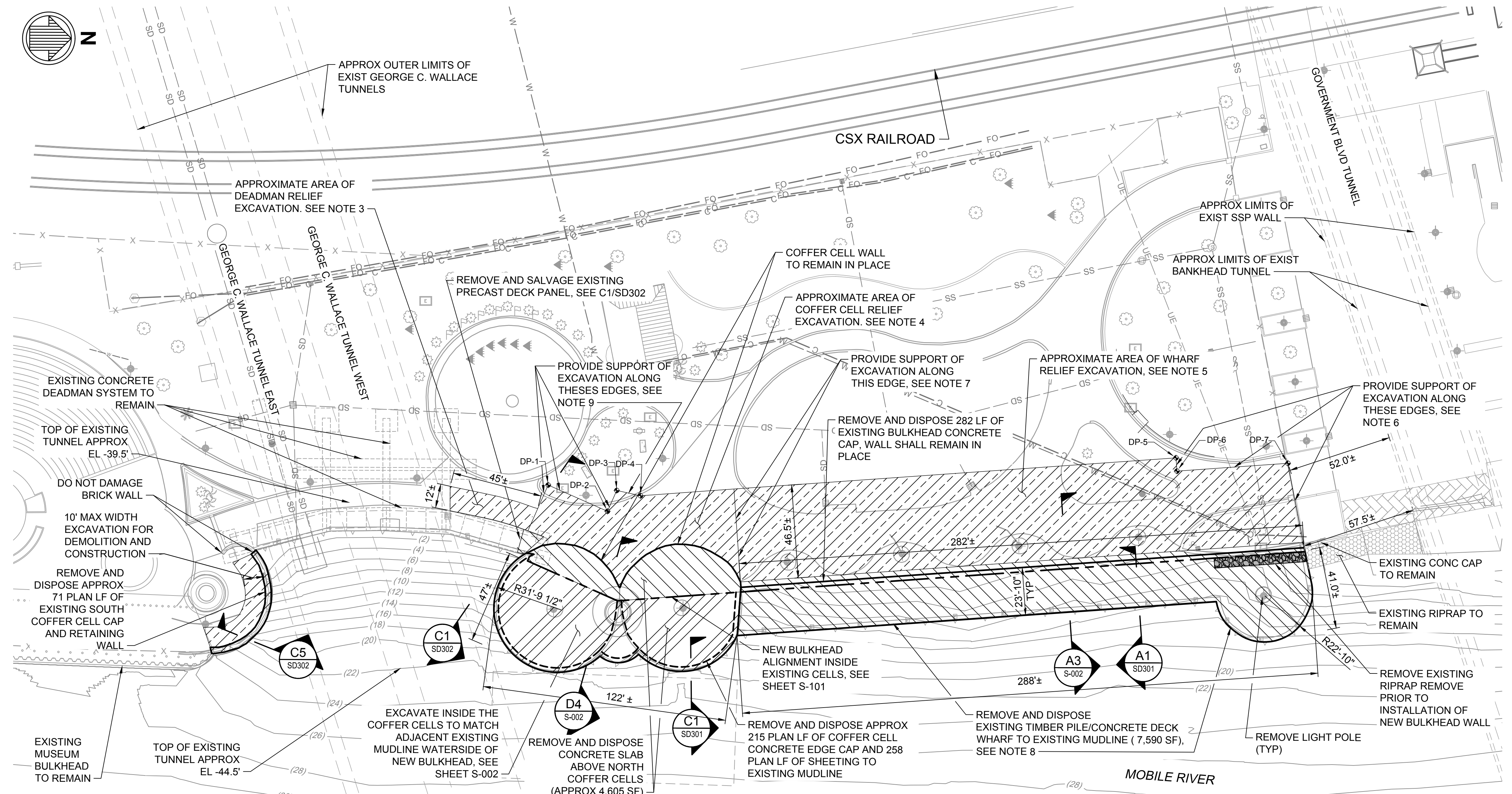


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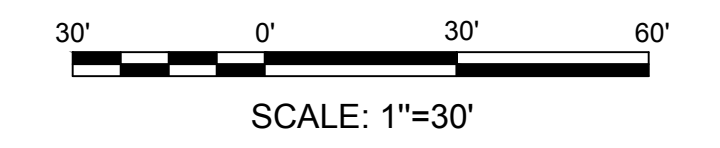
- ALL LAYBACKS ARE SHOWN WITH A 3:1 SLOPE. IT IS PERMISSIBLE TO PROVIDE A STEEPER SLOPE IF THE CONTRACTOR PROVIDES JUSTIFICATION TO THE ENGINEER FOR APPROVAL.
- CONTRACTOR SHALL PROVIDE SIGNED AND SEALED SUPPORT OF EXCAVATION DETAILS PREPARED BY ENGINEER LICENSED IN THE STATE OF ALABAMA.
- EXCAVATE BEHIND EXISTING DEADMAN BEAMS FROM BOTTOM OF BEAMS TO EXISTING GRADE (APPROXIMATELY 4'-0" DEPTH).
- EXCAVATE BEHIND EXISTING COFFER CELL TO BOTTOM OF NEW BULKHEAD WALL CAP.
- EXCAVATE BEHIND EXISTING BULKHEAD WALL TO EL-10.0, WHICH IS THE APPROXIMATE EXISTING MUDLINE WATERSIDE OF THE WALL.
- SUPPORT OF EXCAVATION SHALL PRESERVE THE ADJOINING FENCING AND LANDSCAPING WALLS FROM DAMAGE.
- SUPPORT OF EXCAVATION SHALL MAINTAIN THE SHALLOW COFFER CELL LAYBACK EXCAVATION TO THE SOUTH.
- SOME TIMBER PILES INCLUDE CONCRETE EXTENSIONS. SEE A1/SD301.
- SUPPORT OF EXCAVATION SHALL PROTECT THE TREES AND THEIR ROOTS DIRECTLY TO THE WEST.
- TOTAL VOLUME OF EXCAVATIONS IS ESTIMATED AT APPROXIMATELY 4000 CUBIC YARDS.

DEMOLITION POINT		
POINT #	NORTHING	EASTING
DP-1	251273.95	1799543.79
DP-2	251303.64	1799556.78
DP-3	251308.21	1799546.34
DP-4	251320.12	1799548.94
DP-5	251587.41	1799528.89
DP-6	251587.90	1799535.50
DP-7	251643.28	1799531.37

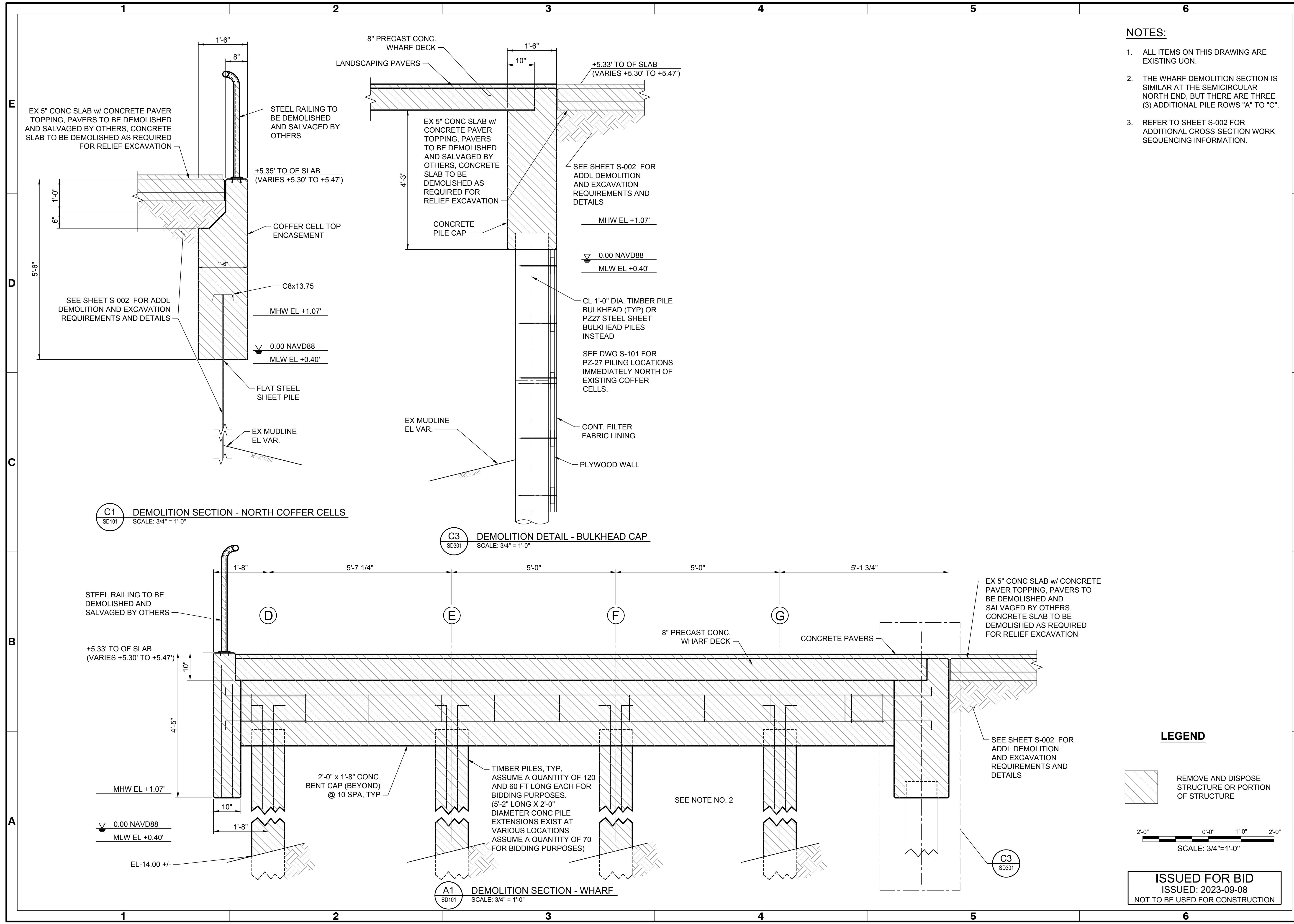


- LEGEND**
- REMOVE AND DISPOSE BULKHEAD
 - ▨ DEMOLITIONS
 - ▨ APPROXIMATE LAYBACK EXCAVATION AREA
 - ▨ DEMOLITIONS AND DISPOSE EXISTING FILL
 - ▨ REMOVE AND DISPOSE EXISTING RIP RAP
 - ▨ ROCK TO REMAIN

A1
SD101
DEMOLITION PLAN
SCALE: 1" = 30'



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NOTES:

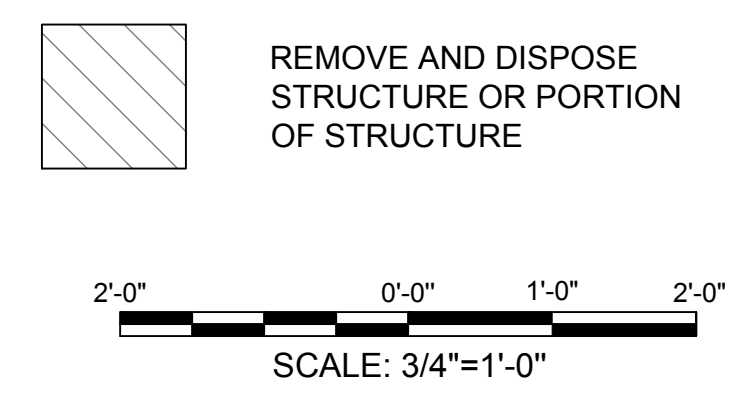
1. ALL ITEMS ON THIS DRAWING ARE EXISTING UNON.
2. THE WHARF DEMOLITION SECTION IS SIMILAR AT THE SEMICIRCULAR NORTH END, BUT THERE ARE THREE (3) ADDITIONAL PILE ROWS "A" TO "C".
3. REFER TO SHEET S-002 FOR ADDITIONAL CROSS-SECTION WORK SEQUENCING INFORMATION.

C1 DEMOLITION SECTION - NORTH COFFER CELLS
SD101 SCALE: 3/4" = 1'-0"

C3 DEMOLITION DETAIL - BULKHEAD CAP
SD301 SCALE: 3/4" = 1'-0"

A1 DEMOLITION SECTION - WHARF
SD101 SCALE: 3/4" = 1'-0"

LEGEND



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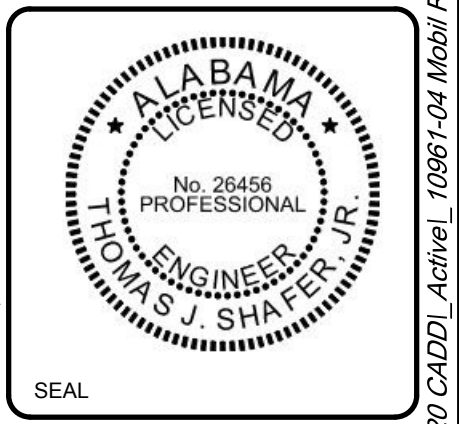
Rev.	Date	By	Description

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**DEMOLITION SECTIONS (1
OF 2)**

Designed by: TD	Date: 2023-09-08	Drawn by: RW	Checked by: NP	Reviewed by: MR	Submitted by: MEG GOECKER
11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 www.moffattnichol.com	MAN Project No. 10961-04	CERT. OF AUTH. # ECA2676	Drawing code: 	Drawing Scale: AS INDICATED	Per Scale: 1:1 (0 SHEET)

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ALABAMA LICENSED PROFESSIONAL ENGINEER
THOMAS J. SHAFFER, JR.



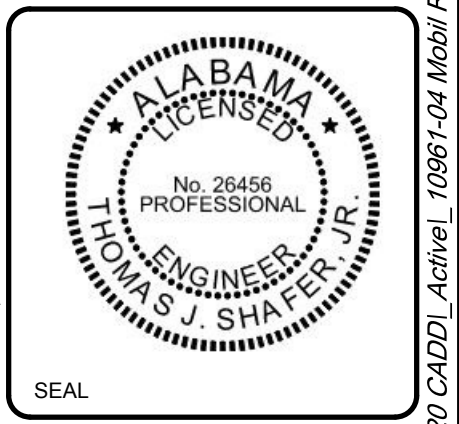
Sheet Reference No.
SD301
INDEX: 20 OF 60



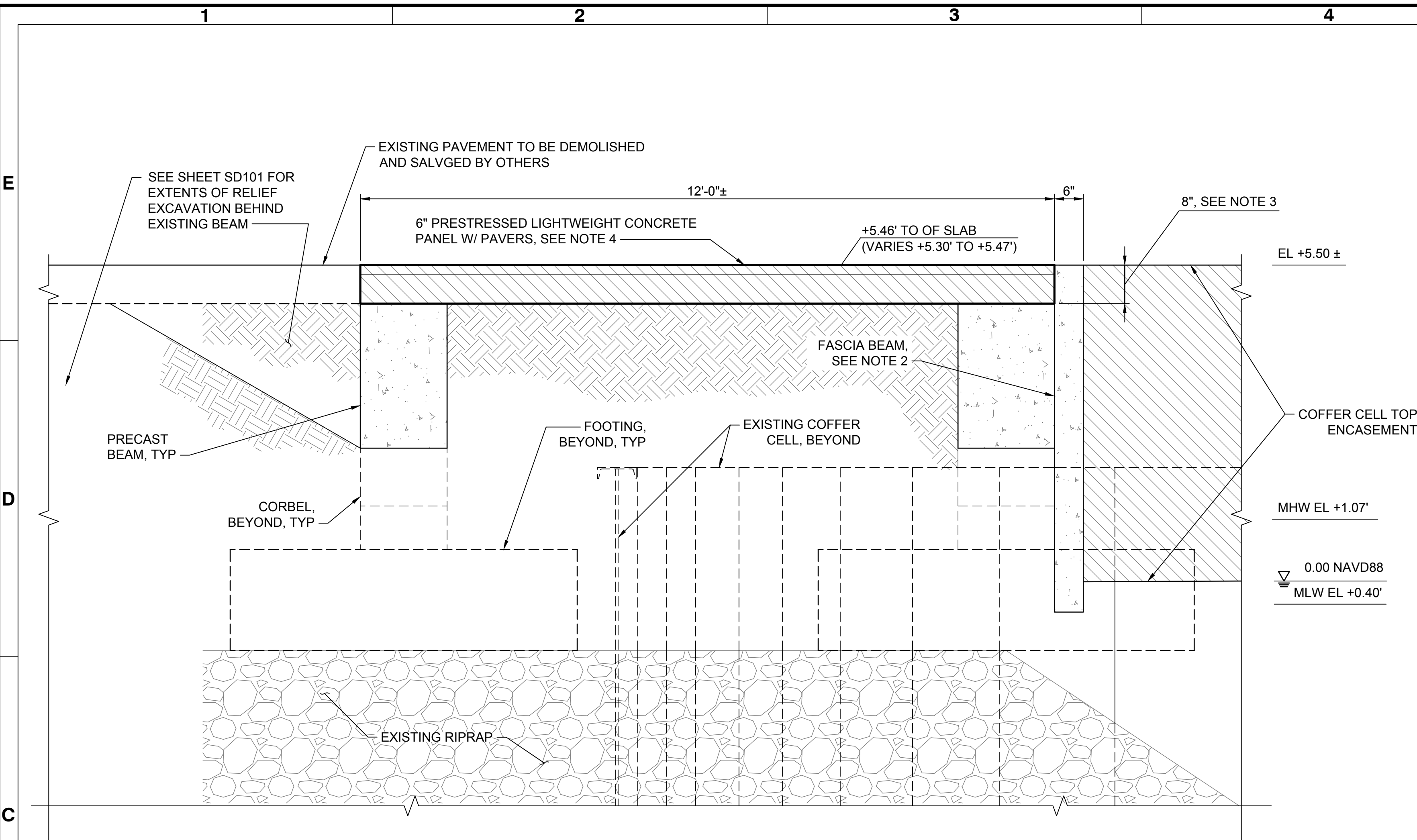
Rev.	Date	Description

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT
DEMOLITION SECTIONS
(2 OF 2)**

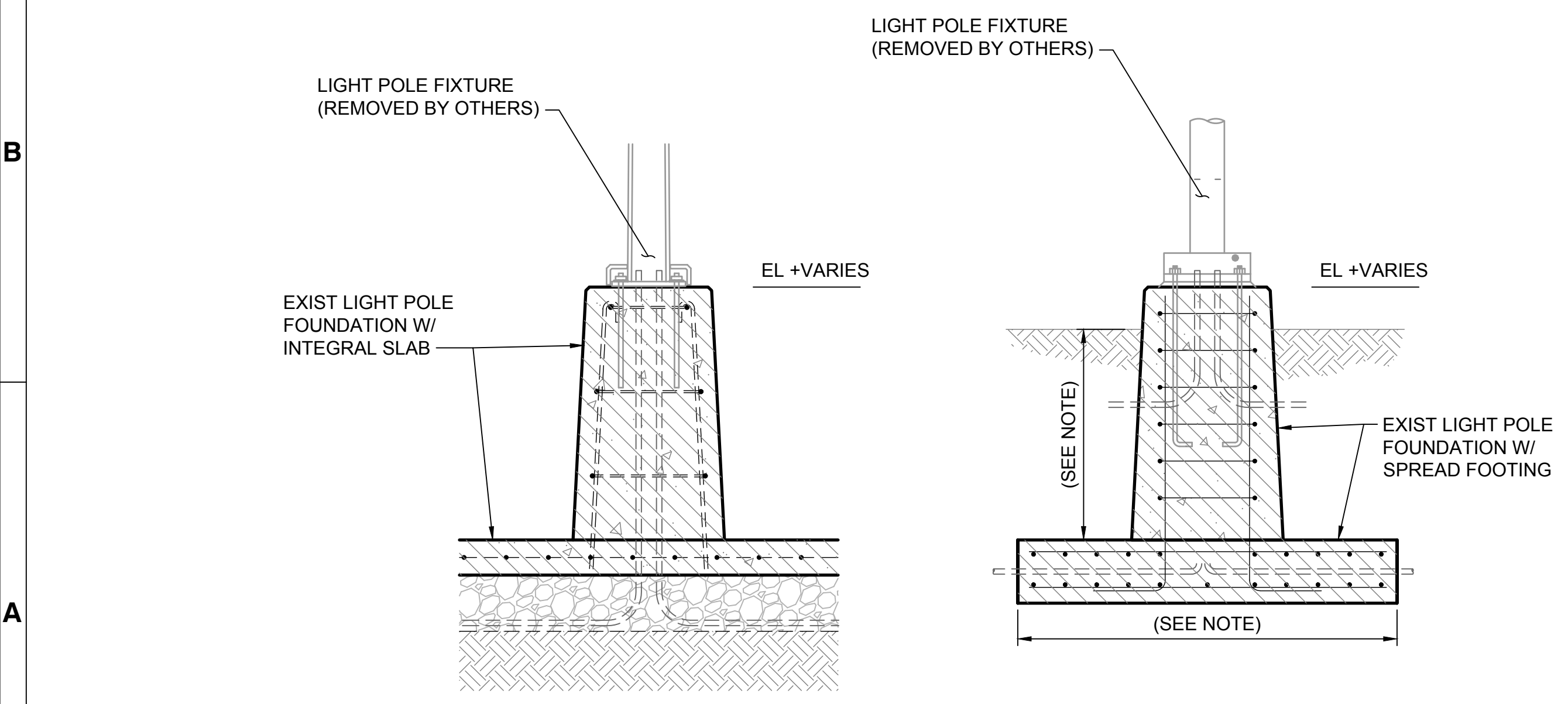
11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-8000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	Date: 2023-09-08 M&N Project No. 10961-04 Drawing code: Drawing Scale: AS INDICATED Plot Scale: 1" = 10' (0 SHEET)
Designed by: Drawn by: RW Reviewed by: MR Submitted by: MEG GOECKER	Date: Drawn by: Reviewed by: Submitted by:



Sheet Reference No.
SD302
INDEX: 21 OF 60



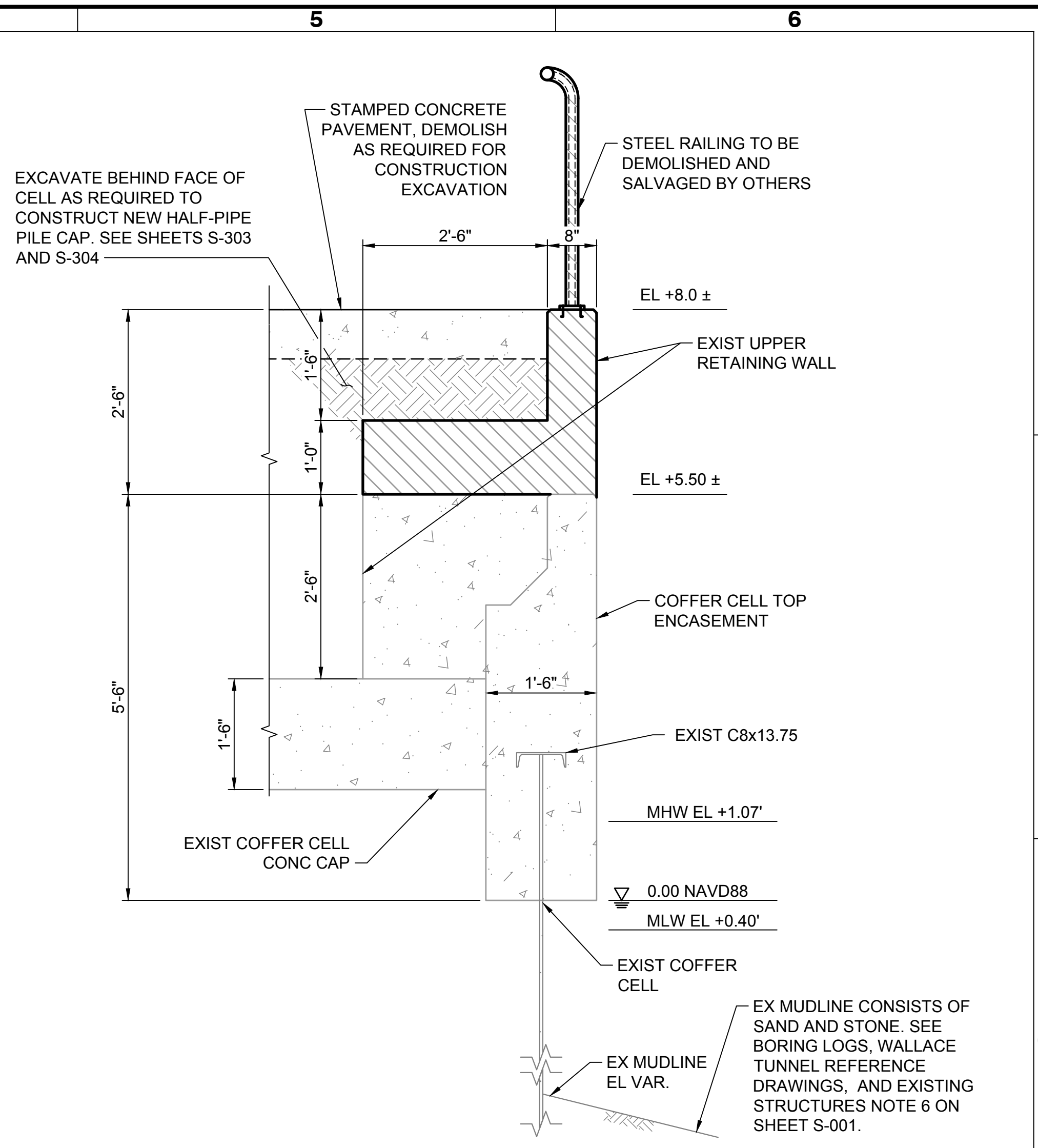
C1 DEMOLITION SECTION - DEADMAN PRECAST PANEL DECK
SD101 SCALE: 3/4" = 1'-0"



A1 DEMOLISH EXISTING LIGHT POLE FOUNDATIONS
CD101 SCALE: 3/4" = 1'-0"

LIGHT POLE NOTES:

- EXACT EXISTING LIGHT POLE FOUNDATION DIMENSIONS ARE UNKNOWN.
- CONTRACTOR SHOULD USE PROVIDED LIGHT POLE FOUNDATION DETAILS FOR BID PURPOSES.
- ACTUAL DEMOLITION COSTS SHALL ACCOUNT FOR COMPLETE REMOVAL OF LIGHT POLE PEDestal AND FOOTING AND/OR INTEGRAL SLABS WITH NO ADDITIONAL COMPENSATION PAID BY OWNER SHOULD ACTUAL LIGHT POLE FOUNDATIONS DIFFER FROM PROVIDED DETAILS.

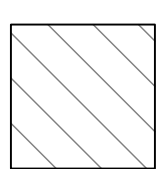


C5 DEMOLITION SECTION - SOUTH COFFER CELL
SD101 SCALE: 3/4" = 1'-0"

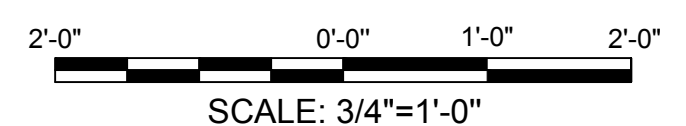
NOTES:

- ALL ITEMS ON THIS DRAWING ARE EXISTING UON.
- DO NOT DAMAGE DEADMAN FASCIA BEAM. COORDINATE WITH THE ENGINEER IF THERE IS A CONNECTION BETWEEN THE PANEL AND FASCIA.
- AFTER DEMOLISHING PANEL, MEASURE THE DEPTH FROM TOP OF EXISTING BEAMS TO TOP OF FASCIA AND SUBMIT TO THE ENGINEER. IF IT IS NOT 8", THE DECK DETAIL ON SHEET S-506 SHALL BE REVISED BY THE ENGINEER.
- ONLY THE SINGLE NORTHERNMOST PRECAST PANEL SHALL BE DEMOLISHED. ITS PRECISE LIMITS ARE NOT KNOWN AND MUST BE DETERMINED AFTER REMOVAL OF THE PAVERS ABOVE.
- REFER TO SHEET S-002 FOR ADDITIONAL CROSS-SECTION WORK SEQUENCING INFORMATION.

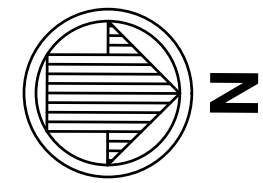
LEGEND



REMOVE AND DISPOSE STRUCTURE OR PORTION OF STRUCTURE



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ISSUED: 2023-09-08
NOT TO BE USED FOR CONSTRUCTION



LEGEND:

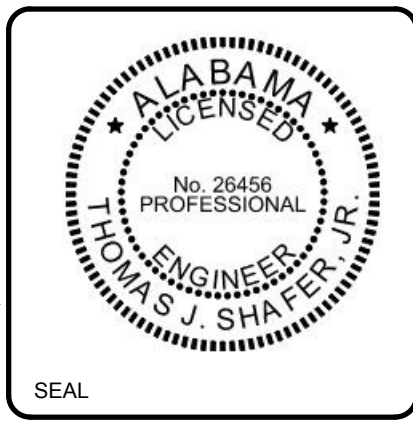
- V-1 VIBRATION MONITORING POINT (VMP)
- D-# DISPLACEMENT MONITORING POINT (DMP)



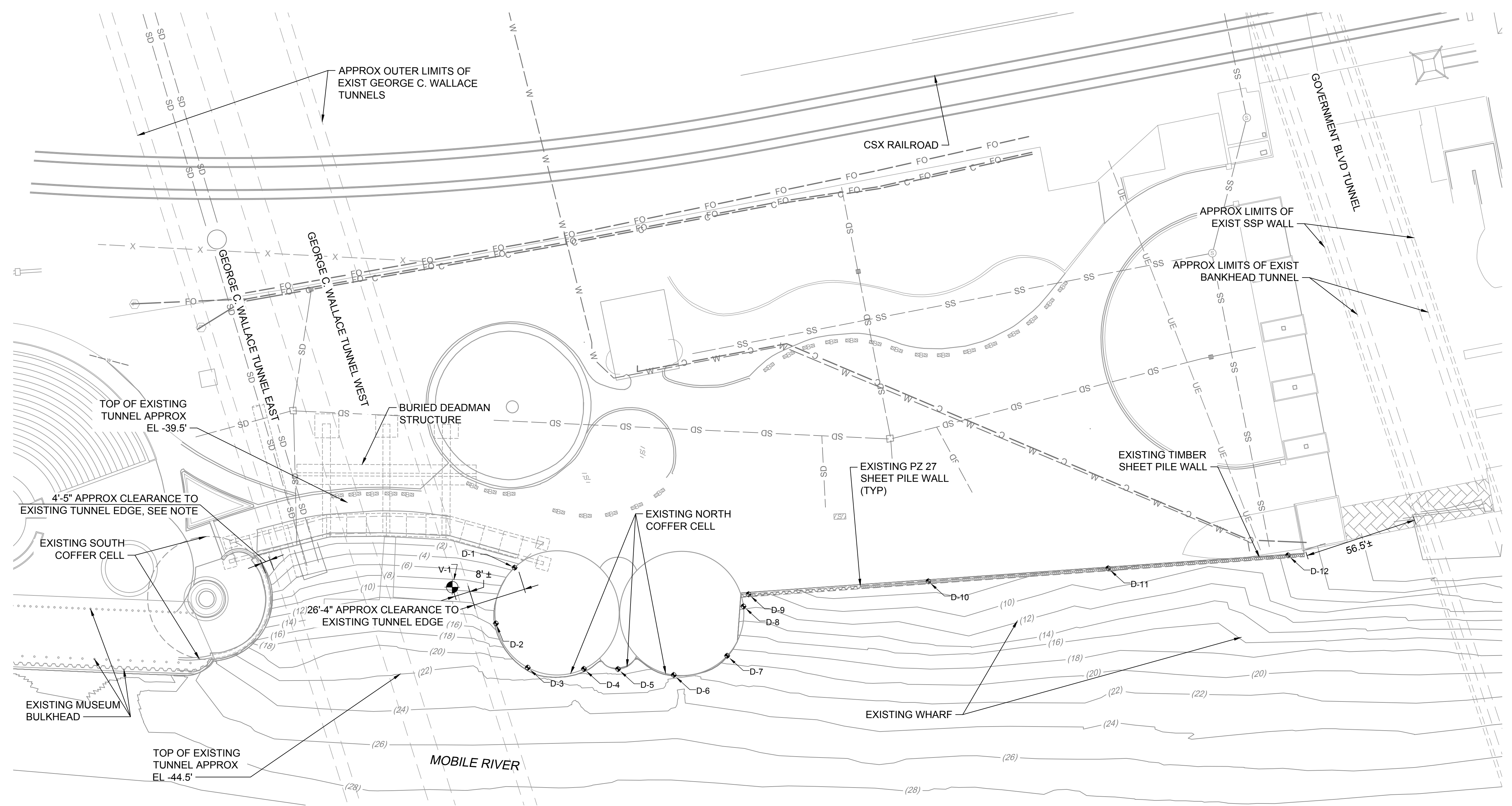
Mark	Description	Date	Appr.

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT
PLAN - MONITORING POINTS**

11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	Date: 2023-09-08 M&N Project No. 10961-04 Drawing code:	Designed by: Drawn by: RW Reviewed by: MR Submitted by: MEG GOECKER	Date: 2023-09-08 M&N Project No. 10961-04 Drawing code:	Drawing Scale: 1" = 40' Plot Scale: 1" = 30' (0 SHEET)
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Sheet Reference No.
S-100
INDEX: 22 OF 60

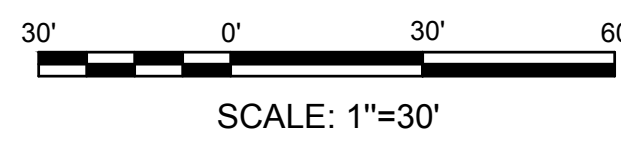


A1 PLAN - MONITORING POINTS
SCALE: 1" = 30'

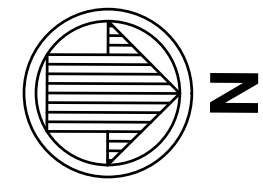
DISPLACEMENT MONITORING POINTS		
POINT #	NORTHING	EASTING
D-1	251257.36	1799582.27
D-2	251248.15	1799610.16
D-3	251264.15	1799632.16
D-4	251292.18	1799632.68
D-5	251309.21	1799632.69
D-6	251337.06	1799635.53
D-7	251363.66	1799625.84
D-8	251371.70	1799601.09
D-9	251374.26	1799595.04
D-10	251463.96	1799588.17
D-11	251553.73	1799581.31
D-12	251643.49	1799574.44

SEE SHEET S-004 FOR LOCATIONS OF VIBRATION MONITORING POINTS INSIDE TUNNEL.

MONITORING POINT		
POINT #	NORTHING	EASTING
V-1	251226.28	1799592.15



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Rev.	Date	Description

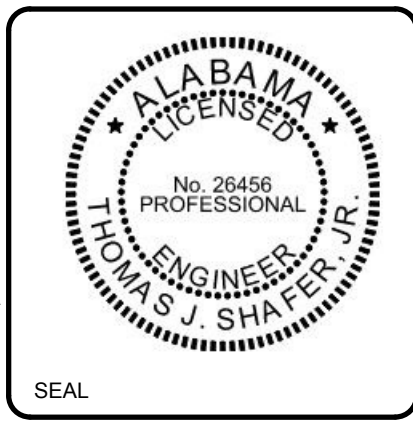
**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**PLAN - PILING BEFORE
DEMOLITION OF NORTH
CELLS**

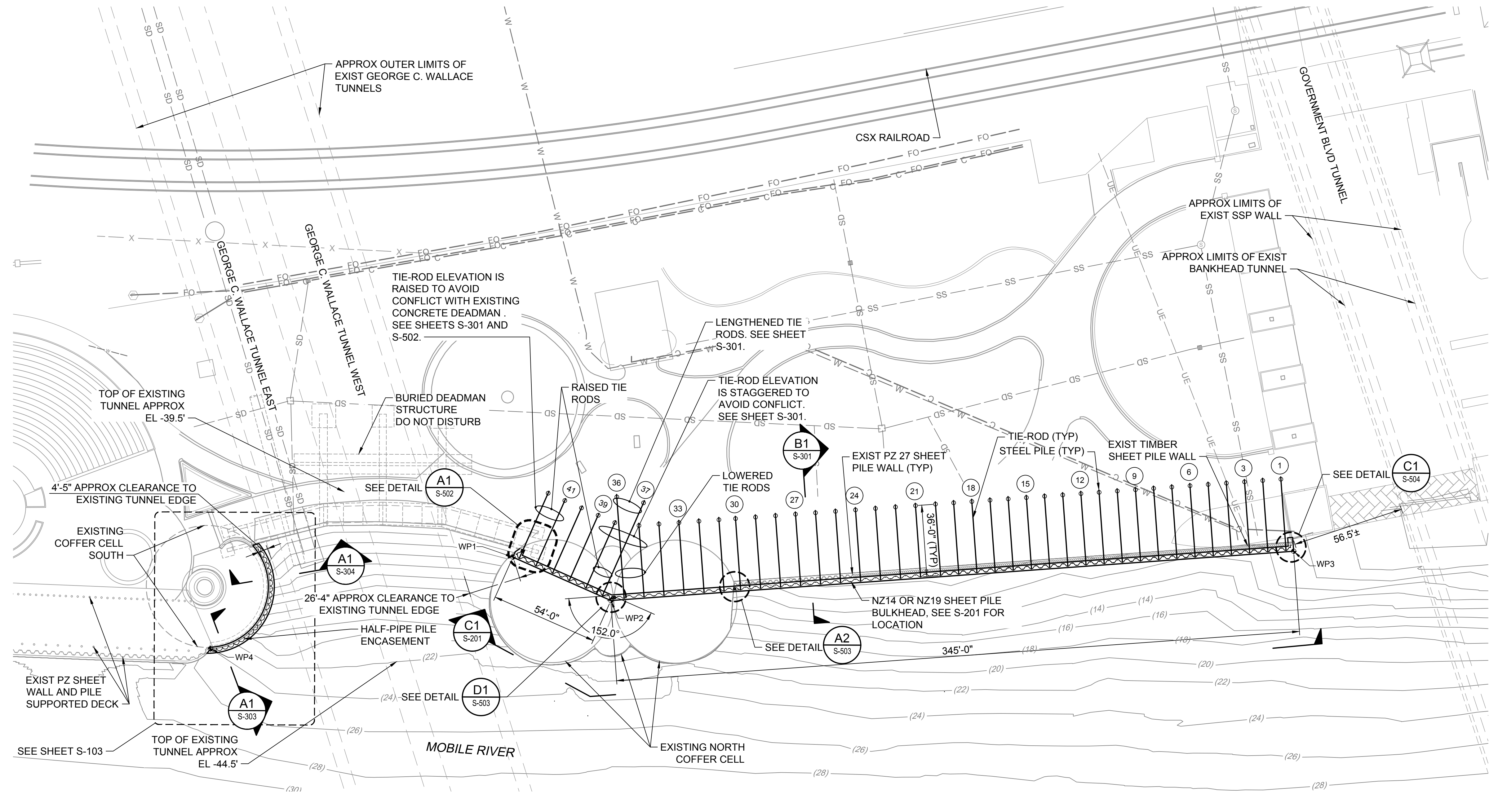
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MOBILE, AL 36602
(251) 378-9000
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CERT. OF AUTH. # ECA2676

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Designed by: 2023-09-08
Date: 2023-09-08
MAN Project No. 10961-04
Drawn by: RW
Reviewed by: MR
Submitted by: MEG GOECKER
Per Scale: 1" = 40'
Drawing Scale: 1" = 40'

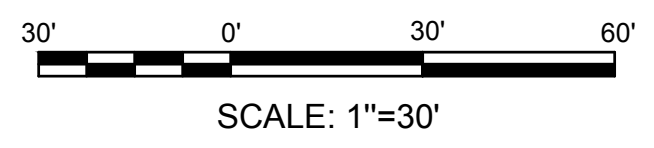


Sheet Reference No.
S-101
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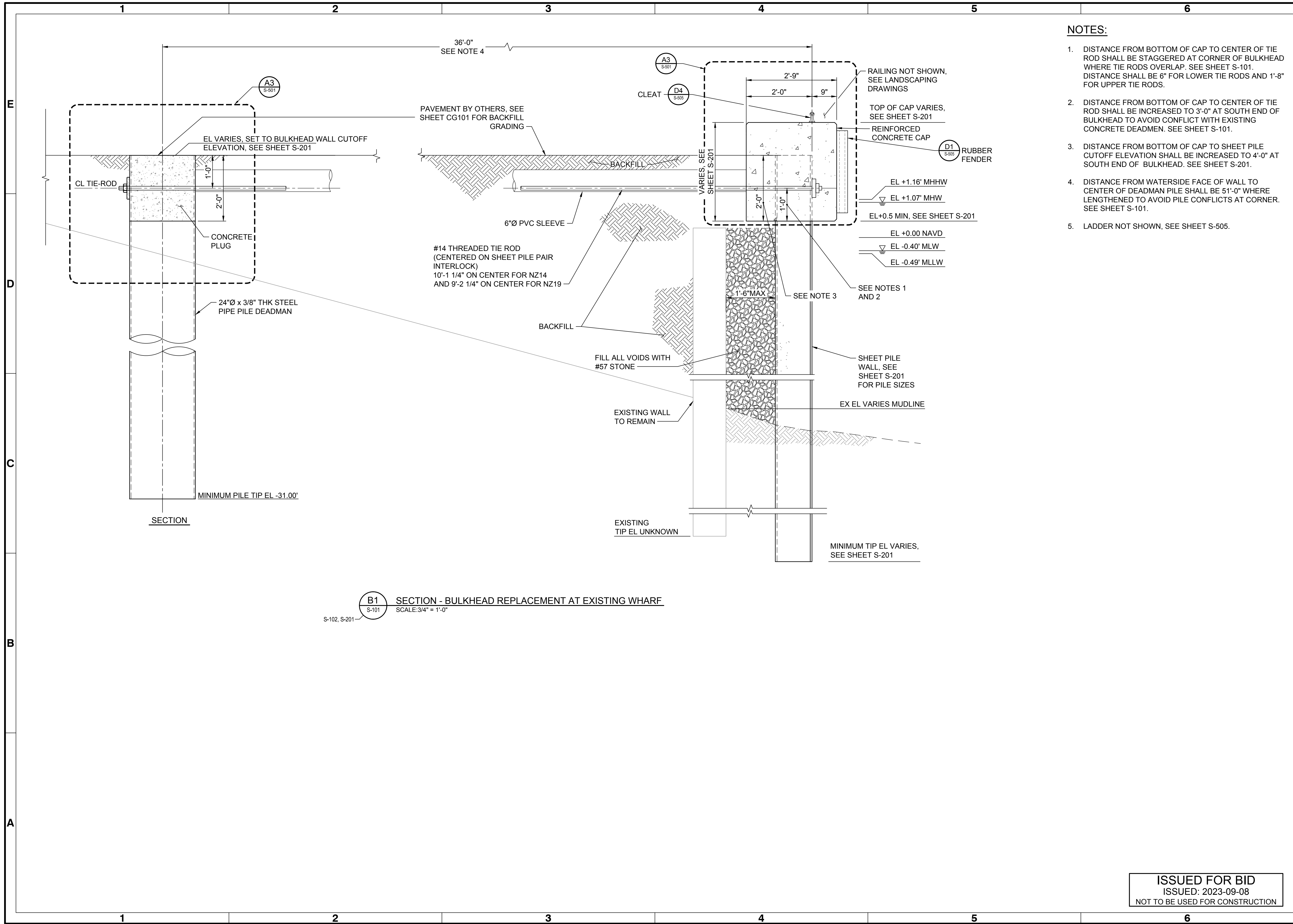


A1 PLAN - PILING BEFORE DEMOLITION OF NORTH CELLS
SCALE: 1" = 30'

WORKING POINTS			
POINT #	NORTHING	EASTING	DESCRIPTION
WP1	251,258.91	1,799,582.69	WATERSIDE OF BULKHEAD WALL CAP
WP2	251,308.41	1,799,604.34	WATERSIDE OF BULKHEAD WALL CAP
WP3	251,652.39	1,799,578.02	WATERSIDE OF BULKHEAD WALL CAP
WP4	251,106.71	1,799,629.54	CORNER OF EXISTING CELL AND BULKHEAD, TO BE VERIFIED ON SITE



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NOTES:

- DISTANCE FROM BOTTOM OF CAP TO CENTER OF TIE ROD SHALL BE STAGGERED AT CORNER OF BULKHEAD WHERE TIE RODS OVERLAP. SEE SHEET S-101. DISTANCE SHALL BE 6" FOR LOWER TIE RODS AND 1'-8" FOR UPPER TIE RODS.
- DISTANCE FROM BOTTOM OF CAP TO CENTER OF TIE ROD SHALL BE INCREASED TO 3'-0" AT SOUTH END OF BULKHEAD TO AVOID CONFLICT WITH EXISTING CONCRETE DEADMEN. SEE SHEET S-101.
- DISTANCE FROM BOTTOM OF CAP TO SHEET PILE CUTOFF ELEVATION SHALL BE INCREASED TO 4'-0" AT SOUTH END OF BULKHEAD. SEE SHEET S-201.
- DISTANCE FROM WATERSIDE FACE OF WALL TO CENTER OF DEADMAN PILE SHALL BE 51'-0" WHERE LENGTHENED TO AVOID PILE CONFLICTS AT CORNER. SEE SHEET S-101.
- LADDER NOT SHOWN, SEE SHEET S-505.



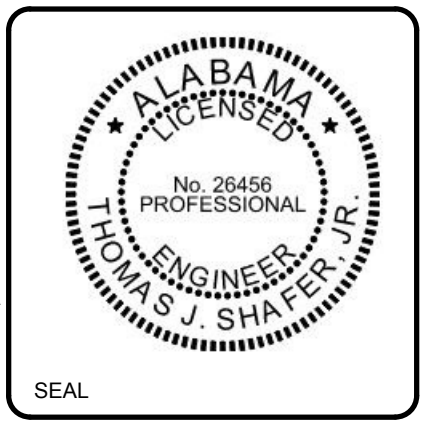
Rev.	Date	Description	Mark

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT
SECTIONS - BULKHEAD
(1 OF 2)**

Date: 2023-09-08 M&N Project No: 10961-04 Drawing code:	AS INDICATED 1:1 (0 SHEET)
Designed by: Drawn by: RW Reviewed by: MR Submitted by: MEG GOECKER	Per Scale:

11 N. WATER ST., STE. 20220
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Sheet Reference No.
S-301
 INDEX: 27 OF 60

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NOTES:
SEE NOTES ON SHEET S-303.

Rev.	Date	Description	Mark

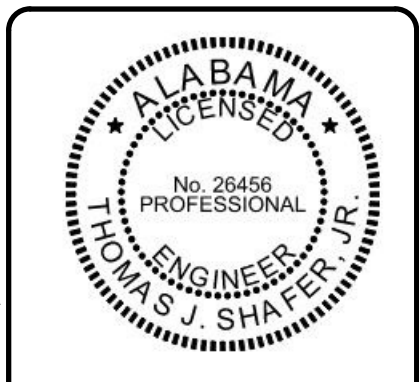
**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**SECTIONS - SOUTH
COFFER CELL (2 OF 2)**

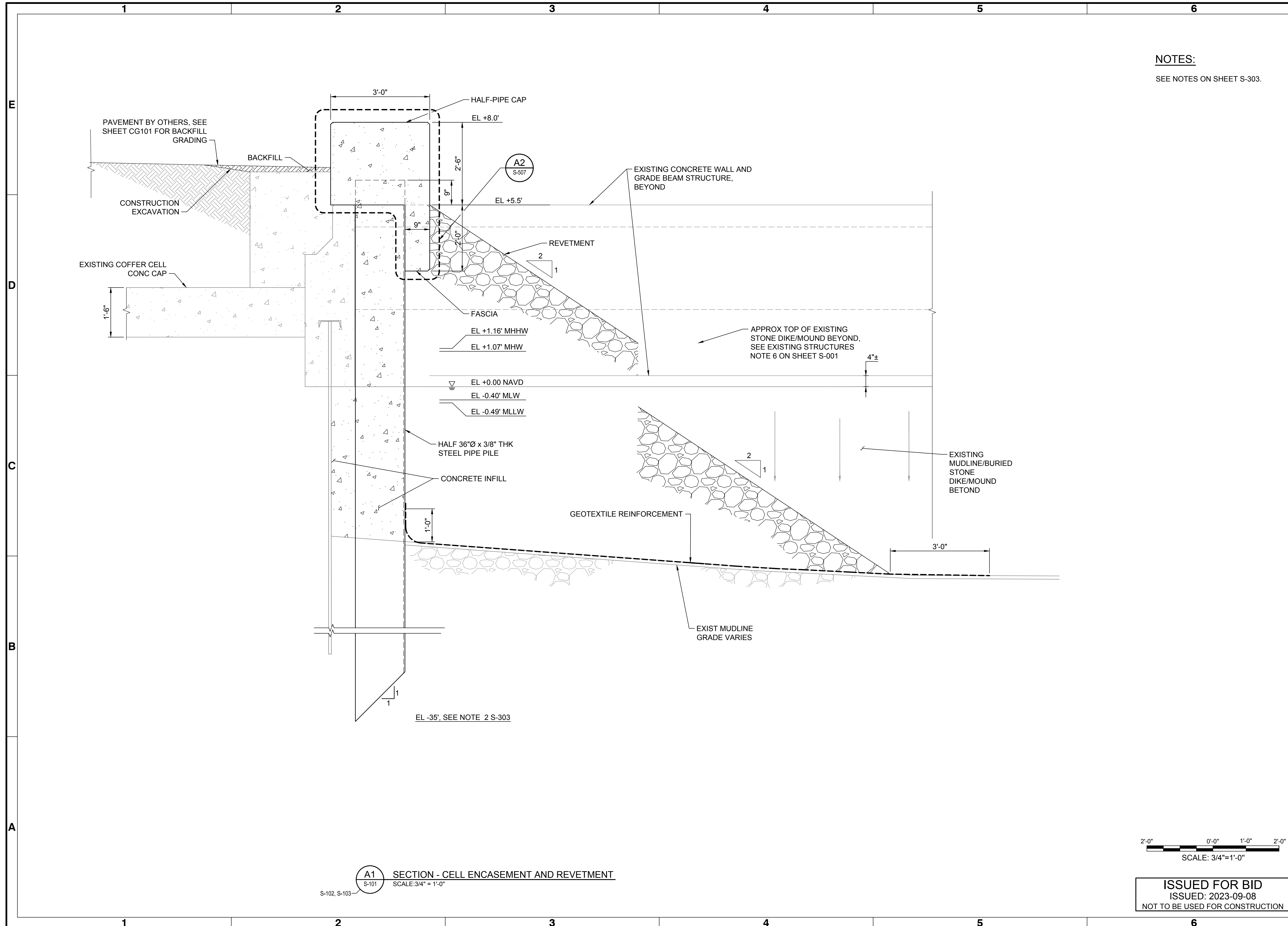
Designed by:	Date:	2023-09-08
Drawn by:	M&N Project No.:	10961-04
Checked by:	Drawn by:	RW
Reviewed by:	Drawing code:	
Submitted by:	Drawing Scale:	AS INDICATED
MEG GOECKER	Per scale:	1:1 (0 SHEET)

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Sheet Reference No.
S-304
INDEX: 30 OF 60

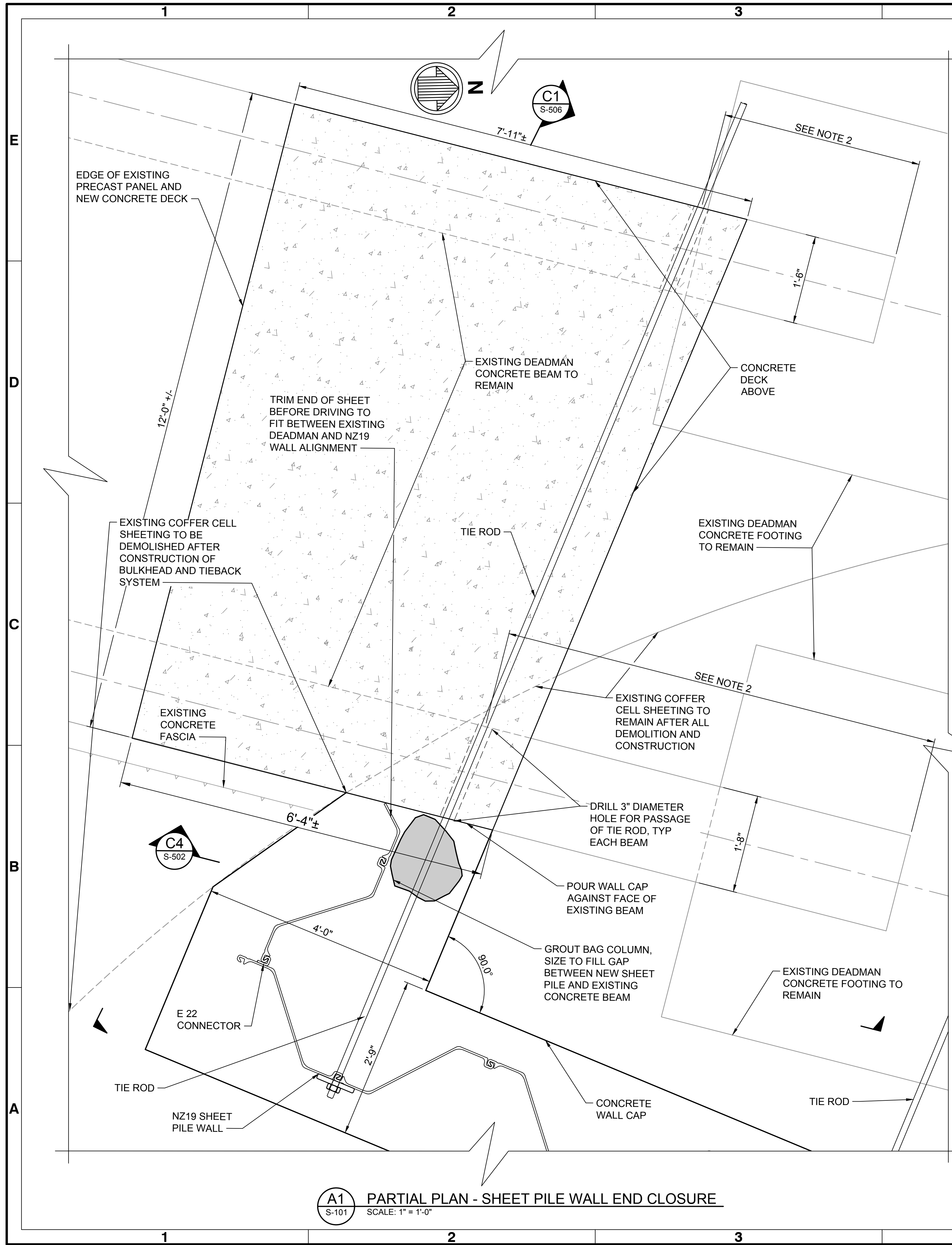


A1 SECTION - CELL ENCASMENT AND REVETMENT
SCALE: 3/4" = 1'-0"

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

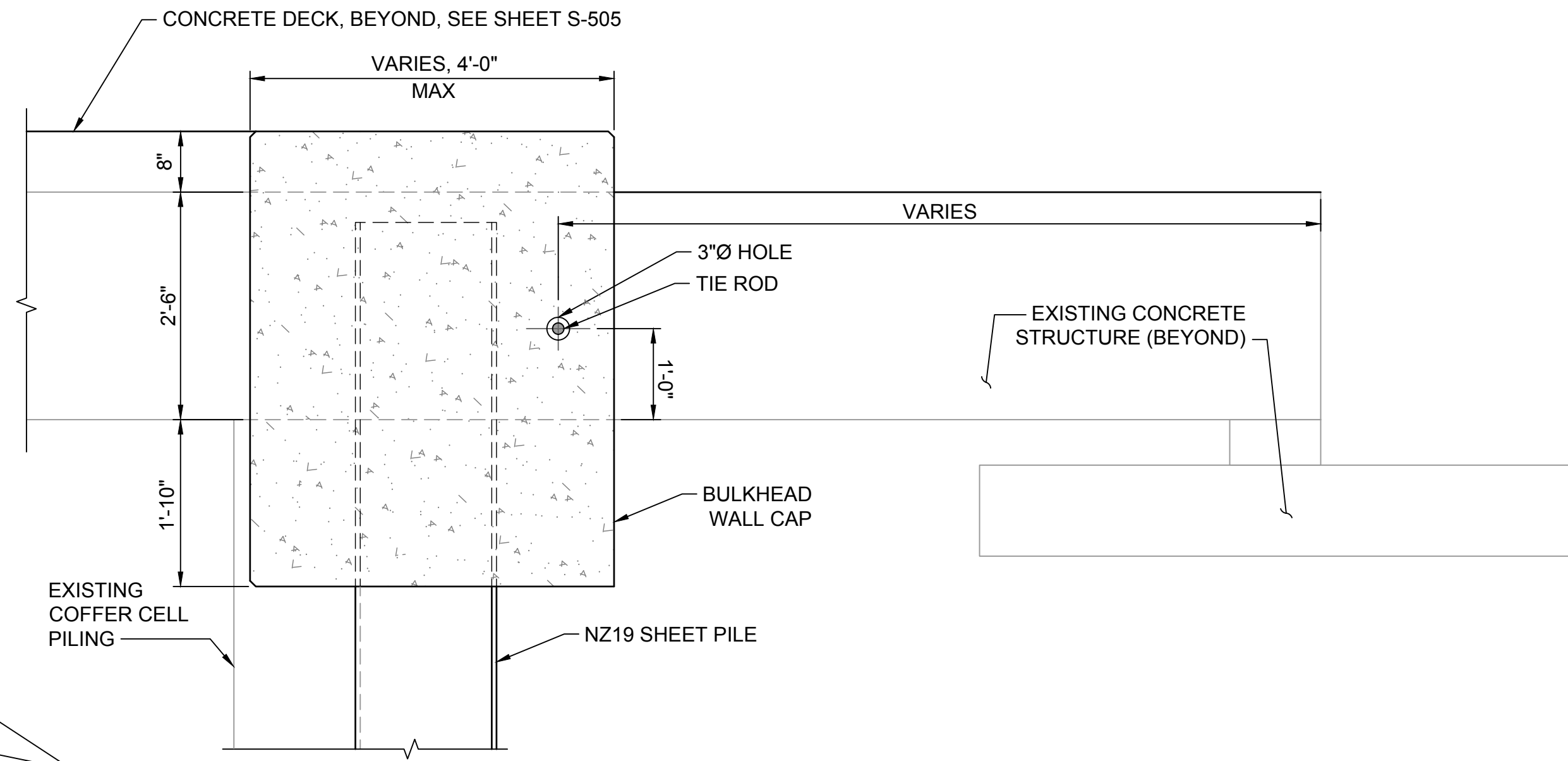
ISSUED FOR BID
ISSUED: 2023-09-08
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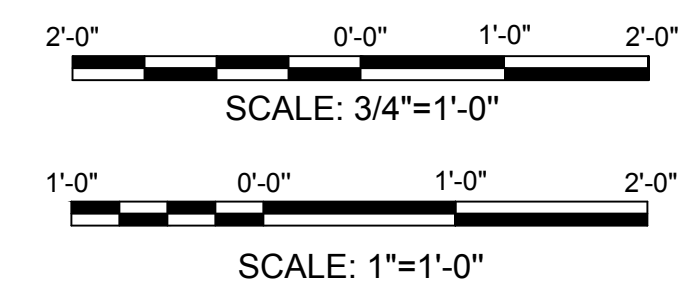


A1 PARTIAL PLAN - SHEET PILE WALL END CLOSURE
SCALE: 1" = 1'-0"

- NOTES:**
- EXTEND GROUT BAG COLUMNS 3" ABOVE BOTTOM OF WALL CAP.
 - LOCATE HOLE FOR TIE RODS AFTER EXCAVATING TO EXPOSE CONCRETE DEADMAN AND CONFIRMING ITS END LOCATION RELATIVE TO THE TIE ROD.
 - GROUT BAG TIP ELEVATION SHALL BE EL-15.0.
 - AFTER SUBMISSION OF THE EXISTING DEADMAN AND COFFER CELLS SURVEY ACCORDING TO THE SEQUENCE ON SHEET S-002, THE DETAILS OF THE CLOSURE BETWEEN THE NEW BULKHEAD AND EXISTING DEADMAN AND CELL WILL BE REVISED AS REQUIRED FOR FIELD CONDITIONS.



C4 DETAIL - WALL CAP CONNECTION TO EXISTING DEADMAN
SCALE: 3/4" = 1'-0"



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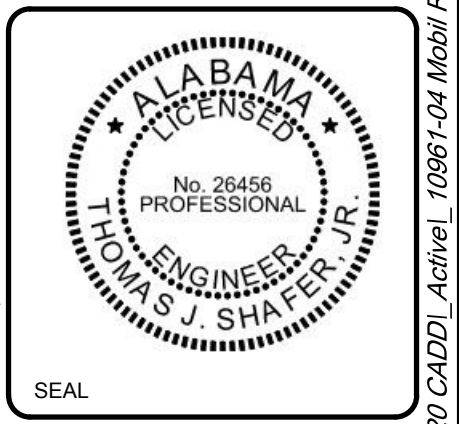


Rev.	Date	By	Description

MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT
DETAILS - BULKHEAD (2 OF 4)

Designed by:	Date:	Drawn by:	Checked by:	Reviewed by:	Submitted by:	Per Scale:
11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	2023-09-08	RW	RW	MR	MEG GOECKER	1" = 1'-0" (0 SHEET)

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PROFESSIONAL ENGINEER
TOMAS J. SHAFFER, JR.
No. 26456



Sheet Reference No.
S-502
INDEX: 34 OF 60



Rev.	Date	Description

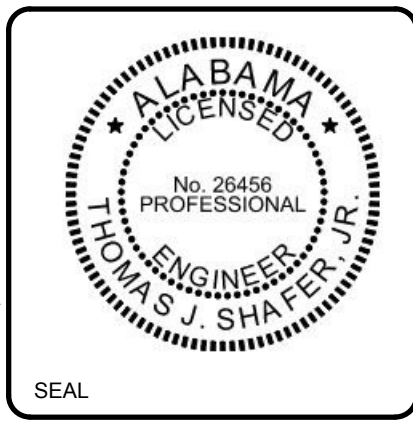
**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

DETAILS - BULKHEAD (3 OF 4)

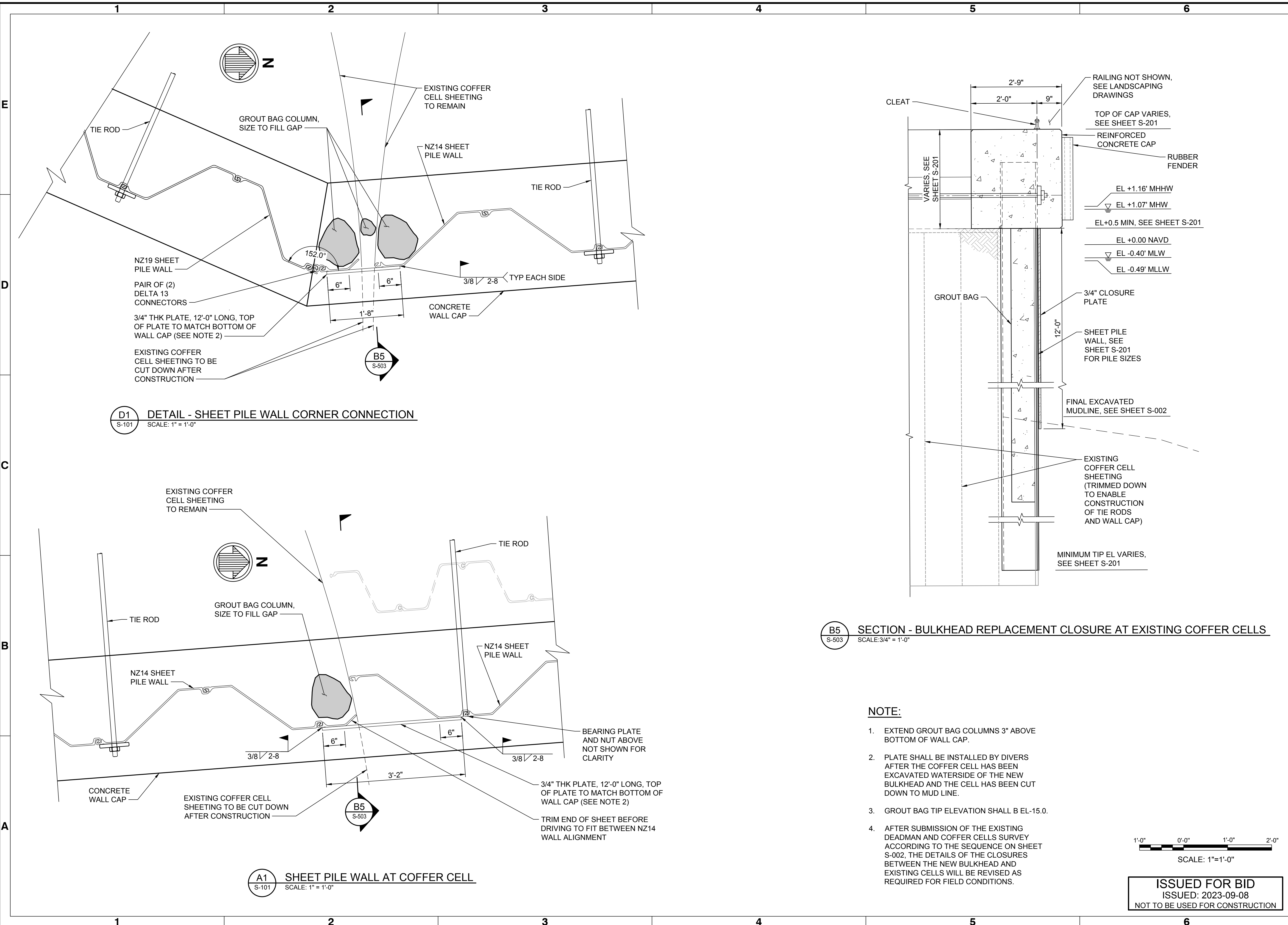
Designed by:	Date:	2023-09-08
Drawn by:	M&N Project No.:	10961-04
Reviewed by:	Drawn by:	RW
Submitted by:	Reviewed by:	MR
MEG GOECKER	MEG GOECKER	
	Per Scale:	1:1 (0 SHEET)

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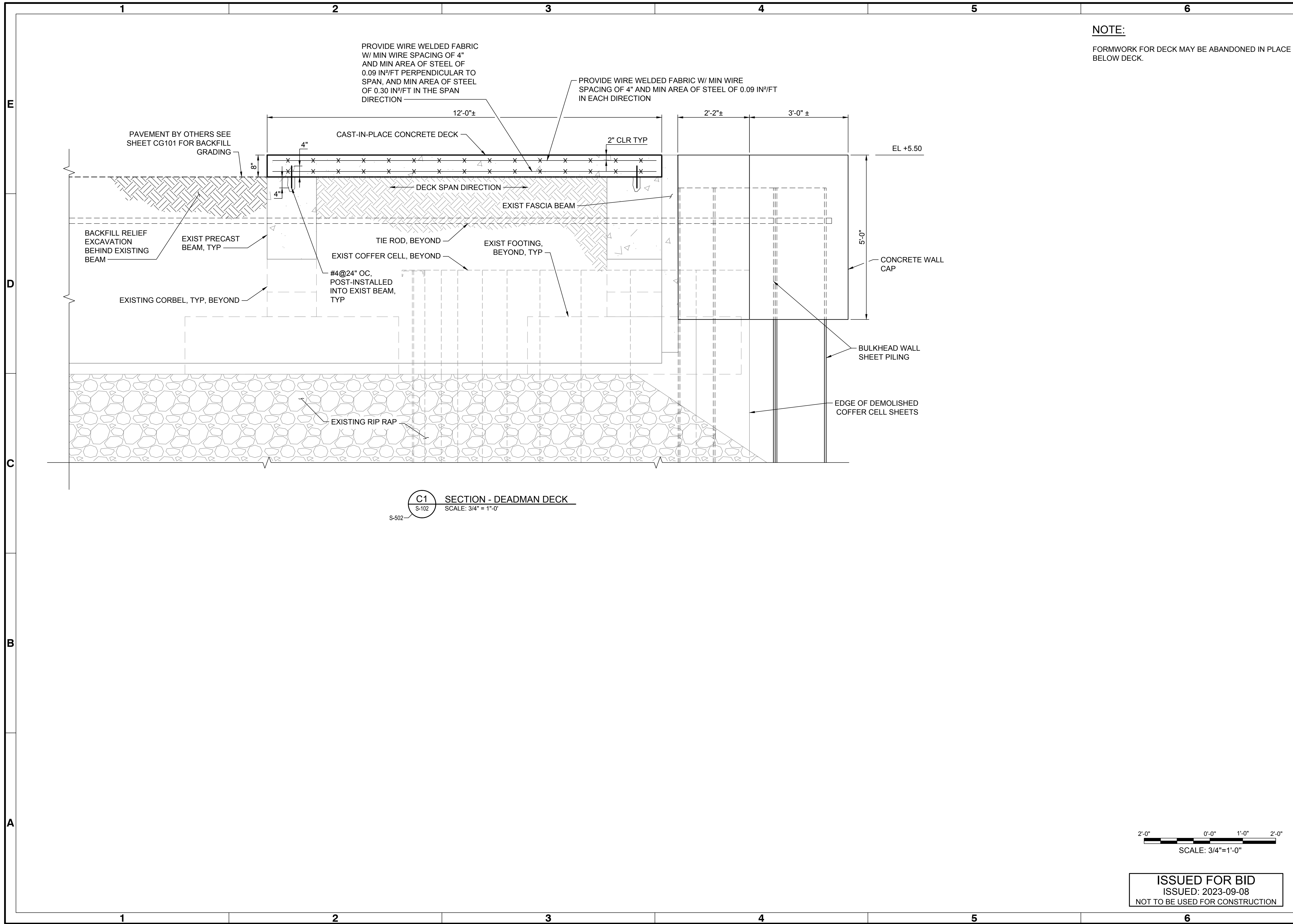
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Sheet Reference No.
S-503
INDEX: 35 OF 60



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NOTE:
FORMWORK FOR DECK MAY BE ABANDONED IN PLACE BELOW DECK.



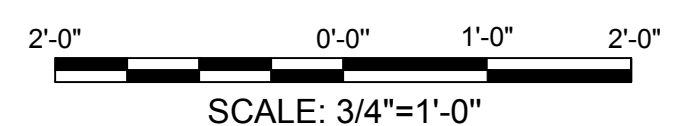
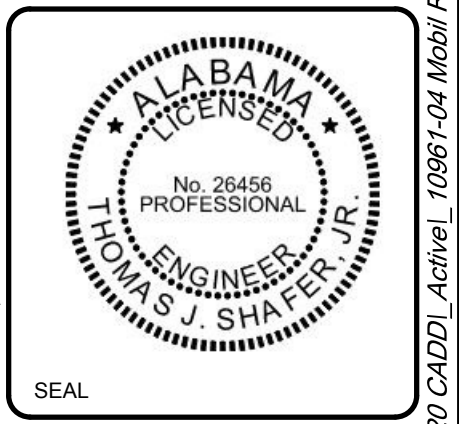
Rev.	Date	Description	Mark

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

DETAILS - DEADMAN DECK

C1 SECTION - DEADMAN DECK
SCALE: 3/4" = 1'-0"

Date: 2023-09-08 M&N Project No: 10961-04 Drawing code:	Designed by: Drawn by: RW Reviewed by: MR Submitted by: MEG GOECKER	11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	Drawing Scale: AS INDICATED Plot Scale: 1:1 (0 SHEET)
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Sheet Reference No.
S-506
INDEX: 38 OF 60



Rev.	Date	Description	Mark

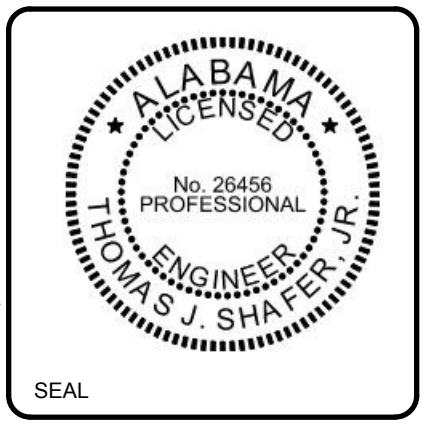
**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**DETAILS - SOUTH
COFFER CELL (1 OF 2)**

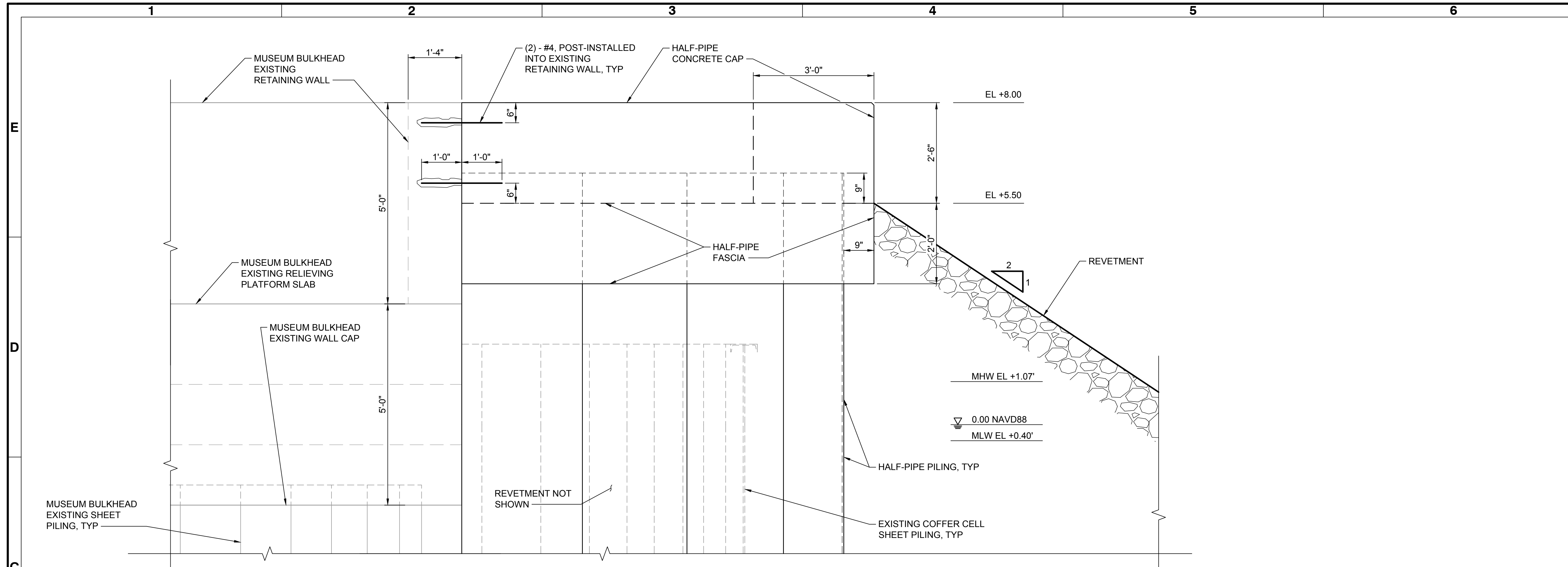
Designed by:	Date:	2023-09-08
Drawn by:	M&N Project No.:	10961-04
Reviewed by:	Drawn by:	RW
Submitted by:	Reviewed by:	MR
MEG GOECKER	Submitted by:	MEG GOECKER

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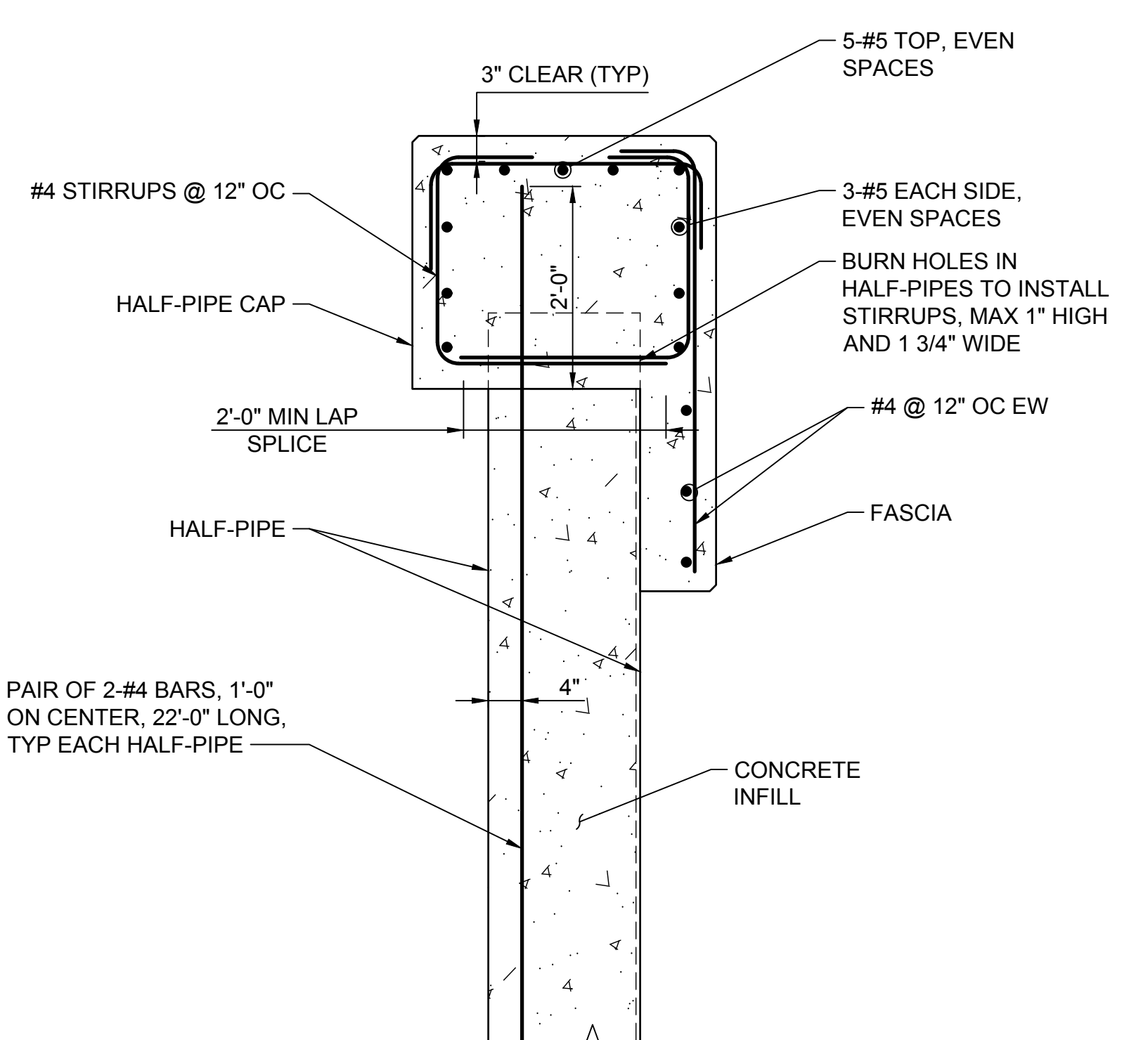
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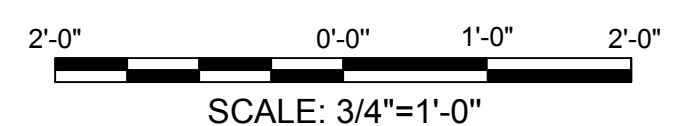
Sheet Reference No.
S-507
INDEX: 39 OF 60



C1 ELEVATION - SOUTH COFFER CELL CAP INTERFACE WITH MUSEUM BULKHEAD
S-103 SCALE: 3/4" = 1'-0"



A2 SECTION - SOUTH COFFER CELL CAP REINFORCEMENT
S-507 S-303, S-304 SCALE: 3/4" = 1'-0"

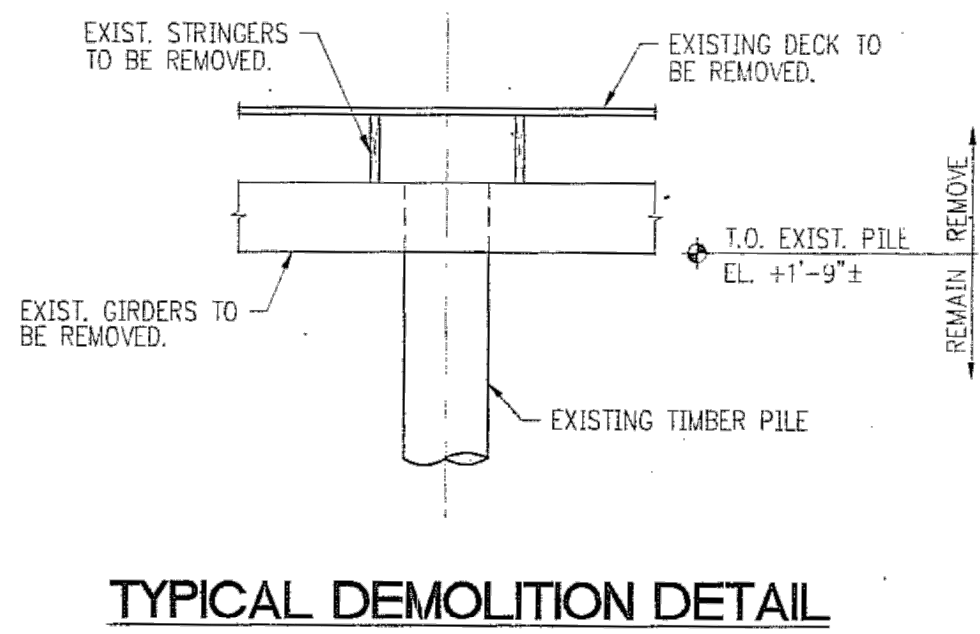
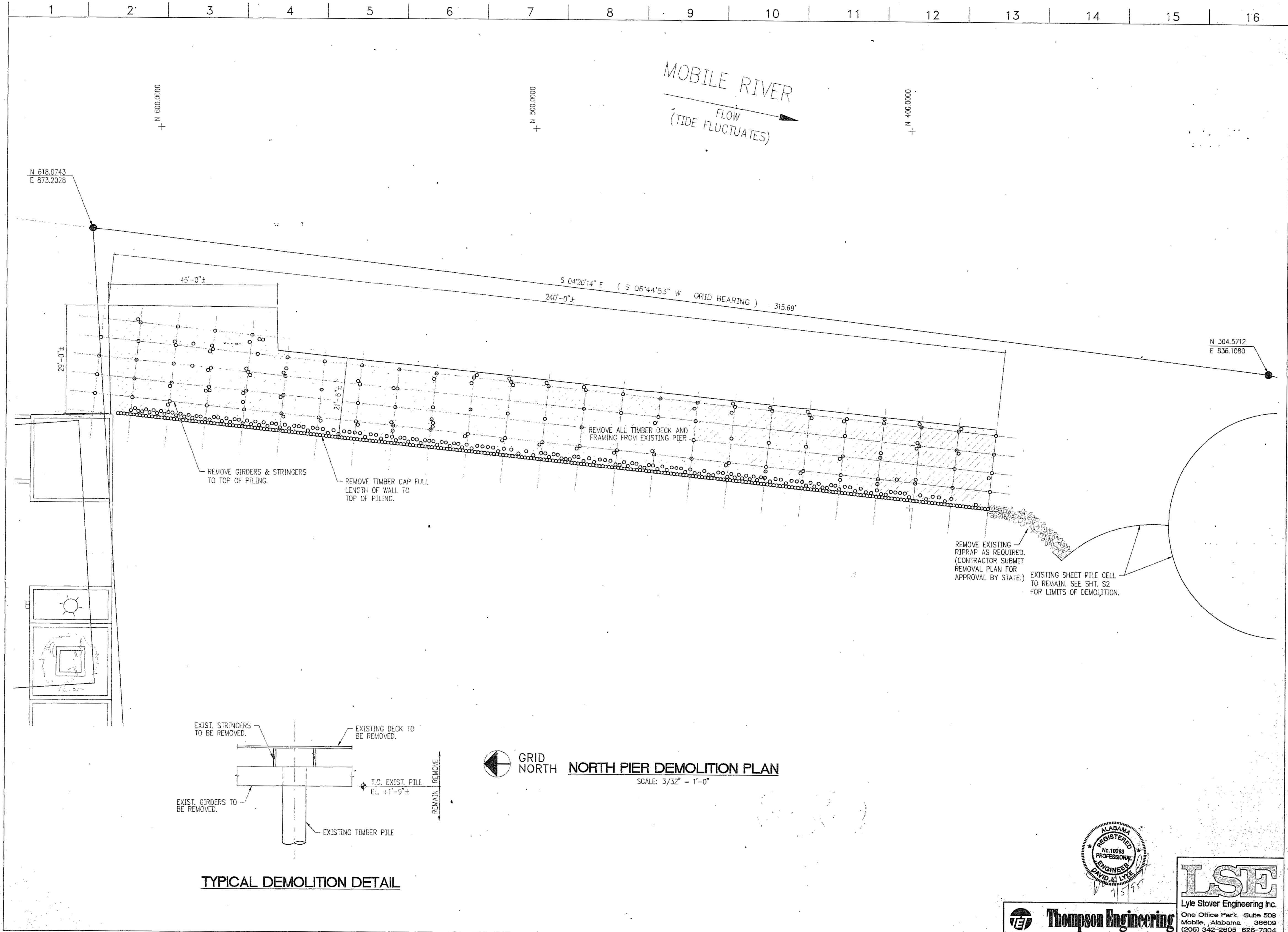


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ISSUED: 2023-09-08
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1 2 3 4 5 6

E
D
C
B
A



GRID NORTH
NORTH PIER DEMOLITION PLAN
 SCALE: 3/32" = 1'-0"

A1
 R-4
PARK WHARF AND DEADMAN
 SCALE: NTS

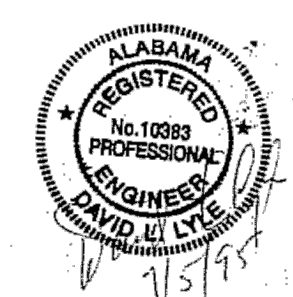
NO.	DATE	REVISION

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**COOPER RIVERSIDE PARK
 NORTH PIER DEMOLITION PLAN**
 MOBILE RIVER
 MOBILE, ALABAMA

70-52094-07
S-1
 SHEET NUMBER



Mark	Description	Date	Appr.

**MOBILE RIVERFRONT REDEVELOPMENT
 BULKHEAD REPLACEMENT**
**PARK WHARF AND DEADMAN
 (2 OF 15)**

Rev.	Date	Designed by	Drawn by	Reviewed by	Submitted by	Drawing Code	Drawing Scale	Per Scale
	2023-09-08		RW	MR	MEG GOECKER		AS INDICATED	1:1 (0 SHEET)
		11 N. WATER ST., STE. 20220 MOBILE, AL 36602 MOFFATT & NICHOL (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2876						

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Sheet Reference No.
R-4
 INDEX: 44 OF 60

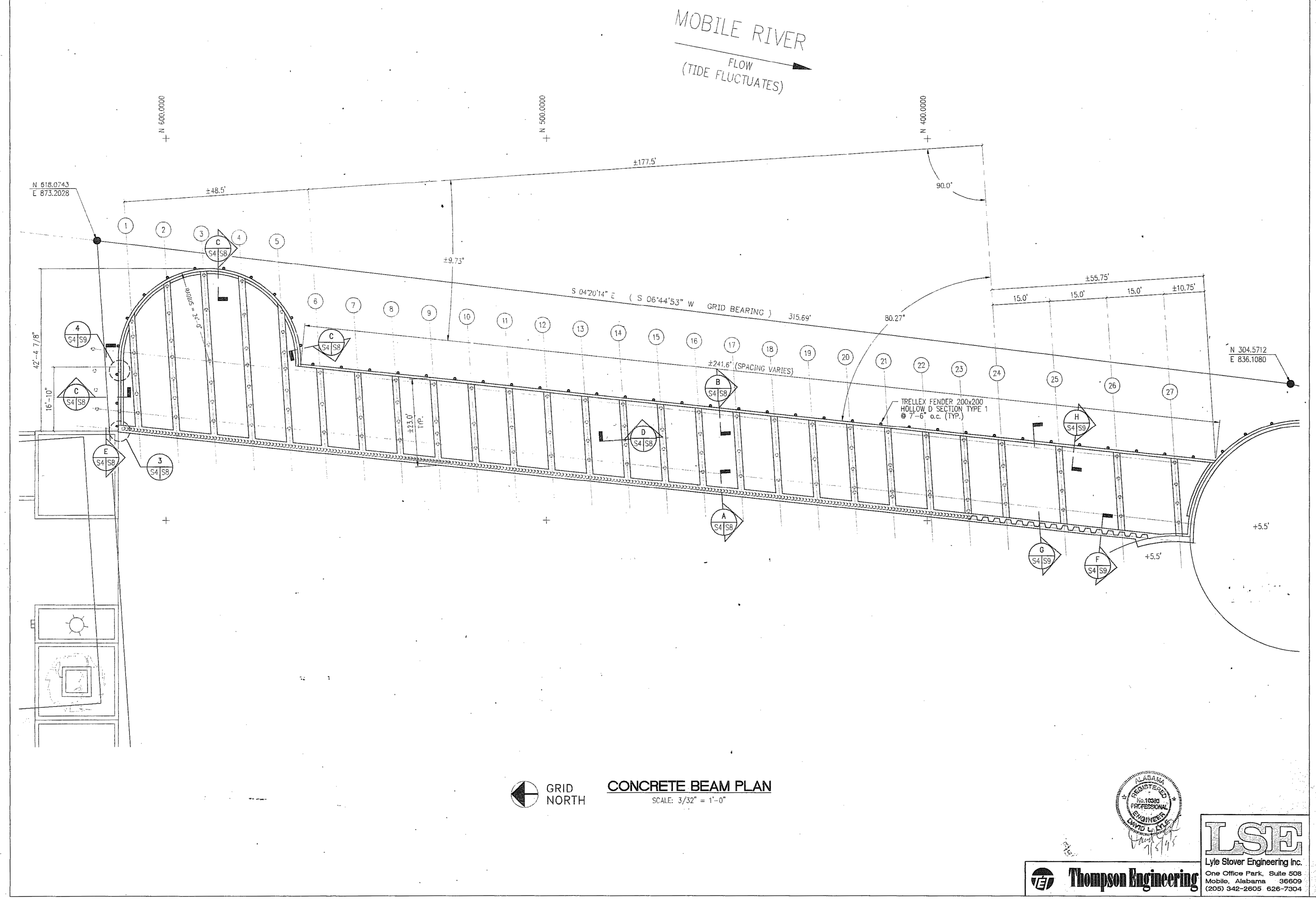
ISSUED FOR BID
 ISSUED: 2023-09-08
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1 2 3 4 5 6

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

E
D
C
B
A

A
B
C
D
E
F
G
H
I
J
K
L
M



CONCRETE BEAM PLAN
SCALE: 3/32" = 1'-0"

No.	DATE	REVISION

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**COOPER RIVERSIDE PARK
CONCRETE BEAM PLAN**
MOBILE RIVER
MOBILE, ALABAMA



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Lyle Stover Engineering Inc.
One Office Park, Suite 508
Mobile, Alabama 36609
(205) 342-2605 626-7304



70-52094-07
S-4
SHEET NUMBER



No.	DATE	REVISION

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**
**PARK WHARF AND DEADMAN
(5 OF 15)**

Designed by:	Date:	2023-09-08
Drawn by:	MAN Project No.:	10961-04
Reviewed by:	Drawing code:	
Submitted by:	Drawing Scale:	AS INDICATED
	Per Scale:	1" = 10' (0 SHEET)

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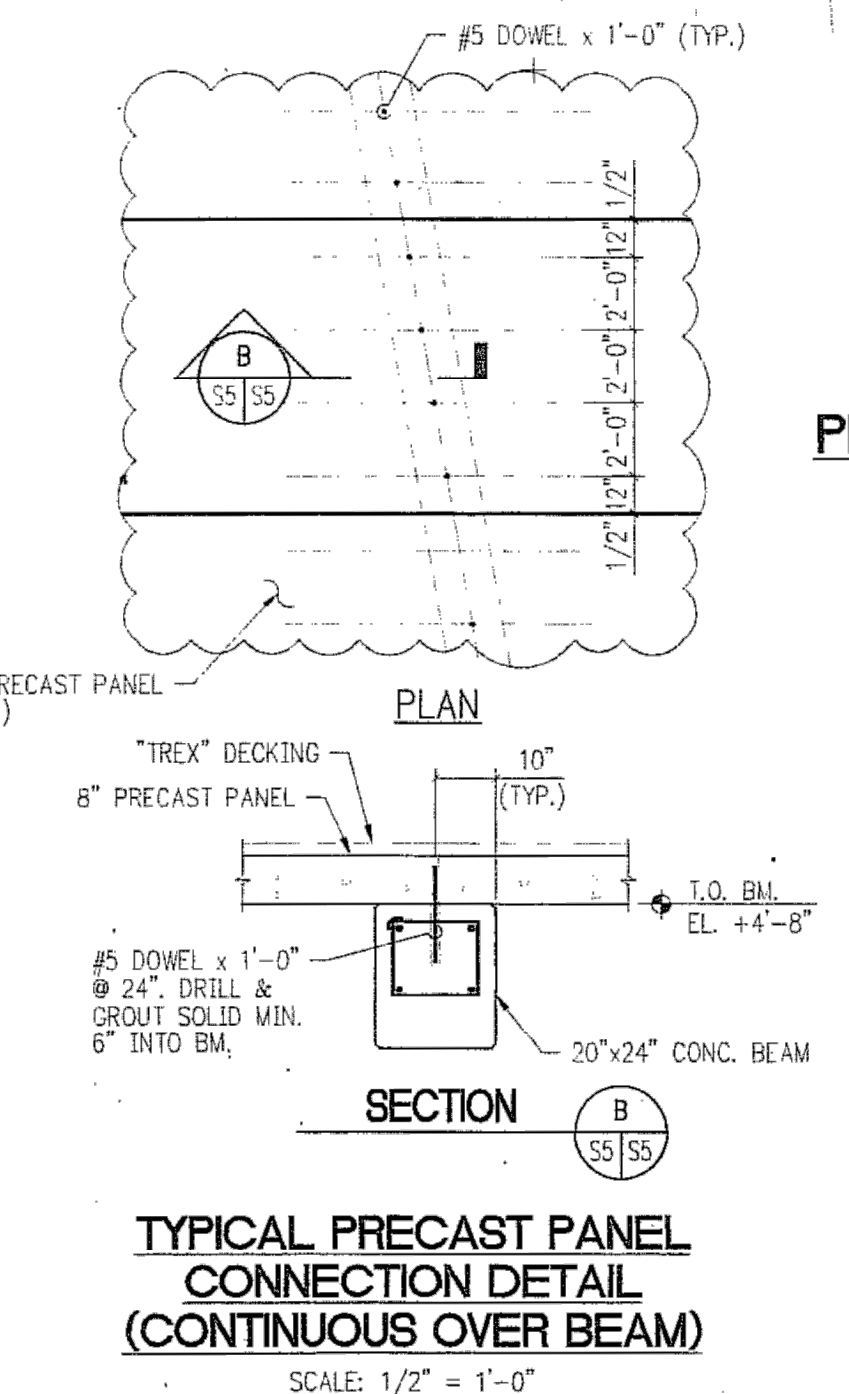
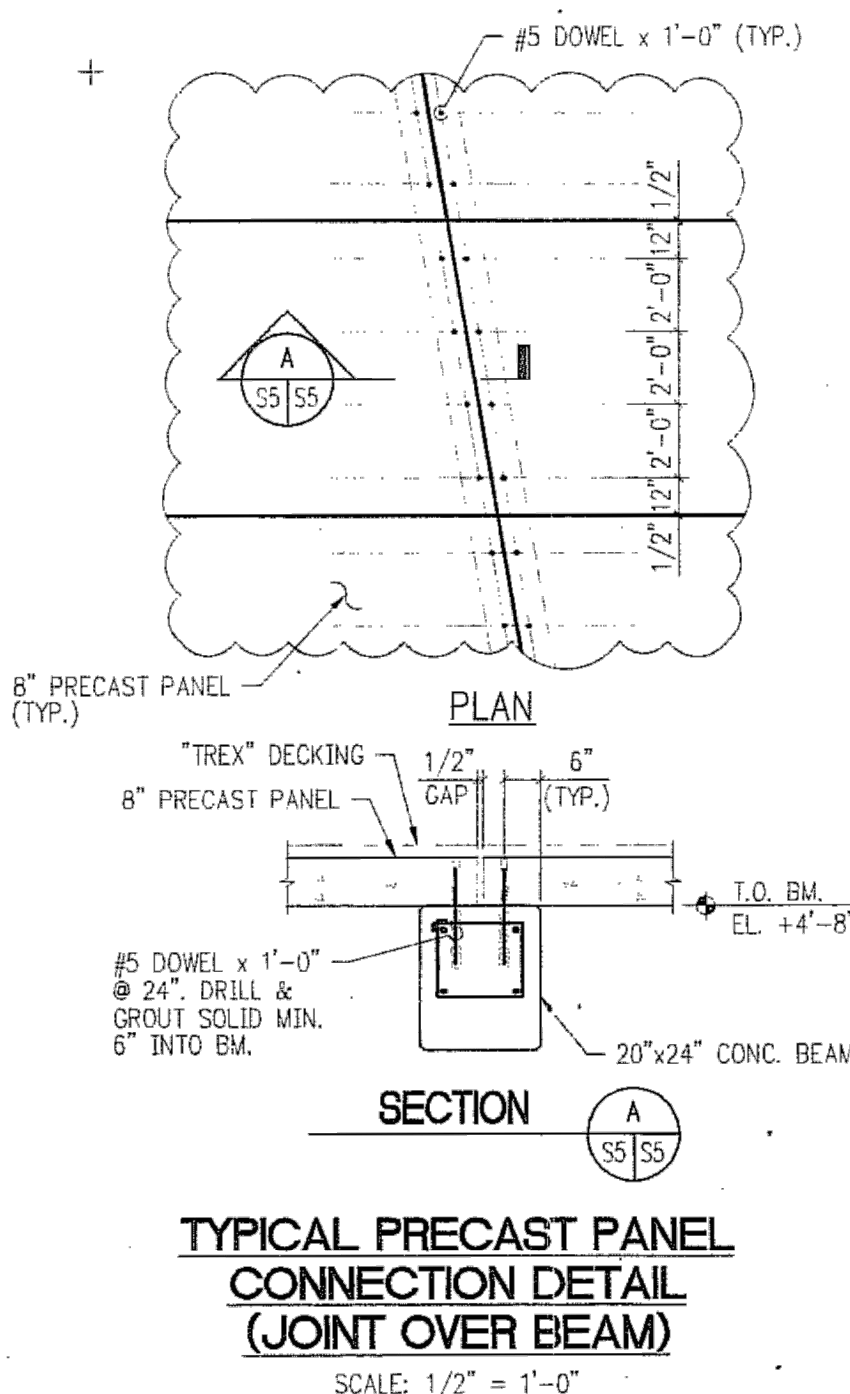
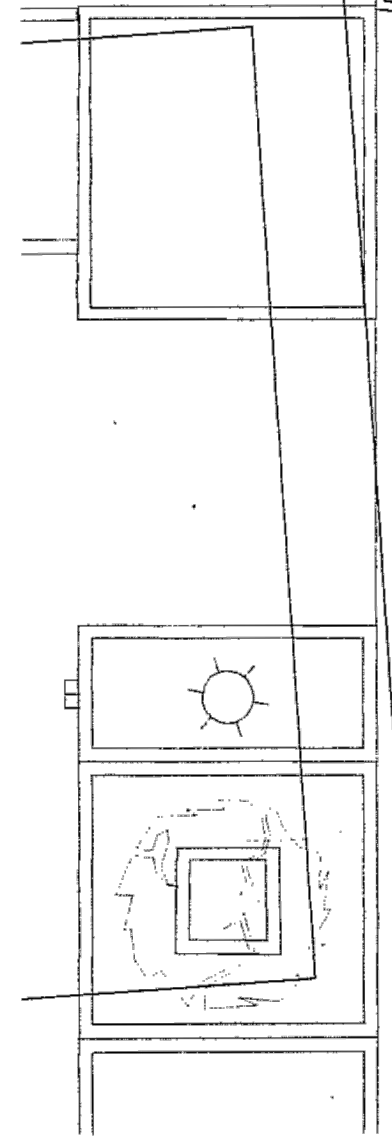
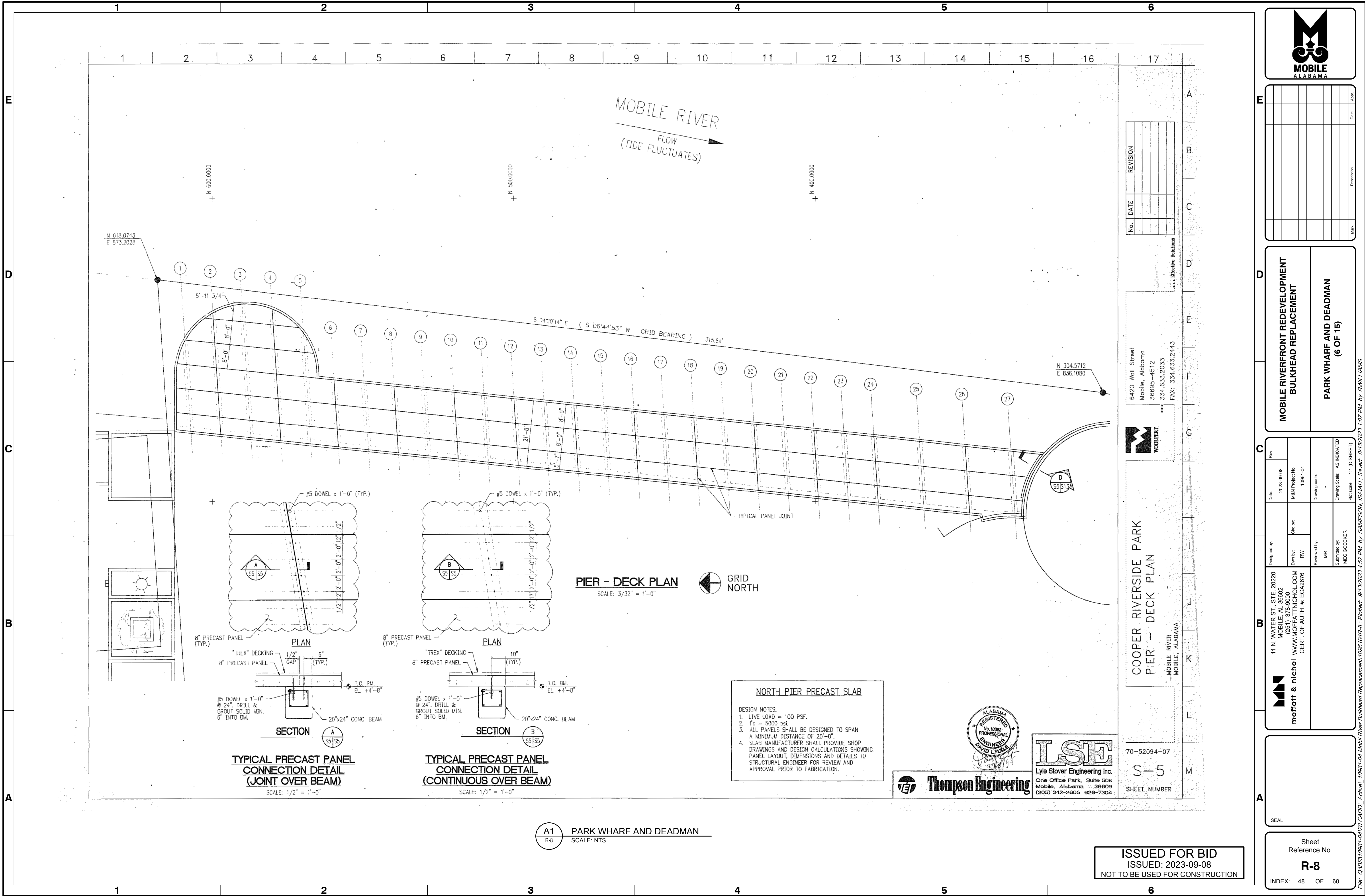
Sheet Reference No.
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A1
R-7
PARK WHARF AND DEADMAN
SCALE: NTS

ISSUED FOR BID
ISSUED: 2023-09-08
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: G:\BRI10961-04\20 CAD\DW\ActiveL 10961-04 Mobil River Bulkhead Replacement\10961-04-7 - Plotted: 9/13/2023 4:52 PM by SAMPSON, ISAIAH - Saved: 8/15/2023 12:54 PM by R WILLIAMS



PIER - DECK PLAN
SCALE: 3/32" = 1'-0"



NORTH PIER PRECAST SLAB

DESIGN NOTES:
 1. LIVE LOAD = 100 PSF.
 2. $f_c = 5000$ psi.
 3. ALL PANELS SHALL BE DESIGNED TO SPAN A MINIMUM DISTANCE OF 20'-0".
 4. SLAB MANUFACTURER SHALL PROVIDE SHOP DRAWINGS AND DESIGN CALCULATIONS SHOWING PANEL LAYOUT, DIMENSIONS AND DETAILS TO STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.



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**COOPER RIVERSIDE PARK
 PIER - DECK PLAN**
 MOBILE RIVER
 MOBILE, ALABAMA

70-52094-07
 S-5
 SHEET NUMBER



Mark	Description	Date	Appr.

**MOBILE RIVERFRONT REDEVELOPMENT
 BULKHEAD REPLACEMENT**
**PARK WHARF AND DEADMAN
 (6 OF 15)**

Designed by:	Date:	2023-09-08
Drawn by:	MAN Project No.:	10961-04
Reviewed by:	Drawing code:	
Submitted by:	MEG GOECKER	
	Drawing Scale:	AS INDICATED
	Plot Scale:	1" = 10' (0 SHEET)

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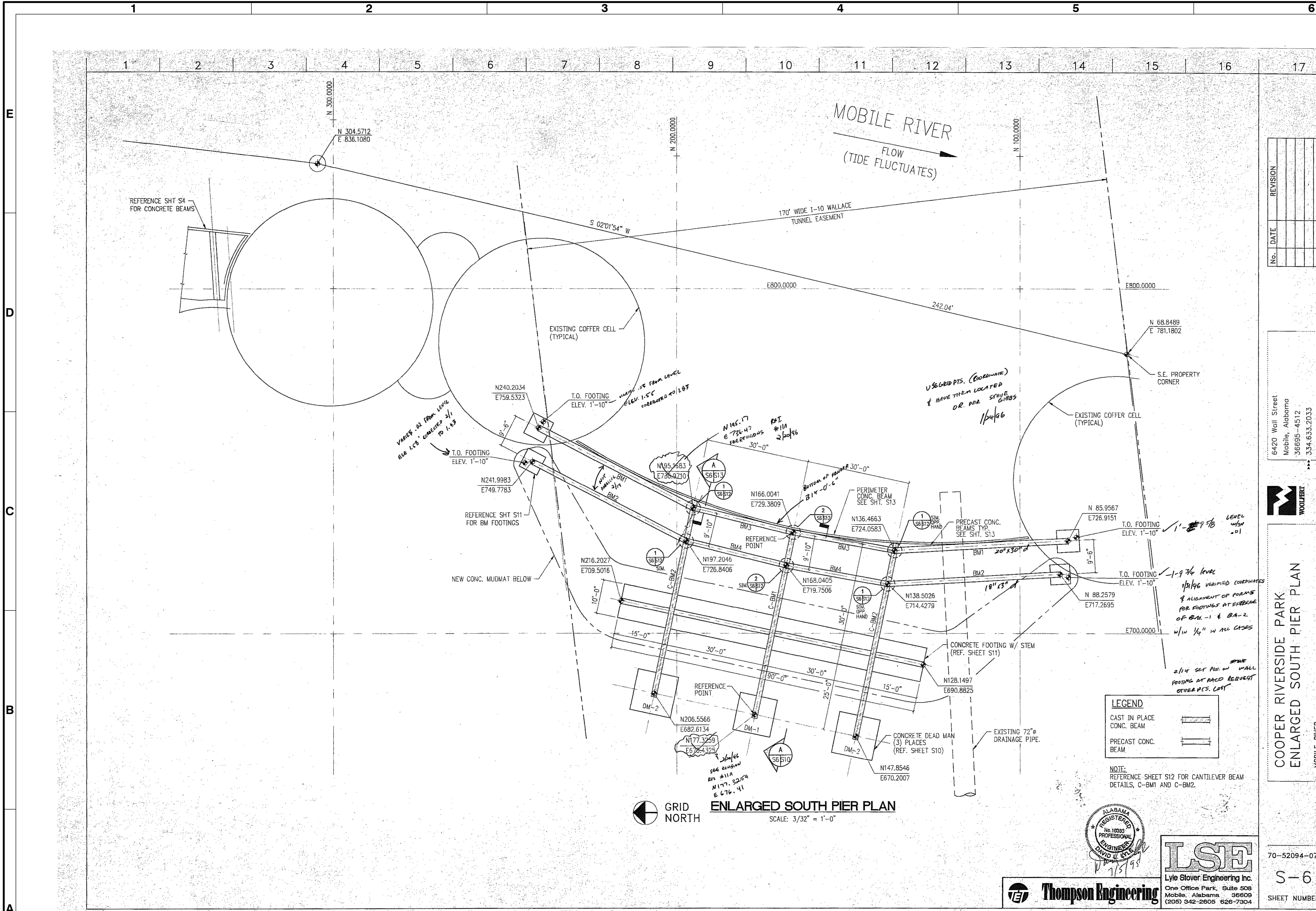
Sheet Reference No.
R-8
 INDEX: 48 OF 60

A1
 R-8
PARK WHARF AND DEADMAN
 SCALE: NTS

ISSUED FOR BID
 ISSUED: 2023-09-08
 NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

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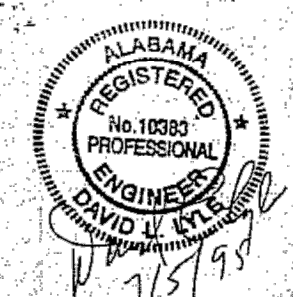


ENLARGED SOUTH PIER PLAN
SCALE: 3/32" = 1'-0"

LEGEND

CAST IN PLACE CONC. BEAM	
PRECAST CONC. BEAM	

NOTE:
REFERENCE SHEET S12 FOR CANTILEVER BEAM DETAILS, C-BM1 AND C-BM2.



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**COOPER RIVERSIDE PARK
ENLARGED SOUTH PIER PLAN**
MOBILE RIVER
MOBILE, ALABAMA

70-52094-07
S-6
SHEET NUMBER



Mark	Description	Date	Appr.

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**PARK WHARF AND DEADMAN
(7 OF 15)**

Designed by:	Date:	Rev:
Drawn by:	MAN Project No:	2023-09-08
Reviewed by:	Drawing code:	10961-04
Submitted by:	Drawing Scale:	AS INDICATED
MEG GOECKER	Per Scale:	1" = 10' (0 SHEET)

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Sheet Reference No.
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No.	DATE	REVISION

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**PARK WHARF AND DEADMAN
(8 OF 15)**

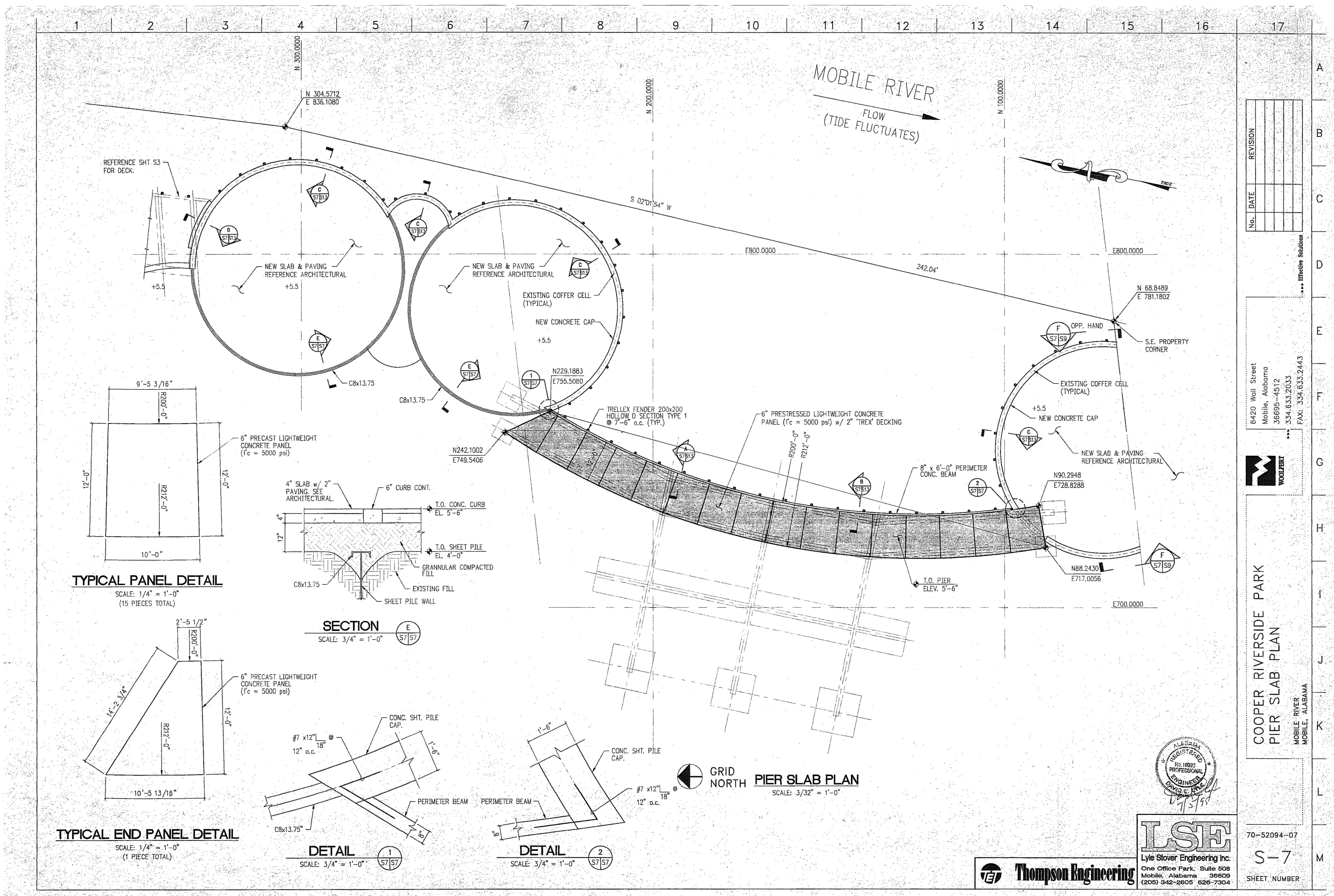
Designed by:	Date:	2023-09-08
Drawn by:	M&N Project No.:	10961-04
Reviewed by:	Drawing code:	
Submitted by:	AS INDICATED	
MEG GOECKER	Per scale:	1:1 (0 SHEET)

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70-52094-07
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Sheet Reference No.
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INDEX: 50 OF 60

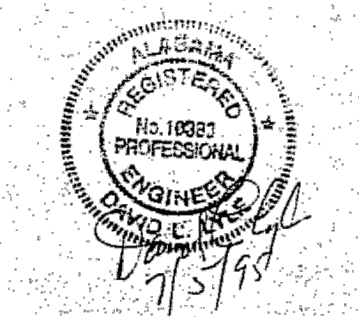


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COOPER RIVERSIDE PARK
PIER SLAB PLAN
MOBILE RIVER
MOBILE, ALABAMA



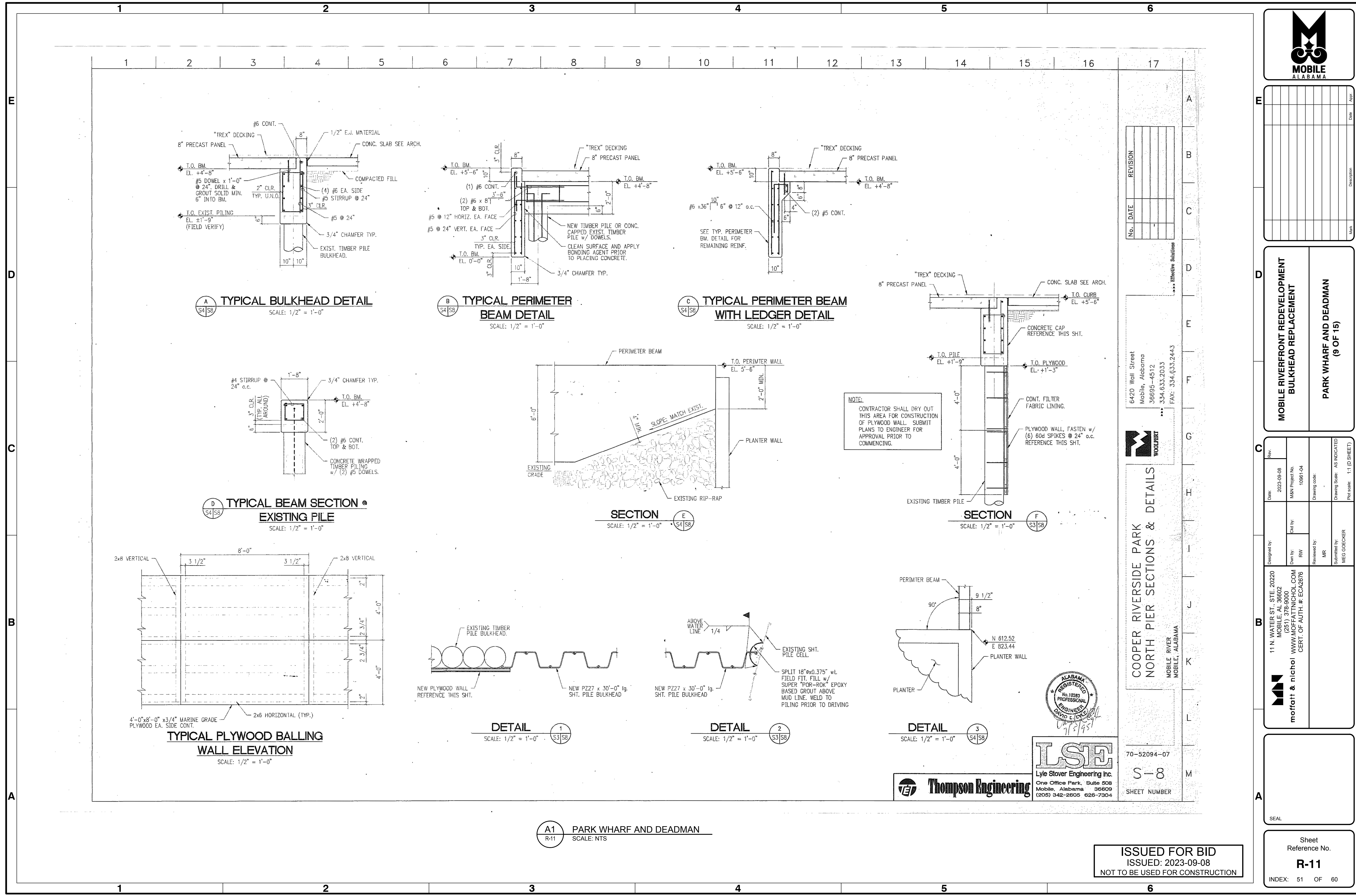
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A1 PARK WHARF AND DEADMAN
SCALE: NTS

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ISSUED: 2023-09-08
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DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



REVISION	No.	DATE	DESCRIPTION

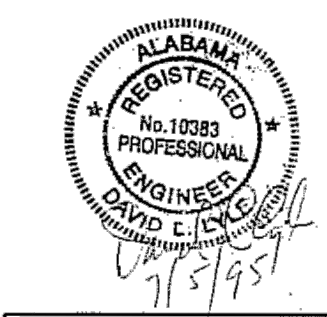
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FAX: 334.633.2443



**COOPER RIVERSIDE PARK
NORTH PIER SECTIONS & DETAILS**
MOBILE RIVER
MOBILE, ALABAMA

70-52094-07
S-8
SHEET NUMBER

NOTE:
CONTRACTOR SHALL DRY OUT THIS AREA FOR CONSTRUCTION OF PLYWOOD WALL. SUBMIT PLANS TO ENGINEER FOR APPROVAL PRIOR TO COMMENCING.



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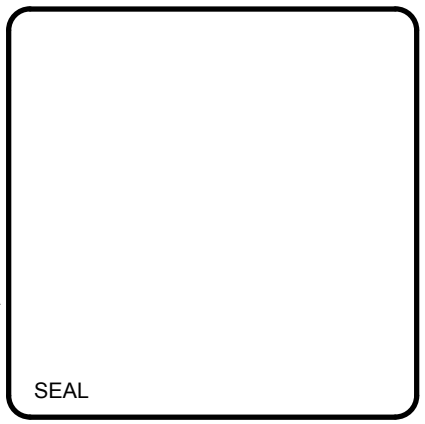


Mark	Description	Date	Appr.

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**
**PARK WHARF AND DEADMAN
(9 OF 15)**

Rev:	Date:	2023-09-08
Designed by:	Drawn by:	M&N Project No. 10961-04
Checked by:	Reviewed by:	Drawing code:
Submitted by:	Submitted by:	MEG GOECKER
Per Scale:	AS INDICATED	1" = 10' (0 SHEET)

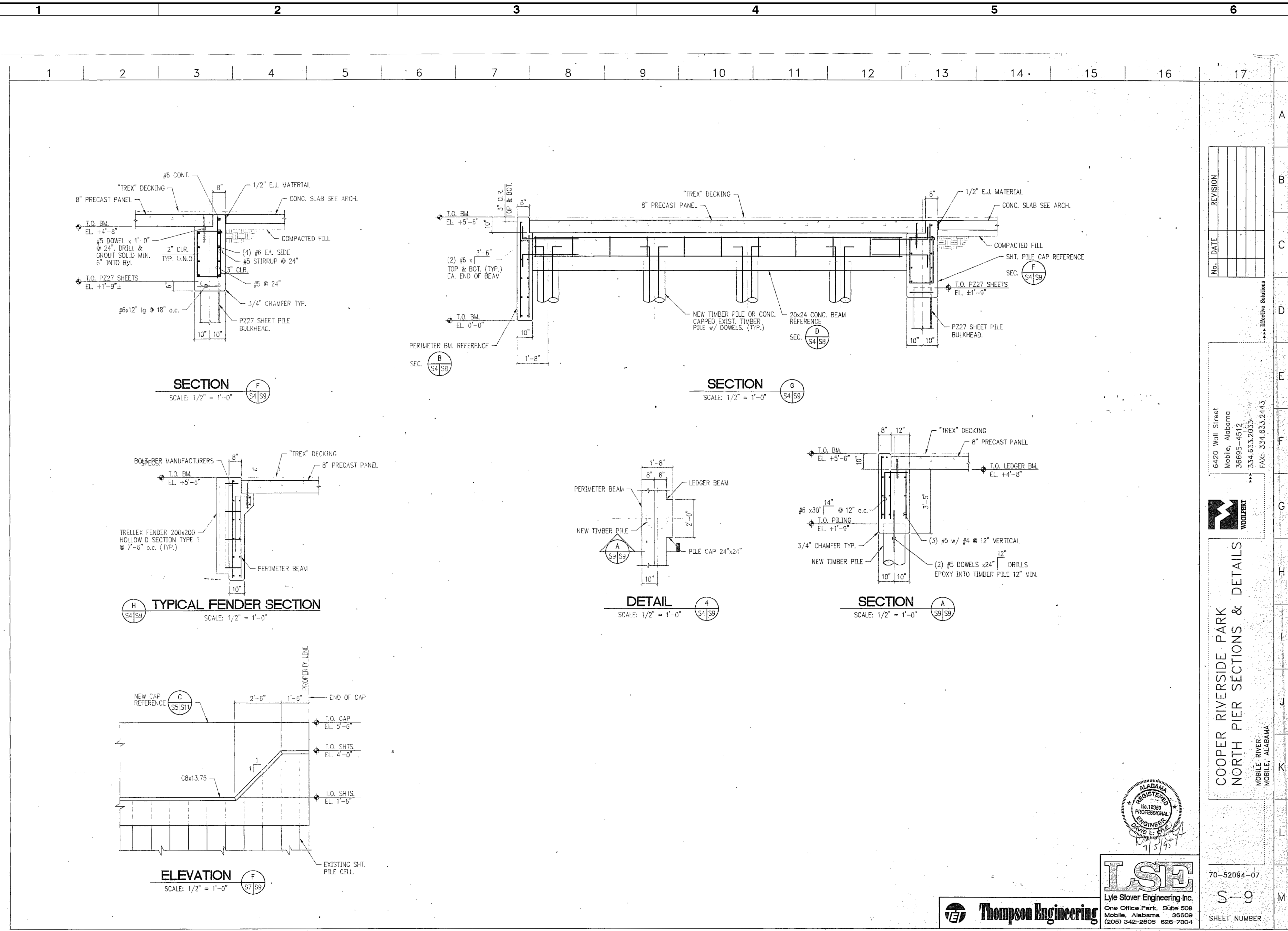
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Sheet Reference No.
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A1 PARK WHARF AND DEADMAN
SCALE: NTS

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

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

TYPICAL FENDER SECTION H
SCALE: 1/2" = 1'-0"

DETAIL 4
SCALE: 1/2" = 1'-0"

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

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

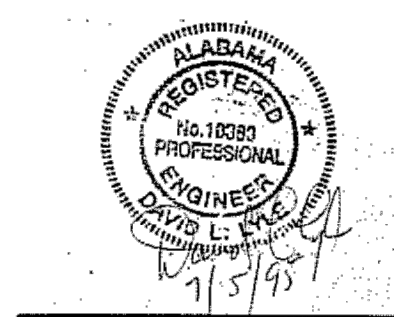
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**COOPER RIVERSIDE PARK
NORTH PIER SECTIONS & DETAILS**
MOBILE, ALABAMA

70-52094-07
S-9
SHEET NUMBER



No.	DATE	REVISION

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**
**PARK WHARF AND DEADMAN
(10 OF 15)**

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Sheet Reference No.
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INDEX: 52 OF 60

A1 PARK WHARF AND DEADMAN
SCALE: NTS

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ISSUED: 2023-09-08
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DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



No.	DATE	REVISION

**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

**PARK WHARF AND DEADMAN
(11 OF 15)**

Date: 2023-09-08 M&N Project No. 10961-04 Drawing code:	Drawing Scale: AS INDICATED Per scale: 1" = 10' (0 SHEET)
Designed by: 11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 WWW.MOFFATTNICHOL.COM CERT. OF AUTH. # ECA2676	Drawn by: RW Reviewed by: MR Submitted by: MEG GOECKER

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REGISTERED PROFESSIONAL ENGINEERS
ALABAMA

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Mobile, Alabama 36609
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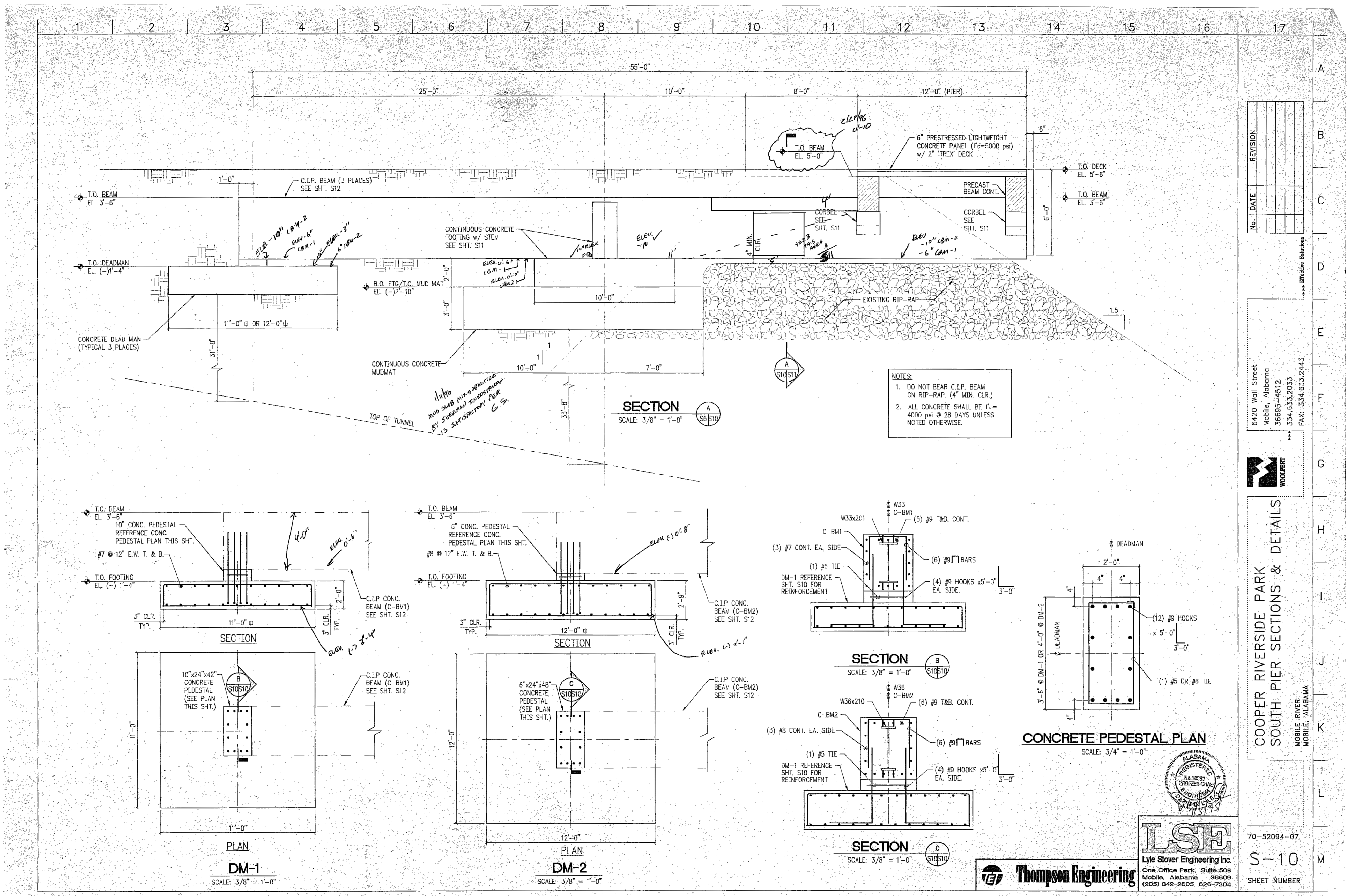
Sheet Reference No. **R-13**
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1 2 3 4 5 6

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

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A1
R-13
PARK WHARF AND DEADMAN
SCALE: NTS

ISSUED FOR BID
ISSUED: 2023-09-08
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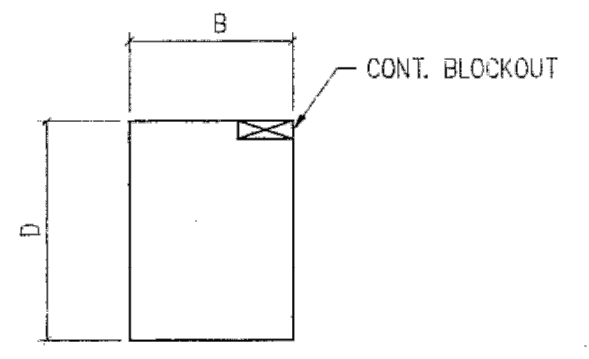
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

PRECAST PRESTRESSED BEAM DETAILS

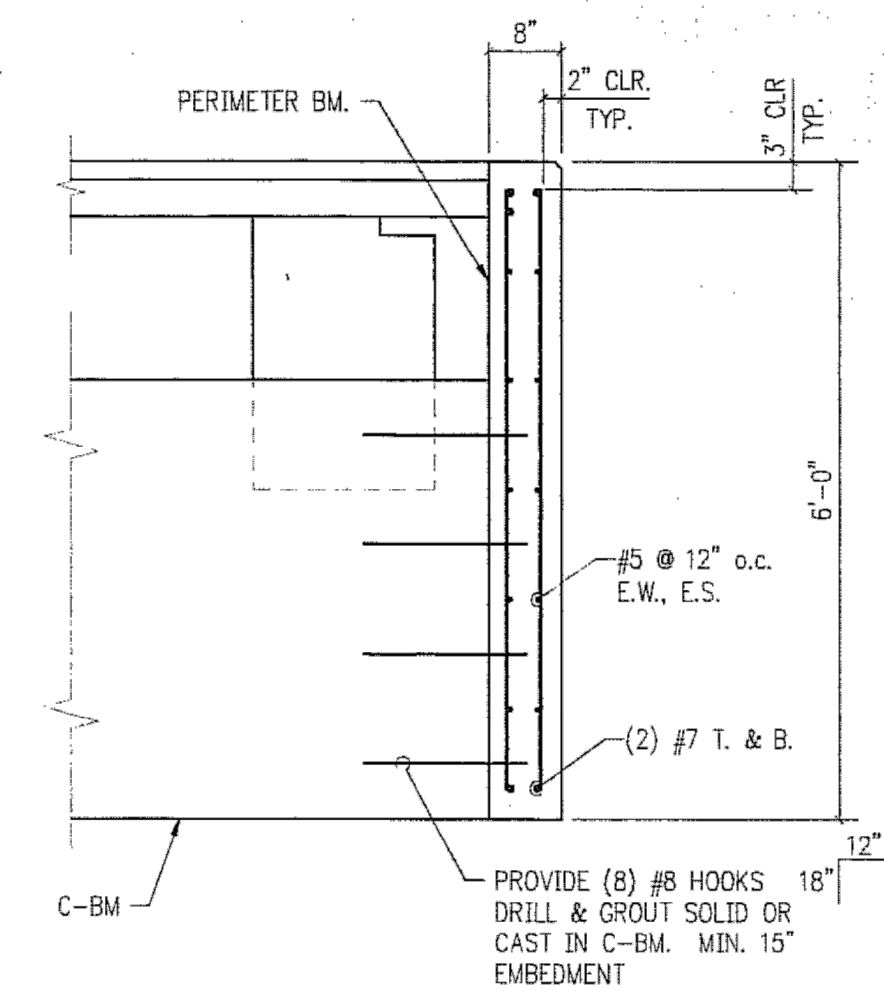
NOTE: PROVIDE 3/8" DRILLS FOR DOWELS @ SUPPORTS SEE SH1. 59



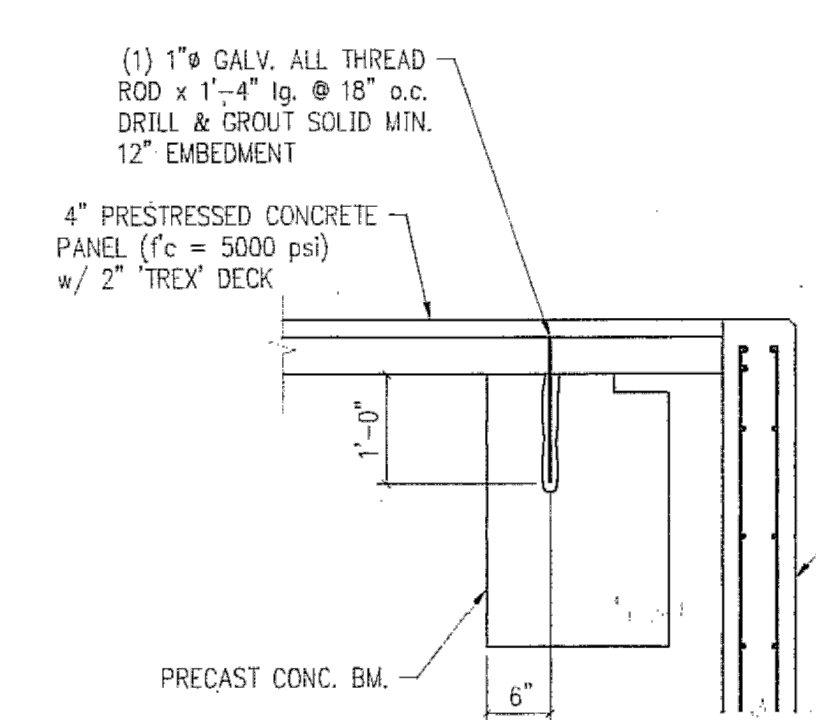
PRECAST PRESTRESSED BEAM SCHEDULE

BEAM	DESIGN SPAN LENGTH	DEAD SERVICE LOAD	LIVE SERVICE LOAD	MAX. WIDTH B	MAX. WIDTH D	BLOCKOUT SIZE & LOCATION
BM1	50.5'	846 plf	600 plf	20"	30"	6" WIDE x 2" DEEP EAST SIDE
BM2	50.5'	825 plf	600 plf	18"	30"	NONE
BM3	30.0'	846 plf	600 plf	18"	28"	6" WIDE x 2" DEEP EAST SIDE
BM4	30.0'	825 plf	600 plf	18"	24"	NONE

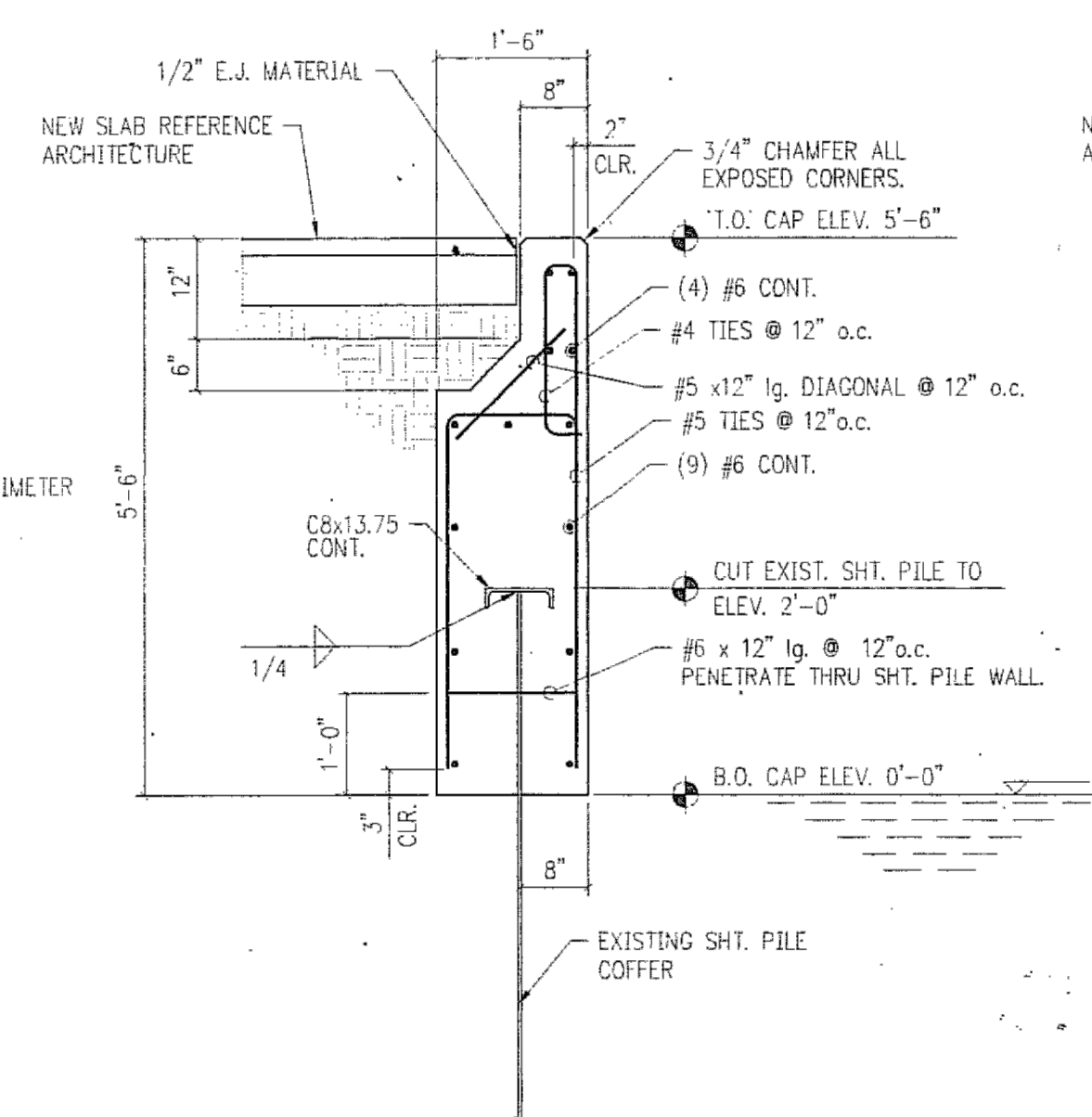
- NOTE:
- DEAD LOAD DOES NOT INCLUDE WEIGHT OF BEAM.
 - ALL BEAMS TO BE MADE LIGHTWEIGHT WITH MAX. AIR DRY UNIT WEIGHT OF 115 POUNDS PER CUBIC FOOT.
 - MAXIMUM ALLOWABLE LIVE LOAD DEFLECTION = $L/360$.
 - MAXIMUM ALLOWABLE DEAD LOAD & LIVE LOAD DEFLECTION = $L/240$.



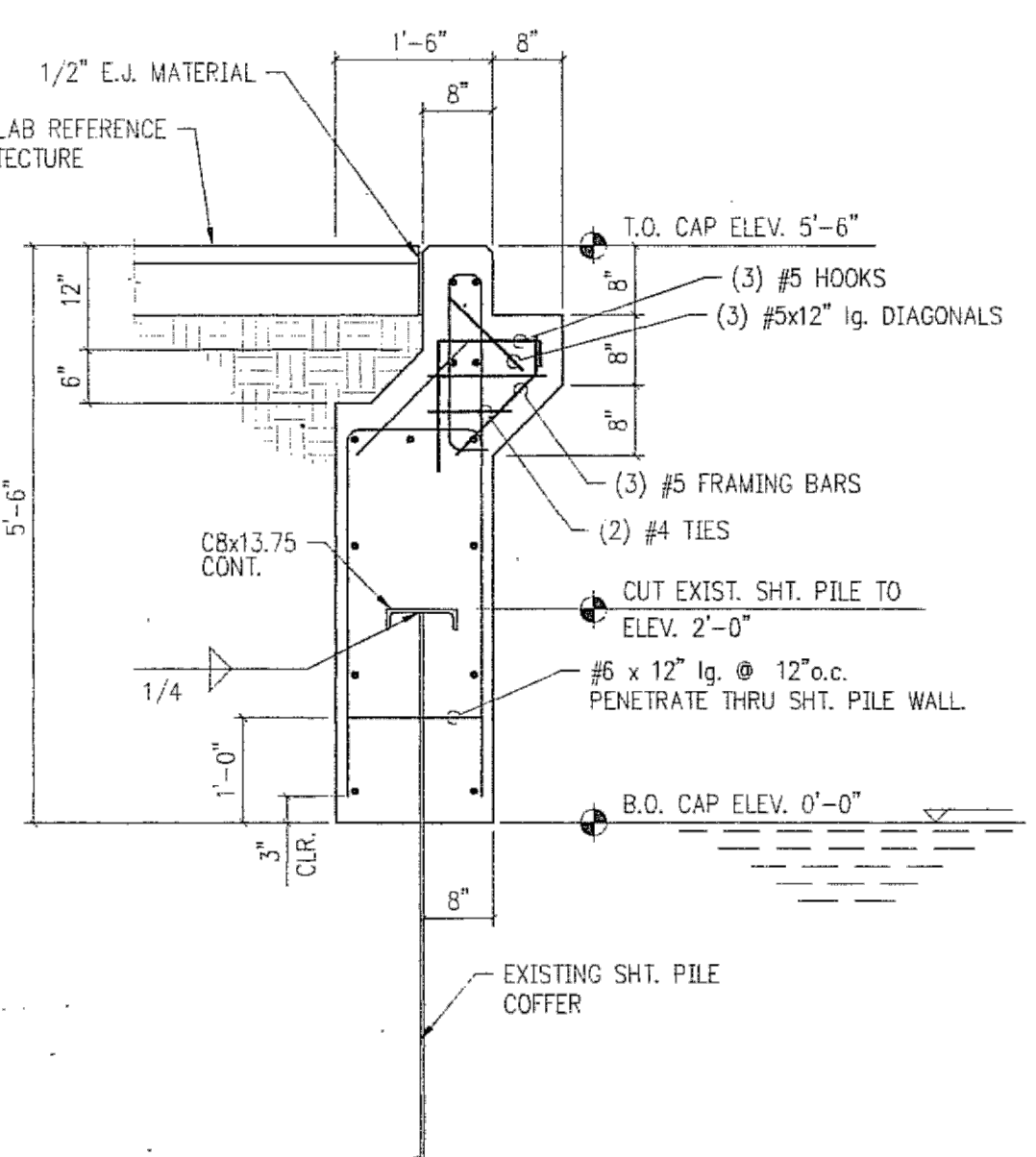
SECTION A-A
SCALE: 3/4" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"



SECTION C-C
SCALE: 3/4" = 1'-0"



SECTION D-D
SCALE: 3/4" = 1'-0"

No.	DATE	REVISION

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Mobile, Alabama
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FAX: 334.633.2443



COOPER RIVERSIDE PARK SOUTH PIER SECTIONS & DETAILS
MOBILE RIVER
MOBILE, ALABAMA



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70-52094-07
S-13
SHEET NUMBER



Mark	Description	Date	Appr.

MOBILE RIVERFRONT REDEVELOPMENT BULKHEAD REPLACEMENT
PARK WHARF AND DEADMAN (14 OF 15)

Designed by:	Date:	2023-09-08
Drawn by:	M&N Project No.:	10961-04
Reviewed by:	Drawing code:	
Submitted by:	Drawing Scale:	AS INDICATED
MEG GOECKER	Per Scale:	1:1 (0 SHEET)

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Sheet Reference No.
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A1
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PARK WHARF AND DEADMAN
SCALE: NTS

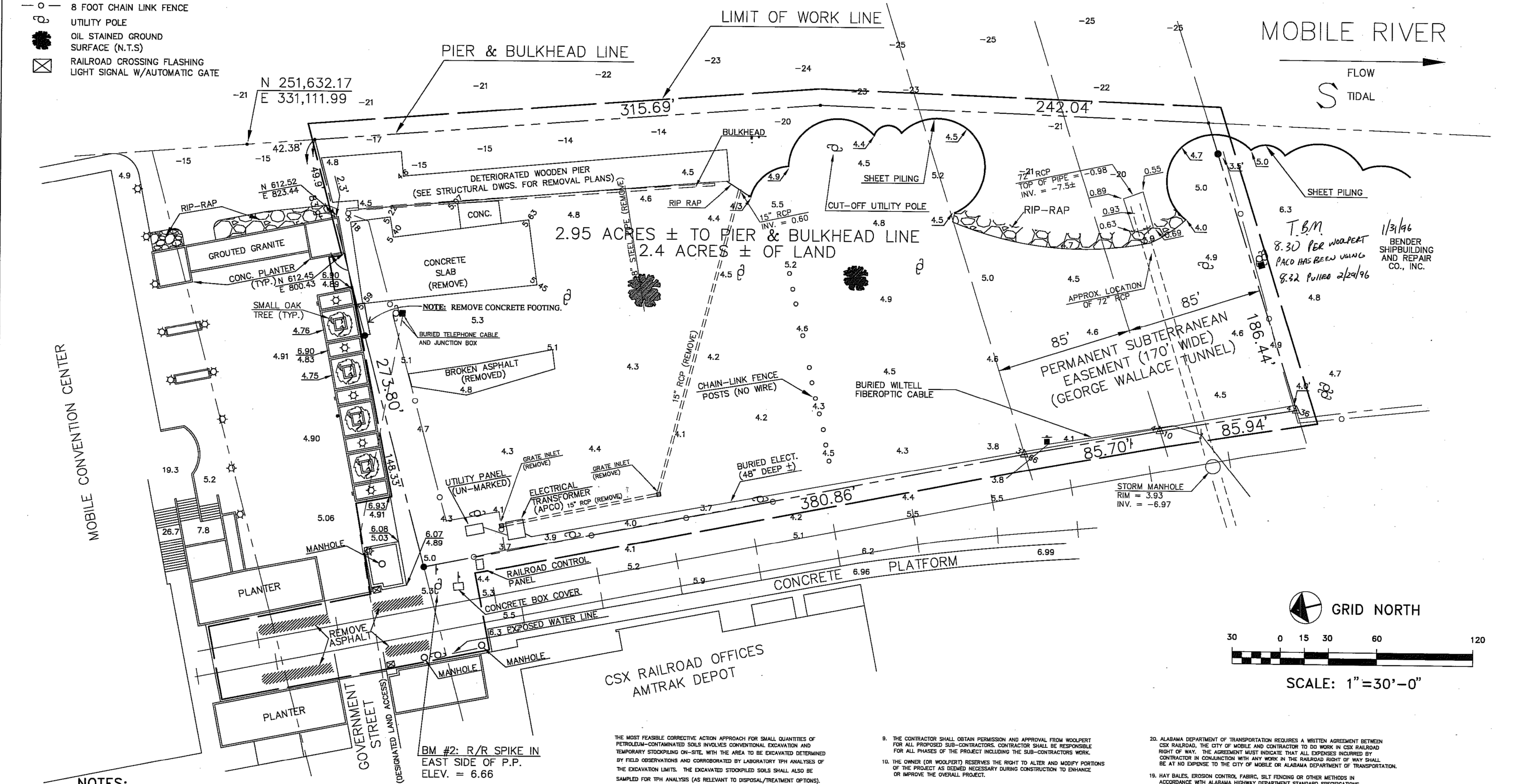
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ISSUED: 2023-09-08
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DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: Q:\BR10961-04\120 CAD\DD_Active\1_10961-04 Mobil River Bulkhead Replacement\10961-04-16 - Pinned_9/13/2023 4:53 PM by SAMPSON, ISAIAH; Saved: 8/15/2023 2:54 PM by WILLIAMS

LEGEND

- CABLE BOX
- CHAIN LINK FENCE POST
- 4.2 SPOT ELEVATION
- 8 FOOT CHAIN LINK FENCE
- UTILITY POLE
- OIL STAINED GROUND SURFACE (N.T.S)
- ⊠ RAILROAD CROSSING FLASHING LIGHT SIGNAL W/AUTOMATIC GATE

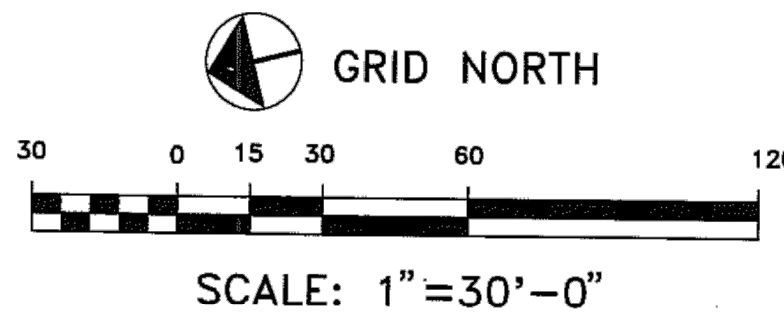


NOTES:

1. THE INFORMATION DEPICTED IS INTENDED TO PROVIDE VISUAL AID WITHIN THE CONTEXT OF A REPORT TITLED: PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR COOPER RIVERSIDE PARK, PREPARED BY THOMPSON ENGINEERING DATED JANUARY 17, 1999, AND SHOULD NOT BE USED AS A SOLE REFERENCE IN PRECISE DIMENSIONING OF FEATURES INDICATED.
2. THOMPSON ENGINEERING FINDINGS HAVE BEEN BASED PRIMARILY ON OBSERVATIONS OF SITE CONDITIONS, INTERPRETATION OF SITE HISTORY, AND SITE USAGE INFORMATION. HOWEVER, IT SHALL BE RECOGNIZED BY THE CONTRACTOR THAT NO ENVIRONMENTAL SITE ASSESSMENT CAN WHOLLY ELIMINATE UNCERTAINTY REGARDING THE POTENTIAL FOR RECOGNIZED ENVIRONMENTAL CONDITIONS IN CONNECTION WITH A PROPERTY. THEREFORE, THE LACK OF IDENTIFICATION OF SUCH CONCERNS SHOULD NOT BE CONSTRUED AS A GUARANTEED ABSENCE OF SUCH CONDITIONS.
3. BASED ON SERVICES PERFORMED BY THOMPSON ENGINEERING, BURIED DEBRIS APPEARS TO BE PRIMARILY COMPOSED OF APPARENT MARINE CONSTRUCTION MATERIALS, REMAINS OF RAILROAD CROSS-TIES AND RELATED WOODEN MATERIALS, AND COMMON CONSTRUCTION DEBRIS SUCH AS BRICK, STONE, WOOD AND CONCRETE MATERIALS. SITE DEVELOPMENT ACTIVITIES WILL REQUIRE SOME EXCAVATION AND AS SUCH GENERATE SOLID WASTE. SOME OF THE WOODEN DEBRIS APPEARED TO BE "CHLORINATED TREATED" TIMBERS. THOMPSON ENGINEERING OBTAINED INFORMATION FROM ADEM PERTAINING TO POTENTIAL REGULATORY CONCERNS ASSOCIATED WITH DISPOSAL OF TREATED WOOD AS SOLID WASTE. A REPRESENTATIVE OF THE HAZARDOUS WASTE BRANCH OF ADEM INDICATED THAT SUCH MATERIALS TYPICALLY DO NOT FAIL HAZARDOUS WASTE CHARACTERIZATION TESTING, AND THIS MAY BE HANDLED AS CONVENTIONAL SOLID WASTES. HOWEVER, ADEM "STRONGLY DISCOURAGES" DISPOSAL OF CHLORINATED-TREATED WOOD BY BURNING OR INCINERATION, WHERE EXCAVATIONS REQUIRE REMOVAL OF DEBRIS MATERIALS. THE DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE SOLID WASTE REGULATIONS. ALSO, IT ALWAYS REMAINS POSSIBLE THAT EXCAVATION COULD ENCOUNTER UNKNOWN OR SUSPECT WASTE MATERIALS WHICH MIGHT REQUIRE FURTHER INVESTIGATION AND/OR CHARACTERIZATION. THE CONTRACTOR SHALL BE REQUIRED TO RETAIN THE APPROPRIATE TESTING SERVICE WHEN DEEMED NECESSARY BY WOLPERT AT NO ADDITIONAL COST TO THE OWNER.
4. DURING THOMPSON ENGINEERING'S SITE RECONNAISSANCE ACTIVITIES, AREAS OF APPARENT GROUND STAINING WITH PETROLEUM RESIDUALS WERE OBSERVED. TYPICALLY, THESE AREAS WERE POORLY DEFINED AND WERE VISUALLY-LIMITED IN AREA. THE APPROXIMATE LOCATIONS OF TWO OF THE LARGER AND MORE DEFINED AREAS OF OIL-STAINED GROUND SURFACE ARE DEPICTED HEREIN. THE LARGER AREA OF APPARENT OIL-STAINED GROUND SURFACE WAS LOCATED NORTH-CENTRALLY ON THE SUBJECT SITE. THE AREA OF APPARENT IMPACT WAS VISUALLY ESTIMATED AS LESS THAN 200 SQUARE FEET AND IS OF RELATIVELY LIMITED EXTENT. THE CONTRACTOR SHALL PERFORM EXCAVATION, REMOVAL, AND PROPER DISPOSAL AND/OR TREATMENT OF THE SOILS WITH PETROLEUM RESIDUALS. ADEM HAS SPECIFIC GUIDELINES WHICH APPLY TO DISPOSAL OF PETROLEUM-CONTAMINATED SOILS. GENERALLY,

THE MOST FEASIBLE CORRECTIVE ACTION APPROACH FOR SMALL QUANTITIES OF PETROLEUM-CONTAMINATED SOILS INVOLVES CONVENTIONAL EXCAVATION AND TEMPORARY STOCKPILING ON-SITE, WITH THE AREA TO BE EXCAVATED DETERMINED BY FIELD OBSERVATIONS AND CORROBORATED BY LABORATORY TPH ANALYSIS OF THE EXCAVATION LIMITS. THE EXCAVATED STOCKPILED SOILS SHALL ALSO BE SAMPLED FOR TPH ANALYSIS (AS RELEVANT TO DISPOSAL/TREATMENT OPTIONS). ADDITIONAL ANALYSES OF THE STOCKPILED SOIL FOR CHARACTERIZATION OF OTHER POTENTIAL CONTAMINANTS MAY BE REQUIRED, DEPENDING ON THE DISPOSAL/TREATMENT OPTION SELECTED. DISPOSAL TREATMENT OPTIONS WHICH ARE MOST FEASIBLE USUALLY INVOLVE EITHER LANDFILL DISPOSAL OR THERMAL DESORPTION. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A TESTING ENGINEER WHEN DEEMED NECESSARY BY WOLPERT, WHO BE RESPONSIBLE FOR APPROPRIATE DISPOSAL, AT NO ADDITIONAL COST TO THE OWNER.

5. DURING SUBSURFACE INVESTIGATION OF THE SUBJECT PROPERTY, WHICH INCLUDED SOIL BORINGS AND CROSS-TRENCH EXCAVATIONS, THE WATER TABLE WAS FOUND TO BE TWO TO THREE FEET BELOW GROUND SURFACE. DUE TO CLOSE PROXIMITY OF THE GROUNDWATER SURFACE, SUBJECT SITE GROUNDWATER IS CONSIDERED SUSCEPTIBLE TO CONTAMINATION (MOEY, 1988). THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS SO AS NOT TO CONTAMINATE GROUND WATER.
6. FOR ADDITIONAL INFORMATION THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE THOMPSON ENGINEERING REPORT TITLED: "REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ASSESSMENT" FOUND IN SECTION IV, PART B OF THE PROJECT MANUAL.
7. WHERE APPLICABLE ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE OF ALABAMA HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS.
8. ALL WORK SHALL BE ACCOMPLISHED UNDER THE DIRECT SUPERVISION OF A CONTRACTOR LICENSED IN THE STATE OF ALABAMA.
9. THE CONTRACTOR SHALL OBTAIN PERMISSION AND APPROVAL FROM WOLPERT FOR ALL PROPOSED SUB-CONTRACTORS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PHASES OF THE PROJECT INCLUDING THE SUB-CONTRACTORS WORK.
10. THE OWNER (OR WOLPERT) RESERVES THE RIGHT TO ALTER AND MODIFY PORTIONS OF THE PROJECT AS DEEMED NECESSARY DURING CONSTRUCTION TO ENHANCE OR IMPROVE THE OVERALL PROJECT.
11. THE CONTRACTOR SHALL NOTIFY WOLPERT AND THE TESTING LAB A MINIMUM OF 24 HOURS IN ADVANCE OF BEGINNING ANY MAJOR PHASE OF THE PROJECT.
12. ALL CONSTRUCTION PERFORMED WITHIN THE EXISTING RIGHT-OF-WAYS SHALL BE COORDINATED WITH THE CITY OF MOBILE, AND SHALL BE IN ACCORDANCE WITH THE STATE OF ALABAMA HIGHWAY DEPARTMENT STANDARDS FOR ACCOMMODATING UTILITIES ON RIGHT-OF-WAY GUIDELINES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF PROJECT AND THE EXPENSE THEREOF.
14. ANY CONFLICT IN THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER OR WOLPERT PRIOR TO COMMENCING WORK ON THE AREA IN CONFLICT.
15. THE CONTRACTOR SHALL PROTECT ALL EXISTING PROPERTY CORNERS.
16. THE CONTRACTOR SHALL CONTRACT OR OTHERWISE HAVE AVAILABLE ADEQUATE PERSONNEL AND EQUIPMENT FOR TRAFFIC CONTROL ON STREETS AND RAILROAD CROSSINGS (PAVED OR UNPAVED) AND SHALL NOT PERFORM ANY WORK OVER RAILWAY ROW OR WITHIN THE CITY STREET RIGHT-OF-WAYS WHEN ADEQUATE PERSONNEL AND EQUIPMENT ARE NOT AVAILABLE AT THE JOB SITE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STRICT COMPLIANCE WITH THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL HOLD WOLPERT AND THE CITY OF MOBILE HARMLESS AGAINST ALL LIABILITY, CLAIM OF LIABILITY, LOSS, COST OR DAMAGE, INCLUDING DEATH AND LOSS OF SERVICES, CAUSED WHATSOEVER IN THE CONSTRUCTION WORK INVOLVED IN THIS PROJECT, AND WILL AT HIS EXPENSE, DEFEND ON BEHALF OF WOLPERT, CITY OF MOBILE, AND STATE, THEIR OFFICES AND EMPLOYEES, IN ANY SUIT BROUGHT AGAINST THEM OR ANY OF THEM, ARISING FROM ANY SUCH CAUSE.
18. THE CONTRACTOR SHALL COORDINATE WITH RAILWAY OWNERS) FOR ANY REQUIREMENTS THE RAILWAY OWNERS) MAY HAVE FOR ACCESS ACROSS ANY RAILWAY.
19. ANY DRIVEWAYS TO THE SITE OTHER THAN THE GOVERNMENT STREET ARE AT CONTRACTOR'S EXPENSE, NOT REBURSABLE BY THE OWNER.
20. ALABAMA DEPARTMENT OF TRANSPORTATION REQUIRES A WRITTEN AGREEMENT BETWEEN THE CITY OF MOBILE AND CONTRACTOR TO DO WORK IN EXISTING RAILROAD RIGHT OF WAY. THE AGREEMENT MUST INDICATE THAT ALL EXPENSES INCURRED BY CONTRACTOR IN COORDINATION WITH ANY WORK BY THE RAILROAD RIGHT OF WAY SHALL BE AT NO EXPENSE TO THE CITY OF MOBILE OR ALABAMA DEPARTMENT OF TRANSPORTATION.
21. HAY BALES, EROSION CONTROL FABRIC, SILT FENCING OR OTHER METHODS IN ACCORDANCE WITH ALABAMA HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS SHALL BE PROVIDED BY THE CONTRACTOR WHEN REQUIRED BY SECTION 665, SHALL BE PROVIDED BY THE CONTRACTOR WHEN REQUIRED BY WOLPERT TO CONTROL EROSION. THE COST FOR PROVIDING THESE ITEMS SHALL BE INCLUDED IN THE CONTRACTOR'S ESTABLISHED BID PRICE. SEE EROSION CONTROL PLAN.
22. THE CONTRACTOR SHALL CONFINE ALL WORK TO THE LIMITS OF WORK AND CLEARED AREAS AS INDICATED ON THE PLANS. ANY ADDITIONAL AREAS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE RIGHT-OF-ENTRY.
23. UNDERGROUND UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH UTILITY COMPANIES AND MAKE ALL NECESSARY ARRANGEMENTS FOR RELATIONS OR REMOVALS.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FENCING OR OTHER SECURITY MEASURES REQUIRED TO PROTECT HIS WORK OR EQUIPMENT DURING CONSTRUCTION.
25. THERE WILL BE NO ADDITIONAL COMPENSATION FOR EITHER USING THE WASTE MATERIALS AS DIRECTED OR FOR DISPOSING OF IT OFF THE PROJECT SITE. ALSO, NO ADDITIONAL COMPENSATION WILL BE MADE FOR DISPOSING OF ALL UNSUITABLE MATERIALS EXCAVATED FROM THE PROJECT SITE. ANY REQUIRED DISPOSAL AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
26. ALL DRIFT DRIVEWAYS SHALL BE PAVED A MINIMUM OF 20' FROM CENTERLINE OF ANY ADJACENT PAVEMENT, OR TO LIMITS OF OWNER'S PROPERTY.
27. ALL DAMAGED STREETS DUE TO CONTRACTOR'S EQUIPMENT SHALL BE RESURFACED TO POINT 20' FROM CENTERLINE OF PAVEMENT UNLESS OTHERWISE NOTED.
28. ALL DAMAGED CONCRETE SHALL BE REPLACED TO POINT OF REMOVAL INDICATED ON THE PLANS. PROVIDED AS DIRECTED. ANY DAMAGED CONCRETE SHALL MEET THE SAME REQUIREMENT, CRACKS AND ELEVATIONS SHOWN ARE BASED ON AEG DOCUMENT #4C OF E 1956, NOV 1929, ELEVATION = 12.97 AND ARE APPROXIMATE ONLY.



No.	DATE	REVISION

6420 Wall Street
Mobile, Alabama
36695-4512
334-633-2033
FAX: 334-633-2443

COOPER RIVERSIDE PARK
EXISTING CONDITIONS/DEMOLITION PLAN
MOBILE RIVER
MOBILE, ALABAMA

70-52094
C-1
SHEET NUMBER



No.	DATE	REVISION

MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT
PARK WHARF AND DEADMAN
(15 OF 15)

11 N. WATER ST., STE. 20220 MOBILE, AL 36602 (251) 378-9000 www.moffattnichol.com CERT. OF AUTH. # ECA2676	Designed by: Date: 2023-09-08	Drawn by: M&N Project No.: 10961-04	Reviewed by: Drawing code:	Submitted by: Drawing Scale: AS INDICATED Post scale: 1" = 10' (SHEET)
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**MOBILE RIVERFRONT REDEVELOPMENT
BULKHEAD REPLACEMENT**

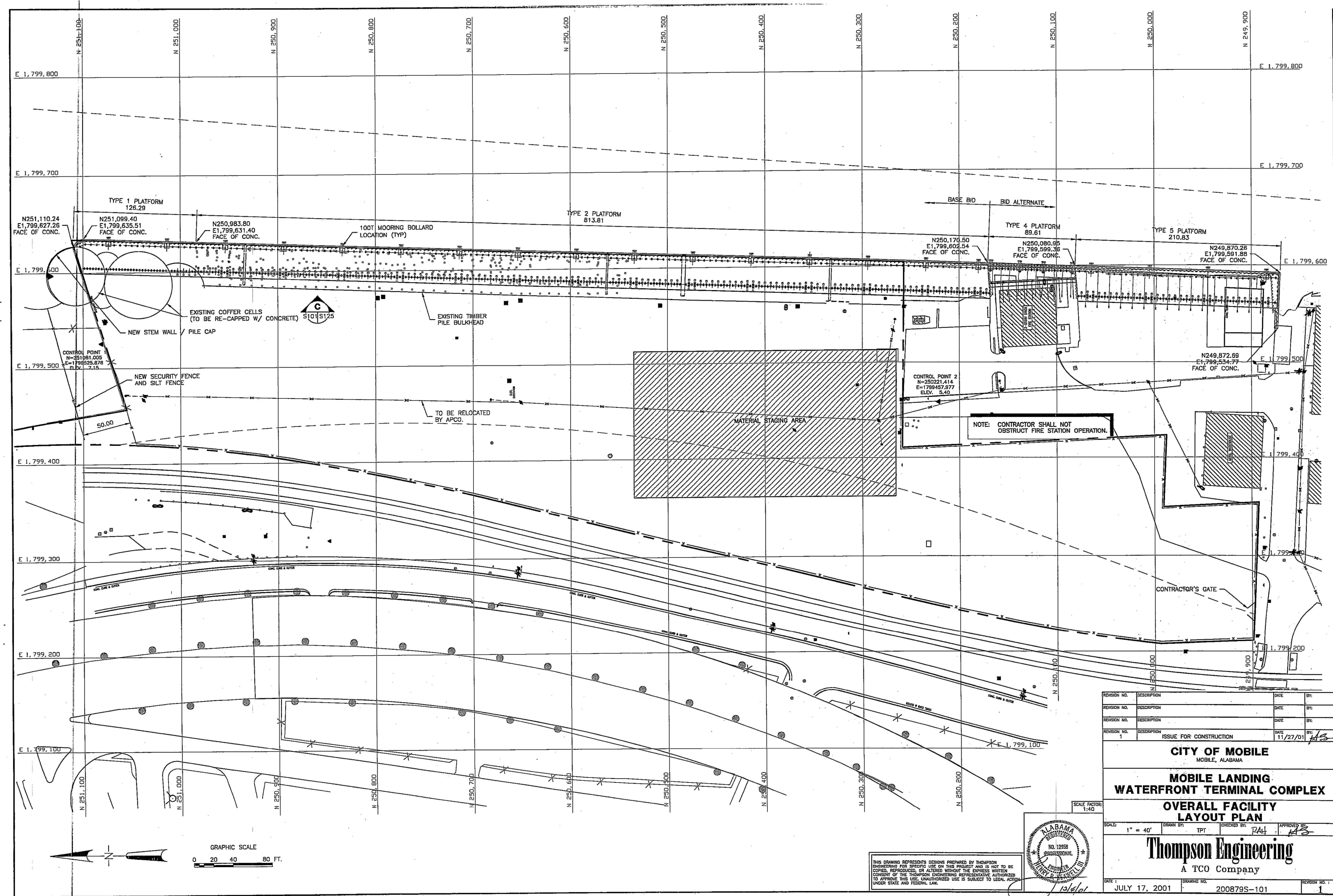
**MUSEUM WHARF AND BULKHEAD
(1 OF 3)**

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1	ISSUE FOR CONSTRUCTION	11/27/01	HS

CITY OF MOBILE
MOBILE, ALABAMA

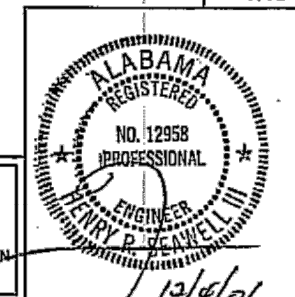
MOBILE LANDING WATERFRONT TERMINAL COMPLEX

OVERALL FACILITY LAYOUT PLAN

Thompson Engineering
A TCO Company

DATE: JULY 17, 2001 DRAWING NO.: 200879S-101 REVISION NO.: 1

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