DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVENUE
NEW ORLEANS LA 70118-3651

December 19, 2022

Mr. Lawrence B. Haase
Louisiana Coastal Protection and
Restoration Authority
150 Terrace Avenue
Baton Rouge, LA 70802

Dear Mr. Haase:

The Coastal Use Permit (CUP) P20131098 issued on November 21, 2022 by the Louisiana Department of Natural Resources for the Mid-Barataria Sediment Diversion and the U.S. Army Corps of Engineers Essential Fish Habitat Final Response provided by letter dated November 17, 2022 to the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, conclude compliance with all environmental laws required under Section 10 of the Rivers and Harbors Act of 1899 (33 USC § 403), Section 404 of the Clean Water Act (33 USC § 1344) (Section 10/404 Permit), and Section 408 permission (33 USC § 408).

Enclosed is a permit dated December 19, 2022, MVN-2012-02806-EOO, authorizing work under the Department of the Army permit program. You must sign and date the permit, signifying acceptance of the terms and conditions herein, and return the signed permit to this office.

Return To: U.S. Army Corps of Engineers, Regulatory Division, Eastern Evaluation Branch, 7400 Leake Ave, New Orleans, LA 70118-3651 or you can send back electronically. If you have any questions regarding this permit, please contact Mr. Brad LaBorde, Chief, Eastern Evaluation Branch, at (504) 862-2225.

Before signing and returning the permit to this office, carefully consider the information contained in the permit. Also, carefully consider the information contained in the attached form "Notification of Applicant Option (NAO)" which lists the options available to you in your evaluation of the enclosed permit.

If you choose to accept the terms and conditions of this permit, you must sign and return this permit with the drawings and the fee within 60 days of the date of this letter. If you fail to do so, we will assume that you no longer plan to do the work covered by the permit and your application will be removed from our files.

It is necessary that you notify the District Engineer, Attention: Eastern Evaluation Branch, in writing, prior to commencement of work and also upon its completion. The notification must include the permittee's name, as shown on the permit, and the permit number. Please note the expiration date on the permit. Should the project not be completed by that date, you may request a permit time extension. Such requests must be received before, but no sooner than six months before, the permit expiration date and must show the work completed and the reason the project was not finished within the time period granted by the permit.

A copy of Page 1 of the permit (ENG Form 1721) must be conspicuously displayed at the project site. Also, you must keep a copy of the signed permit at the project site until the work is completed.

In addition, please find enclosed Mississippi Valley Division's Approval letter pursuant to 33 USC 408 (Section 408) concerning your request to alter or occupy an existing U.S. Army Corps of Engineers Civil Works Project. Questions concerning the enclosed Approval should be directed to the point of contact provided in the Section 408 Approval letter.

Sincerely,

[redacted]

Cullen A. Jones, P.E., PMP
Colonel, U.S. Army
Commanding

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: LA Coastal Protection and Restoration Authority	File Number: MVN-2012-02806-EOO	Date: 12/19/2022
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
✔	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspxor Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This formmust be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD orprovide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you mayprovide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Brad P. LaBorde
Chief, Eastern Evaluation Branch
U.S. Army Corps of Engineers
7400 Leake Ave
New Orleans, LA 70118-3651
(504) 862-2225

If you only have questions regarding the appeal process you may also contact:

Brian Oberlies
Administrative Appeals Review Officer
Mississippi Valley Division
P.O. Box 80 (1400 Walnut Street)
Vicksburg, MS 39181-0080
(601) 634-5820 FAX: (601) 634-5816

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:

DEPARTMENT OF THE ARMY PERMIT

Permittee: LA Coastal Protection and Restoration Authority

Permit No.: MVN-2012-02806-EOO

Issuing Office: New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Clear, grade, excavate, and deposit fill for construction of the Mid-Barataria Sediment Diversion, in accordance with drawings attached in 140 pages:

pages 1-9, 11, 14, 29-33, 37, 40-51, 55-56, 58-69, 80, 85-95, 108 dated August 2022,
pages 10, 12-13, 15-28, 34-36, 38-39, 52-54, 57, 81-84 dated July 2022,
pages 70-79, 105 dated July 13, 2022,
pages 96-104, 106-107 dated June 2022,
pages 109-127, 134-135 dated November 9, 2021,
pages 128-133 dated July 20, 2022,
pages 136-139 dated March 16, 2021, and
page 140 dated March 31, 2022.

Project Location: On the right descending bank of the Mississippi River at river mile (RM) 60.7 in the vicinity of the town of Ironton, Plaquemines Parish, Louisiana. (29.662083, -89.963278).

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2032**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions: See page 4.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

[redacted] [redacted]

CULLEN A. JONES, P.E., PMP, Colonel, U.S. Army, District Commander (DATE)

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

[redacted] X [redacted]

(PERMITTEE) (DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE) (DATE)

ENG FORM 1721, Nov 86 (33 CFR 325 (Appendix A))

SPECIAL CONDITIONS: See Attached.

Special Conditions: MVN-2012-02806-EOO

7) The permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.

8) The permittee must install and maintain, at its expense, any safety lights, signs and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on its authorized facilities. Any inquiries concerning a U.S. Coast Guard Private Aids to Navigation marking determination may be directed to the Eighth Coast Guard District (dpw), Hale Boggs Federal Building, 500 Poydras St., Suite 1230, New Orleans, Louisiana 70130, at (504) 671-2330 or via email to: D8oanPATON@uscg.mil. For general information related to Private Aids to Navigation, you may visit the Eighth CG District web site at: http://www.atlanticarea.uscg.mil/district-8/district-divisions/waterways/PATON

9) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

10) If the authorized project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, the permittee is advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be prepared. Notification with a copy of this permit approval and drawings can be emailed to: D8MarineInfo@uscg.mil, or mailed to the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Suite 1230, New Orleans, Louisiana 70130. Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2118.

11) The U.S. Army Corps of Engineers, New Orleans District (CEMVN) may suspend, modify, or revoke this permit if it is in the public interest to do so.

12) The permittee agrees that details associated with the project component that will re-establish/nourish marsh (labeled as "Dredged Material Placement Area" in the permitted drawings and referred to here as the "marsh creation component") are still conceptual at the time of permit issuance and that all details regarding construction, schedule, success criteria and deadlines, monitoring and reporting and maintenance for the marsh creation component must be finalized prior to initiation of construction. Specifications to ensure sufficient and appropriate data is obtained and provided in monitoring reports must be developed. Design, planning, and monitoring requirements regarding target construction marsh elevation (TCME), target settled marsh elevation (TSME), timing/phasing for single versus multiple lifts, cell size and location, transect layout, number and location of survey plots, timing of the monitoring events, vegetative

goals, success and performance milestones, etc., must be coordinated and approved by CEMVN prior to initiation of structure construction. The permittee will submit the required details of the marsh creation component plan at least forty-five (45) days prior to any planned initiation of construction for CEMVN review and approval. In addition to the foregoing information, the marsh creation component plan will contain:

a. Detailed written specifications and work descriptions including, but not limited to, construction methods, timing, schedule and sequence; methods for establishing the desired marsh; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate; soil management and erosion control measures.

b. Performance standards. Ecologically-based standards that will be used to determine whether the project marsh component is achieving its objectives.

c. Maintenance plan. A description and schedule of maintenance requirements to ensure the continued viability of the marsh once initial construction is completed.

d. A description of parameters to be monitored in order to determine if the marsh creation component is on track to meet performance standards and if adaptive management is needed.

13) The marsh creation component plan must be approved by CEMVN prior to initiation of construction. Failure to obtain approval from CEMVN prior to initiation of construction will result in assessment of compensatory mitigation, in which case the permittee will provide compensatory mitigation to account for direct, secondary and temporal adverse impacts to jurisdictional wetlands from project construction in the form of mitigation bank credits. If determined to be required, CEMVN will inform the permittee of the appropriate number and type of credits and from which banks the permittee may purchase credits. If purchase of bank credits is required for failure to obtain CEMVN approval for the final marsh creation component plan, that credit purchase will be completed and proof of satisfaction of compensatory mitigation requirements will be provided to CEMVN prior to initiation of construction.

14) The permittee will fully offset unavoidable direct, secondary, and temporal adverse impacts to jurisdictional wetlands associated with project construction. To accomplish this, the permittee will construct the marsh creation component of the project and will ensure that it achieves all success milestones (temporal, spatial and functional) and will maintain the marsh creation/nourishment components as set forth below.

a. Construction of both activity components (diversion structure components and marsh cereation components) must occur concurrently.

b. In the event that the permittee fails to complete the marsh creation component of the project as authorized and agreed upon through the coordination effort discussed in special condition number 12 above and/or if the marsh creation component does not meet its success criteria as outlined in special condition number 15 and/or the permittee

fails to monitor or submit reports in accordance with the requirements developed pursuant to special condition number 12 above or if the marsh creation cells are not maintained for the duration identified, the permittee must provide compensatory mitigation to account for any remaining direct, secondary and temporal adverse impacts to jurisdictional wetlands from project construction in the form of compensatory mitigation banking credits. CEMVN will inform the permittee of the appropriate number and type of credits and from which banks the permittee may purchase credits.

c. Failure to complete the marsh creation component as agreed through the coordination effort discussed in special condition number 12 above or otherwise provide compensatory mitigation to account for direct, secondary and temporal adverse impacts to jurisdictional wetlands from project construction in the form of compensatory mitigation bank credits will be grounds for permit suspension and/or revocation, and restoration of the permit site.

15) The following criteria will be used to determine success of the creation component of the project:

a. Spatial completeness, regarding re-establishment of 375 acres emergent marsh and nourishment of 92 acres of existing emergent marsh as identified on drawings 60 through 64 of 140.

b. All permanent transects, elevation survey plots, and vegetative plots have been established as agreed upon through the coordination effort discussed in special condition number 12 above.

c. All monitoring reports contain the type and level of information, and have been provided in accordance with the reporting schedule as agreed upon through the coordination effort discussed in special condition number 12 above.

d. For the following specific monitoring events/intervals:

i. As-built construction survey must be submitted within 60 days after dredged material placement is completed.

1. The average of the measurements from the post-construction elevation survey in the As-Built Report is at or above the TCME and a minimum of 80% of the site is within 6 inches of the TCME.

ii. Initial Monitoring must be completed 12 to 14 months after completion of dredge material placement.

1. The average of the elevation survey measurements taken from the site are at or above the projected TSME and a minimum of 80% of the site is within 6 inches of the TSME.

iii. Interim Monitoring must be completed 3 years after completion of dredge material placement or prior to initial operation of the diversion structure, whichever is first.

1. All containment dikes have been breached or degraded and all control structures removed, and any additional work determined necessary has been completed such that hydrologic exchange between the restored and/or enhanced marsh and adjacent water bodies is unimpeded.

2. The average of the elevation survey measurements taken from the site are at or above the TSME and a minimum of 80% of the site is within 6 inches of the target settled marsh elevation.

iv. Long-Term Monitoring must be completed 5, 10, 15 and 20 years after completion of dredge material placement.

1. The average of the elevation survey measurements taken from the site are at or above the TSME and a minimum of 80% of the site is within 6 inches of the target settled marsh elevation.

2. Wetland vegetative coverage is 100% on the target settled marsh elevation. The species composition and diversity at this time are consistent with the intended community.

3. Observed use of restored and/or enhanced marsh by wildlife species typically found in natural marsh habitats of similar salinity regime.

4. Tidal fluctuations are comparable to those in adjacent tidal areas.

e. If additional dredged material needs to be deposited to meet elevation requirements, then the permittee shall base all required monitoring and reporting time-frames on that new dredge placement completion date.

f. If, prior to any sampling event, the permittee is aware that the success criteria would not be met, the permittee may submit an adaptive management plan requesting a delay in that monitoring event, documenting why the success criteria would not be met, providing details on any adaptive management that may be needed, and proposing a new schedule for conducting monitoring events.

g. The marsh re-establishment/nourishment component of the project) must be maintained to its fullest extent, both spatially and functionally, for a period of not less than 20 years from submission and approval of the required As-Built Report documenting completion of the project.

16) The permittee is reminded of its agreement to comply with all 14 (fourteen) of U.S. Fish and Wildlife Service's (FWS) recommendations in the Final "Fish and Wildlife Coordination Act Report For the Mid-Barataria Sediment Diversion Project" dated May 25, 2022.

17) The permittee is reminded of its agreement to comply with all 2 (two) of NOAA Fisheries, National Marine Fisheries Service's (NMFS) Essential Fish Habitat Conservation Recommendations.

    a. The MAM Plan should clearly identify variables and conditions to be monitored and describe the monitoring protocols. The MAM Plan should also identify specific management alternatives including, but not limited to alternate flow rate, frequency, timing and duration, and an effective decision making regime to modify project management if monitoring and subsequent analyses indicate diversion operations are not providing the desired outputs, or are causing unexpected or unwanted effects to resources of concern.

    b. The CPRA and LA TIG should continue investment in ecosystem models (e.g., EwE and CASM) and individual species models (e.g., HSI) development and refinement for their use in comparing alternatives in the MAM Plan. Recommended ecosystem model improvements to support MAM, include but are not limited to:

        i. Continued calibration

        ii. True validation with independent data

        iii. Sensitivity analyses with biotic and abiotic parameters

        iv. Refined uncertainty analyses

        v. Structural sensitivity analysis

        vi. Translation of salinity or other environmental parameters to changes in growth, mortality, reproduction, movement/distribution, production, prey availability, etc. to get at population-, or food web-level effects

18) Mechanized land clearing, filling, or vehicle tracking of jurisdictional wetland areas outside the project area for access, staging, and/or implementation of the authorized work is not allowed.

19) The permittee shall employ siltation controls around all construction sites that require earthwork (clearing, grading, dredging and/or deposition of fill material) such that eroded material is prevented from entering adjacent wetlands and/or waterways.

20) Many local governing bodies have instituted laws and/or ordinances in order to regulate dredge and/or fill activities in floodplains to assure maintenance of floodwater storage capacity and avoid disruption of drainage patterns that may affect surrounding properties. The authorized project involves dredging and/or placement of fill, therefore, the permittee must contact the local

municipal and/or parish governing body regarding potential impacts on floodplains and compliance of your proposed activities with local floodplain ordinances, regulations, or permits.

21) If rutting or disturbance to ground surface occurs in jurisdictional areas during construction, steps shall be taken to return pre-project elevations and contours immediately following that occurrence. This includes hauling in appropriate material and stabilizing damaged areas if necessary. If any hydrologic connections are created from equipment moving across shorelines or banklines, these areas must be immediately stabilized and restored to pre-project conditions by hauling in appropriate fill material, if necessary. As-built drawings of any such repair/restoration must be provided to this office no later than 90-days following completion of such work. If it is later determined that permanent impacts on wetland areas have occurred within the project footprint from such repair/restoration efforts, compensatory mitigation or on-site restoration may be required by this office.

22) If the authorized project requires any additional work that requires a Department of Army Section 10/404 permit and that is not expressly permitted herein, the permittee must apply for an amendment to this authorization.

23) The permittee must comply with all stipulations in the enclosed Programmatic Agreement for National Historic Preservation Act compliance.

24) The permittee shall, in coordination with USACE, contact FWS and Louisiana Department of Wildlife and Fisheries (LDWF) for additional consultation if: 1) the scope of location of the authorized project is changed significantly, 2) new information reveals that the action may affect listed species or designated critical habitat, 3) the action is modified in a manner that causes effects to listed species or designated critical habitat, or 4) a new species is listed or critical habitat designated. Additional consultation as a result of any of the above conditions or for changes not covered in this consultation should occur before changes are made or finalized.

25) The permittee must adhere to the following Reasonable and Prudent Measures (RPM) and their associated Terms and Conditions (TC) and Monitoring and Reporting Requirements (MRR) as laid forth in FWS Biological Opinion dated December 13, 2021:

    a. FWS RPM 1: Gate operation that would significantly increase or decrease the velocity through the structure should be implemented over several hours to allow fish sufficient time to migrate back to the river or swim away from the structure.

        i. FWS TC 1: The FWS's Louisiana Ecological Services Office (337-291-3126) should be notified of any proposed changes to the proposed action described in the biological opinion, so that re-initiation of consultation under Section 7 of the ESA can proceed as quickly and efficiently as possible

    b. FWS RPM 2: The permittee will develop a plan to be implemented for the proposed MBSD that identifies potential avoidance and minimization measures for pallid sturgeon. Live sturgeon captured in the structure, or the cofferdam area should be tagged and returned to the river.

i. FWS TC 2: Develop a plan to be implemented for the proposed MBSD that identifies potential avoidance and minimization measures for pallid sturgeon. Live sturgeon captured in the structure or the cofferdam area should be tagged and returned to the river.

c. FWS RPM 3: Dredging (cutterhead/suction) in the Mississippi River will be conducted using dredge operational parameters coordinated with FWS.

i. FWS TC 3: Should dredging (cutterhead/suction dredge) activities be necessary in the Mississippi River, the following operational parameters would be included as conditions of the permit and in the design of the project:

1. The cutterhead must remain completely buried in the bottom material during dredging operation. If pumping water through the cutterhead is necessary to dislodge material or to clean the pumps or cutterhead, etc., the pumping rate will be reduced to the lowest rate possible until the cutterhead is at mid-depth, where the pumping rate can then be increased.

2. During dredging, the pumping rates will be reduced to the slowest speed possible while the cutterhead is descending to the channel bottom.

d. FWS RPM 4: Ensure that the terms and conditions are accomplished and completed as detailed in FWS's incidental take statement (ITS) including the completion of reporting requirements.

i. FWS TC 4: Upon locating a dead, injured, or sick individual of an endangered or threatened species, the permittee must notify the Louisiana Ecological Services Office at Lafayette, Louisiana at (337) 291-3100 and the CEMVN within 48 hours. Care should be taken in handling sick or injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death or injury.

ii. FWS TC 5: A report describing the actions taken to implement the terms and conditions of this ITS shall be submitted to the Project Leader, U.S. Fish and Wildlife Service, 200 Dulles Drive, Lafayette, LA 70506, within 60 days of the completion of project construction. This report shall include the dates of work, assessment, and actions taken to address impacts on the pallid sturgeon, if they occurred.

e. FWS MRR1: Monitoring of the diversion structure for the entrainment of pallid sturgeon should be conducted, once the diversion is in operation. Reporting of monitoring results will be conducted yearly.

f. FWS MRR2: A monitoring report will be submitted to FWS after maximum flow conditions have occurred. This report should include any data sheets, maps, and the findings of the pallid sturgeon monitoring efforts.

26) The permittee must adhere to the following RPMs and their associated TCs as laid forth in NMFS Biological Opinion dated December 13, 2021:

a. NMFS RPM 1: Monitoring Brown Shrimp Fishing Effort in the Action Area: Monitor the annual trip ticket data for area 211 and reports to NMFS (as described below) the 3-year running average of brown shrimp fishing trips on an annual basis.

i. NMFS TC 1: The permittee must monitor the annual trip ticket data collected by LDWF for area 211 and provides an annual report to NMFS PRD, sent to the following address (takereport.nmfsser@noaa.gov). The federal action agencies may specify if they would also like to receive these reports from the project proponent. The reports shall reference the Consultation Identification Number for this consultation (SERO-2021-00433), and shall provide the raw trip ticket data, as well as the 3-year running average of brown shrimp fishing trips. The first report shall be provided within 1 year of the commencement of MBSD operations, using the previous 3 years' data to calculate the 3-year running average.

b. NMFS RPM 2: Monitoring Salinity Conditions in the Lower Barataria Basin: Develop (in coordination with NMFS), fund and implement a salinity monitoring program in Barataria Bay and reports the data output from that monitoring plan to NMFS on an annual basis (as described below).

i. NMFS TC 2: The permittee must develop in coordination with NMFS (SERO and SEFSC), fund, and implement a monitoring program and analytical design that will allow NMFS to determine if seasonal salinity conditions under actual project operations are within the expected range projected by the model relied upon and analyzed in this Opinion. The final monitoring design must establish measurable triggers that will indicate when salinity conditions have exceeded the levels anticipated and analyzed in the NMFS Biological Opinion dated December 13, 2021, and would thus trigger the requirement to reinitiate consultation on the proposed project. The monitoring plan must be fully developed and approved by NMFS PRD prior to the commencement of MBSD operations. Once the monitoring plan design has been developed and approved, it must be integrated into the existing Monitoring and Adaptive Management Plan for the Proposed Project. The monitoring plan shall be implemented prior to, or immediately following commencement of MBSD operations. An annual report of the data and analytical output from this monitoring shall be sent to NMFS at the following address (takereport.nmfsser@noaa.gov). The first report shall be submitted to NMFS within 1 year of the commencement of monitoring. The federal action

agencies may specify if they would also like to receive these reports from the project proponent. The reports shall reference the Consultation Identification Number for this consultation (SERO-2021-00433).

c. NMFS RPM 3: Monitor Sea Turtle Habitat Use and Abundance in the Action Area: Develop (in coordination with NMFS SEFSC), fund and implement a monitoring plan targeting sea turtle distribution, health and habitat use within the Barataria Basin.

    i. NMFS TC 3: The permittee must develop in coordination with NMFS SEFSC, fund, and implement a monitoring plan designed to study sea turtle distribution and habitat use to increase the body of knowledge and understanding of distribution, relative abundance, and seasonal and spatial sea turtle habitat use in the action area before project operations and to monitor how project operations affect distribution, relative abundance, and seasonal and spatial sea turtle habitat use of the action area. This sea turtle monitoring plan must include 3 years of field work prior to implementation of MBSD operations, 3 years of field work immediately following implementation of MBSD operations, and 1 year of data analysis. The field work must include trawl vessel surveys, satellite tagging, health assessment, and data analysis. This study would include deploying up to 240 satellite tags (target of 40 per year), some or all equipped with specialized salinity sensors, and conducting transect surveys to better understand sea turtle abundance and distribution. Turtle monitoring and tagging field work is be conducted in selected areas of the lower Barataria Basin, from the area below the proposed outfall, down to and including the passes and inlets around the barrier islands and the Gulf-side shallow water habitat adjacent to the barrier islands at the southern end of Barataria Bay. The monitoring plan must receive final approval by NMFS PRD, and shall include the following components:

        1. Field Work: Conduct 6 years of field work (three years prior to implementation of MBSD operations and 3 years after operations start) employing the following methods:

            a. Transect surveys – Direct capture of sea turtles using otter trawl and skimmer trawl vessels using standardized seasonal 30-minute transects during spring, summer, and autumn of each year to obtain a statistically appropriate sample size in the action area. Turtles will be captured using skimmer trawls in shallow areas (less than 10 feet), focusing on salt marsh habitat where we expect to find smaller juvenile sea turtles, and larger otter trawl vessels using paired otter trawls in depths greater than 10 feet. Appropriate scientific research and collection permits will be required for these activities.

b. Health assessments – turtles captured in trawl surveys will be measured, weighed, tagged with flipper and passive integrated transponder (PIT) tags, tissue sampled (for genetic analysis and stable isotopes), and blood sampled (for blood chemistry analyses). Environmental data (salinity, water temperature, etc.) will be collected in conjunction with sea turtle capture efforts. Turtles will be released at or near the capture site.

c. Satellite Tagging – up to 240 turtles (target of 40 per year, with selection based on appropriate size and condition), captured in the trawl surveys will be satellite tagged to monitor location, dive behavior, salinity, and temperature. Salinity sensor-equipped satellite tags will be used on a portion of these turtles to better understand habitat use patterns relative to salinity regimes and if shifts in salinity affect behavior.

d. Annual and seasonal estimates of relative abundance will be generated from the trawl data at the conclusion of each year's sampling.

2. Analysis and Modeling: Conduct 1 year of data analysis, including the following:

   a. Estimate habitat use by overlaying our satellite tracking data on available GIS benthic habitat layers, as well as salinity information collected by the satellite tags. Additionally, data from any current in-water environmental monitoring stations could be used to provide additional supplemental environmental data. In addition, we plan to coordinate with other research groups, such as benthic researchers studying lower trophic level organisms to provide abundance and species composition data for key prey organisms to further understand habitat use and sea turtle distribution.

   b. Complete development of a predictive model for sea turtle species habitat use and distribution in relation to physical and biological habitat characteristics and salinity level parameters. The model can be used to assess the overlap of sea turtle distribution with known and emerging threats to prioritize the type and location of restoration activities and to evaluate their effectiveness.

3. Adaptive Management of Monitoring Activities: Due to the scarcity of information on sea turtle activity and use of the study area, there is

uncertainty regarding the expected results and efficacy of the monitoring of sea turtle habitat use and abundance in the action area required herein (number of turtles that may be captured, number that may be suitable for tagging, etc.). There are also many extrinsic factors that may impact monitoring efficacy and results, such as hurricanes and annual hydrologic conditions affecting the Basin. Due to the uncertainties, it may be necessary to adjust monitoring targets and methodologies (gear, locations, effort, etc.) during the study period to ensure the monitoring efforts are optimized to effectively discern the effects of the project on sea turtles. An adaptive management team consisting of up to three state (CPRA) and three federal (NMFS SEFSC, NMFS PRD, and NOAA RC) representatives (along with any technical experts invited by these entities) will meet at least once a year to review progress and results of the monitoring activities. The USACE may also participate on this team if they wish. This team may make recommendations on any necessary changes to the monitoring and tagging activities, locations, timing, or level of effort, based on current information and monitoring/tagging results to date. Any proposed changes to the sea turtle monitoring activities must be approved by NMFS PRD before implementation of those changes.

4. Project Outputs/Deliverables: Data collected will be used to analyze habitat use in relation to physical and biological habitat characteristics and salinity level parameters. Outputs include:

    a. satellite tagging datasets;
    b. transect survey data;
    c. health assessment data;
    d. modeling outputs; and
    e. technical report synthesizing data.

27) The Permittee must comply with the “Standard Manatee Conditions for In-Water Activities.”

a. All work, equipment, and vessel operation should cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once the manatee has left the buffer zone on its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in-water work can resume under careful observation for manatee(s).

b. If a manatee(s) is sighted in or near the project area, all vessels associated with the project should operate at “no wake/idle” speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels should follow routes of deep water whenever possible.

c. If used, siltation or turbidity barriers should be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.

d. Temporary signs concerning manatees should be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities should display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8½ " X 11" reading language similar to the following: “CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT.” A second temporary sign measuring 8½ " X 11” should be posted at a location prominently visible to all personnel engaged in water-related activities and should read language similar to the following: “CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION.”

e. Collisions with, injury to, or sightings of manatees should be immediately reported to the Service’s Louisiana Ecological Services Office (337-291-3100) and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225-765-2821). Please provide the nature of the call (that is, report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
COASTAL ENGINEERING DIVISION

MID-BARATARIA SEDIMENT DIVERSION (MBSD)

CPRA PROJECT NO: BA-0153
PLAQUEMINES PARISH, LOUISIANA
AUGUST 2022

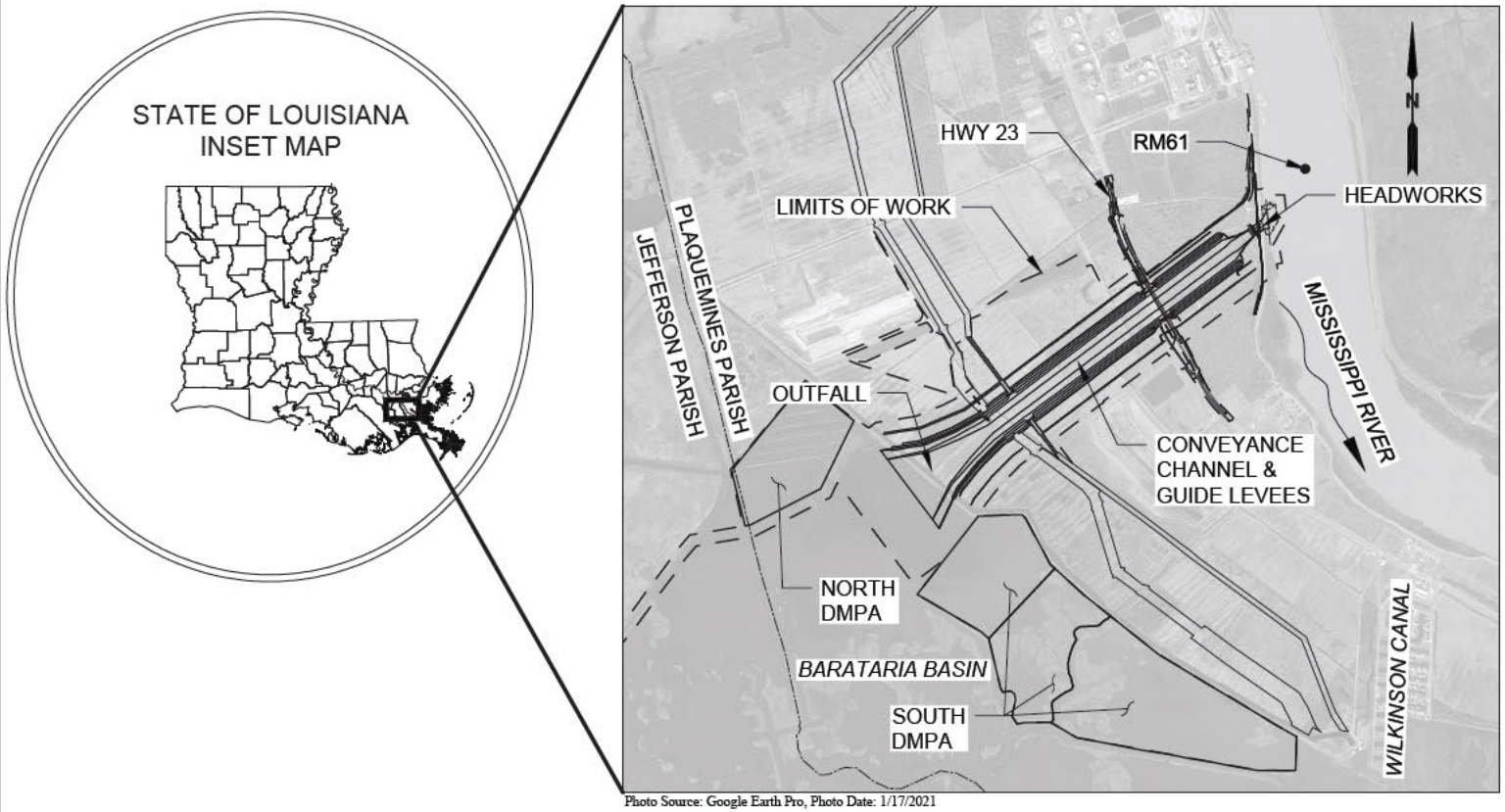

Photo Source: Google Earth Pro, Photo Date: 1/17/2021

PROJECT LOCATION
SCALE: NTS

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CPRA

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ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

COVER SHEET

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL

DRAWING FIGURE 1 | SHEET 1 OF 1

FIGURE	SHEET	TITLE
1	1	COVER SHEET
2	1	PERMANENT WORKS DRAWING INDEX
2	2	TEMPORARY WORKS DRAWING INDEX
2	3	GENERAL NOTES AND LEGEND
3	1	DRAWING KEY MAP
3	2	DRAWING KEY MAP
3	3	DRAWING KEY MAP
4	1	PROJECT VICINITY MAP
5	1	LIMITS OF WORK
6	1	DIVERSION PROFILE
7	1	DEMOLITION KEY PLAN
7	2	EXISTING SITE & DEMOLITION PLAN
7	3	EXISTING SITE & DEMOLITION PLAN
7	4	EXISTING SITE & DEMOLITION PLAN
7	5	DEMOLITION TABLE
8	1	HEADWORKS PLAN
8	2	HEADWORKS U-FRAME SECTION A
8	3	HEADWORKS U-FRAME SECTION B
9	1	DIVERSION GATE SECTION
9	2	DIVERSION GATE SECTION
10	1	NORTH TRANSITION T-WALL PROFILE
10	2	SOUTH TRANSITION T-WALL PROFILE
10	3	HEADWORKS TRANSITION T-WALL SECTION
10	4	HEADWORKS TRANSITION T-WALL SECTION
10	5	HEADWORKS TRANSITION T-WALL SECTION
11	1	MRL T-WALL PROFILE
11	2	MRL T-WALL TYPICAL SECTION A
11	3	MRL T-WALL TYPICAL SECTION B
12	1	NOGC RR BRIDGE PLAN
12	2	NOGC RR BRIDGE PROFILE
12	3	NOGC RR BRIDGE SECTION A
12	4	TEMP NOGC RR SPUR PLAN
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13	1	HEADWORKS RIVER PROTECTION STRUCTURES PLAN
13	2	HEADWORKS RIVER PROTECTION STRUCTURES SECTIONS
13	3	HEADWORKS RIVER PROTECTION STRUCTURES SECTIONS
14	1	CONVEYANCE CHANNEL PLAN
14	2	CONVEYANCE CHANNEL SECTION
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15	1	LA-23 BRIDGE PLAN & PROFILE
15	2	LA-23 PLAN
15	3	LA-23 BRIDGE SECTION
16	1	MBSD OVERALL SITE DRAINAGE PLAN
16	2	EXISTING SITE DRAINAGE PLAN
17	1	INVERTED DRAINAGE SIPHON SITE PLAN
17	2	INVERTED DRAINAGE SIPHON PROFILE
17	3	INVERTED DRAINAGE SIPHON INTAKE SECTION
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18	1	NOV-NF-W-05A.1 DRAINAGE STRUCTURE PLAN
18	2	NOV-NF-W-05A.1 DRAINAGE STRUCTURE PROFILE
19	1	OUTFALL TRANSITION FEATURE PLAN
19	2	OUTFALL TRANSITION FEATURE SECTION
19	3	OUTFALL TRANSITION FEATURE SECTION
19	4	OUTFALL TRANSITION FEATURE SECTION
20	1	RESERVATION AREA SITE PLAN
21	1	MISSISSIPPI RIVER BOAT LAUNCH PLAN
21	2	MISSISSIPPI RIVER BOAT LAUNCH PROFILE
22	1	BASIN BOAT LAUNCH PLAN
22	2	BASIN BOAT LAUNCH PROFILE
23	-	OMIT
24	1	DMPA NORTH PLAN
24	2	DMPA SOUTH PLAN
24	3	DMPA SECTION A
24	4	DMPA SECTION B & C
24	5	DMPA SECTION D
25	1	STOCKPILE AREA PLAN
25	2	STOCKPILE AREA SECTIONS E & F
25	3	BORROW PIT SECTIONS G & H
26	1	POWER TRANSMISSION RELOCATION PLAN
27	1	POWER DISTRIBUTION LINES RELOCATION PLAN
28	1	PL SEG - NAIRN TO NORCO 20 IN.
28	2	PL SEG - NAIRN TO NORCO 20 IN.
28	3	PL SEG - NAIRN TO NORCO 20 IN.
28	4	PL SEG - NAIRN TO NORCO 20 IN.
28	5	PL SEG - NAIRN TO NORCO 20 IN.
28	6	PL SEG - NAIRN TO NORCO 20 IN.
28	7	PL SEG - NAIRN TO NORCO 20 IN.
28	8	PL SEG - NAIRN TO NORCO 20 IN.
28	9	PL SEG - NAIRN TO NORCO 20 IN.
28	10	PL SEG - NAIRN TO NORCO 20 IN.

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
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MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

PERMANENT WORKS DRAWING INDEX

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 2 | SHEET 1 OF 3

TEMPORARY WORKS		
FIGURE	SHEET	TITLE
101	1	OVERALL SITE PLAN
102	1	SITE PLAN
102	2	SITE PLAN
102	3	SITE PLAN
102	4	SITE PLAN
103	1	DEWATERING PLAN
103	2	DEWATERING WELL DETAIL
103	3	DEWATERING WELL DETAIL
103	4	DEWATERING WELL DETAIL
103	5	DEWATERING WELL DETAIL
103	6	DEWATERING WELL DETAIL
103	7	DEWATERING WELL DETAIL
103	8	DEWATERING WELL DETAIL
103	9	DEWATERING WELL DETAIL
103	10	DEWATERING WELL DETAIL
103	11	DEWATERING WELL DETAIL
104	1	SECTION SITE PLAN
104	2	SECTION A-A
104	3	SECTION B-B
104	4	SECTION C-C COFFERRDAM TIE INTO MRL
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104	6	SECTION STA 32+00
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105	1	SIPHON EXCAVATION PLAN
106	1	DRAINAGE STRUCTURE CONSTRUCTION SEQUENCE PLAN
107	1	HIGHWAY 23 SITE PLAN
107	2	HIGHWAY 23 DETAIL
108	1	DETAIL SHEET
109	1	TYPICAL INTERIM LEVEE SECTION
P1	-	VICINITY MAP
P2	-	OVERALL PROJECT PLAN
P3	-	RIVER TRESTLE LOCATION PLAN
P4	-	COFFERDAM LOCATION PLAN
P5	-	BARGE FLEETING LOCATION PLAN
P6	-	RIVER TRESTLE - PARTIAL PILE PLAN
P7	-	RIVER TRESTLE - PARTIAL PILE PLAN
P8	-	RIVER TRESTLE SECTIONS 1 OF 2
P9	-	RIVER TRESTLE SECTIONS 2 OF 2
P10	-	LEVEE RAMP LOCATION PLAN
P11	-	LEVEE RAMP SECTIONS
P12	-	TEMPORARY DRAINAGE PLAN
P13	-	TEMPORARY TIMBER CANAL BRIDGE PLAN AND DETAIL
P14	-	TEMPORARY TIMBER CANAL BRIDGE SECTION AND ELEVATION
P15	-	COFFERDAM PLAN AND ELEVATION
P16	-	3 PILE DOLPHIN PLAN, SECTIONS, AND DETAILS
P17	-	BARGE MOORING BUOY PLAN AND ELEVATION
P18	-	BARGE MOORING MONOPILE PLAN AND ELEVATION
P19	-	OVERALL EQUIPMENT APPROACH ROUTE
P20	-	DREDGE ACCESS ROUTE SURVEY
P21	-	DREDGE ACCESS ROUTE SURVEY
P22	-	DREDGE ACCESS ROUTE SURVEY
P23	-	DREDGE ACCESS ROUTE SURVEY
P24	-	DREDGE ACCESS ROUTE SURVEY
P25	-	DREDGE ACCESS ROUTE SURVEY
P26	-	EQUIPMENT ENTRANCE DETAIL
P27	-	SPOIL PLACEMENT PLAN - 1 OF 5
P28	-	SPOIL PLACEMENT PLAN - 2 OF 5
P29	-	SPOIL PLACEMENT PLAN - 3 OF 5
P30	-	SPOIL PLACEMENT PLAN - 4 OF 5
P31	-	SPOIL PLACEMENT PLAN - 5 OF 5
P32	-	SHELL 24" HORIZONTAL DIRECTIONAL DRILL

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TEMPORARY WORKS DRAWING INDEX

CPRA PROJECT NUMBER: BA-0153

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DATE: AUGUST 2022

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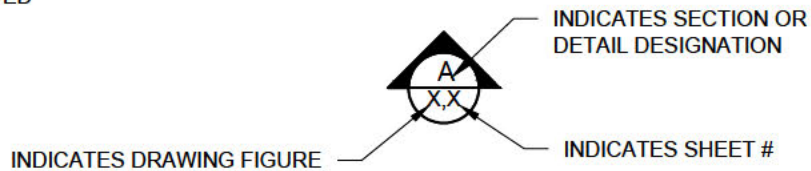
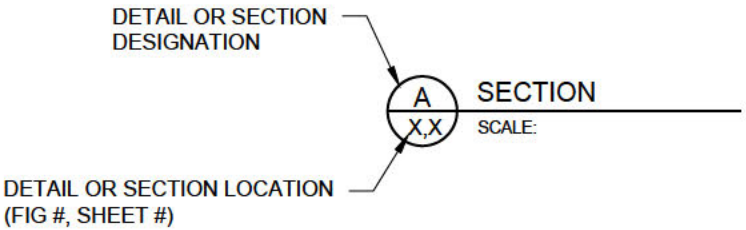
LEGEND:

- ARMORING
- ASPHALT
- CAST IN PLACE CONCRETE
- COMPACTED LOCAL CLAY
- FILL MATERIAL
- LOCAL BACKFILL/CLAY
- RIP-RAP
- SAND
- STONE
- WOOD
- LIMITS OF DEMOLITION
- LIMITS OF TREES TO BE REMOVED
- TREE
- LIMITS OF WORK
- DIRECTION OF FLOW
- OPEN WATER
- FORESTED WETLANDS
- EMERGENT WETLANDS

NOTES:

1. PLANS ARE BASED ON TOPOGRAPHIC SURVEY DATA PRODUCED BY ALL SOUTH CONSULTING ENGINEERING, LLC, DATED AUGUST 2018. THE HORIZONTAL DATUM USED FOR THE SURVEY ARE BASED ON THE LOUISIANA STATE PLANE COORDINATE SYSTEM OF 1983, SOUTH ZONE. THE VERTICAL DATUM USED FOR THE SURVEY IS NAVD88 (2009.55) GEOID 12B, US SURVEY FEET.
2. MBSD OPERATIONAL PLAN: THE DIVERSION WILL BE OPERATED WHEN THE MISSISSIPPI RIVER (MR) FLOWS AT OR ABOVE 450,000 CFS PAST THE BELLE CHASSE GAGE. DIVERSION GATES WILL BE POSITIONED VERTICALLY WITHIN THE FLOW STREAM TO LIMIT DIVERTED FLOW TO A MAXIMUM OF 75,000 CFS. WHEN THE MR DISCHARGE FALLS BELOW 450,000 CFS, THE DIVERSION WILL FLOW A NOT-TO-EXCEED AMOUNT OF 5,000 CFS TO THE EXTENT PRACTICABLE. FULL OPERATIONS WILL CEASE IN THE CASE OF EMERGENCY EVENTS.





ABBREVIATIONS

AC	ACRE
B/L	BASELINE
CY	CUBIC YARD
DMPA	DESIGNATED MATERIAL PLACEMENT AREA
EL	ELEVATION
FIG	FIGURE
LOW	LIMITS OF WORK
MBSD	MID BARATARIA SEDIMENT DIVERSION
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
MTL	MEAN TIDE LEVEL
NOGC	NEW ORELEANS & GULF COAST
OTF	OUTFALL TRANSITION FEATURE
RM	RIVER MILE
RR	RAILROAD
STA	STATION

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GENERAL NOTES AND LEGEND

DATE: AUGUST 2022

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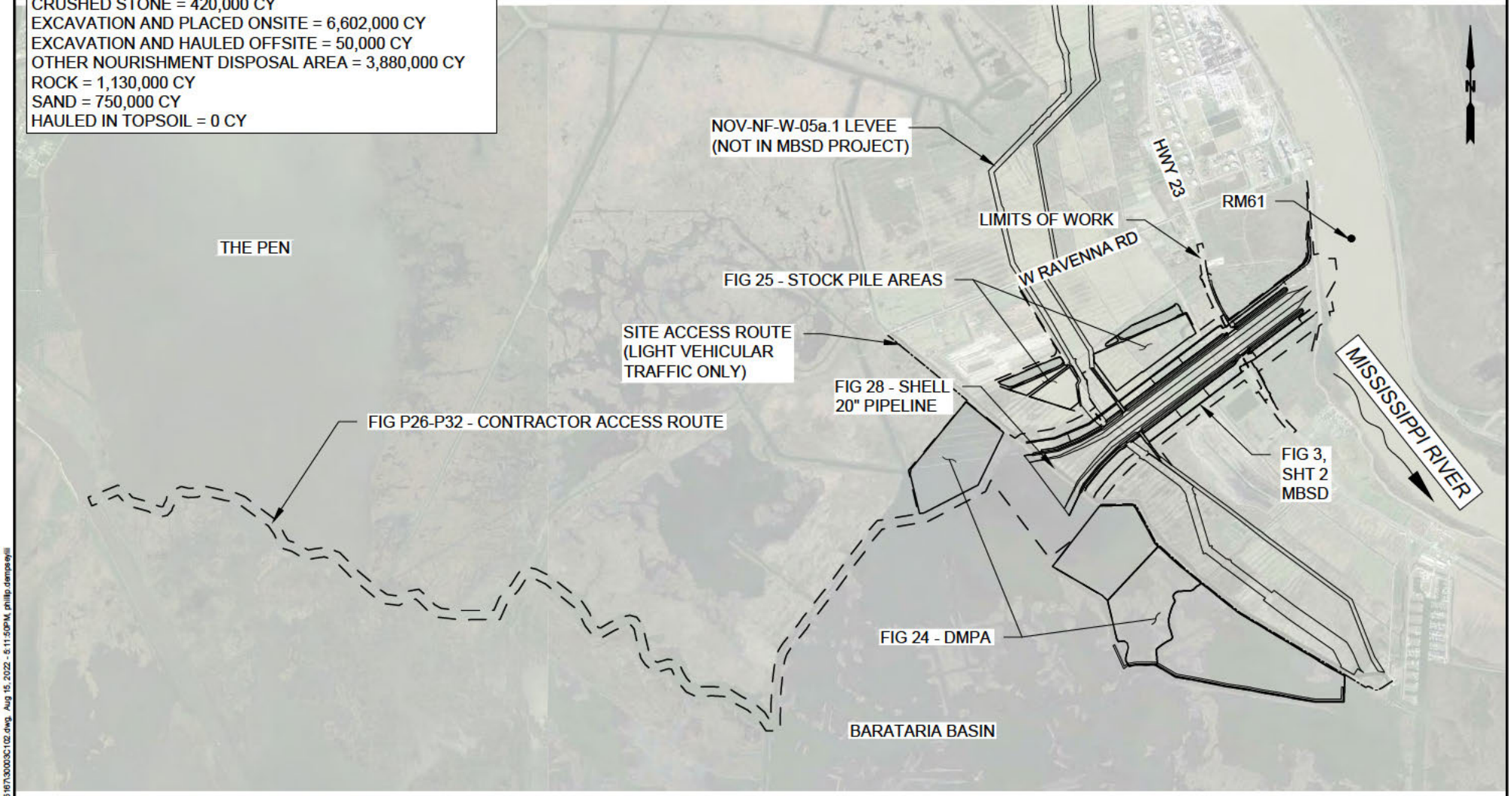
FILL MATERIALS:

CONCRETE = 145,000 CY
CRUSHED STONE = 420,000 CY
EXCAVATION AND PLACED ONSITE = 6,602,000 CY
EXCAVATION AND HAULED OFFSITE = 50,000 CY
OTHER NOURISHMENT DISPOSAL AREA = 3,880,000 CY
ROCK = 1,130,000 CY
SAND = 750,000 CY
HAULED IN TOPSOIL = 0 CY



2500' 0 2500' 5000'
SCALE: 1" = 5000'

DRAWING KEY MAP

SCALE: 1" = 5000

NOTE:

FOR TEMPORARY FACILITIES SITE PLAN, SEE FIGURE 101.

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CPRA PROJECT NUMBER: BA-0153

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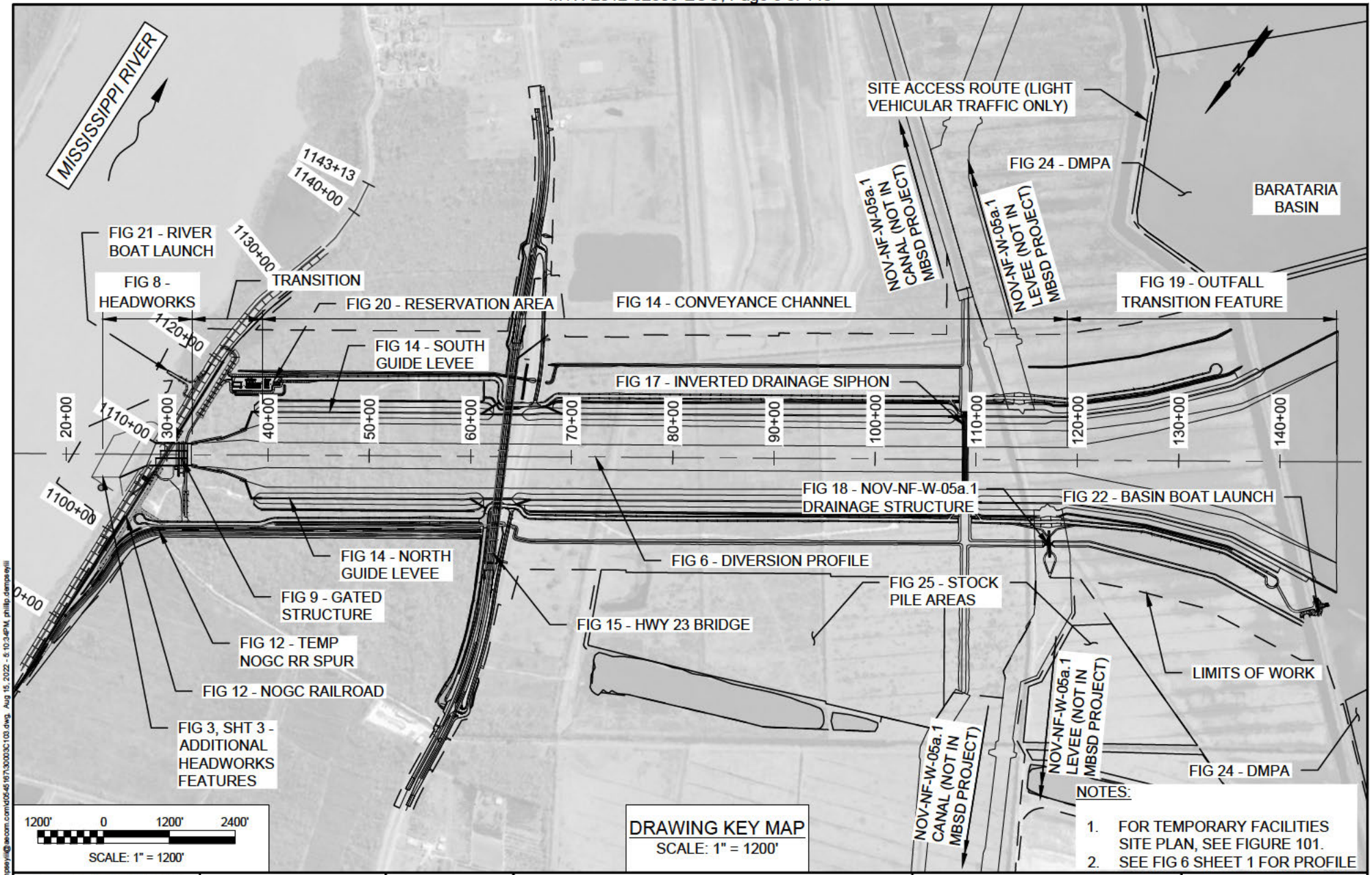

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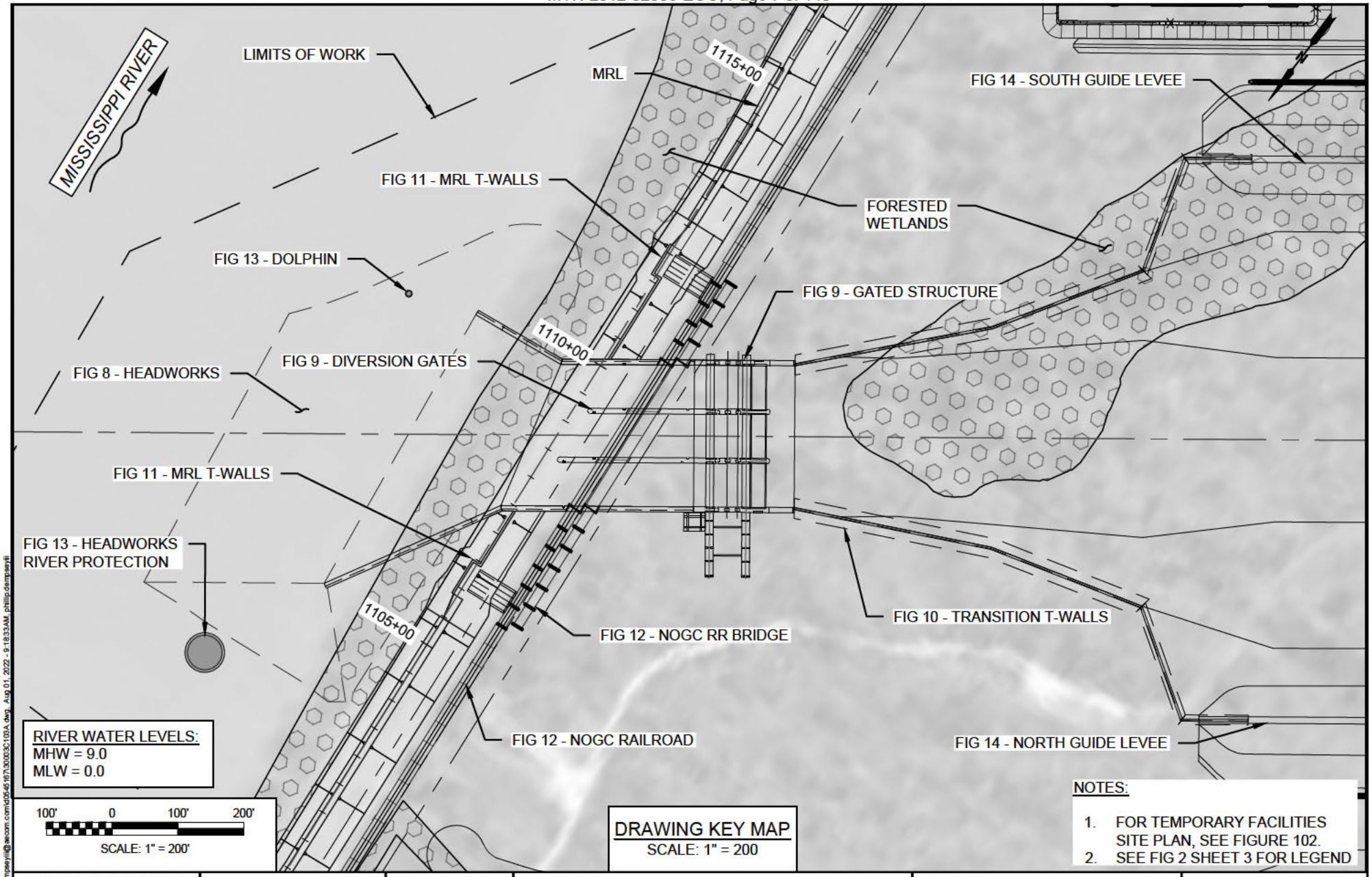

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150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DRAWING KEY MAP

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 3 | SHEET 3 OF 3

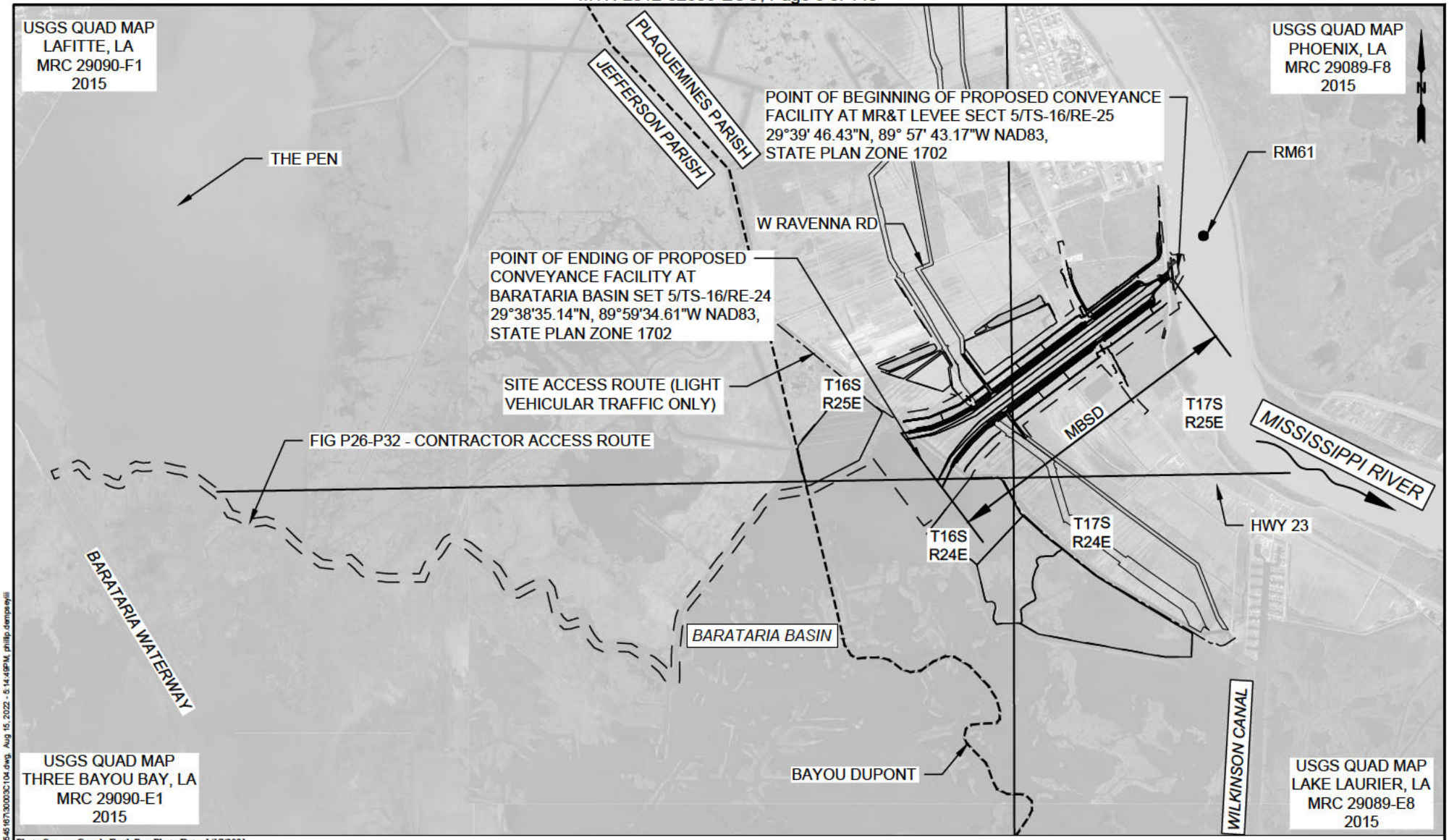

Photo Source: Google Earth Pro, Photo Date: 1/17/2021

PROJECT VICINITY MAP

SCALE: 1" = 1 MILE

SECTION #: 5 16 47 48 49	TOWNSHIP #: 16S	RANGE #: 25E
SECTION #: 3 2 1 41 19	TOWNSHIP #: 17S	RANGE #: 24E

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE
LA. — STATE | 29393 — LICENSE NO. | AUGUST 2022 — DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

PROJECT VICINITY MAP

DATE: AUGUST 2022

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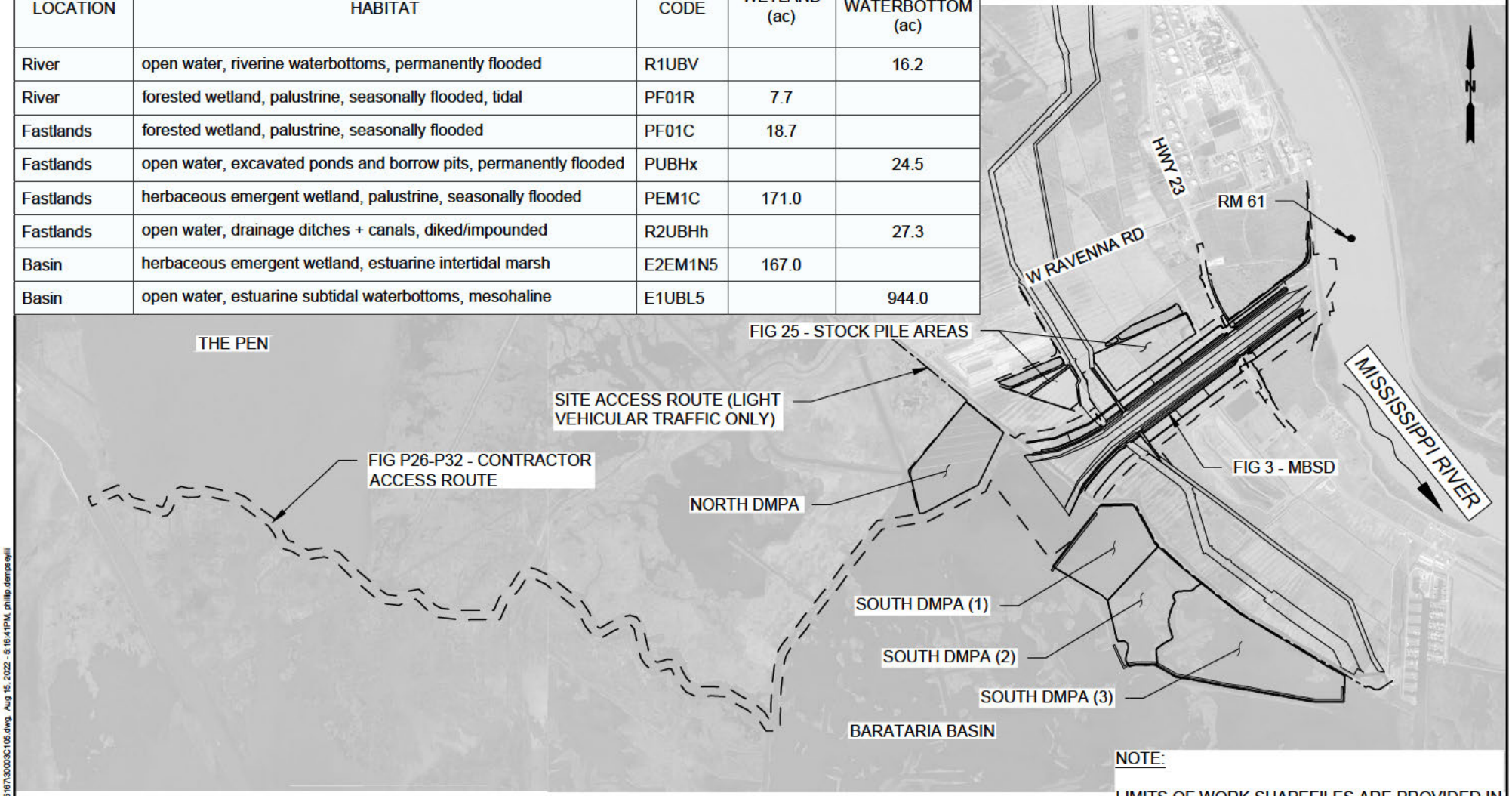
WETLAND AND WATERBOTTOM ACREAGE WITHIN THE LIMITS OF WORK BY HABITAT CATEGORY (COWARDIN CODE)

LOCATION	HABITAT	CODE	WETLAND (ac)	NON-WETLAND WATERBOTTOM (ac)
River	open water, riverine waterbottoms, permanently flooded	R1UBV		16.2
River	forested wetland, palustrine, seasonally flooded, tidal	PF01R	7.7	
Fastlands	forested wetland, palustrine, seasonally flooded	PF01C	18.7	
Fastlands	open water, excavated ponds and borrow pits, permanently flooded	PUBHx		24.5
Fastlands	herbaceous emergent wetland, palustrine, seasonally flooded	PEM1C	171.0	
Fastlands	open water, drainage ditches + canals, diked/impounded	R2UBHh		27.3
Basin	herbaceous emergent wetland, estuarine intertidal marsh	E2EM1N5	167.0	
Basin	open water, estuarine subtidal waterbottoms, mesohaline	E1UBL5		944.0



2500' 0 2500' 5000'

SCALE: 1" = 5000'

LIMITS OF WORK
SCALE: 1" = 5000

NOTE:

LIMITS OF WORK SHAPEFILES ARE PROVIDED IN A FILE TITLED "MBSD_Shapefiles_Aug2022.zip". THE SHAPEFILES SHOW AREAS WHERE EXCAVATION, FILL OR DISTURBANCE WILL OCCUR FOR THE MBSD PROJECT.

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

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150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

LIMITS OF WORK

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 5 | SHEET 1 OF 1

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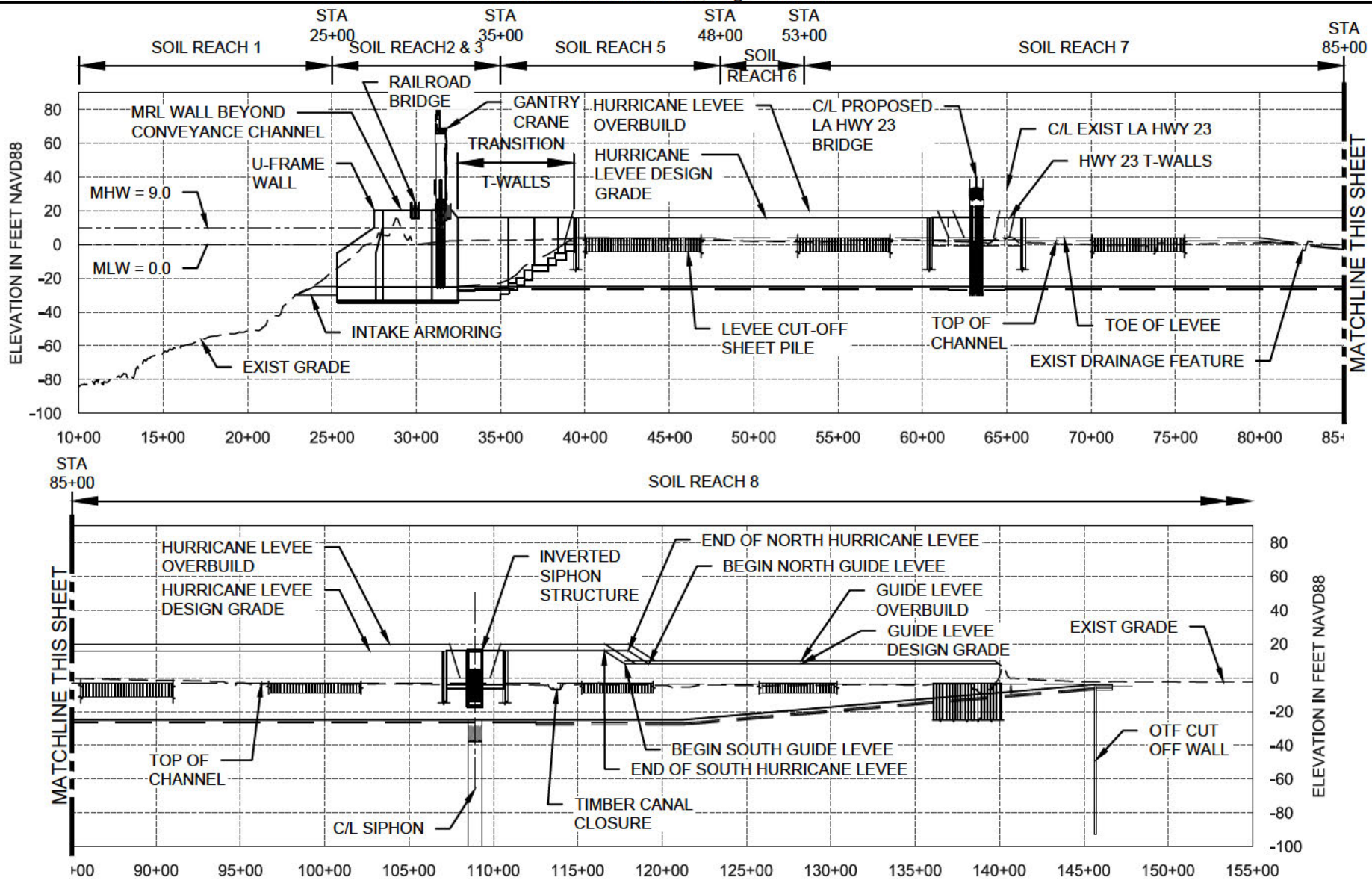

DIVERSION PROFILE

SCALE: NTS

NOTE:
1. SEE FIGURE 3, SHEET 2 OF 3 FOR PLAN.

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE | LA — STATE | 29393 — LICENSE NO. | JULY 2022 — DATE

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

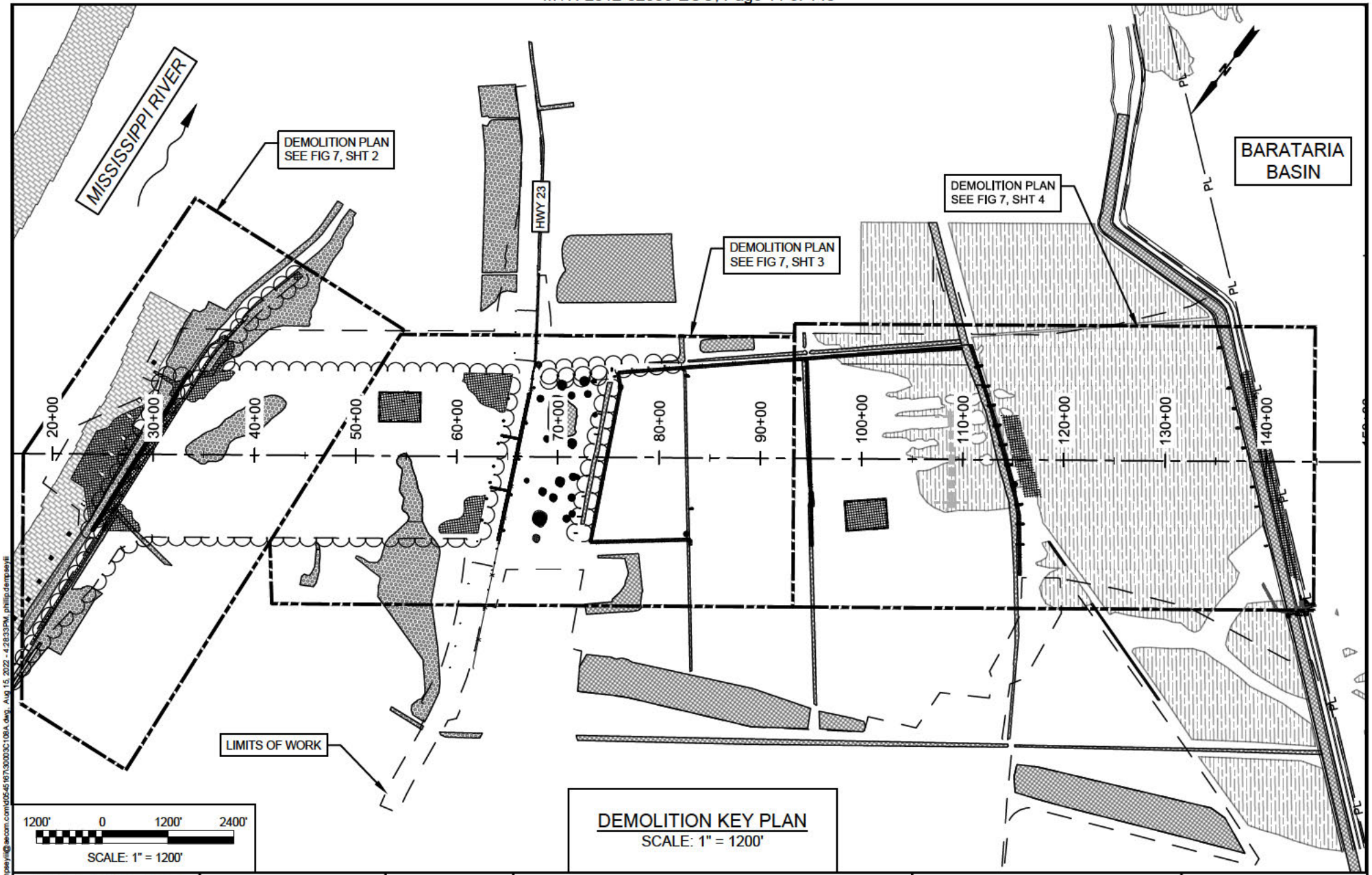
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DIVERSION PROFILE

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 6 | SHEET 1 OF 1



DEMOLITION KEY PLAN
SCALE: 1" = 1200'

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DEMOLITION KEY PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 7 | SHEET 1 OF 5

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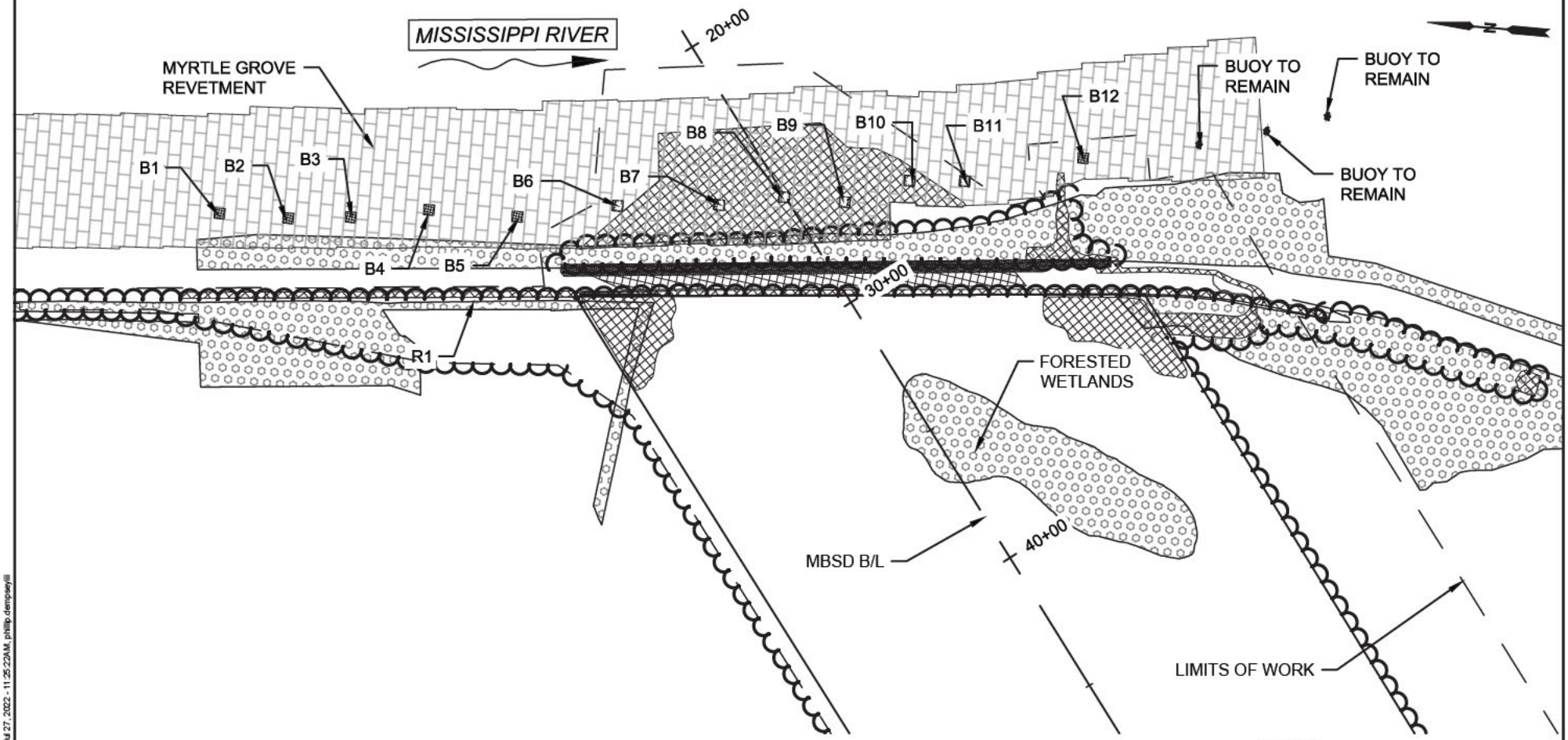

EXISTING SITE & DEMOLITION PLAN

SCALE: 1" = 500'

250' 0 250' 500'

SCALE: 1" = 500'

NOTES:

1. SEE FIG 7 SHEET 5 OF 5 FOR DISPOSITION TABLE
2. SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

LEGEND:

B1 42" CHS INC. FLEETING PILES

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG, ENGINEER OF RECORD | CIVIL, DISCIPLINE | LA. STATE | 29393 LICENSE NO. | JULY 2022 DATE

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COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
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150 TERRACE AVENUE
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MID-BARATARIA SEDIMENT DIVERSION

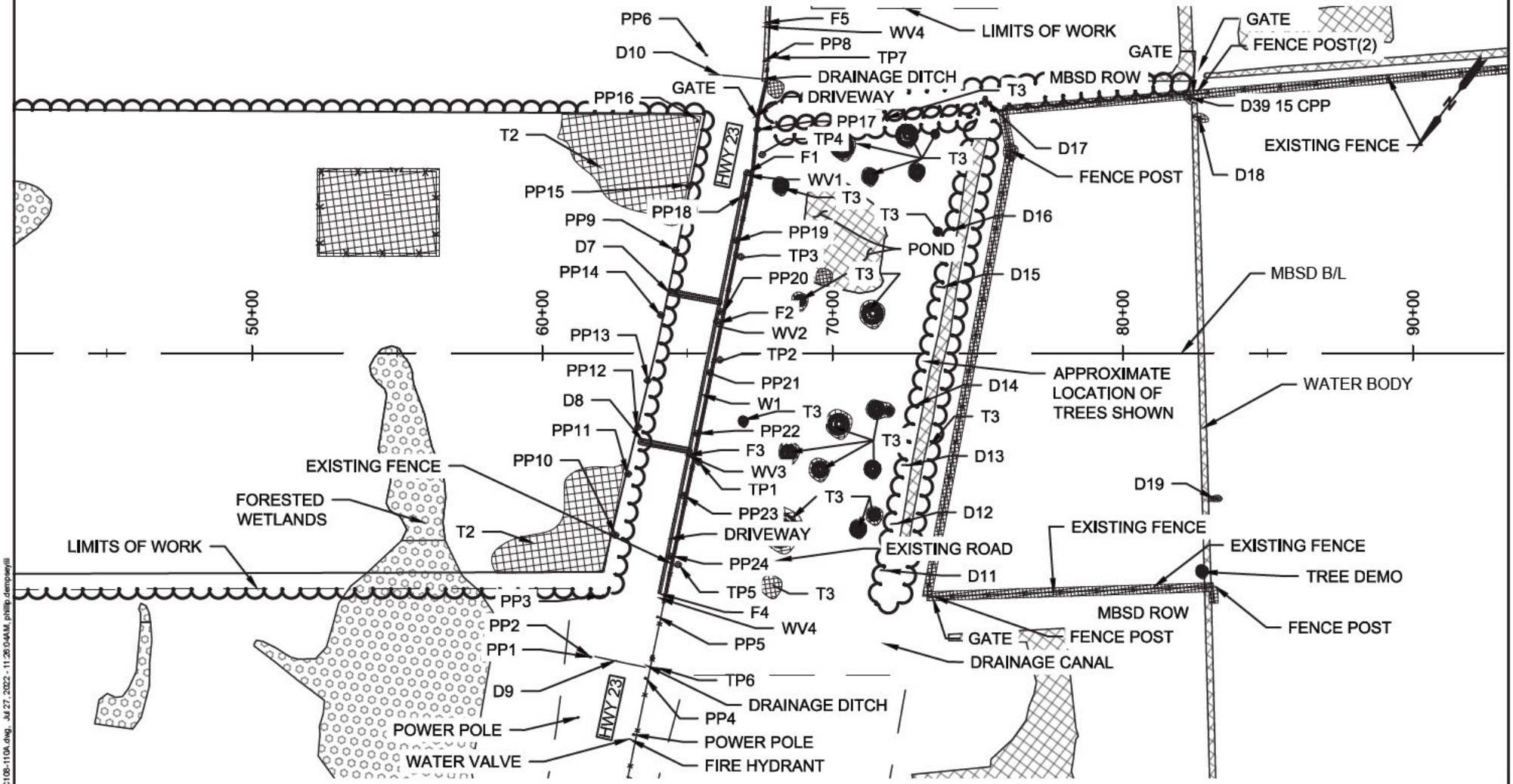
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

EXISTING SITE & DEMOLITION PLAN

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 7 | SHEET 2 OF 5



NOTES:

1. SEE FIG 7 SHEET 5 OF 5 FOR DISPOSITION TABLE
2. SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

250' 0 250' 500'

SCALE: 1" = 500'

EXISTING SITE & DEMOLITION PLAN

SCALE: 1" = 500'

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

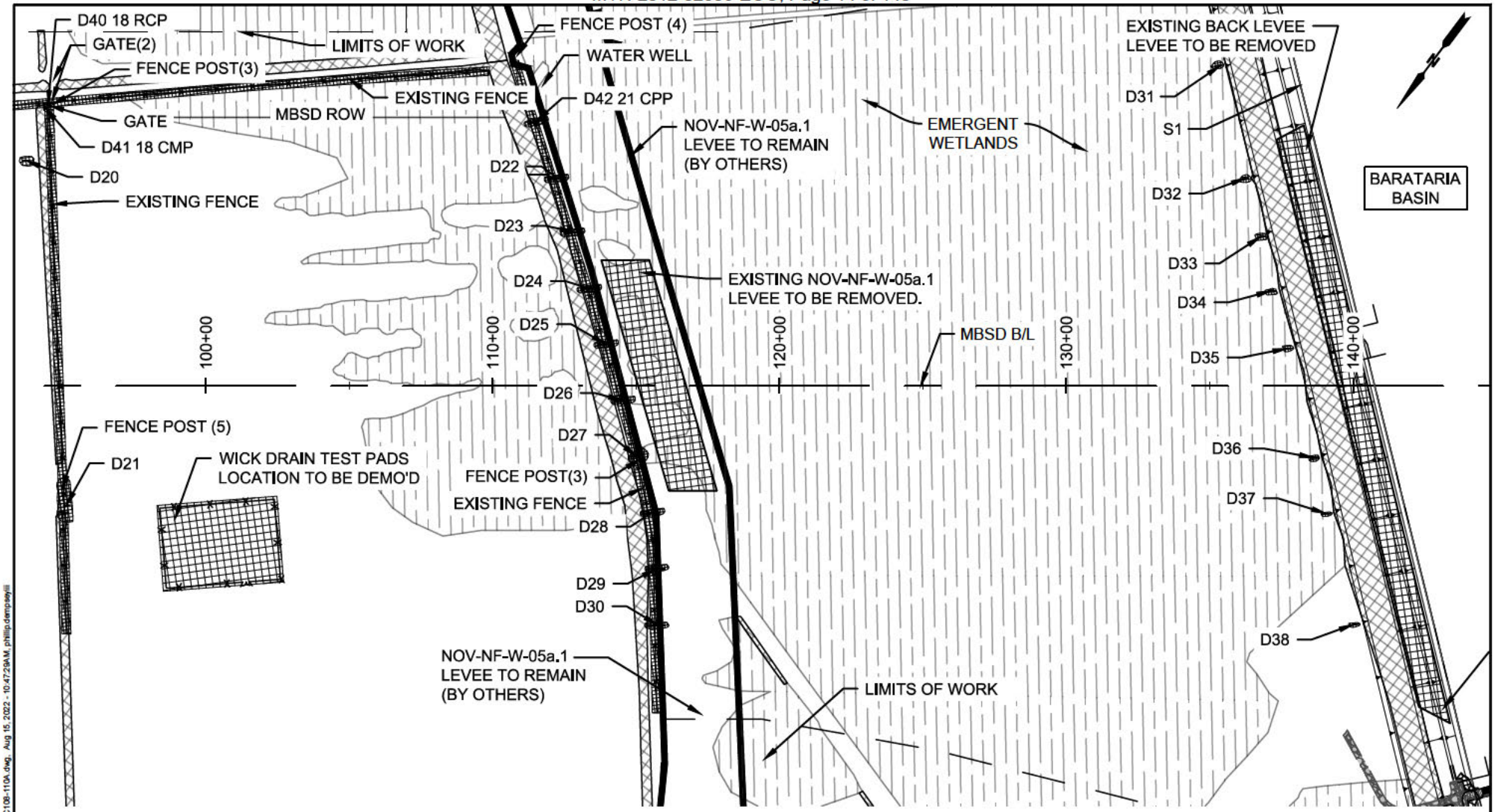
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

EXISTING SITE & DEMOLITION PLAN

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 7 | SHEET 3 OF 5



EXISTING SITE & DEMOLITION PLAN

SCALE: 1" = 500'

250' 0 250' 500'

SCALE: 1" = 500'

NOTES:

1. SEE FIG 7 SHEET 5 OF 5 FOR DISPOSITION TABLE
2. SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

PRELIMINARY FOR PERMIT PURPOSE ONLY

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COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

EXISTING SITE & DEMOLITION PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 7 | SHEET 4 OF 5

DISPOSITION TABLE:

ID NO.	DESCRIPTION	DISPOSITION	QUANTITY	UNIT
* B1 - B12	42" CHS INC. FLEETING PILE	A	12	EA
D1	24" STEEL PIPE	A	34±	LF
D2	8" PVC PIPE	A	28±	LF
D3	8" PVC PIPE	A	29±	LF
D4	8" PVC PIPE	A	29±	LF
D5	8" PVC PIPE	A	29±	LF
D6	8" PVC PIPE	A	29±	LF
D7	30" RCP	A	179±	LF
D8	30" RCP	A	179±	LF
D9	30" RCP	I	30±	LF
D10	30" RCP	I	30±	LF
D11	18" CMP	A	30±	LF
D12	18" CMP	A	30±	LF
D13	18" CMP	A	30±	LF
D14	18" CMP	A	32±	LF
D15	18" CMP	A	30±	LF
D16	18" CMP	A	30±	LF
D17	36" STEEL PIPE	A	17±	LF
D18	12" CMP	A	34±	LF
D19	18" METAL PIPE	A	22±	LF
D20	10" CMP	A	20±	LF
D21	12" PVC	A	20±	LF
D22	21" PVC	A	59±	LF
D23	21" PVC	A	60±	LF
D24	21" PVC	A	59±	LF
D25	21" PVC	A	59±	LF
D26	21" PVC	A	58±	LF
D27	36" CMP	A	41±	LF
D28	21" PVC	A	59±	LF
D29	21" PVC	A	59±	LF
D30	21" PVC	A	58±	LF
D31	21" PVC	A	21±	LF
D32	18" PVC	A	21±	LF
D33	21" PVC	A	22±	LF
D34	21" CCP	A	21±	LF
D35	21" CCP	A	24±	LF
D36	18" PVC	A	23±	LF
D37	18" PVC	A	20±	LF
D38	18" PVC	A	21±	LF
D39	15" CPP	A	22±	LF
D40	18" RCP	I	21±	LF
D41	18" CMP	I	24±	LF
D42	21" PVC	A	60±	LF

* EXISTING CHS INC. FLEETING PILES SHALL BE CUT AT THE MUDLINE OR BOTTOM OF EXCAVATION.

DISPOSITION TABLE:

ID NO.	DESCRIPTION	DISPOSITION	QUANTITY	UNIT
F2 AND F3	FIRE HYDRANT	G	2	EA
F1, F4 AND F5	FIRE HYDRANT	I	3	EA
L1	MISSISSIPPI RIVER LEVEE	A	1,615±	LF
P1	USACE MYRTLE GROVE REVETMENT	A	7.6±	AC
P2	MRL CONCRETE SLOPE PAVEMENT	A	4500±	SY
P3	MRL CRUSHED STONE ACCESS ROAD	A	1,800±	SY
PP1 THRU PP9	ENTERGY DISTRIBUTION POLE	I	9	EA
PP10 THRU PP24	ENTERGY DISTRIBUTION POLE	D	14	EA
R1	NOGC RAILROAD	A	3,840	LF
S1	SHELL PIPELINE	D	XXX	LF
T1	FORESTED AREA (BATTURE / DOCK)	A	4±	AC
T2	FORESTED AREA (MRL TO HWY 23 + RR)	A	130±	AC
TP1 THRU TP5	ENTERGY TRANSMISSION POLE	D	5	EA
TP6 THRU TP7	ENTERGY TRANSMISSION POLE	I	2	EA
T2	FORESTED AREA (MRL TO HWY 23)	A	130±	AC
T3	TREES (HWY 23 TO BAY SIDE)	A	5±	AC
WV1 THRU WV3	WATER VALVE	G	2	EA
W1	16" WATER MAIN	G	1,474±	LF

ID LEGEND:

B BUOY, DOLPHINS
D DRAINAGE PIPE OR DRAINAGE STRUCTURE
F FIRE HYDRANT
L LEVEE
P PAVEMENT (CONCRETE, STONE, ASPHALT)
PP POWER POLE
R RAILROAD
S SHELL PIPELINE
T TREES/FOREST
TP TRANSMISSION POLE
W WATER MAIN
WV WATER VALVE

DISPOSITION LEGEND:

A TO BE REMOVED BY THE CONTRACTOR PRIOR TO CONSTRUCTION
B TO BE REMOVED BY THE OWNER PRIOR TO CONSTRUCTION
C TO BE RELOCATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION
D TO BE RELOCATED BY THE OWNER PRIOR TO CONSTRUCTION
E TO RE REMOVED BY THE CONTRACTOR CONCURRENT WITH CONSTRUCTION
F TO BE REMOVED BY THE OWNER CONCURRENT WITH CONSTRUCTION
G TO BE RELOCATED BY THE CONTRACTOR CONCURRENT WITH CONSTRUCTION
H TO BE RELOCATED BY THE OWNER CONCURRENT WITH CONSTRUCTION
I DO NOT DISTURB
X TO BE CONFIRMED WHO WILL REMOVE OR RELOCATE

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD; CIVIL — DISCIPLINE
LA. — STATE; 29393 — LICENSE NO.; JULY 2022 — DATE

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8555 UNITED PLAZA BLVD
SUITE 300
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225-922-5700

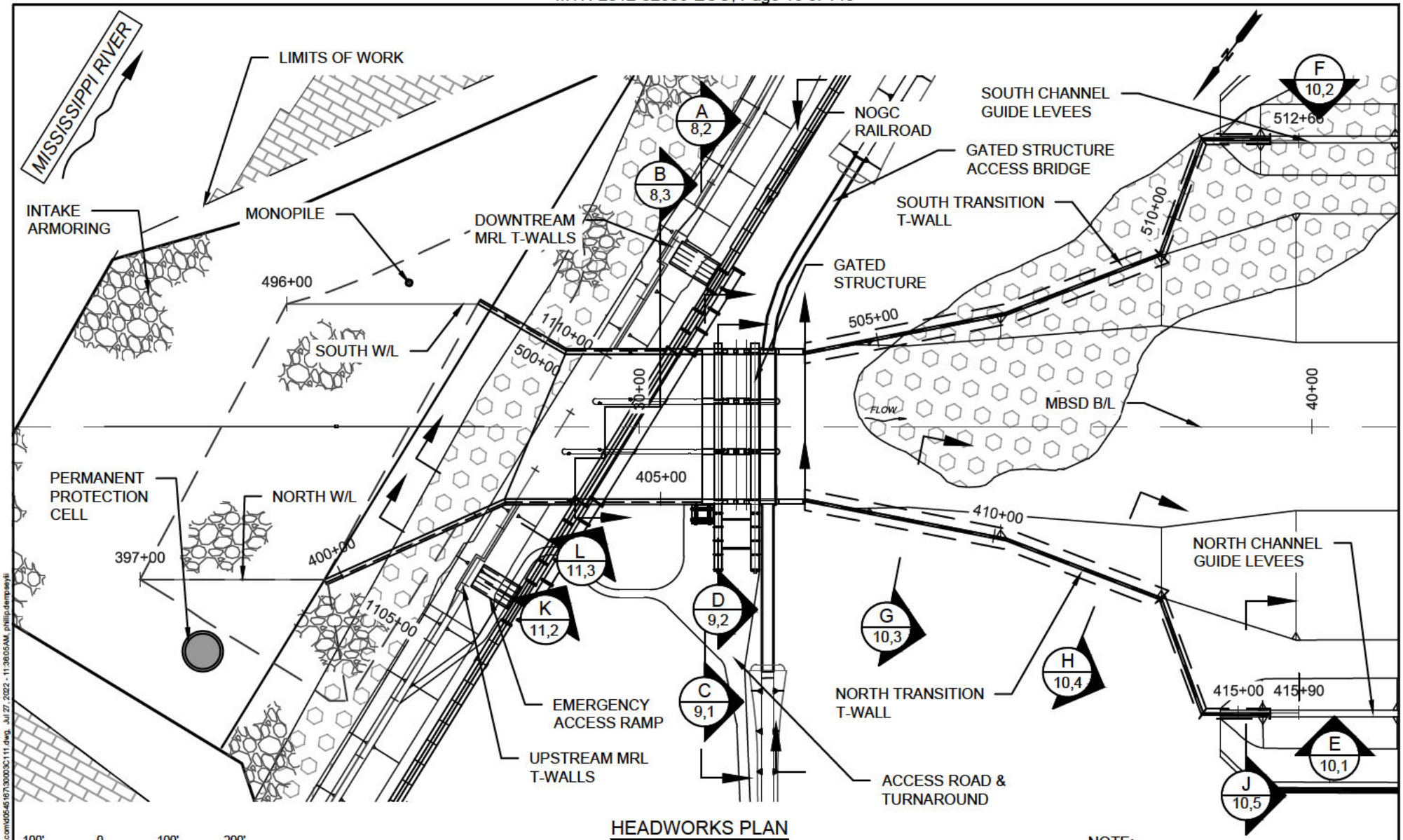
COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION
CPRA PROJECT NUMBER: BA-0153
AECOM PROJECT NUMBER: 60649021

DEMOLITION TABLE
DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 7 | SHEET 5 OF 5



HEADWORKS PLAN

SCALE: 1" = 200'

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

PRELIMINARY FOR PERMIT PURPOSE ONLY

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

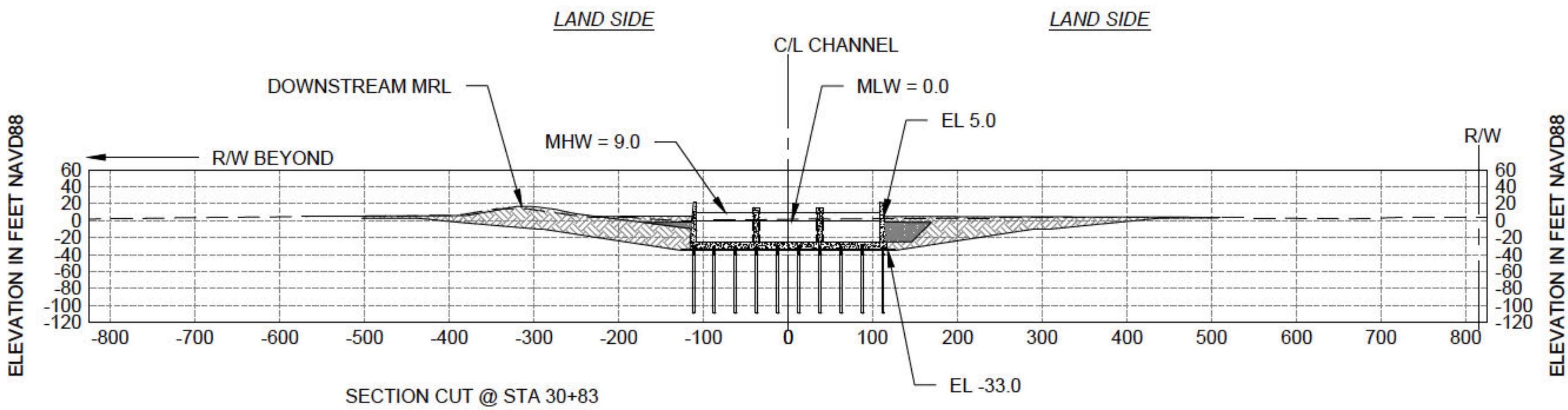
HEADWORKS PLAN

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 8 | SHEET 1 OF 3



A / 8,1 GATE STRUCTURE SECTION

SCALE: 1" = 200'

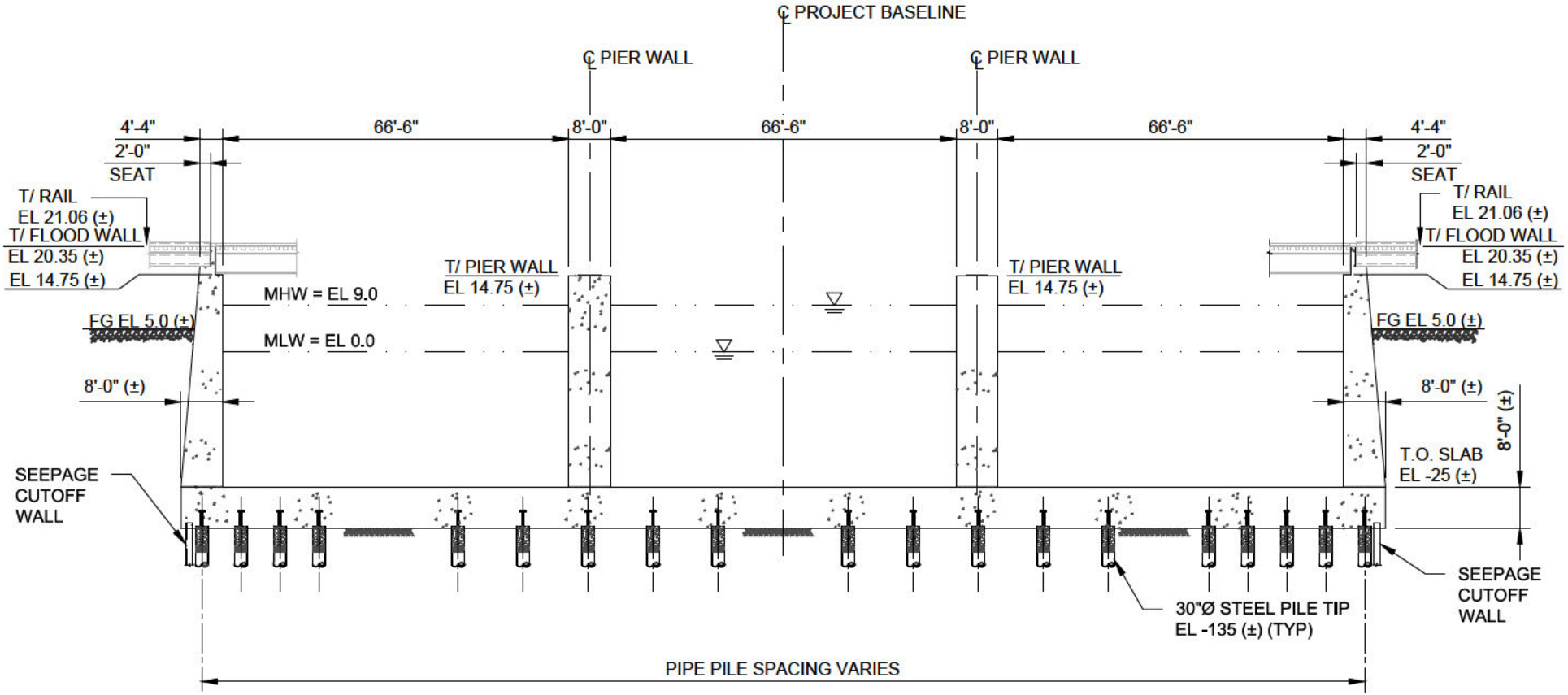
100' 0 100' 200'

SCALE: 1" = 200'

PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG — ENGINEER OF RECORD; CIVIL — DISCIPLINE LA. — STATE; 29393 — LICENSE NO.; JULY 2022 — DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021	HEADWORKS U-FRAME SECTION A DATE: JULY 2022
			DRAWN BY: PD / DESIGNED BY: PO	APPROVED BY: BL	DRAWING FIGURE 8 / SHEET 2 OF 3

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



B
8,1

HEADWORKS U-FRAME
SECTION & NOGC RR SECTION

SCALE: 1" = 30'

15' 0 15' 30'

SCALE: 1" = 30'

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BRUCE LELONG — ENGINEER OF RECORD
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COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
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150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

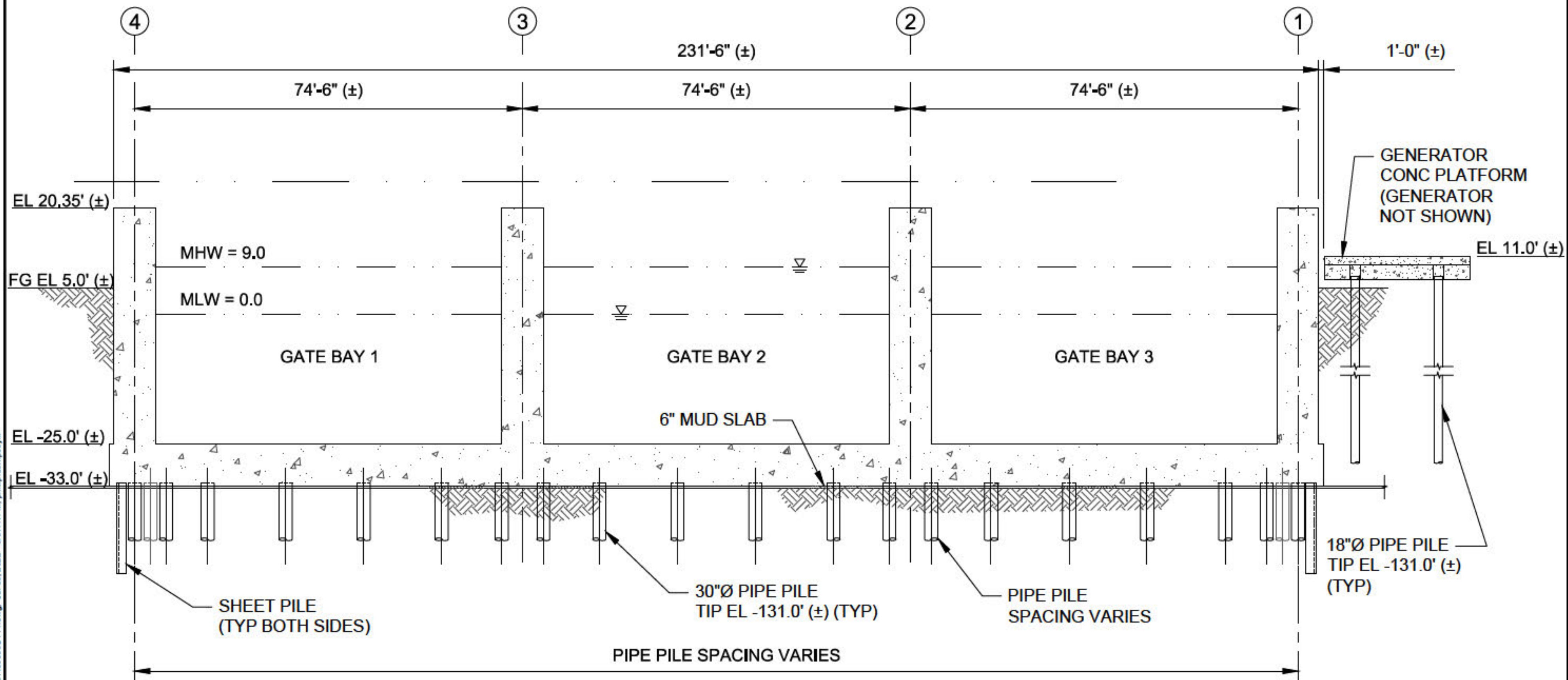
HEADWORKS U-FRAME SECTION B

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL

DRAWING FIGURE 8 | SHEET 3 OF 3

NOTES:
1. THE PILES THAT ARE SHOWN IN GRAYSCALE ARE BEYOND.
2. ALL ELEVATIONS ARE IN FEET NAVD88



GATED STRUCTURE @ STA 30+97

C / 8,1 DIVERSION GATE SECTION

SCALE: NTS

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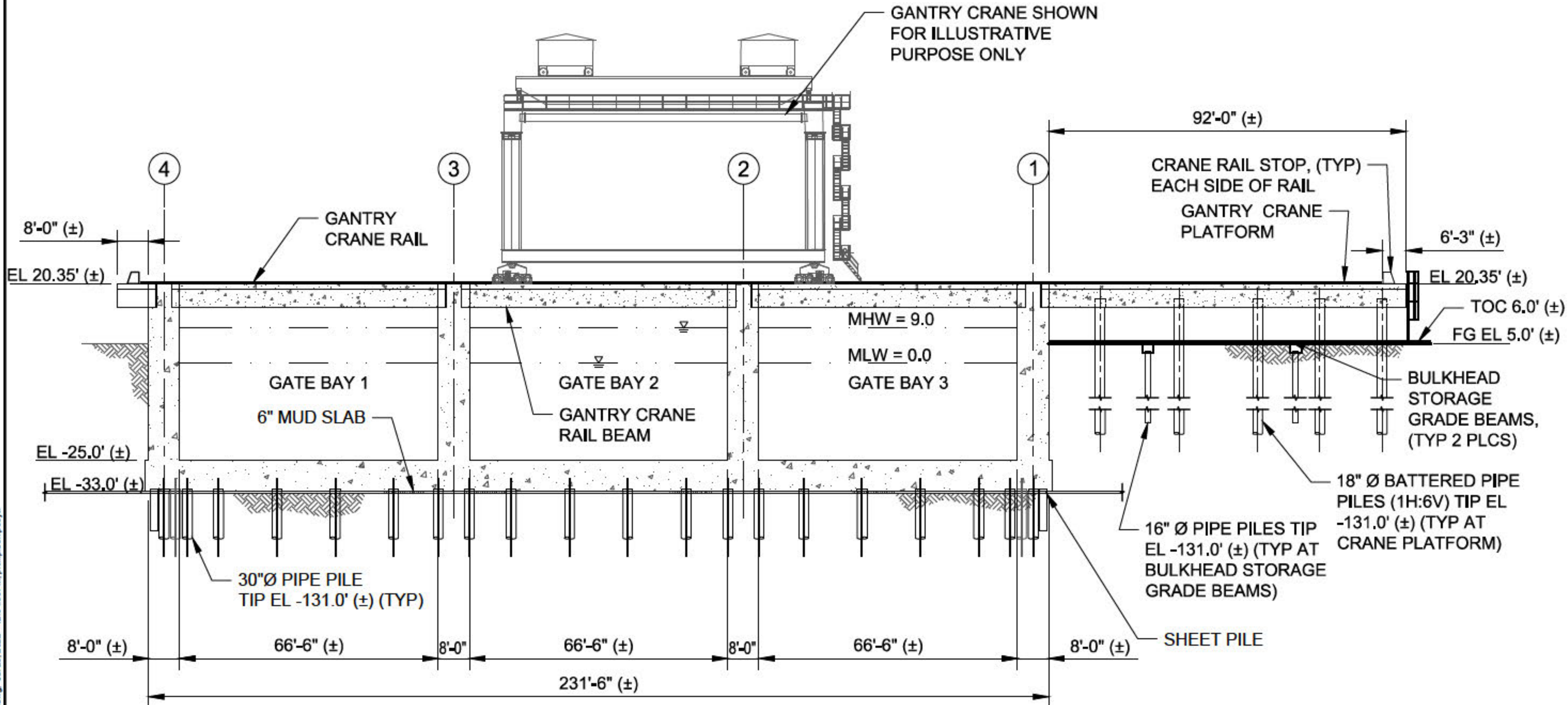
			DRAWN BY: PD	DESIGNED BY: PO
APPROVED BY: BL	DIVERSION GATE SECTION	DATE: JULY 2022	DRAWING FIGURE 9	SHEET 1 OF 2

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



GATED STRUCTURE @ STA 31+17.33

D
8,1
DIVERSION GATE SECTION
SCALE: NTS

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CIVIL
DISCIPLINE
LA.
STATE
29393
LICENSE NO.
JULY 2022
DATE

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LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

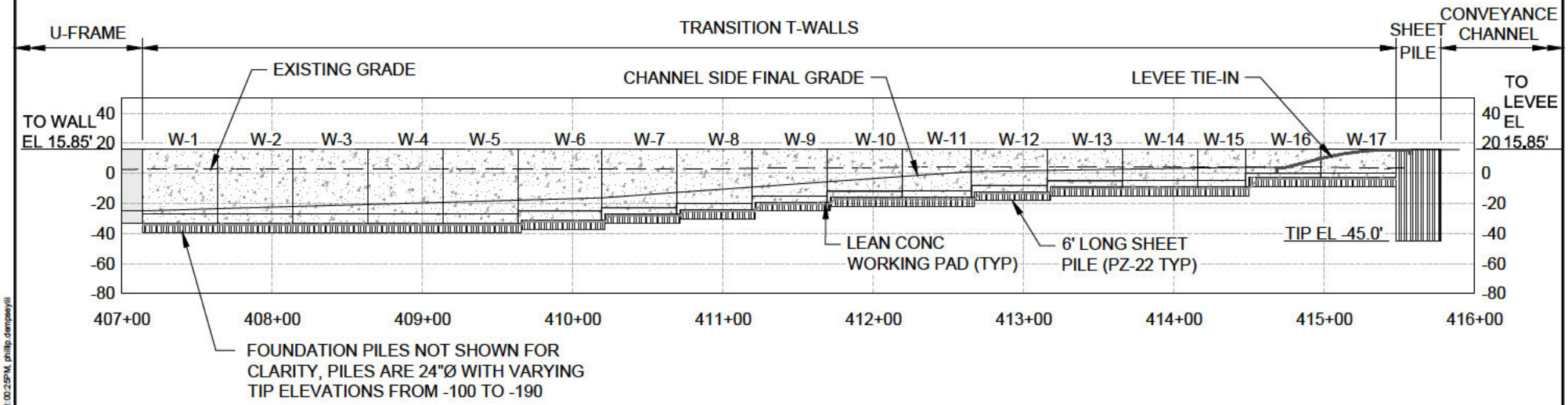
DIVERSION GATE SECTION

DATE: JULY 2022

DRAWN BY: PD
DESIGNED BY: PO
APPROVED BY: BL
DRAWING FIGURE 9
SHEET 2 OF 2

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



E 8,1 NORTH TRANSITION T-WALL PROFILE
SCALE: 1" = 100'

50' 0 50' 100'
SCALE: 1" = 100'

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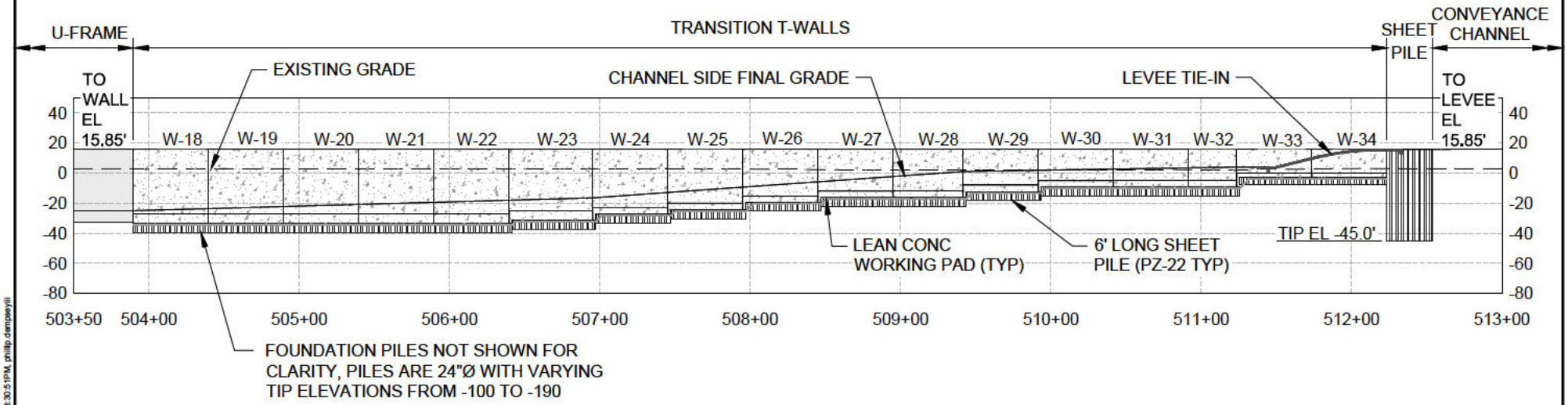
NORTH TRANSITION T-WALL PROFILE

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 10 | SHEET 1 OF 5

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



F 8,1 SOUTH TRANSITION T-WALL PROFILE

SCALE: 1" = 100'

50' 0 50' 100'

SCALE: 1" = 100'

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE

LA. — STATE | 29393 — LICENSE NO. | JULY 2022 — DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

SOUTH TRANSITION T-WALL PROFILE

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL

DRAWING FIGURE 10 | SHEET 2 OF 5

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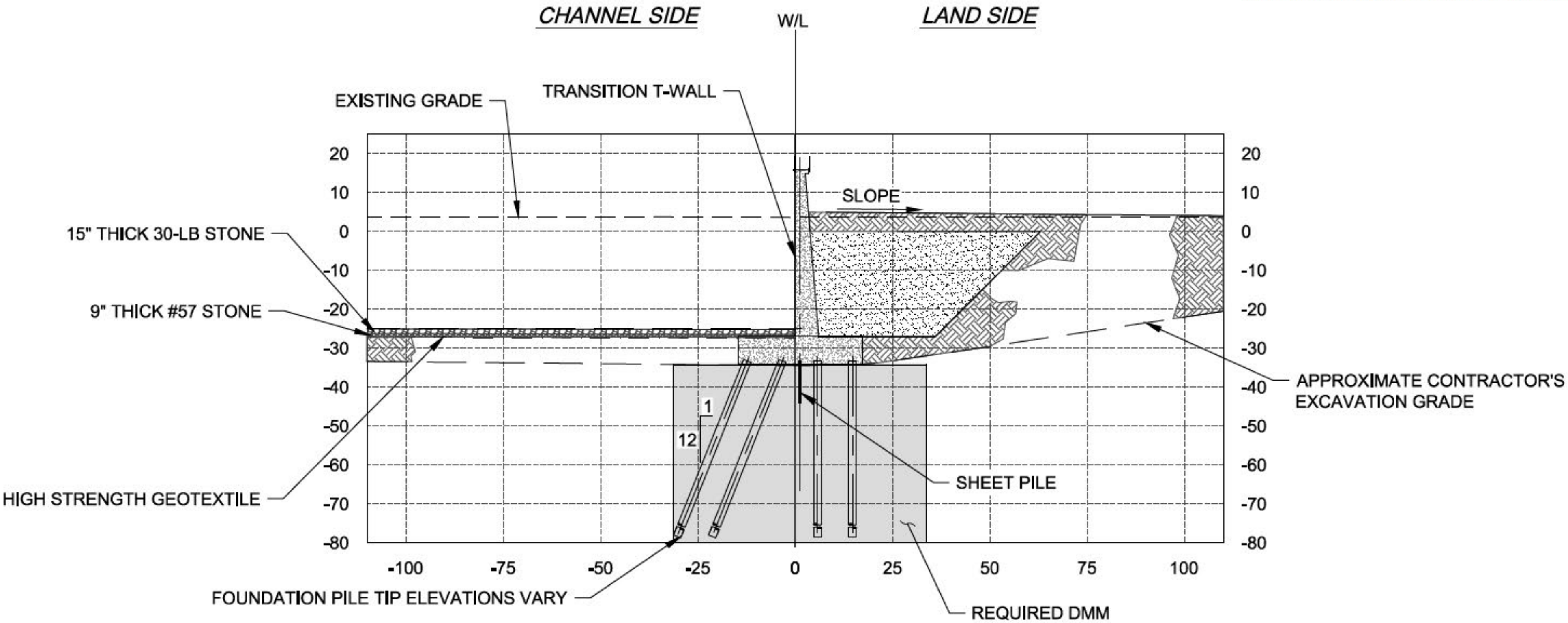
NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



(W-18 THRU W-23 - SYMMETRICAL ABOUT CHANNEL BASELINE)

(W-1 THRU W-6)

G
8,1

HEADWORKS TRANSITION T-WALL SECTION

SCALE: 1" = 40'

20' 0 20' 40'

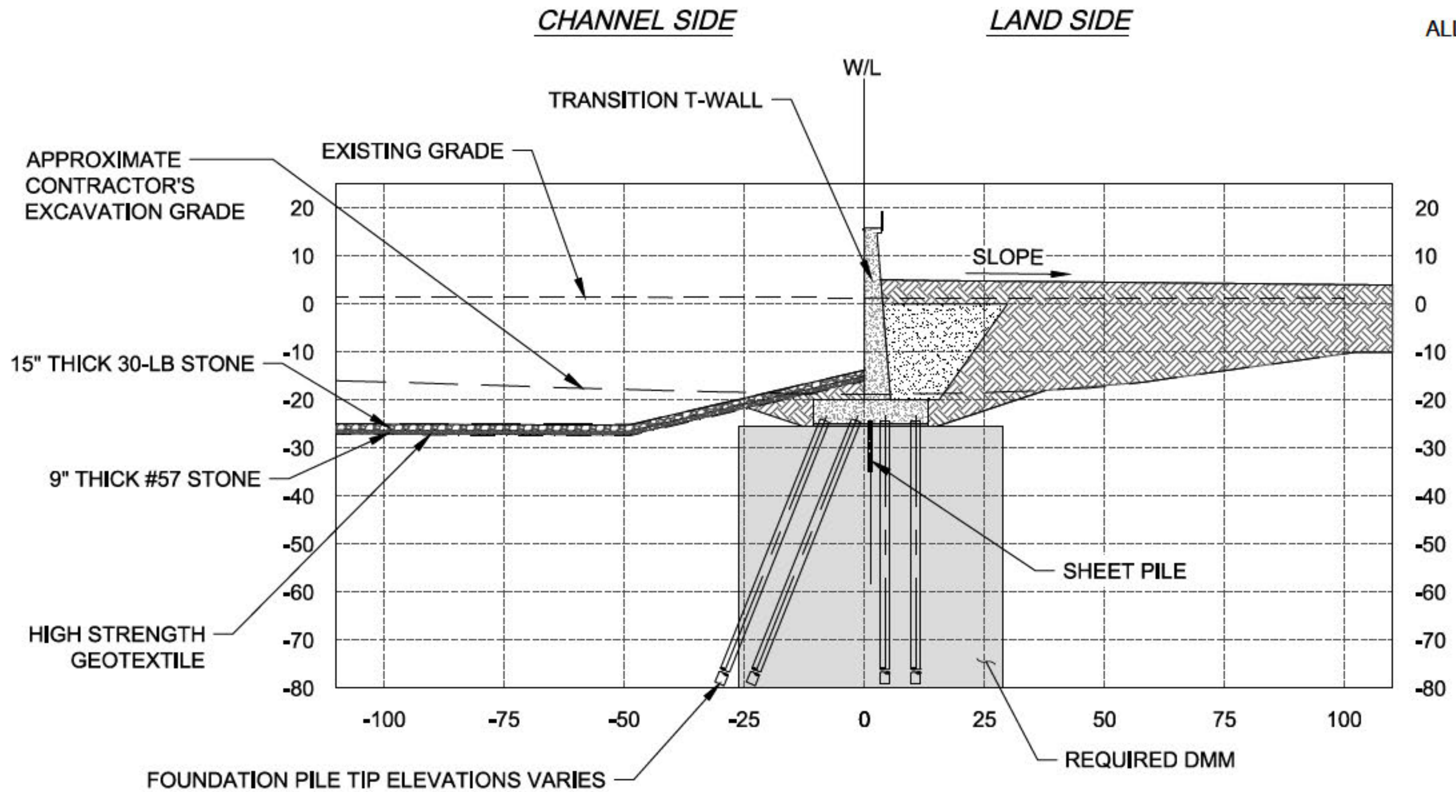
SCALE: 1" = 40'

PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG — ENGINEER OF RECORD; CIVIL — DISCIPLINE LA. — STATE; 29393 — LICENSE NO.; JULY 2022 — DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021
			DRAWN BY: PD / DESIGNED BY: PO	APPROVED BY: BL

HEADWORKS TRANSITION T-WALL SECTION	
DATE: JULY 2022	
DRAWING FIGURE 10	SHEET 3 OF 5

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



(W-24 THRU W-32 SYMMETRICAL ABOUT CHANNEL BASELINE)

SECTION (W-7 THRU W-15)

H / 8,1 HEADWORKS TRANSITION T-WALL SECTION

SCALE: 1" = 40'

20' 0 20' 40'

SCALE: 1" = 40'

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG ENGINEER OF RECORD | CIVIL DISCIPLINE

LA. STATE | 29393 LICENSE NO. | JULY 2022 DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

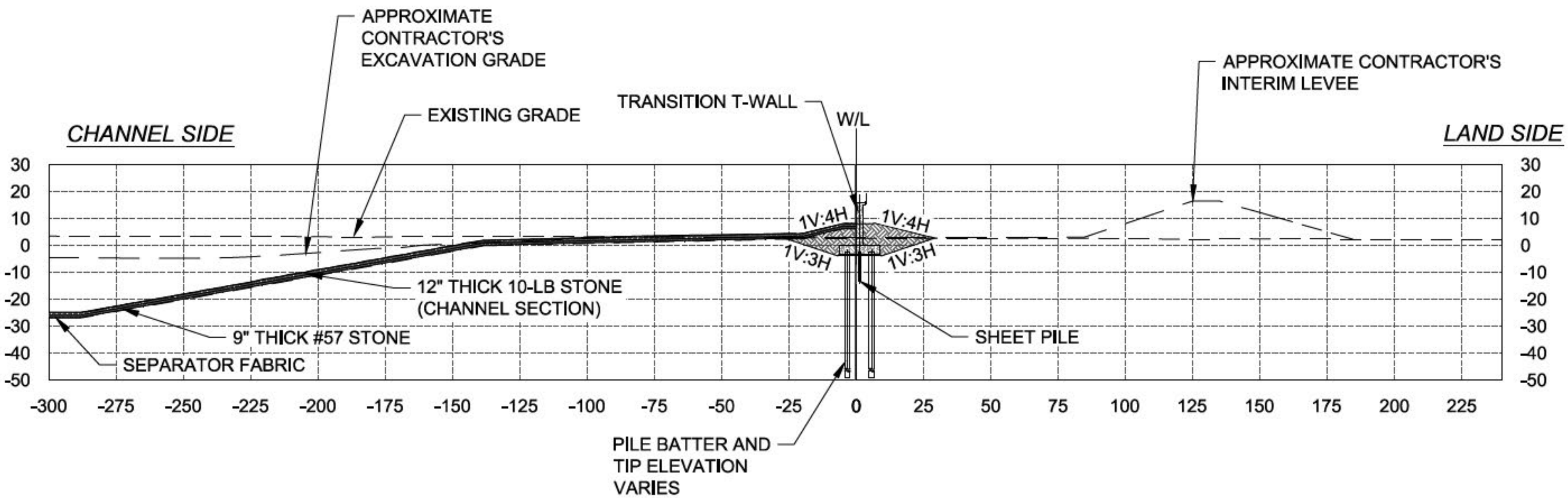
HEADWORKS TRANSITION T-WALL SECTION

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 10 | SHEET 4 OF 5

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



(W-33 AND W-34 - SYMMETRICAL ABOUT CHANNEL BASELINE)

(W-16 AND W-17)

J / 8,1 HEADWORKS TRANSITION T-WALL SECTION
SCALE: 1" = 40'

20' 0 20' 40'
SCALE: 1" = 40'

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PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE
LA. — STATE | 29393 — LICENSE NO. | JULY 2022 — DATE

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8555 UNITED PLAZA BLVD
SUITE 300
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225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

HEADWORKS TRANSITION T-WALL SECTION

CPRA PROJECT NUMBER: BA-0153

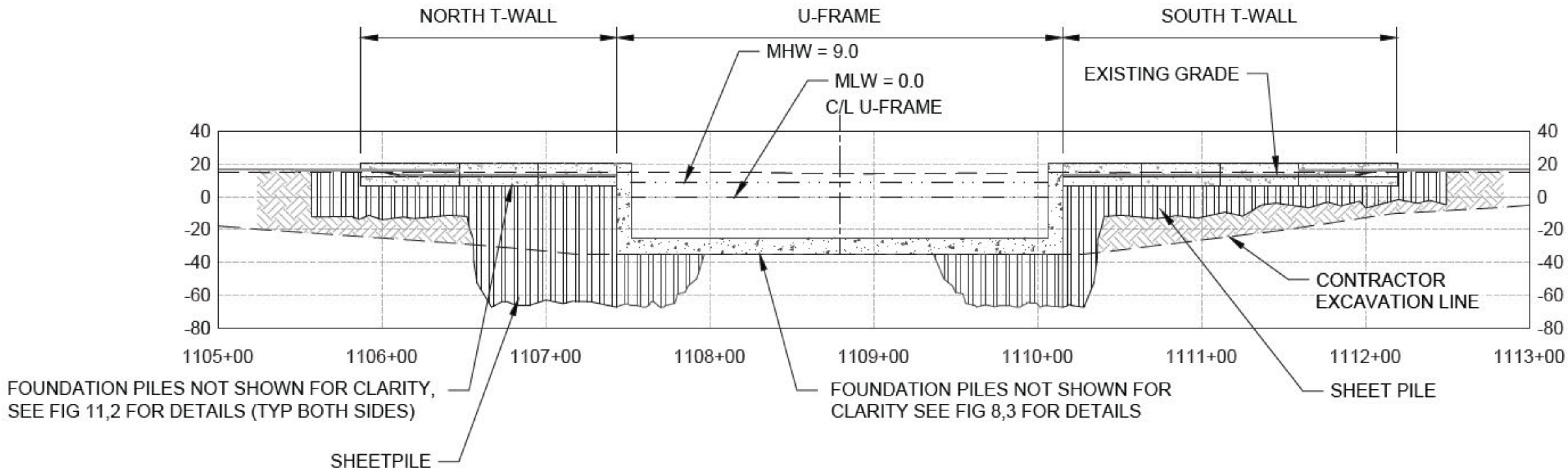
AECOM PROJECT NUMBER: 60649021

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 10 | SHEET 5 OF 5

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



MRL T-WALL PROFILE

SCALE: 1" = 100'

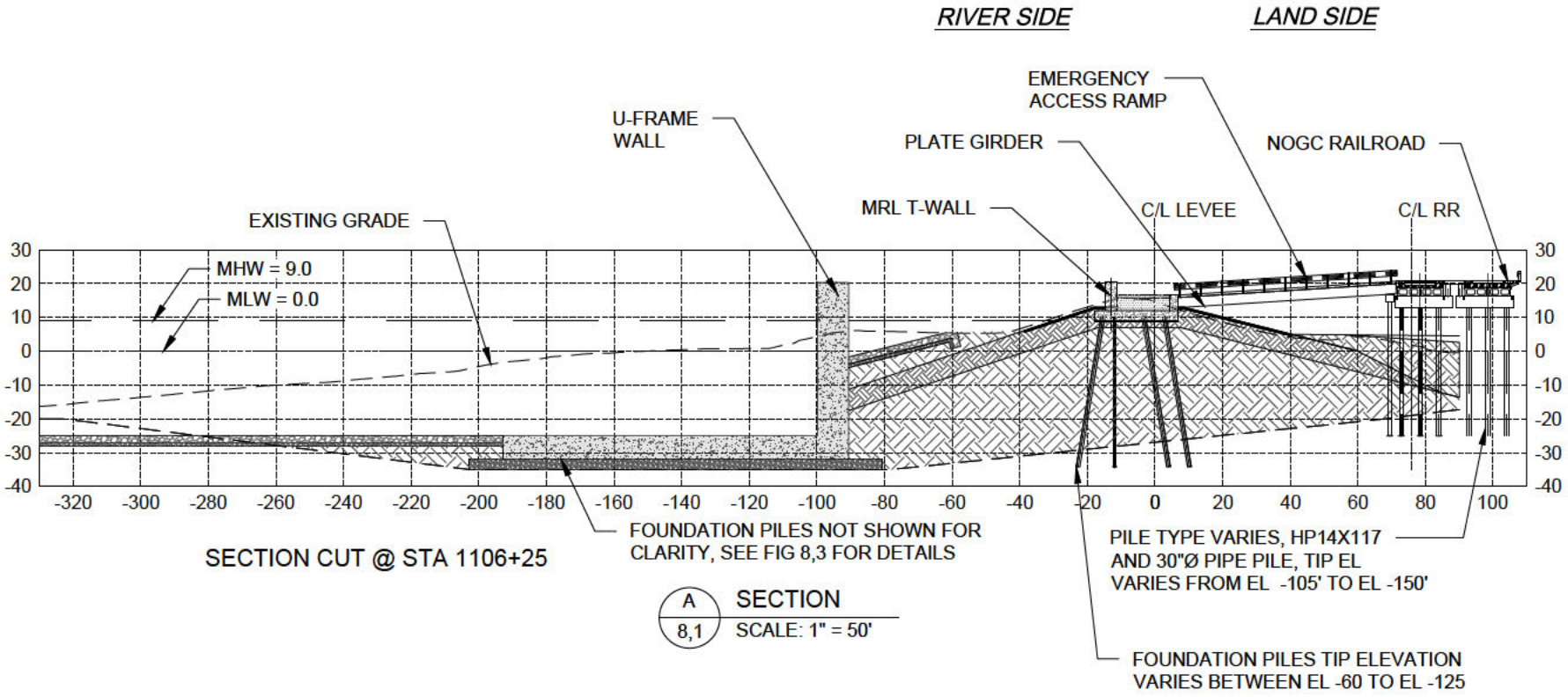
50' 0 50' 100'

SCALE: 1" = 100'

PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG, ENGINEER OF RECORD; CIVIL, DISCIPLINE LA., STATE; 29393, LICENSE NO.; JULY 2022, DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021	MRL T-WALL PROFILE DATE: JULY 2022
			DRAWN BY: PD	DESIGNED BY: PO	APPROVED BY: BL
				DRAWING FIGURE 11	SHEET 1 OF 3

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



SECTION CUT @ STA 1106+25

A / 8,1 SECTION
SCALE: 1" = 50'

25' 0 25' 50'
SCALE: 1" = 50'

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD
CIVIL — DISCIPLINE
LA. — STATE
29393 — LICENSE NO.
JULY 2022 — DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

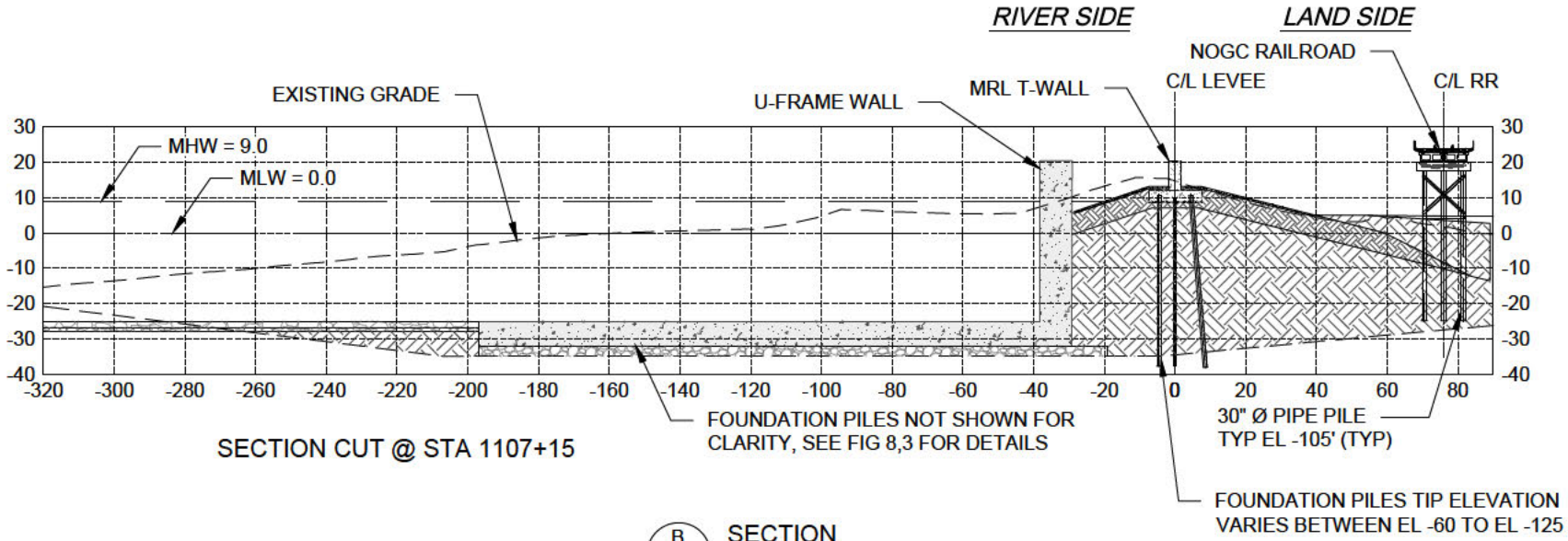
MRL T-WALL
TYPICAL SECTION A

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 11 | SHEET 2 OF 3

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



SECTION CUT @ STA 1107+15

B
8,1
SECTION
SCALE: 1" = 50'

25' 0 25' 50'

SCALE: 1" = 50'

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG
ENGINEER OF RECORD

CIVIL
DISCIPLINE

LA.
STATE

29393
LICENSE NO.

JULY 2022
DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

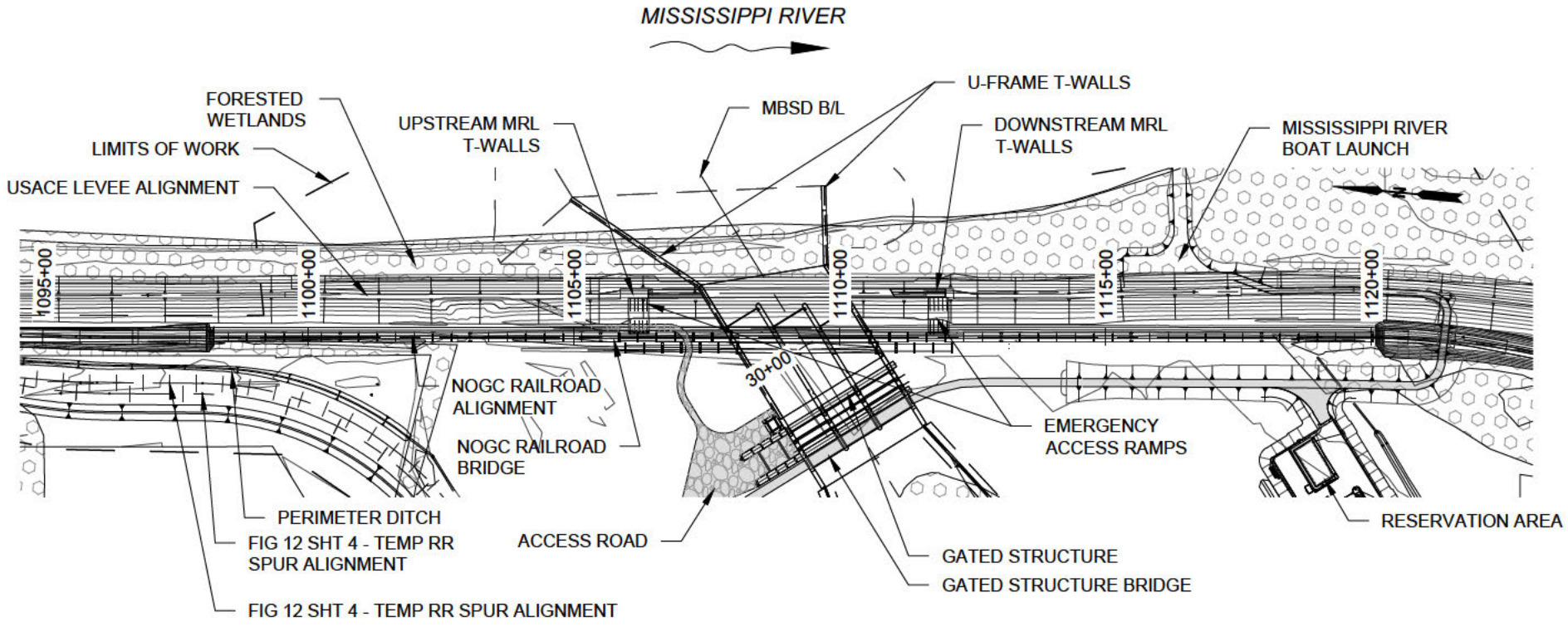
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

MRL T-WALL
TYPICAL SECTION B

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 11 | SHEET 3 OF 3



NOGC RR BRIDGE PLAN

SCALE: 1" = 300'

150' 0 150' 300'

SCALE: 1" = 300'

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE

LA. — STATE | 29393 — LICENSE NO. | AUGUST 2022 — DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

NOGC RR BRIDGE PLAN

CPRA PROJECT NUMBER: BA-0153

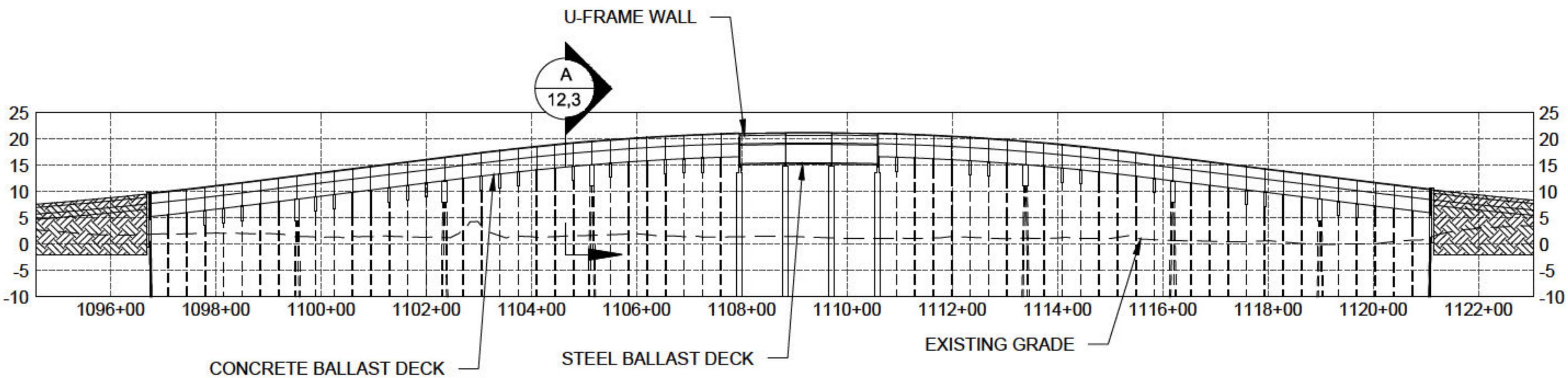
AECOM PROJECT NUMBER: 60649021

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 12 | SHEET 1 OF 5

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



NOGC RR BRIDGE PROFILE

SCALE: 1" = 300'

150' 0 150' 300'

SCALE: 1" = 300'

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE

LA. — STATE | 29393 — LICENSE NO. | AUGUST 2022 — DATE

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SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

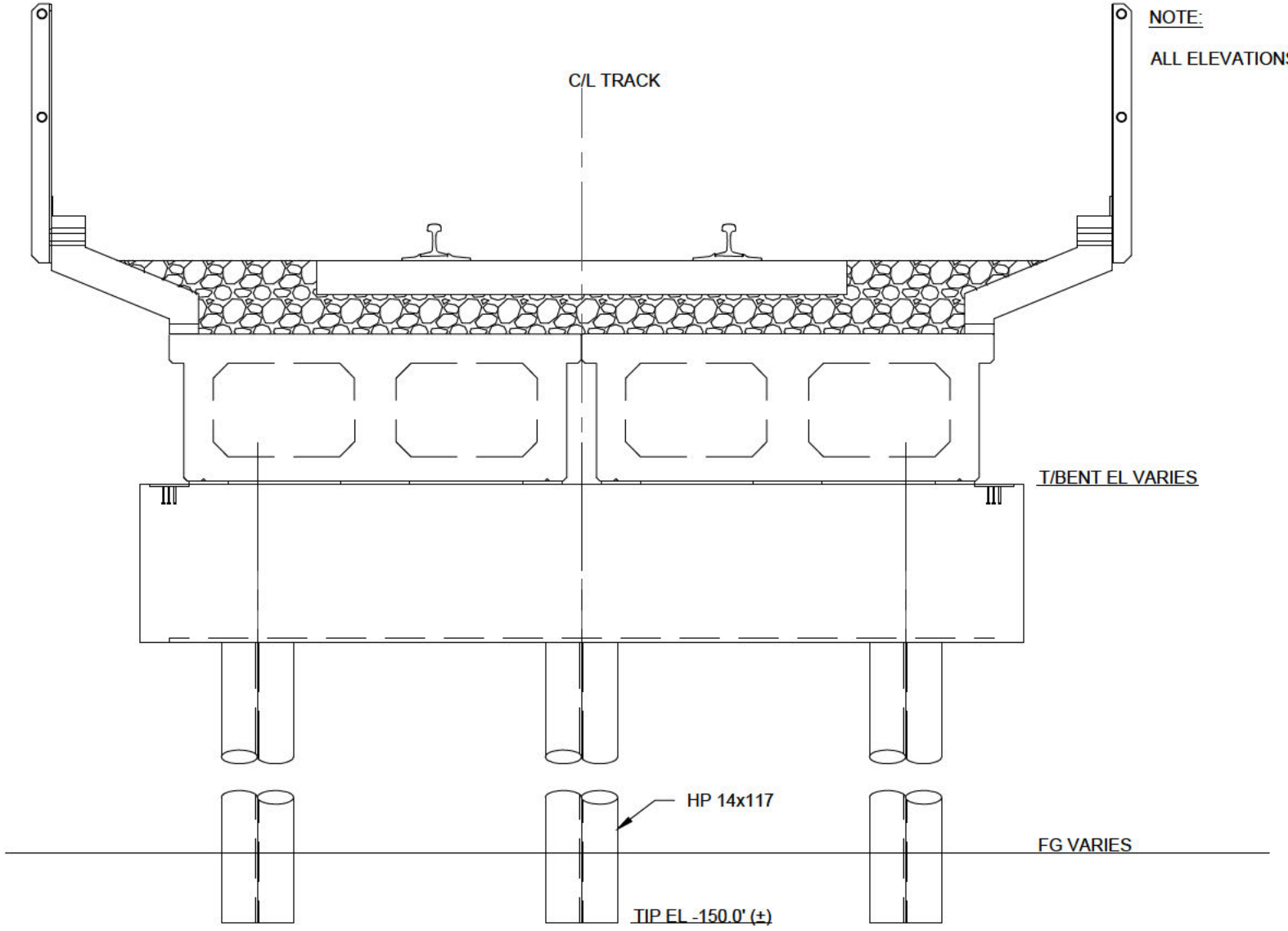
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

NOGC RR BRIDGE PROFILE

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 12 | SHEET 2 OF 5



NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88

0 2' 4' 6'

SCALE: 3/8" = 1'-0"

A
12,2

TYPICAL SECTION - PRESTRESSED BOX GIRDER SPAN

SCALE: 3/8" = 1'-0"

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG
ENGINEER OF RECORD

CIVIL
DISCIPLINE

LA.
STATE

29393
LICENSE NO.

AUGUST 2022
DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

NOGC RR BRIDGE
SECTION A

DATE: AUGUST 2022

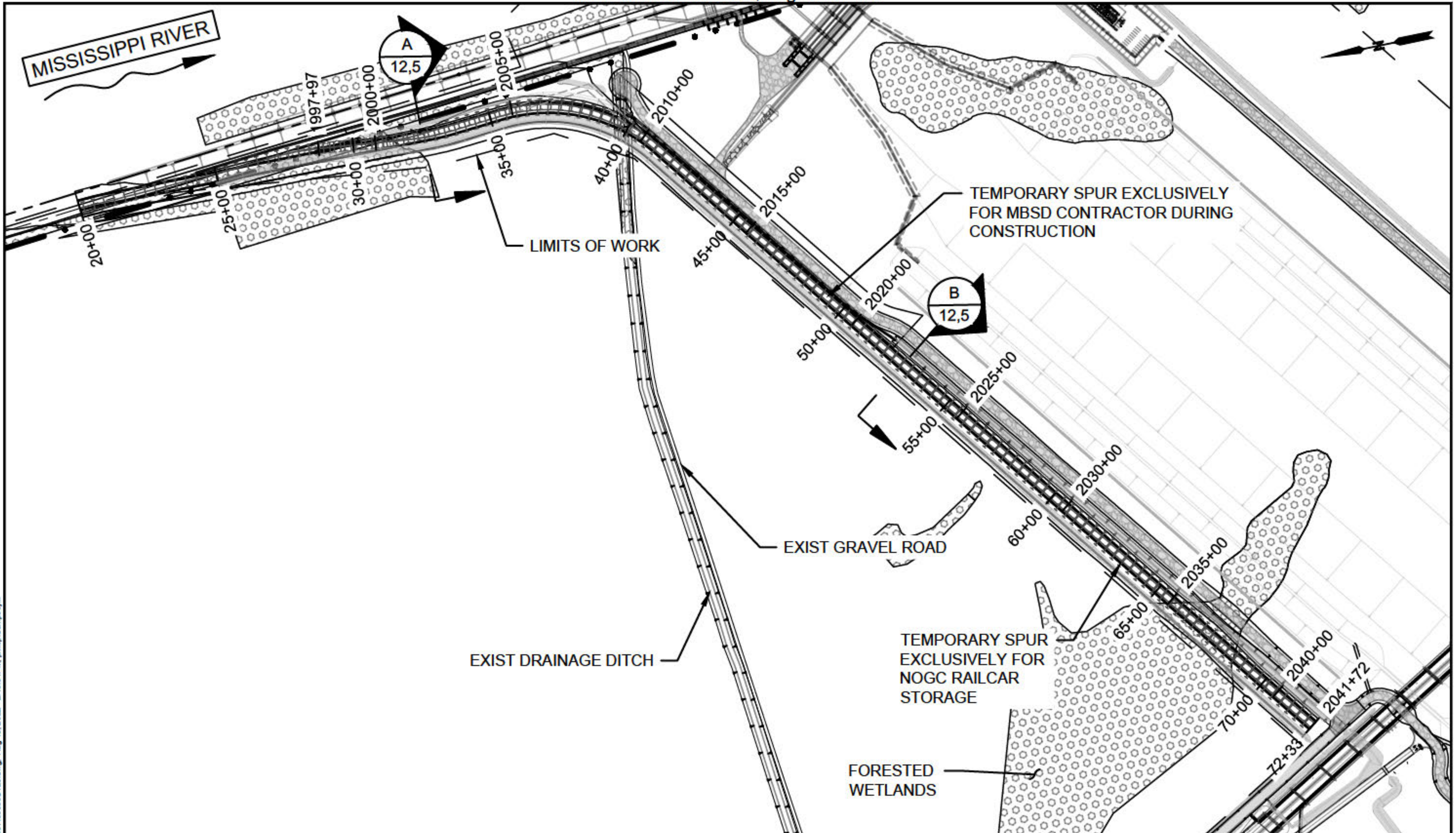
DRAWN BY: PD

DESIGNED BY: PO

APPROVED BY: BL

DRAWING FIGURE 12

SHEET 3 OF 5



250' 0 250' 500'

SCALE: 1" = 500'

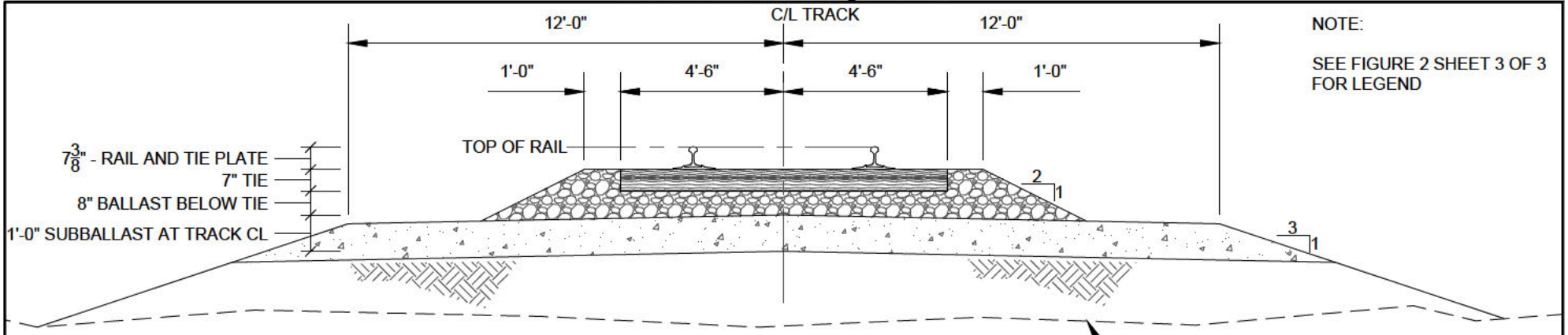
TEMP NOGC RR SPUR - PLAN

SCALE: 1" = 500'

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG — ENGINEER OF RECORD; CIVIL — DISCIPLINE LA. — STATE; 29393 — LICENSE NO.; AUGUST 2022 — DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021	TEMP NOGC RR SPUR PLAN DATE: AUGUST 2022
			DRAWN BY: PD / DESIGNED BY: PO	APPROVED BY: BL	DRAWING FIGURE 12 / SHEET 4 OF 5



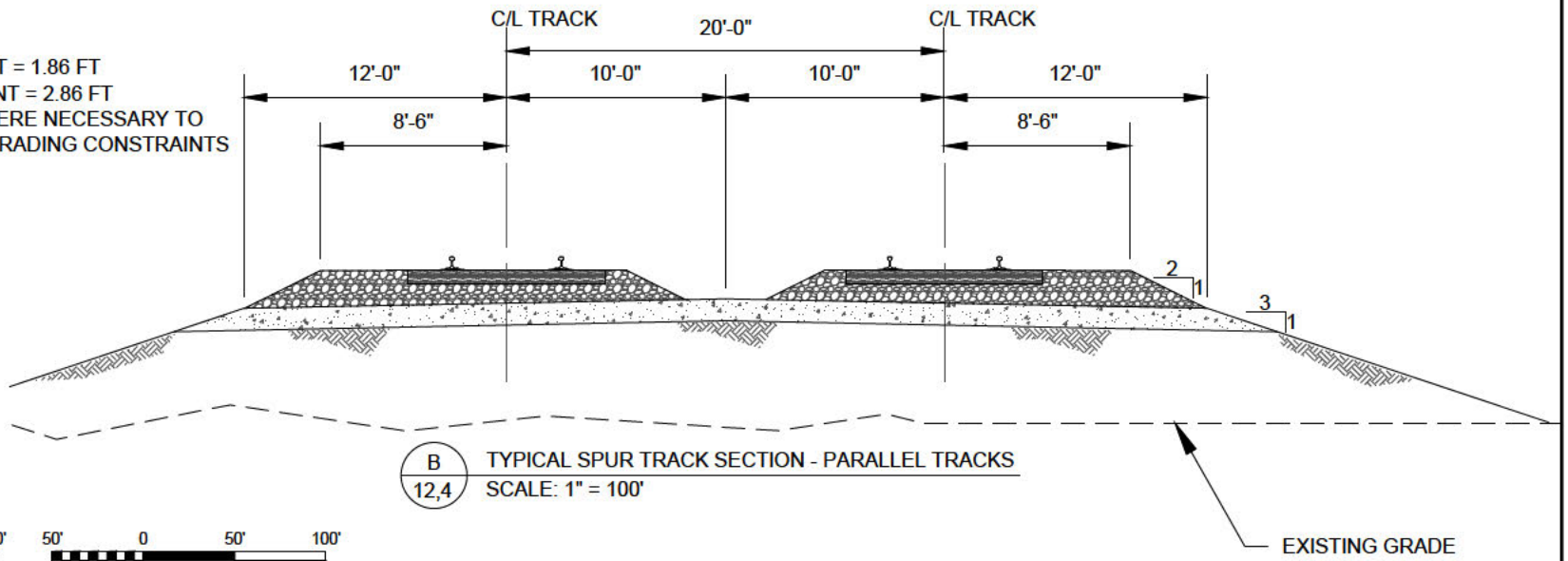
NOTE:

SEE FIGURE 2 SHEET 3 OF 3 FOR LEGEND

A / 12,4 TYPICAL TRACK SECTION
SCALE: 1" = 50'

DIMENSIONS FOR TOP/RAIL TO TOP/EMBANKMENT AT TRACK CENTERLINE:

NEW AREMA 115 RE# RAIL = 6 5/8"
TIE PLATE (AREMA PLAN 7) = 3/4" (5 1/2" BASE)
9" x 9'-0" CROSS TIE = 7"
**BALLAST = 8"
SUBBALLAST = 12"
TOP/RAIL TO TOP/SUBBALLAST = 1.86 FT
TOP/RAIL TO TOP/EMBANKMENT = 2.86 FT
**BALLAST DEPTH VARIES WHERE NECESSARY TO MEET DESIGN PROFILE AND GRADING CONSTRAINTS



B / 12,4 TYPICAL SPUR TRACK SECTION - PARALLEL TRACKS
SCALE: 1" = 100'

25' 0 25' 50'
SCALE: 1" = 50'

50' 0 50' 100'
SCALE: 1" = 100'

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD
CIVIL — DISCIPLINE
LA. — STATE
29393 — LICENSE NO.
AUGUST 2022 — DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

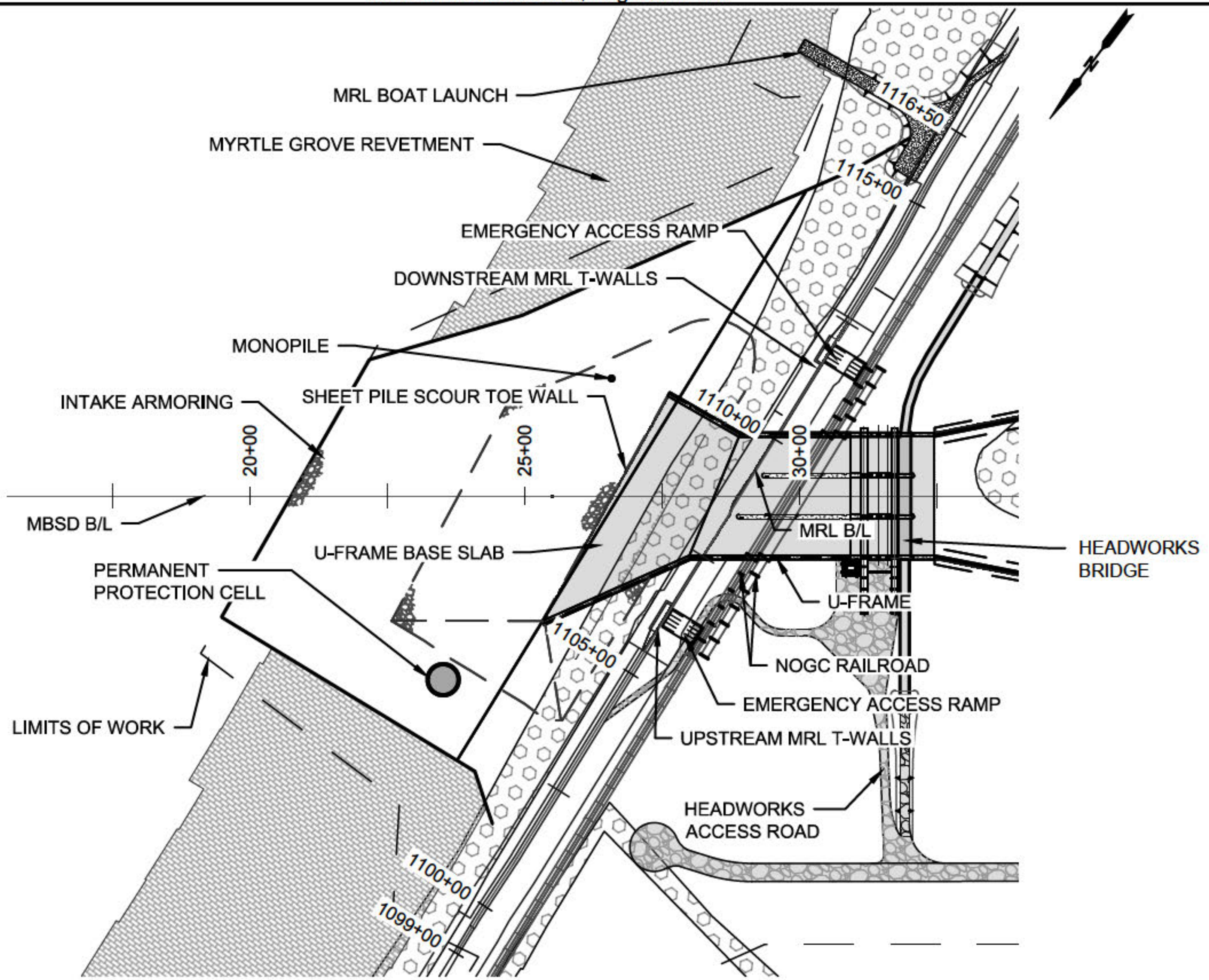
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

TEMP NOGC RR MAINLINE & SPUR SECTIONS

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 12 | SHEET 5 OF 5



150' 0 150' 300'

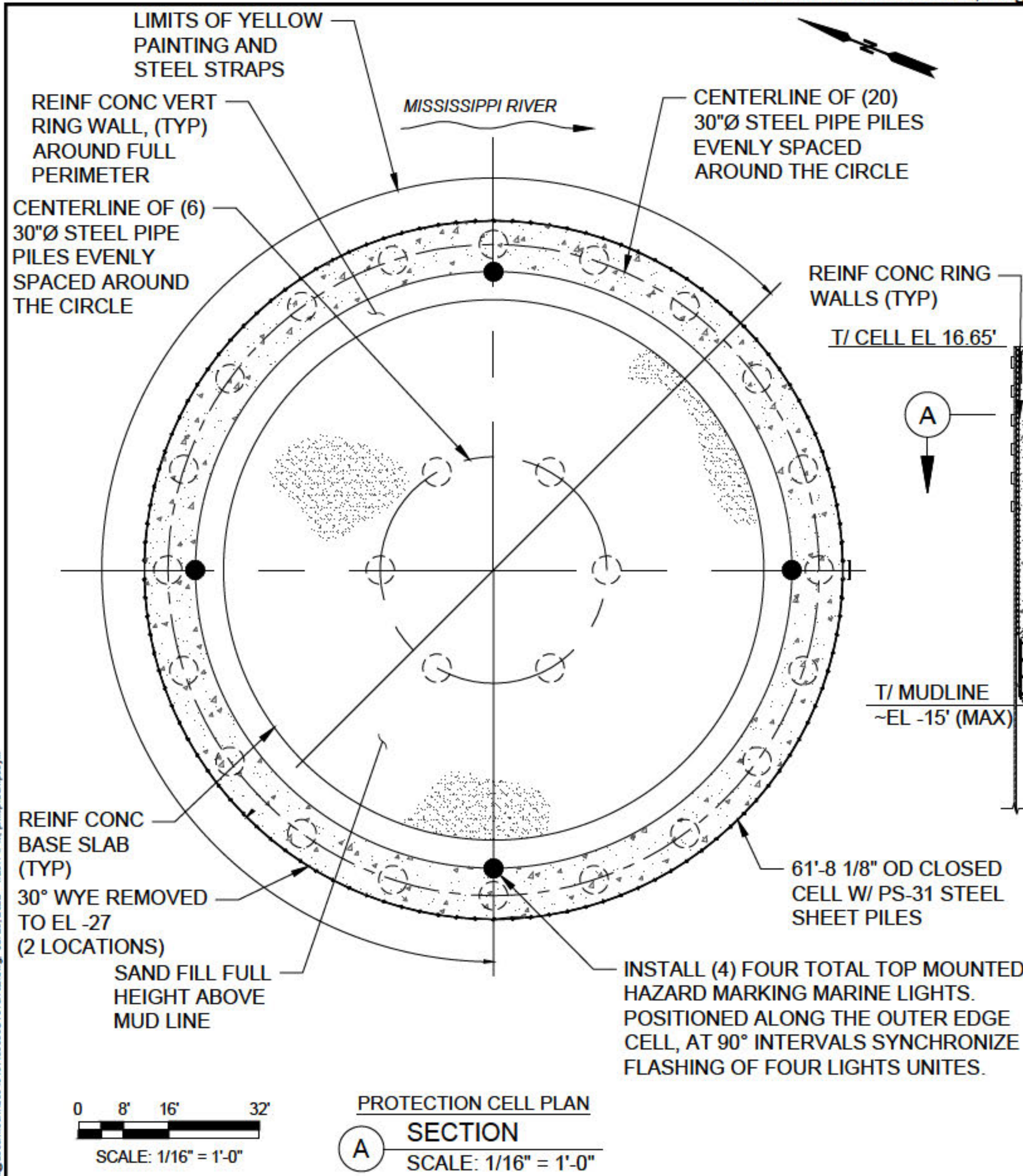
SCALE: 1" = 300'

HEADWORKS RIVER PROTECTION STRUCTURES PLAN

SCALE: 1" = 300'

PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG — ENGINEER OF RECORD; CIVIL — DISCIPLINE LA. — STATE; 29393 — LICENSE NO.; JULY 2022 — DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021
			DRAWN BY: PD / DESIGNED BY: PO	APPROVED BY: BL

HEADWORKS RIVER PROTECTION STRUCTURES PLAN	
DATE: JULY 2022	
DRAWING FIGURE 13	SHEET 1 OF 3



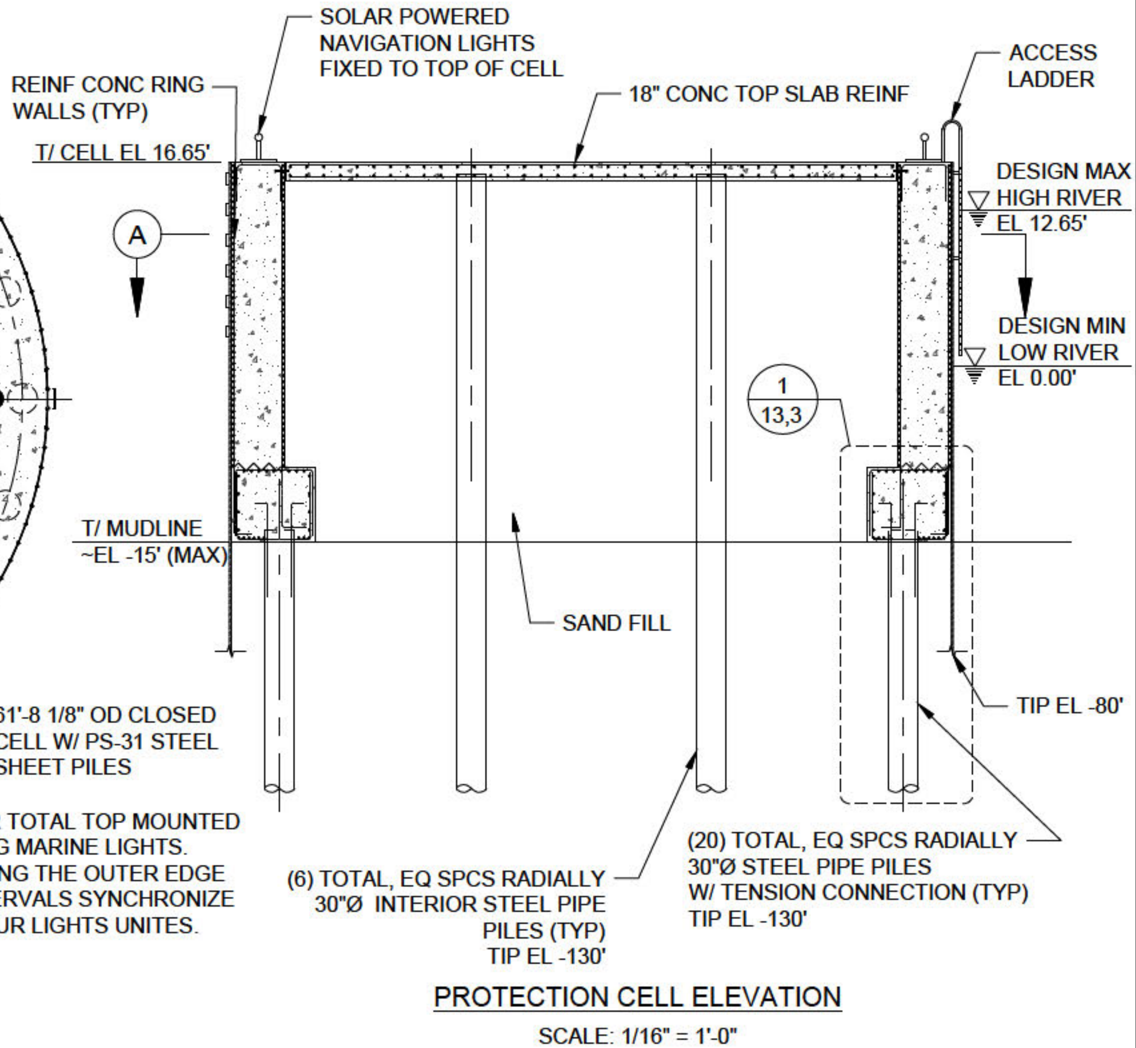
PROTECTION CELL PLAN

(A) SECTION

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

NOTES:

1. PROTECTION CELL IS SHOWN IN THE FINAL CONDITION.
2. ALL INTERIOR PILES SHALL BE COATED WITH 6-A-Z COAL TAR EPOXY PAINT FROM TOP OF PILE TO EL -5.0 (TOTAL PILE COATING LENGTH = 21 FT).
3. ALL ELEVATIONS ARE IN FEET NAVD88.

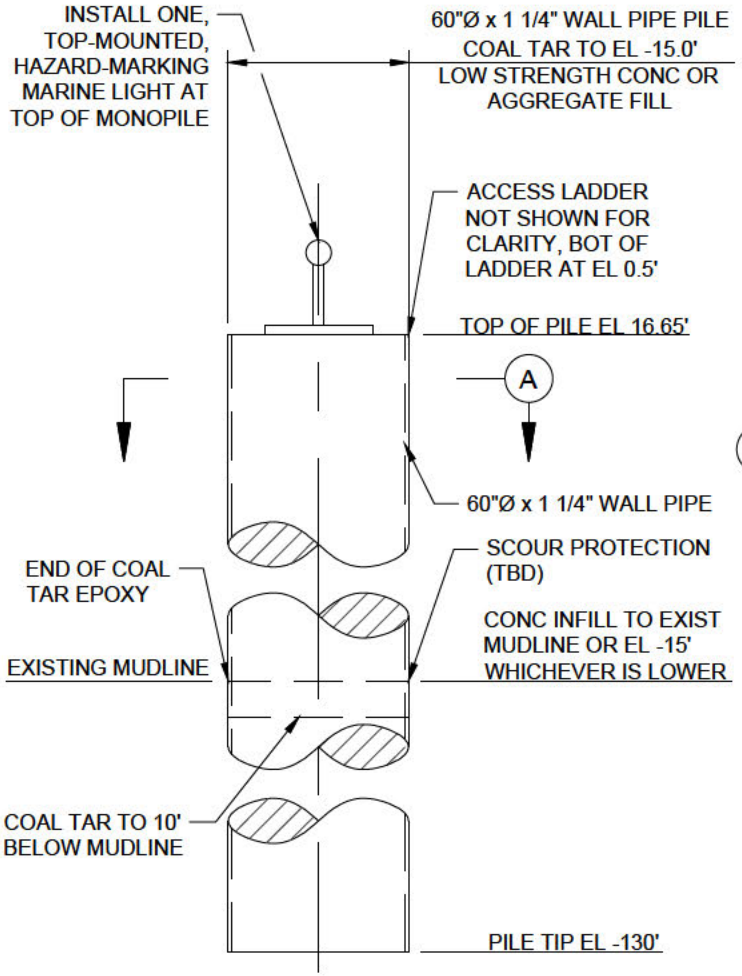


PROTECTION CELL ELEVATION

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

PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG, ENGINEER OF RECORD — CIVIL, DISCIPLINE LA., STATE — 29393, LICENSE NO. — JULY 2022, DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021	HEADWORKS RIVER PROTECTION STRUCTURES SECTIONS DATE: JULY 2022
			DRAWN BY: PD — DESIGNED BY: PO	APPROVED BY: BL	DRAWING FIGURE 13 — SHEET 2 OF 3

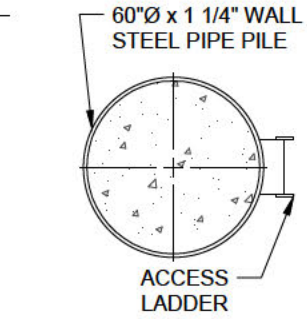
NOTE:
1. ALL ELEVATIONS ARE IN FEET NAVD88.



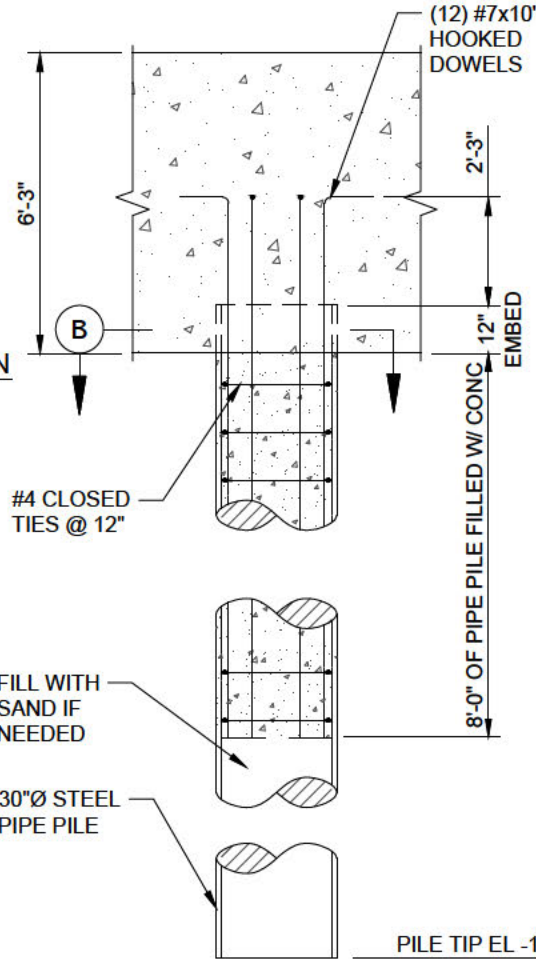
MONOPILE ELEVATION
SCALE: 3/16" = 1'-0"

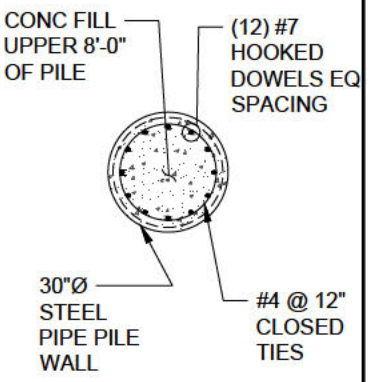
0 4' 8' 12'
SCALE: 3/16" = 1'-0"

0 2' 4' 8'
SCALE: 1/4" = 1'-0"



A MONOPILE SECTION
SCALE: 3/16" = 1'-0"





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

1/13,2 DETAIL - TYPICAL SECTION AT 30"Ø PIPE PILES
SCALE: 1/4" = 1'-0"

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD
CIVIL — DISCIPLINE
LA. — STATE
29393 — LICENSE NO.
JULY 2022 — DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153
AECOM PROJECT NUMBER: 60649021

HEADWORKS RIVER PROTECTION STRUCTURES SECTIONS

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 13 | SHEET 3 OF 3

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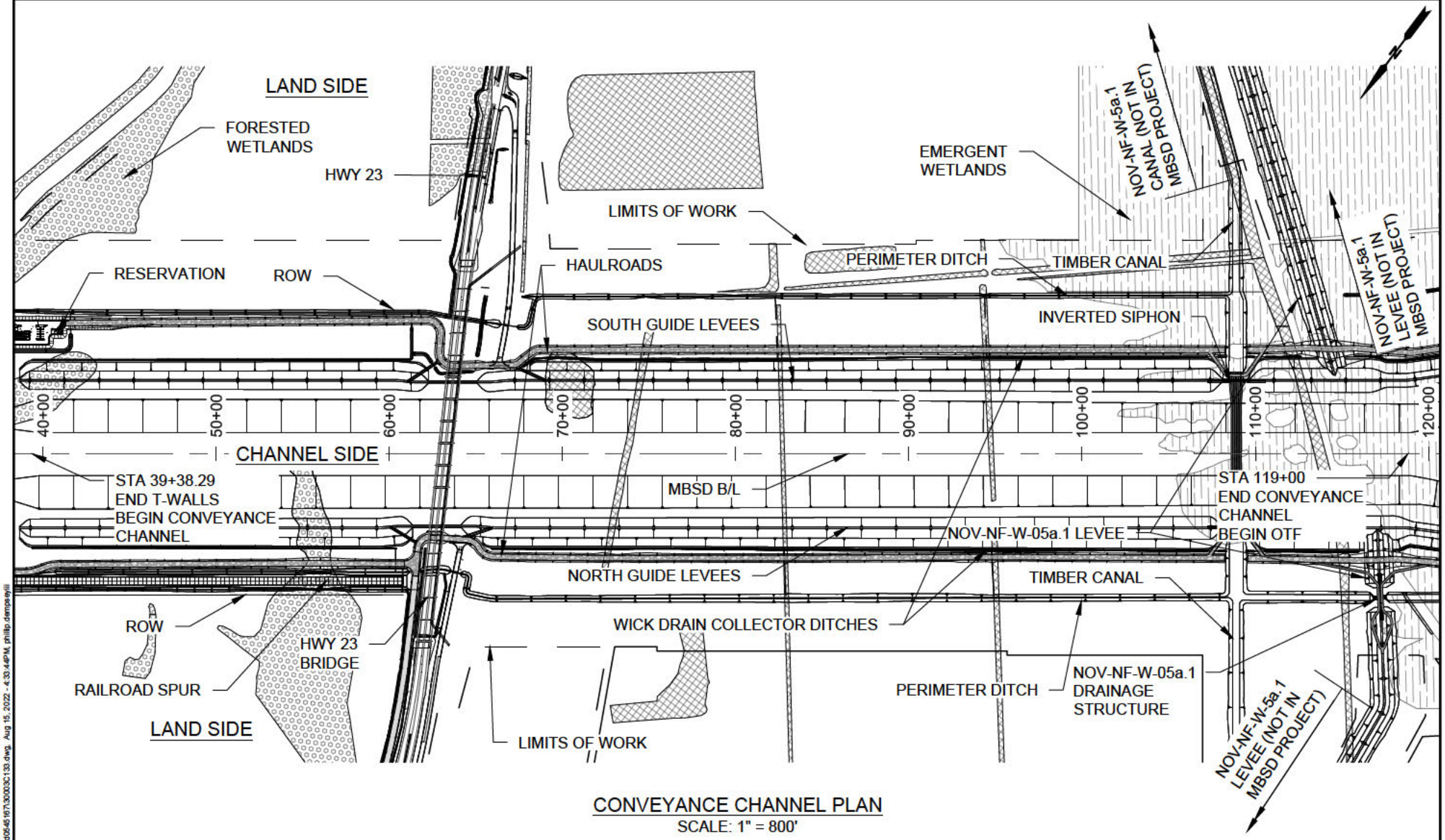

CONVEYANCE CHANNEL PLAN

SCALE: 1" = 800'

400' 0 400' 800'

SCALE: 1" = 800'

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE

LA. — STATE | 29393 — LICENSE NO. | AUGUST 2022 — DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CONVEYANCE CHANNEL PLAN

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 14 | SHEET 1 OF 3

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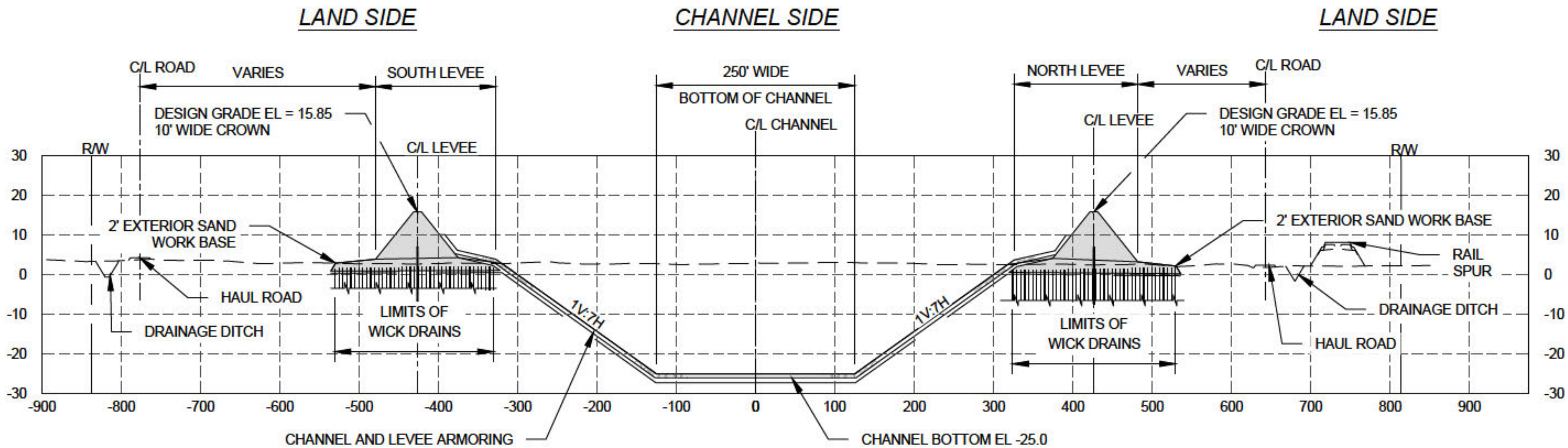
NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



* ROW LIMIT VARIES RIVERSIDE OF STA 62+00

SECTION CUT AT STA = 47+00.00

REACH 5 TYPICAL SECTION
DESIGN GRADE EL 15.85
B/L STA 39+38 TO B/L STA 48+00

SCALE: 1" = 200' (HORIZONTAL)
1" = 40' (VERTICAL)

100' 0 100' 200'

SCALE: 1" = 200'

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE
LA. — STATE | 29393 — LICENSE NO. | JULY 2022 — DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

CONVEYANCE CHANNEL SECTION

DATE: JULY 2022

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NOTE:

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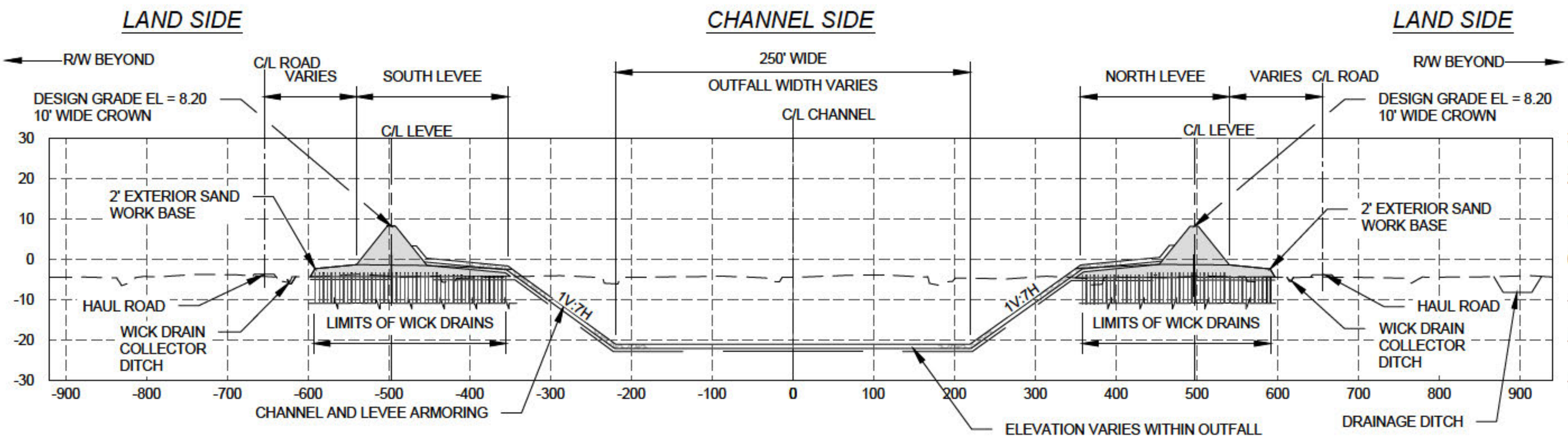

SECTION CUT AT STA = 124+00.00

TYPICAL REACH 8 (GUIDE LEVEE)
DESIGN GRADE EL 8.2
B/L STA 117+00 TO B/L STA 127+66
SCALE: 1" = 200' (HORIZONTAL)
1" = 40' (VERTICAL)

100' 0 100' 200'

SCALE: 1" = 200'

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225-922-5700

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

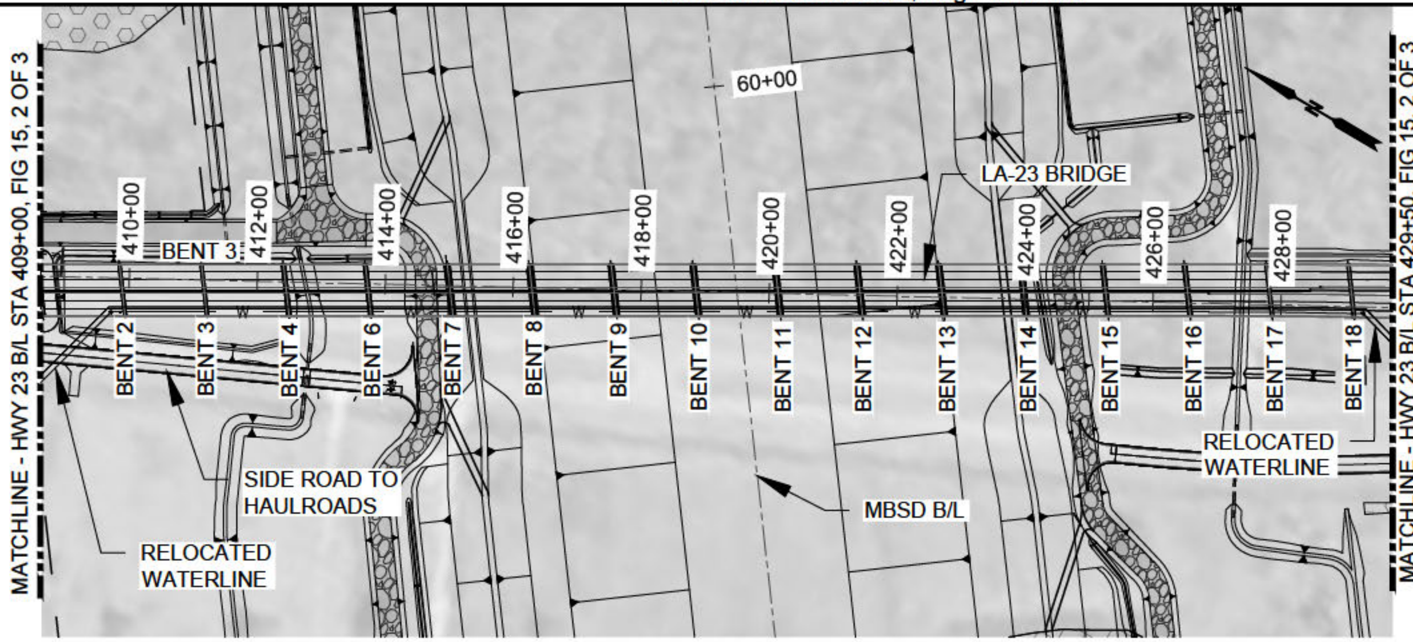
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

CONVEYANCE CHANNEL SECTION

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 14 | SHEET 3 OF 3



NOTE:

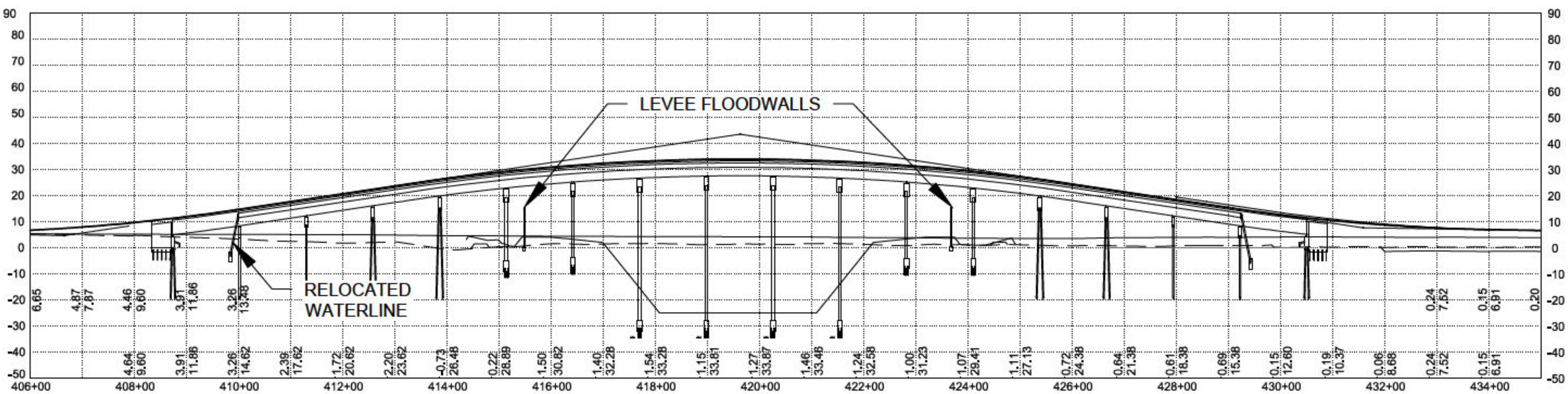
ALL ELEVATIONS ARE IN FEET NAVD88

150' 0 150' 300'

SCALE: 1" = 300'

LA-23 BRIDGE PLAN

SCALE: 1" = 300



PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG ENGINEER OF RECORD | CIVIL DISCIPLINE

LA. STATE | 29393 LICENSE NO. | AUGUST 2022 DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

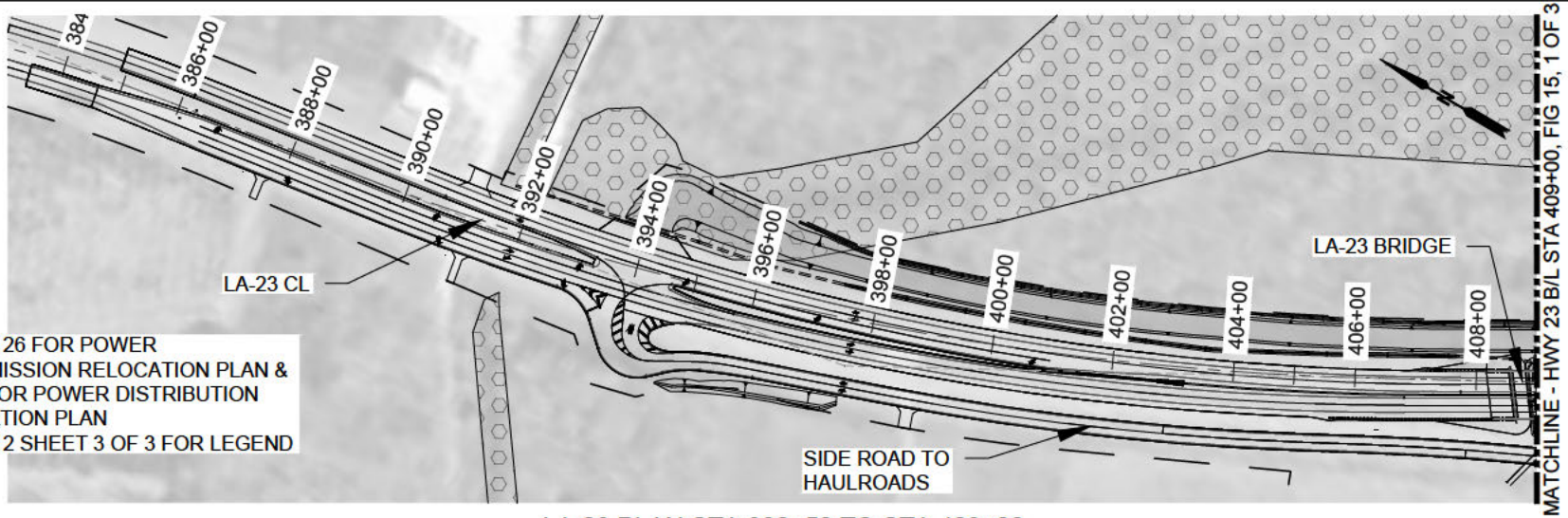
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

LA-23 BRIDGE PLAN & PROFILE

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 15 | SHEET 1 OF 3

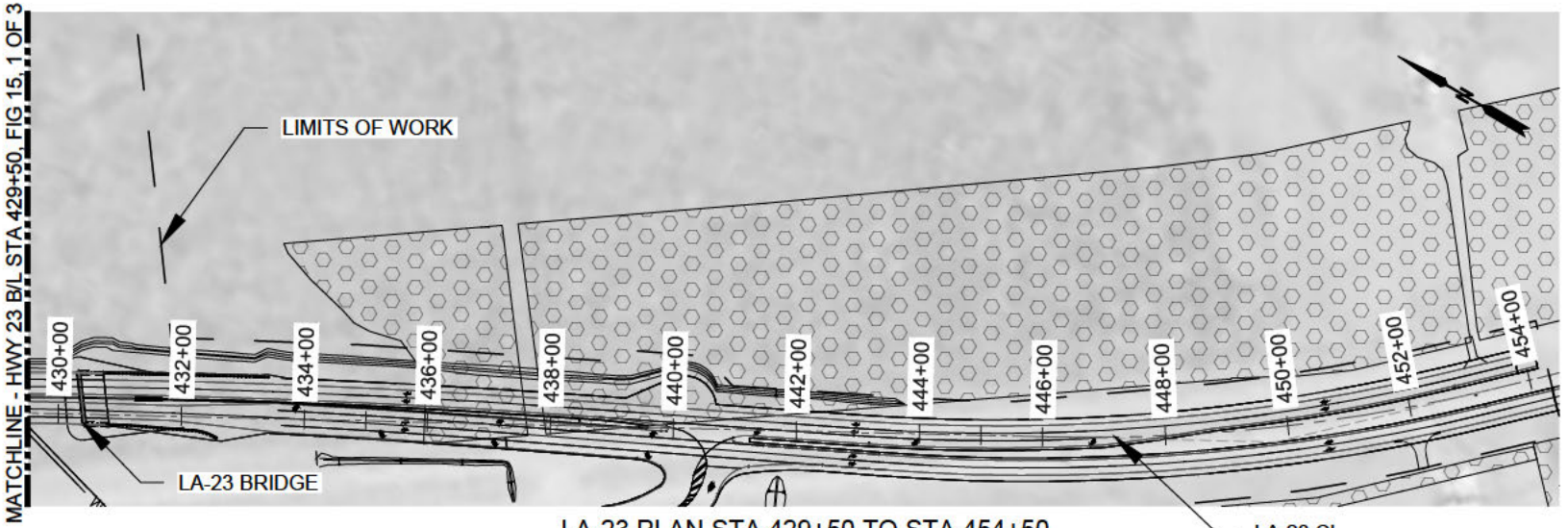


NOTES:

1. SEE FIG 26 FOR POWER TRANSMISSION RELOCATION PLAN & FIG 27 FOR POWER DISTRIBUTION RELOCATION PLAN
2. SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

LA-23 PLAN STA 382+50 TO STA 409+00

SCALE: 1" = 300



LA-23 PLAN STA 429+50 TO STA 454+50

SCALE: 1" = 300

150' 0 150' 300'

SCALE: 1" = 300'

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LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

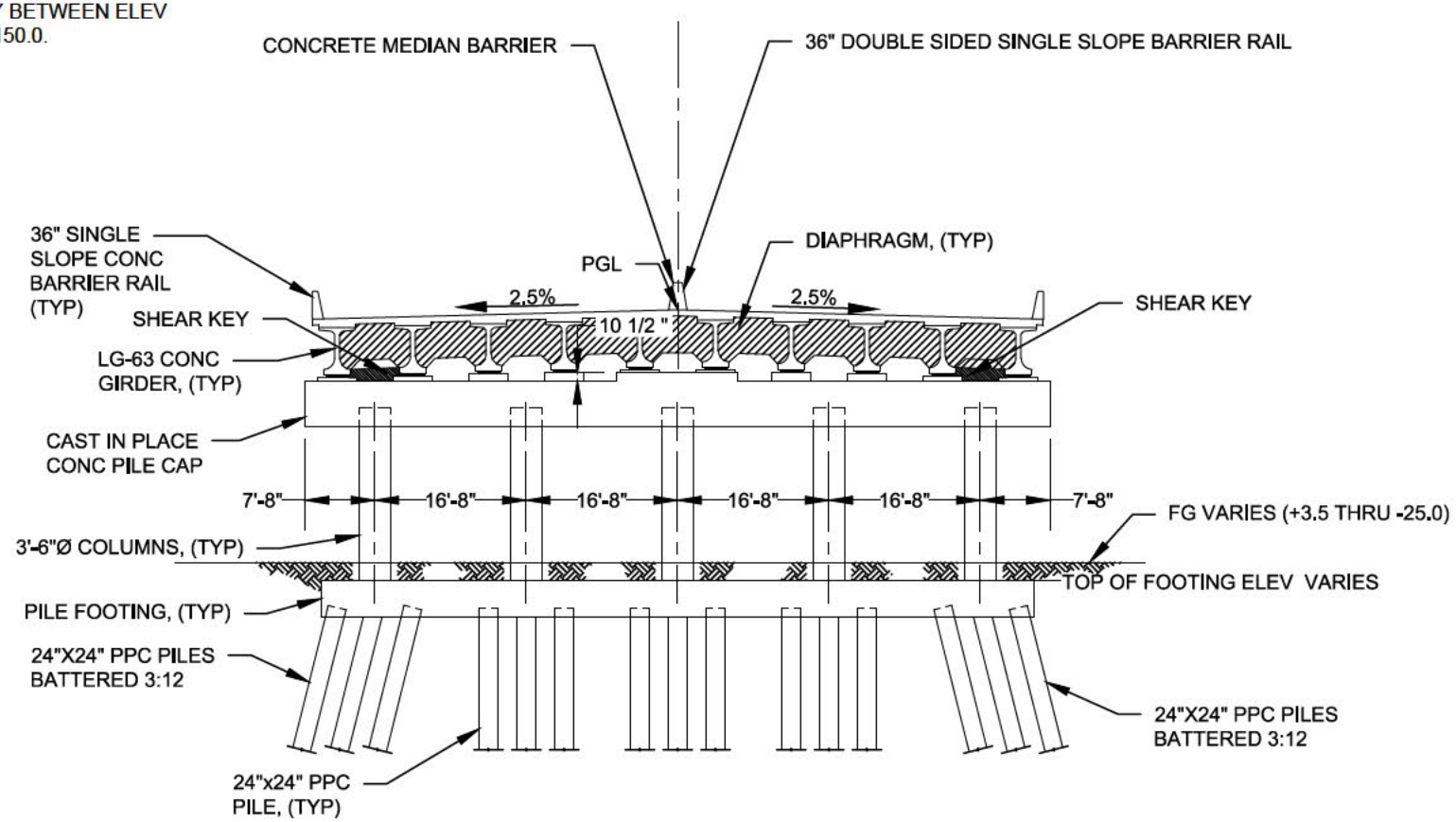
LA-23 PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 15 | SHEET 2 OF 3

NOTES:

1. ALL ELEVATIONS ARE IN FEET NAVD88
2. LA-HWY 23 BRIDGE PILE TIP ELEVATIONS VARY BETWEEN ELEV -130.0 AND ELEV -150.0.



TYPICAL BRIDGE SECTION - LA HIGHWAY 23

SCALE: 1" = 20'

10' 0 10' 20'

SCALE: 1" = 20'

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COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
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MID-BARATARIA SEDIMENT DIVERSION

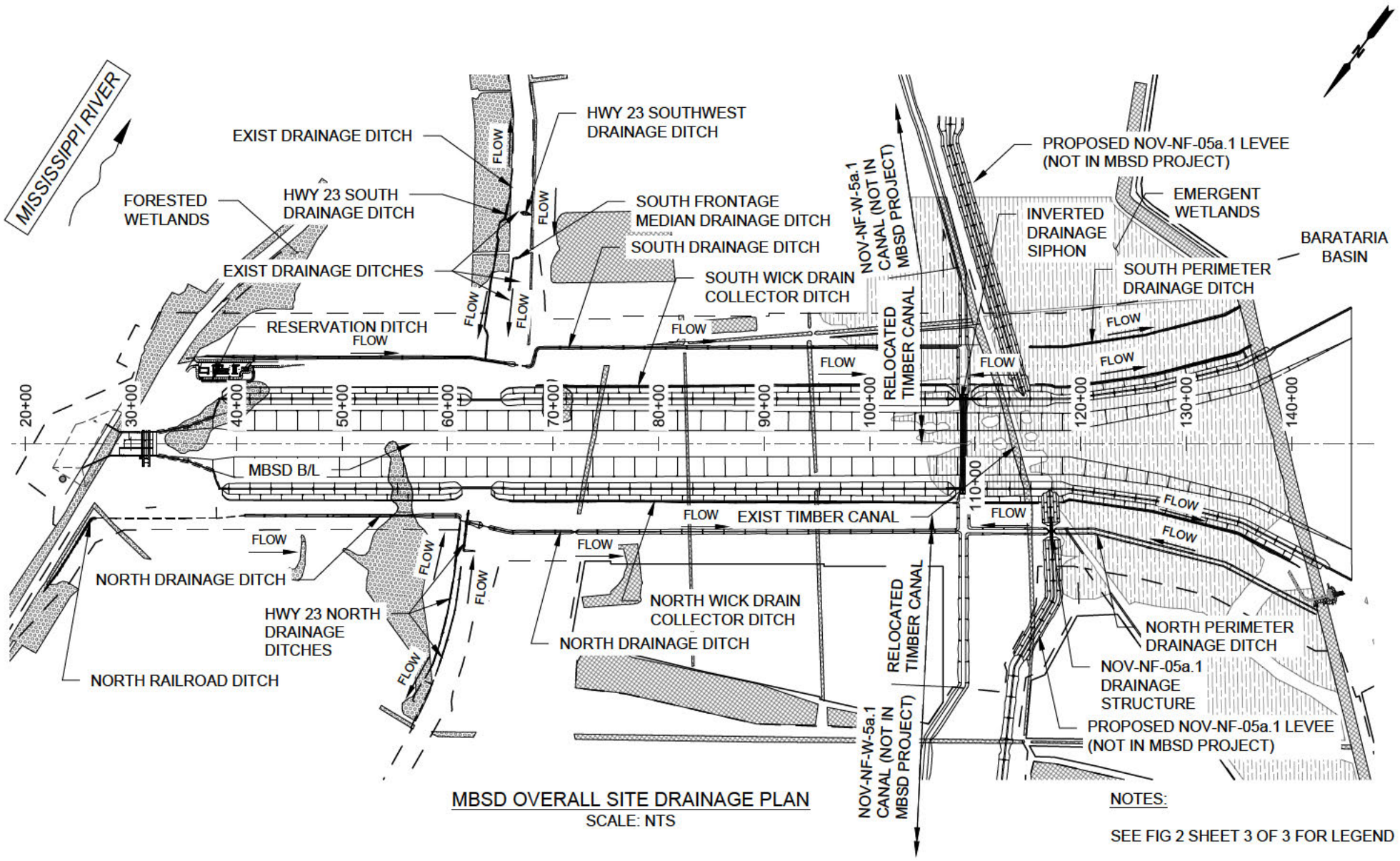
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

LA-23 BRIDGE SECTION

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 15 | SHEET 3 OF 3



MBSD OVERALL SITE DRAINAGE PLAN

SCALE: NTS

NOTES:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

PRELIMINARY FOR PERMIT PURPOSE ONLY

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
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BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

MBSD OVERALL SITE DRAINAGE PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 16 | SHEET 1 OF 2

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Photo Source: Google Earth Pro, Photo Date: 1/17/2021

EXISTING SITE DRAINAGE PLAN

SCALE: 1" = 2000'

NOTES:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

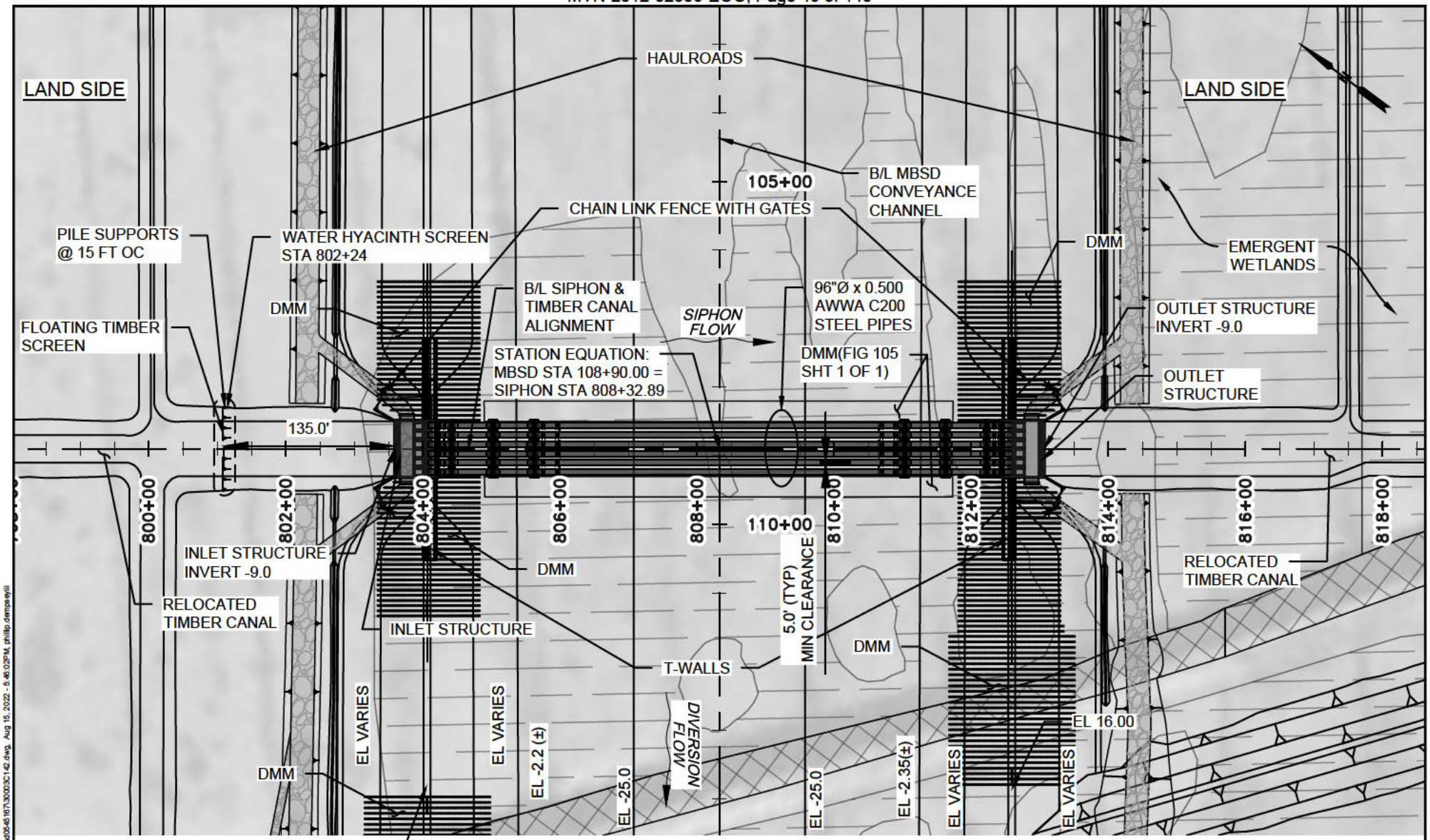
1000' 0 1000' 2000'

SCALE: 1" = 2000'

LEGEND:

- DRAINAGE BOUNDARIES
- EXISTING DRAINAGE FLOW
- MBSD LOW

PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG ENGINEER OF RECORD — CIVIL DISCIPLINE LA. STATE — 29393 LICENSE NO. — AUGUST 2022 DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021	EXISTING SITE DRAINAGE PLAN DATE: AUGUST 2022
			DRAWN BY: PD — DESIGNED BY: PO	APPROVED BY: BL	DRAWING FIGURE 16 — SHEET 2 OF 2



100' 0 100' 200'

SCALE: 1" = 200'

INVERTED DRAINAGE SIPHON SITE PLAN

SCALE: 1" = 200'

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD | CIVIL — DISCIPLINE

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AECOM
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225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
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150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

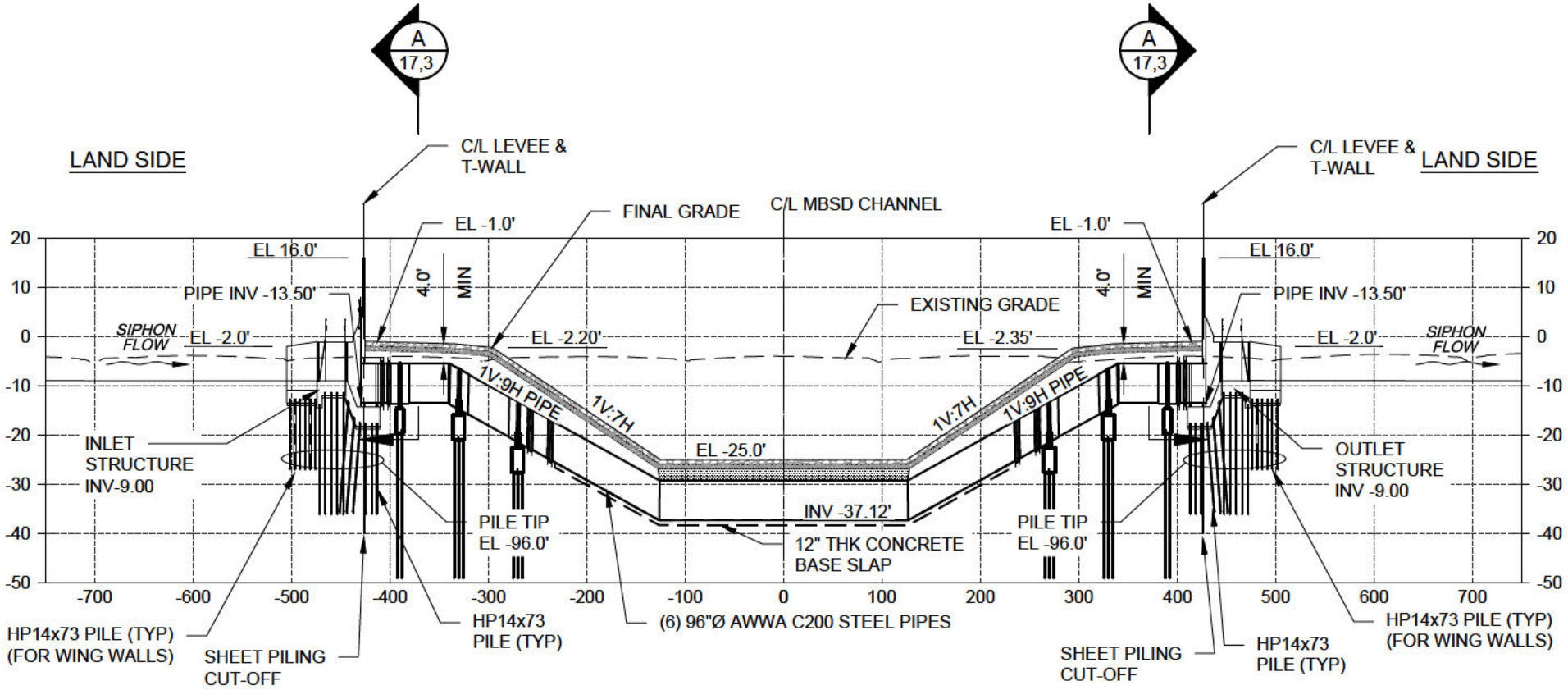
INVERTED DRAINAGE SIPHON SITE PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 17 | SHEET 1 OF 4

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



INVERTED DRAINAGE SIPHON PROFILE

SCALE: NTS

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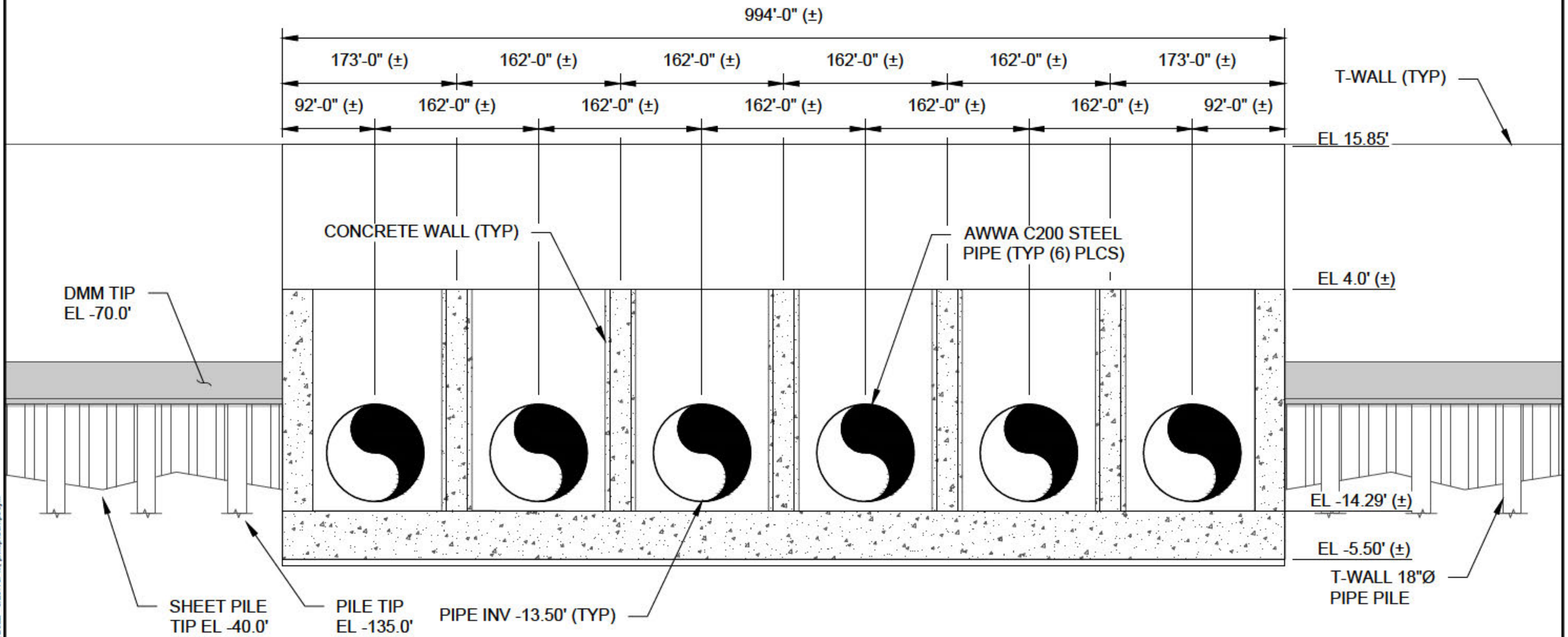
PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG ENGINEER OF RECORD — CIVIL DISCIPLINE LA. STATE — 29393 LICENSE NO. — AUGUST 2022 DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021	INVERTED DRAINAGE SIPHON PROFILE DATE: AUGUST 2022
			DRAWN BY: PD — DESIGNED BY: PO	APPROVED BY: BL	DRAWING FIGURE 17 — SHEET 2 OF 4

NOTES:

1. SLUICE GATES NOT SHOWN IN SECTION FOR CLARITY
2. STRUCTURE PILES NOT SHOWN FOR CLARITY
3. ALL ELEVATIONS ARE IN FEET NAVD88



A / 17,2 INVERTED SIPHON INTAKE SECTION
SCALE: NTS

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BRUCE LELONG, ENGINEER OF RECORD — CIVIL, DISCIPLINE
LA., STATE — 29393, LICENSE NO. — AUGUST 2022, DATE

AECOM
8555 UNITED PLAZA BLVD
SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

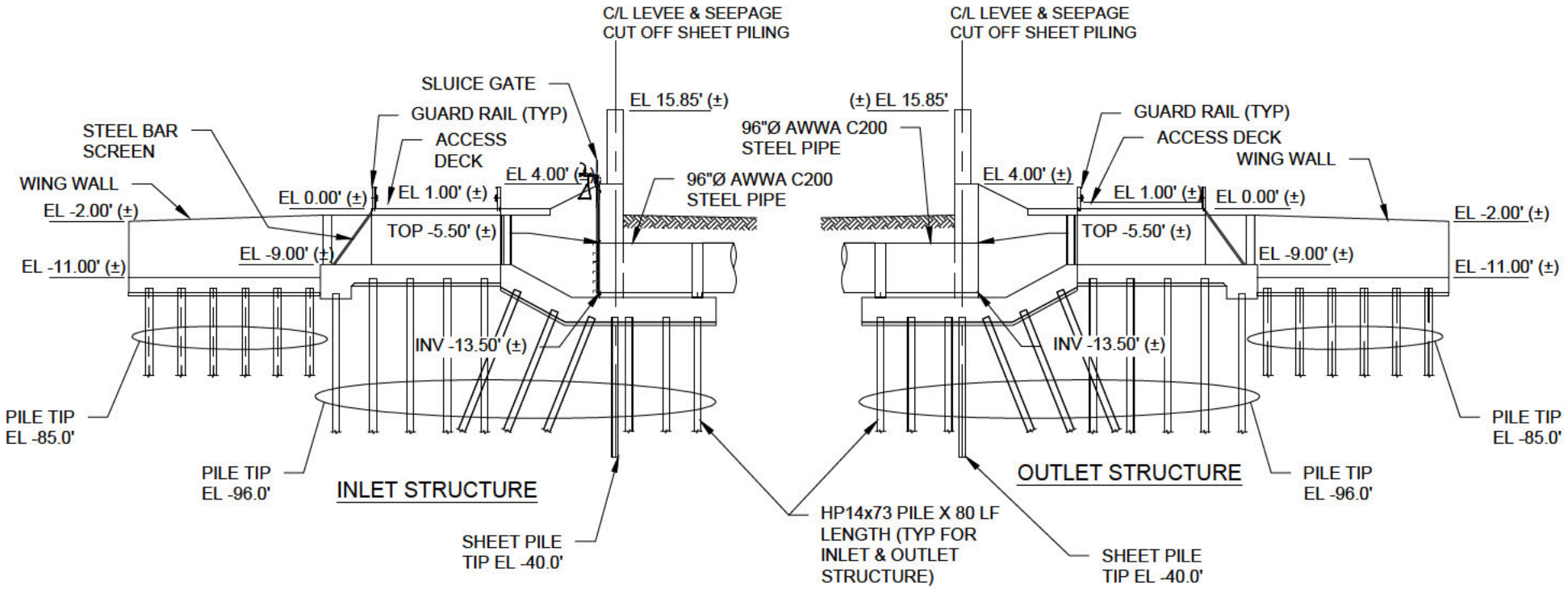
INVERTED DRAINAGE SIPHON INTAKE SECTION

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 17 | SHEET 3 OF 4

NOTE:

1. 96"Ø PIPES HAVE 1/2" WALL THICKNESS WITH CEMENT MORTAR LINER INSIDE AND POLYURETHANE LINER OUTSIDE
2. ALL ELEVATIONS ARE IN FEET NAVD88



B 17,1&2 INVERTED SIPHON STRUCTURE SECTION
SCALE: 1" = 300'

150' 0 150' 300'
SCALE: 1" = 300'

PRELIMINARY FOR PERMIT PURPOSE ONLY

BRUCE LELONG ENGINEER OF RECORD | CIVIL DISCIPLINE
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225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153
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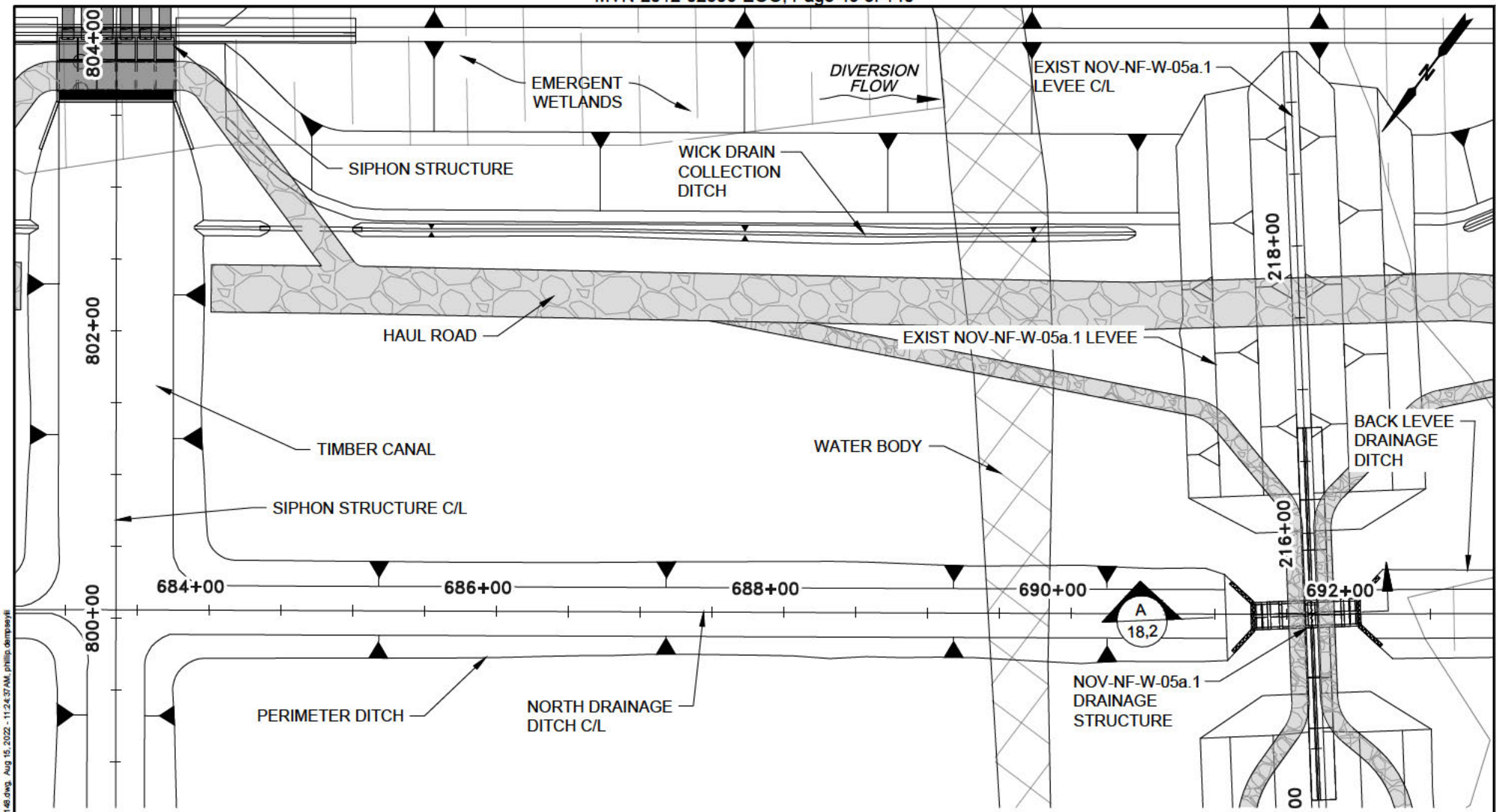
INVERTED DRAINAGE SIPHON STRUCTURE SECTION

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 17 | SHEET 4 OF 4



NOV-NF-W-05a.1 DRAINAGE STRUCTURE PLAN
SCALE: 1" = 100'

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

50' 0 50' 100'
SCALE: 1" = 100'

PRELIMINARY FOR PERMIT PURPOSE ONLY

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225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

NOV-NF-W-05A.1 DRAINAGE STRUCTURE PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 18 | SHEET 1 OF 2

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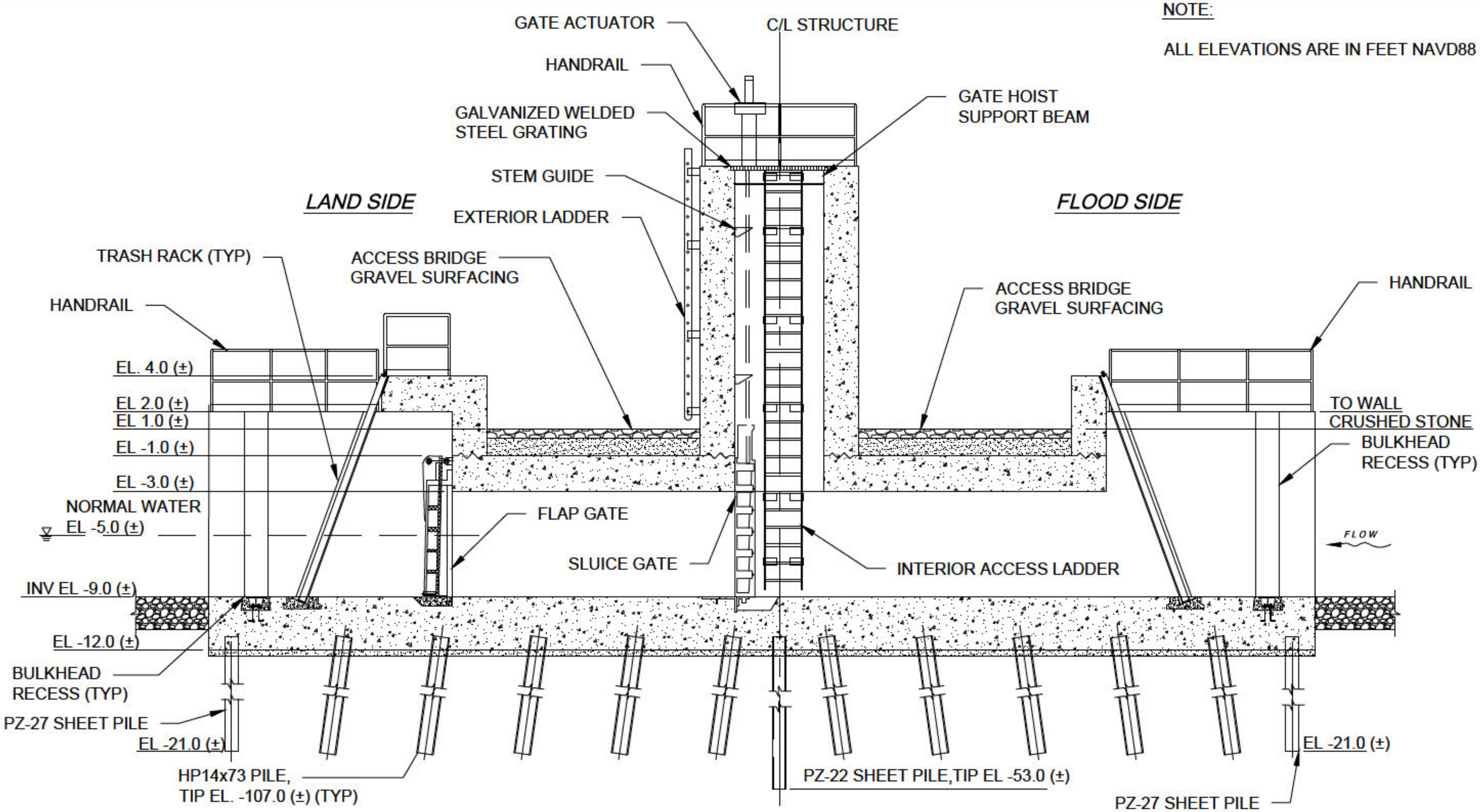
NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



A NOV-NF-W-05a.1 DRAINAGE STRUCTURE PROFILE
18,1 SCALE: 1" = 100'

50' 0 50' 100'
SCALE: 1" = 100'

PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG ENGINEER OF RECORD — CIVIL DISCIPLINE LA. STATE — 29393 LICENSE NO. — AUGUST 2022 DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION CPRA PROJECT NUMBER: BA-0153 AECOM PROJECT NUMBER: 60649021	NOV-NF-W-05A.1 DRAINAGE STRUCTURE PROFILE DATE: AUGUST 2022
			DRAWN BY: PD — DESIGNED BY: PO	APPROVED BY: BL	DRAWING FIGURE 18 — SHEET 2 OF 2

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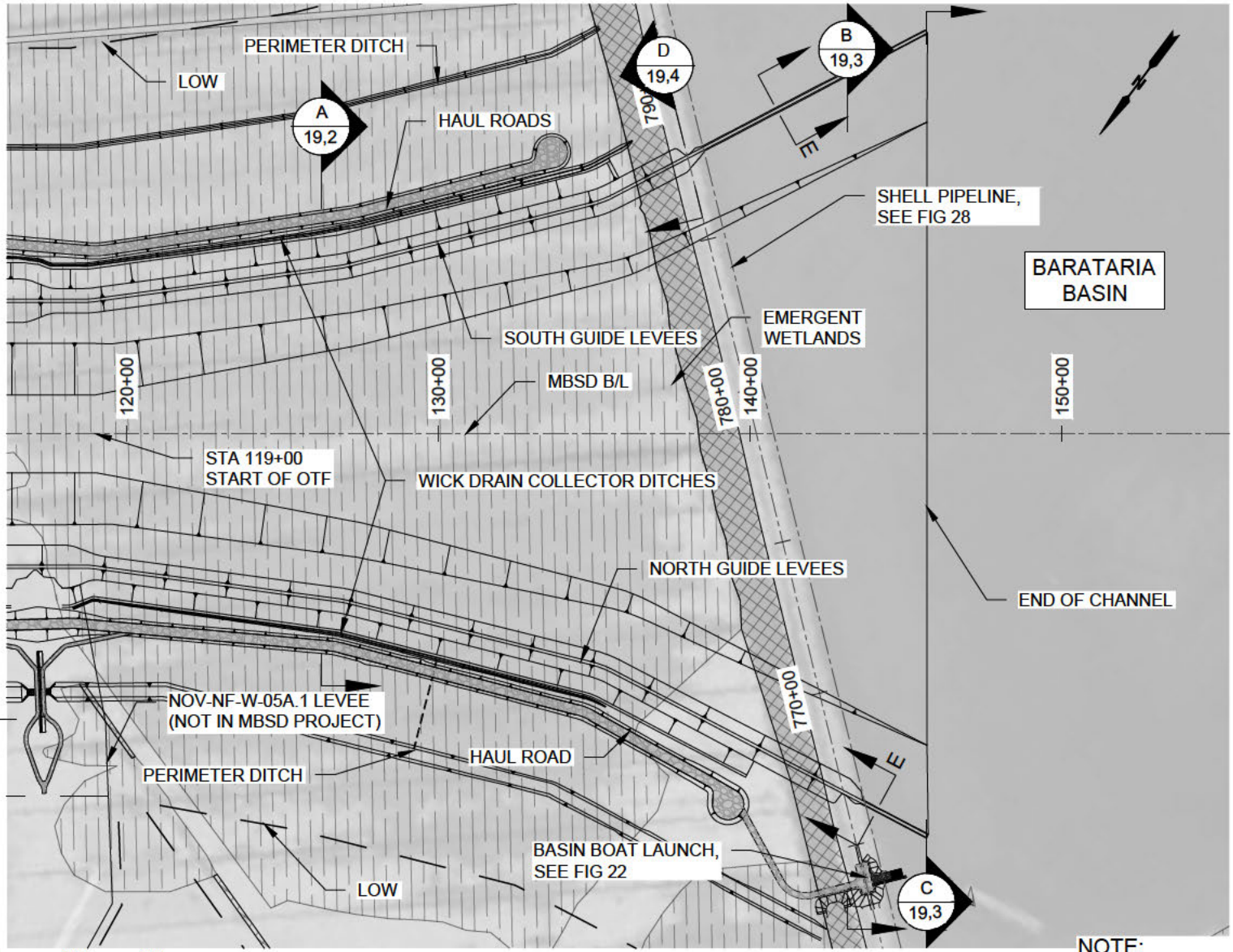

OUTFALL TRANSITION FEATURE PLAN

SCALE: 1" = 500'

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

PRELIMINARY
FOR PERMIT
PURPOSE ONLY

BRUCE LELONG — ENGINEER OF RECORD
CIVIL — DISCIPLINE
LA. — STATE
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AUGUST 2022 — DATE

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8555 UNITED PLAZA BLVD
SUITE 300
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225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

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ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

OUTFALL TRANSITION FEATURE PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 19 | SHEET 1 OF 4

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NOTE:

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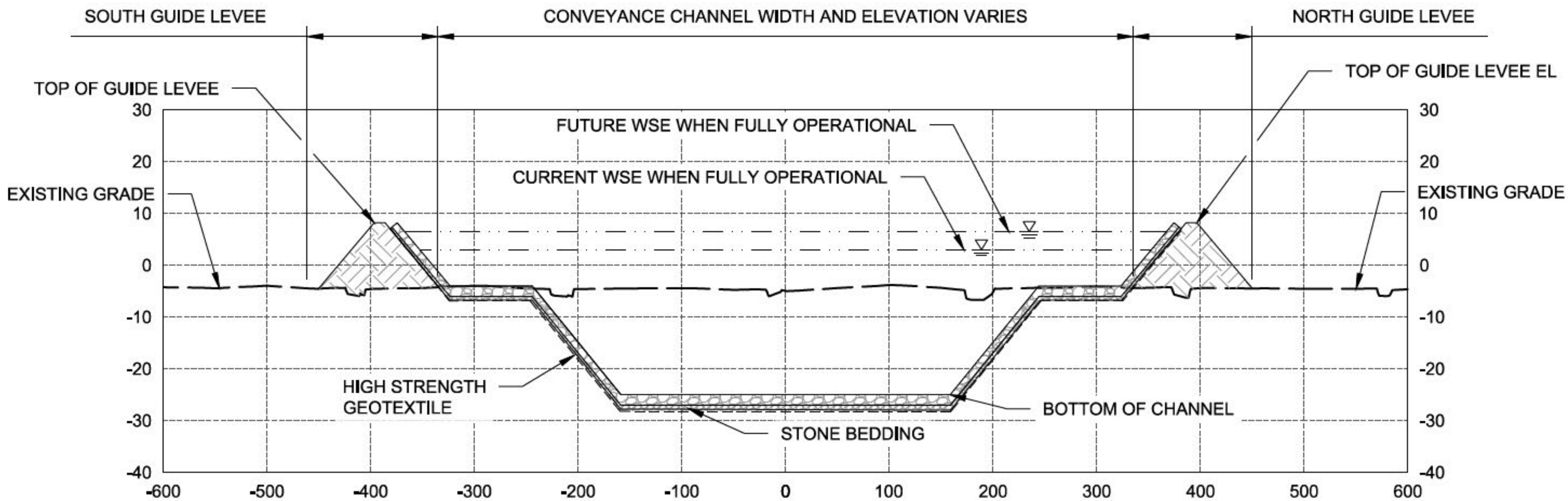

A
19,1
SECTION
SCALE: NTS

PRELIMINARY FOR PERMIT PURPOSE ONLY

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

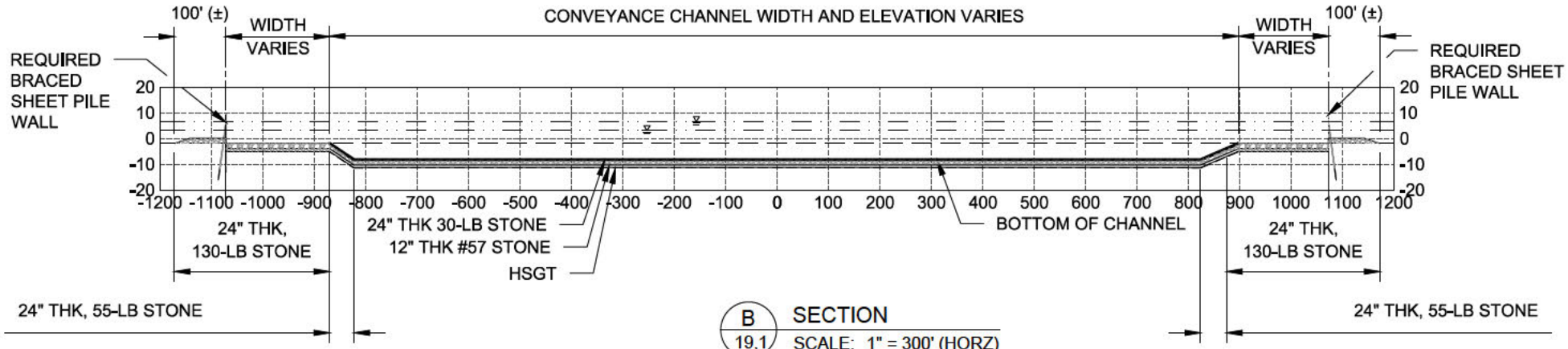
OUTFALL TRANSITION FEATURE SECTION

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 19 | SHEET 2 OF 4

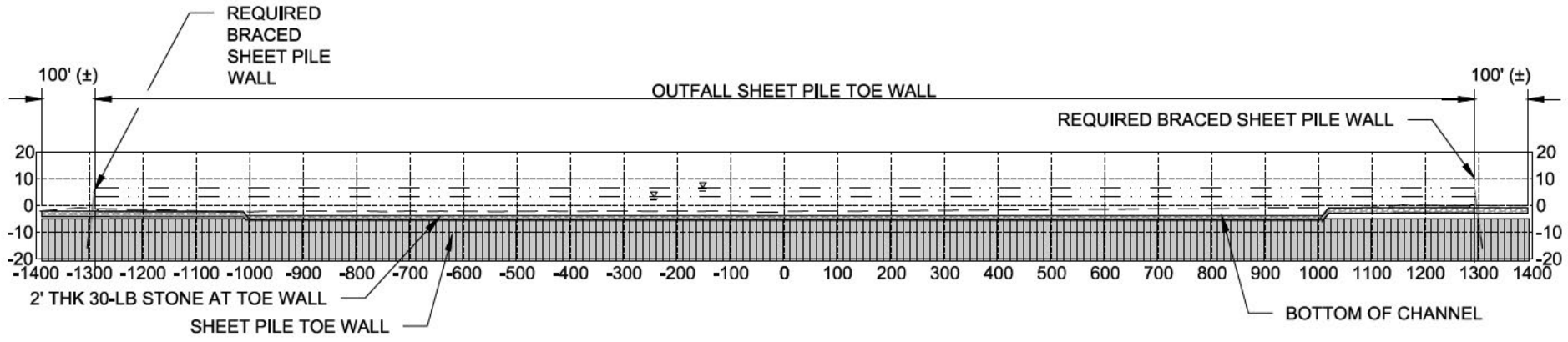
NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



B / 19,1 SECTION

SCALE: 1" = 300' (HORZ)
1" = 60' (VERT)



C / 19,1 SECTION

SCALE: 1" = 300' (HORZ)
1" = 60' (VERT)

150' 0 150' 300'

SCALE: 1" = 300'

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AECOM PROJECT NUMBER: 60649021

OUTFALL TRANSITION FEATURE SECTION

DATE: JULY 2022

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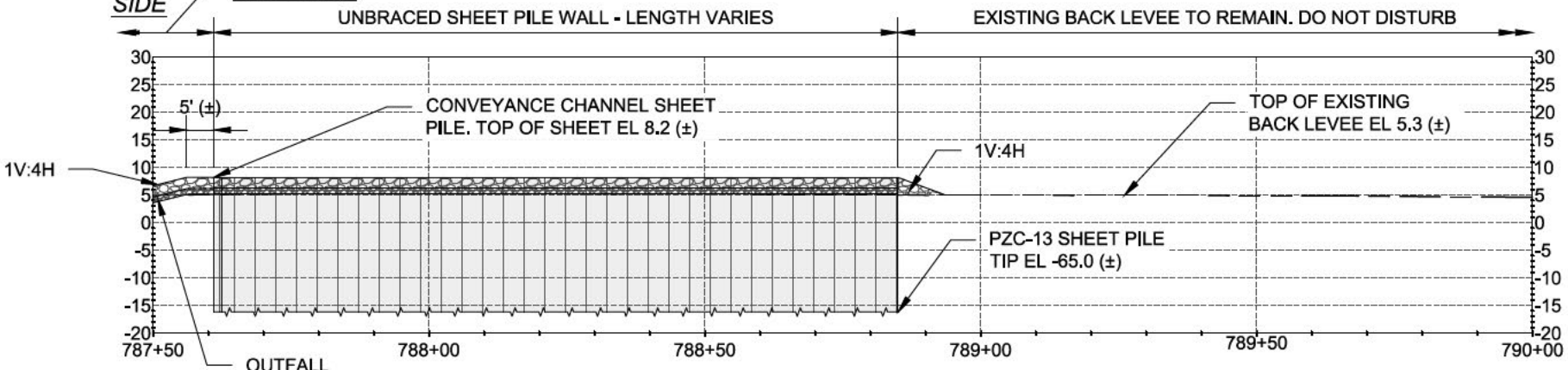
DRAWING FIGURE 19 | SHEET 3 OF 4

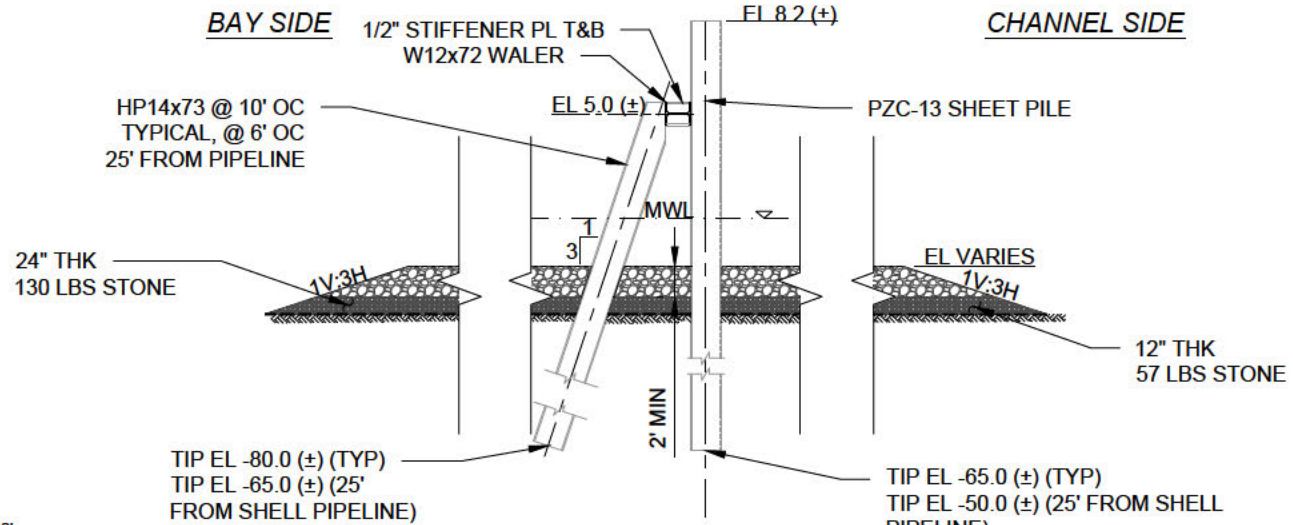
OUTFALL CHANNEL
EXISTING BACK LEVEE TO BE
REMOVED, NO REPLACEMENT

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



D 19,1 SECTION
SCALE: 1" = 30'



E 19,1 SECTION
SCALE: NTS

15' 0 15' 30'
SCALE: 1" = 30'

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BRUCE LELONG — ENGINEER OF RECORD
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LA. — STATE
29393 — LICENSE NO.
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SUITE 300
BATON ROUGE, LA 70809
225-922-5700

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

OUTFALL TRANSITION FEATURE SECTION

DATE: JULY 2022

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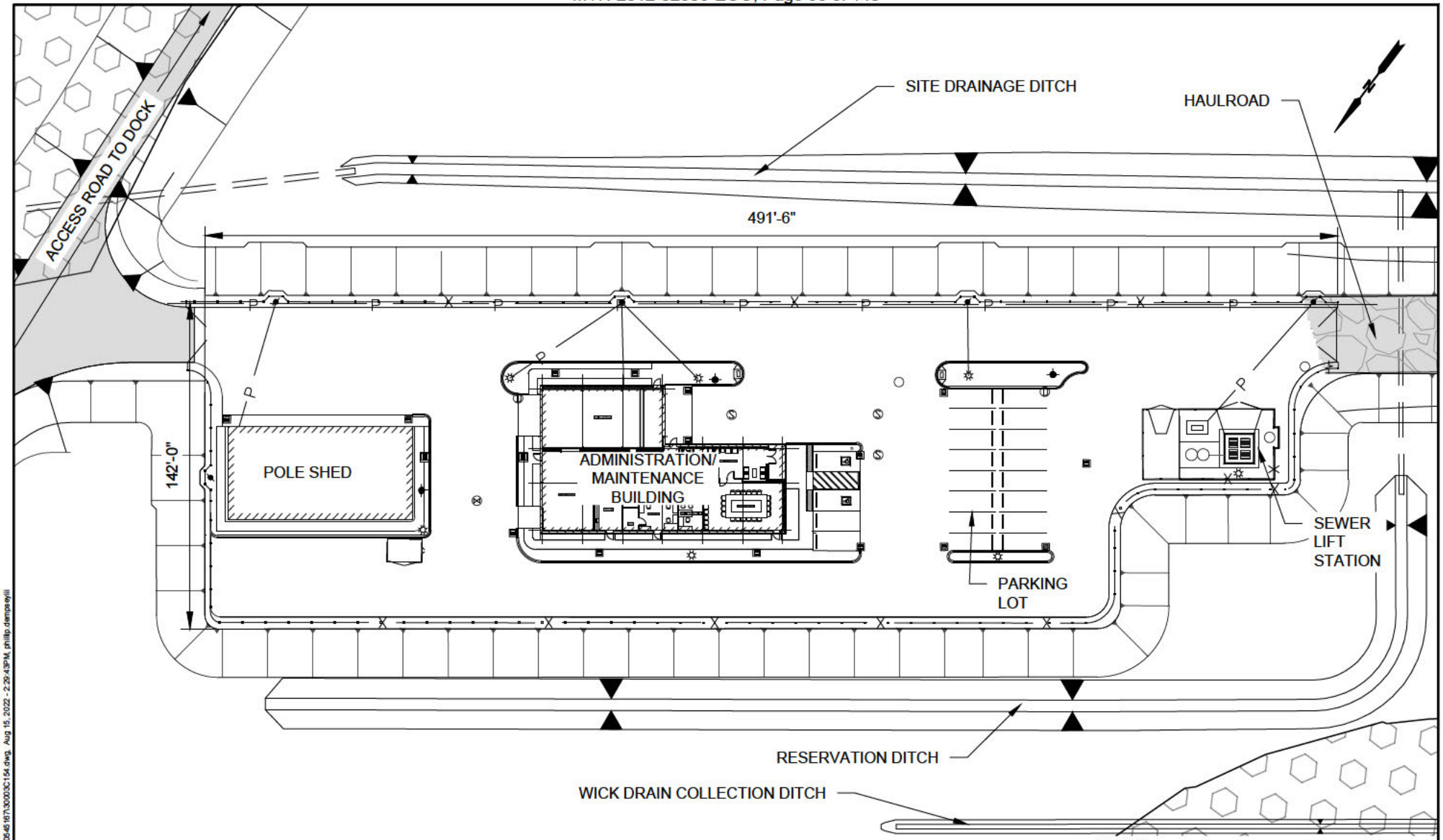
DRAWING FIGURE 19 | SHEET 4 OF 4



30' 0 30' 60'

SCALE: 1" = 60'

RESERVATION AREA SITE PLAN

SCALE: 1" = 60'

NOTES:
1. RESERVATION AREA MAX EL 11.
2. CLASS B TIMBER PILES 65' LONG (TYP ALL BUILDING STRUCTURES)

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CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

RESERVATION AREA SITE PLAN

DATE: AUGUST 2022

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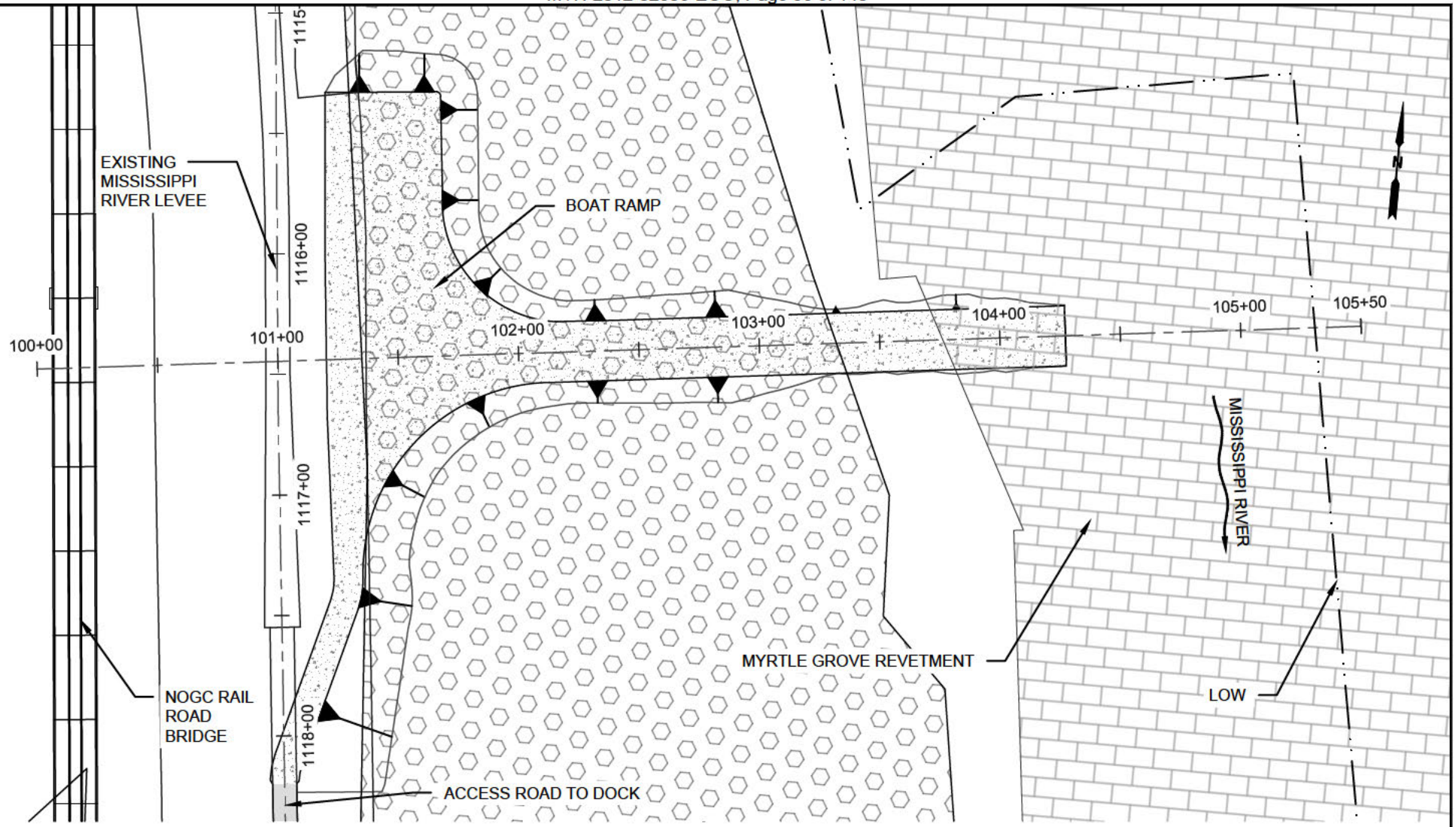

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

30' 0 30' 60'

SCALE: 1" = 60'

MISSISSIPPI RIVER BOAT LAUNCH PLAN

SCALE: 1" = 60'

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AECOM PROJECT NUMBER: 60649021

MISSISSIPPI RIVER BOAT LAUNCH PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 21 | SHEET 1 OF 2

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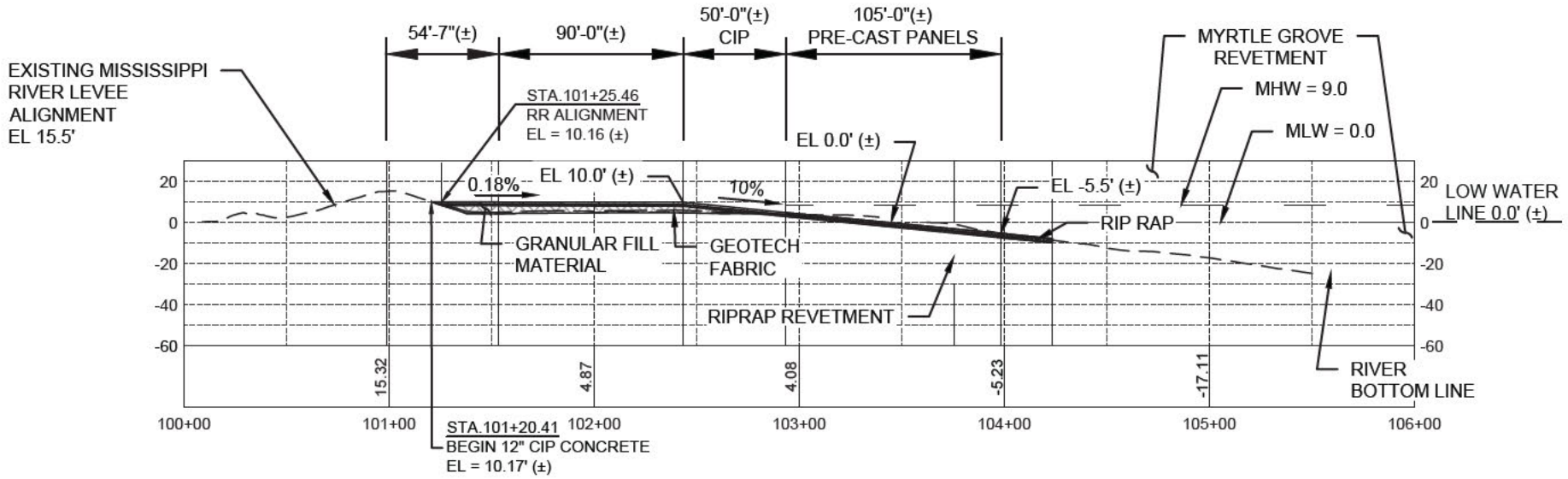
NOTES:

1. CONCRETE FINISH TO BE COARSE TEXTURED BROOM FINISH. ALL EDGES ARE TO BE TOOLED.
2. ALL RAMP APRONS SHALL BE FINISHED ON TOP WITH A TINE TEXTURING DEVICE TO PRODUCE GROOVES IN THE CONCRETE SPACED ON 1 INCH CENTERS AND SHALL BE 3/16" WIDE AND 1/4" TO 3/8" DEEP.
3. AGGREGATE BASE TO BE PLACED IN ALL LIFTING HOLES (FLUSH TO SLAB) AND IN GAPS ALONG EDGES OF NEW SLABS.
4. ALL ELEVATIONS ARE IN FEET NAVD88.



MISSISSIPPI RIVER BOAT LAUNCH RAMP PROFILE

SCALE: 1" = 80'

40' 0 40' 80'

SCALE: 1" = 80'

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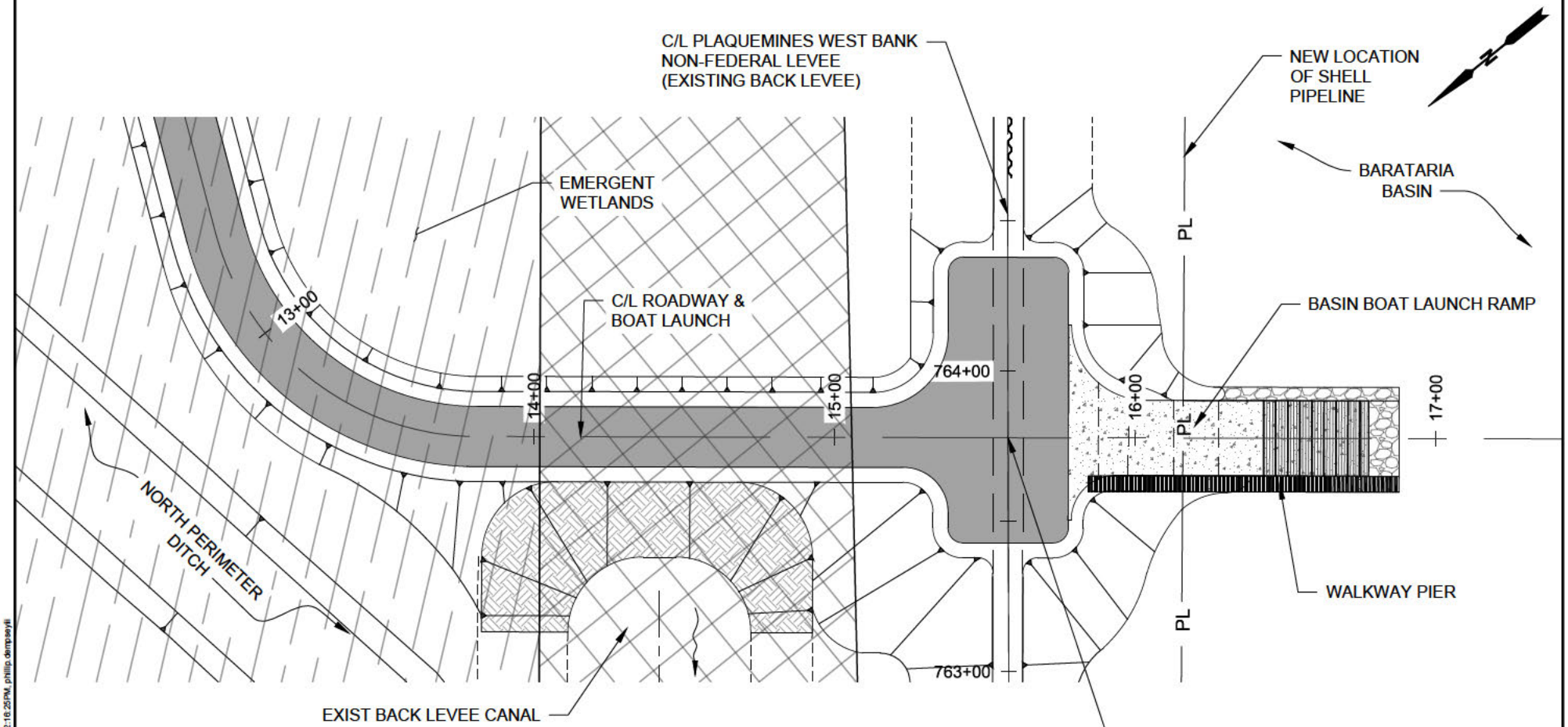
MISSISSIPPI RIVER BOAT LAUNCH PROFILE

DATE: JULY 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 21 | SHEET 2 OF 2



BASIN BOAT LAUNCH PLAN

SCALE: 1" = 50'

NOTE:

SEE FIG 2 SHEET 3 OF 3 FOR LEGEND

25' 0 25' 50'

SCALE: 1" = 50'

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BASIN BOAT LAUNCH PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 22 | SHEET 1 OF 2

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NOTE:

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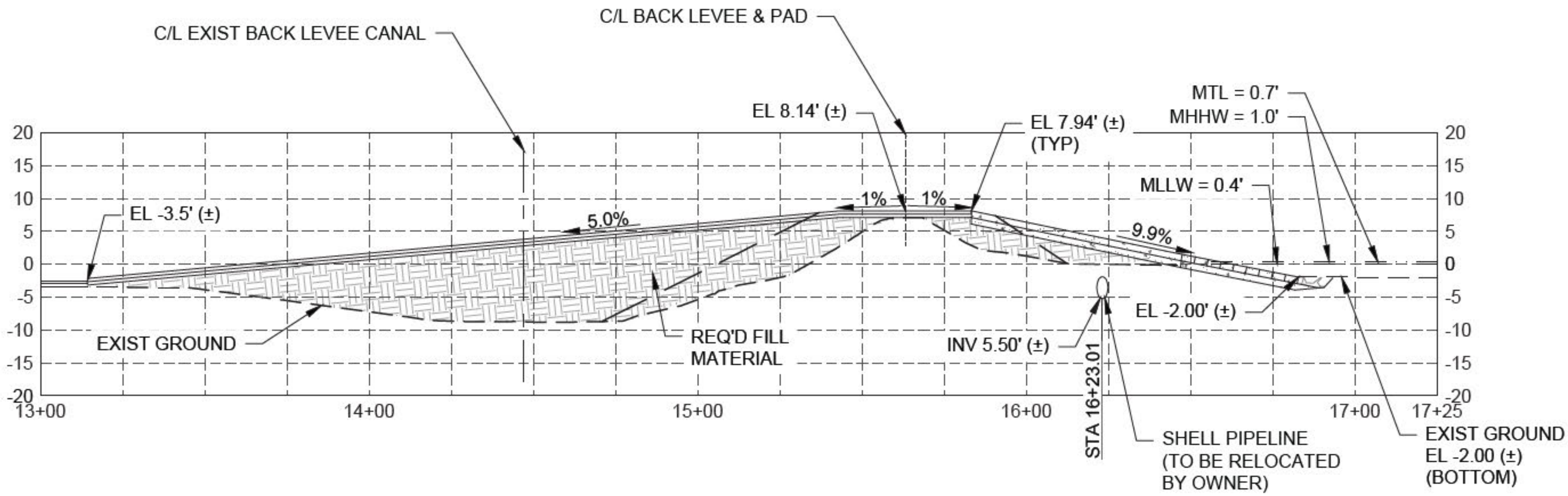

BASIN BOAT LAUNCH PROFILE

SCALE: 1" = 50'

25' 0 25' 50'

SCALE: 1" = 50'

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

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MID-BARATARIA SEDIMENT DIVERSION

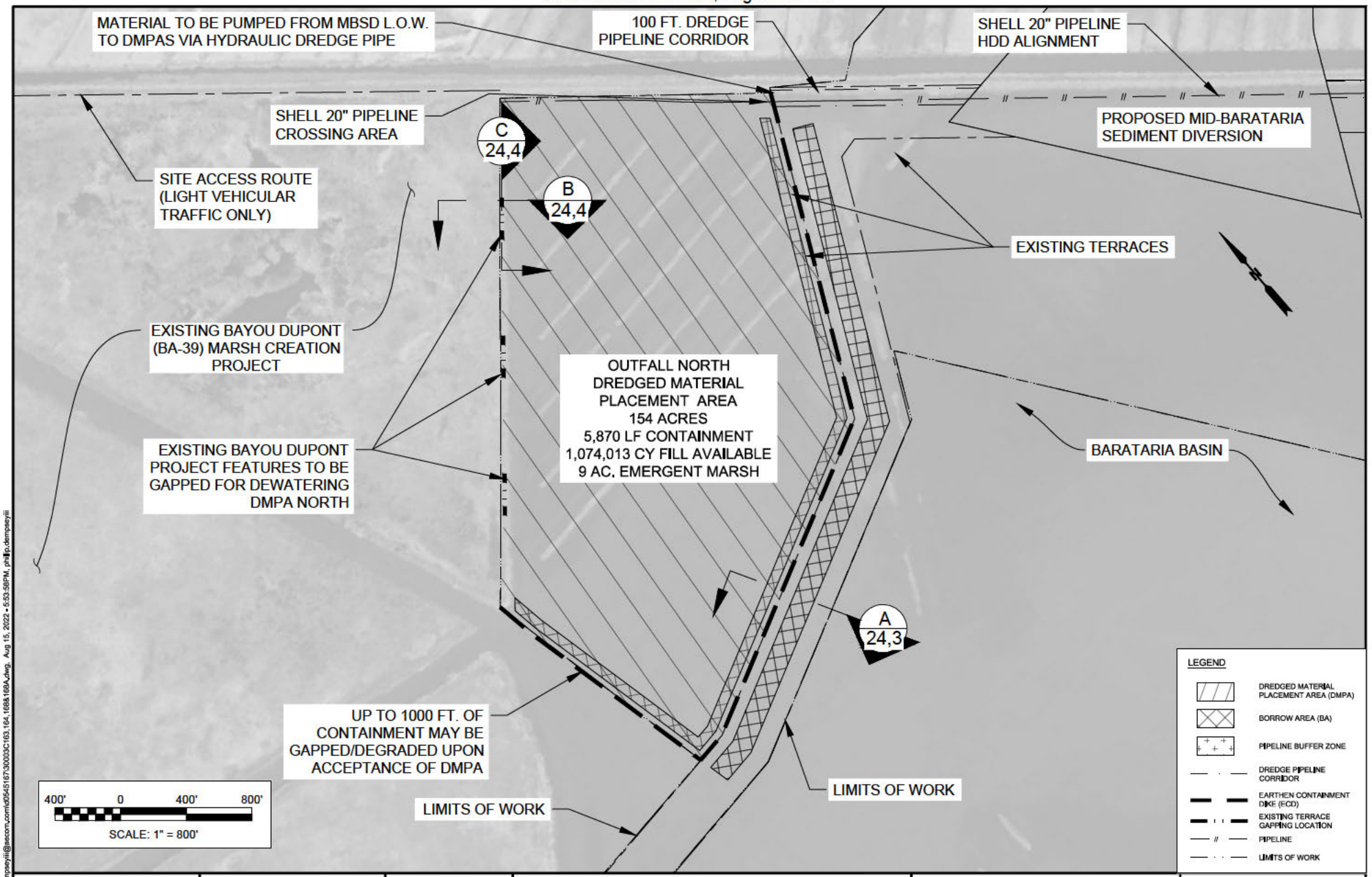
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

BASIN BOAT LAUNCH PROFILE

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 22 | SHEET 2 OF 2



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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

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ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

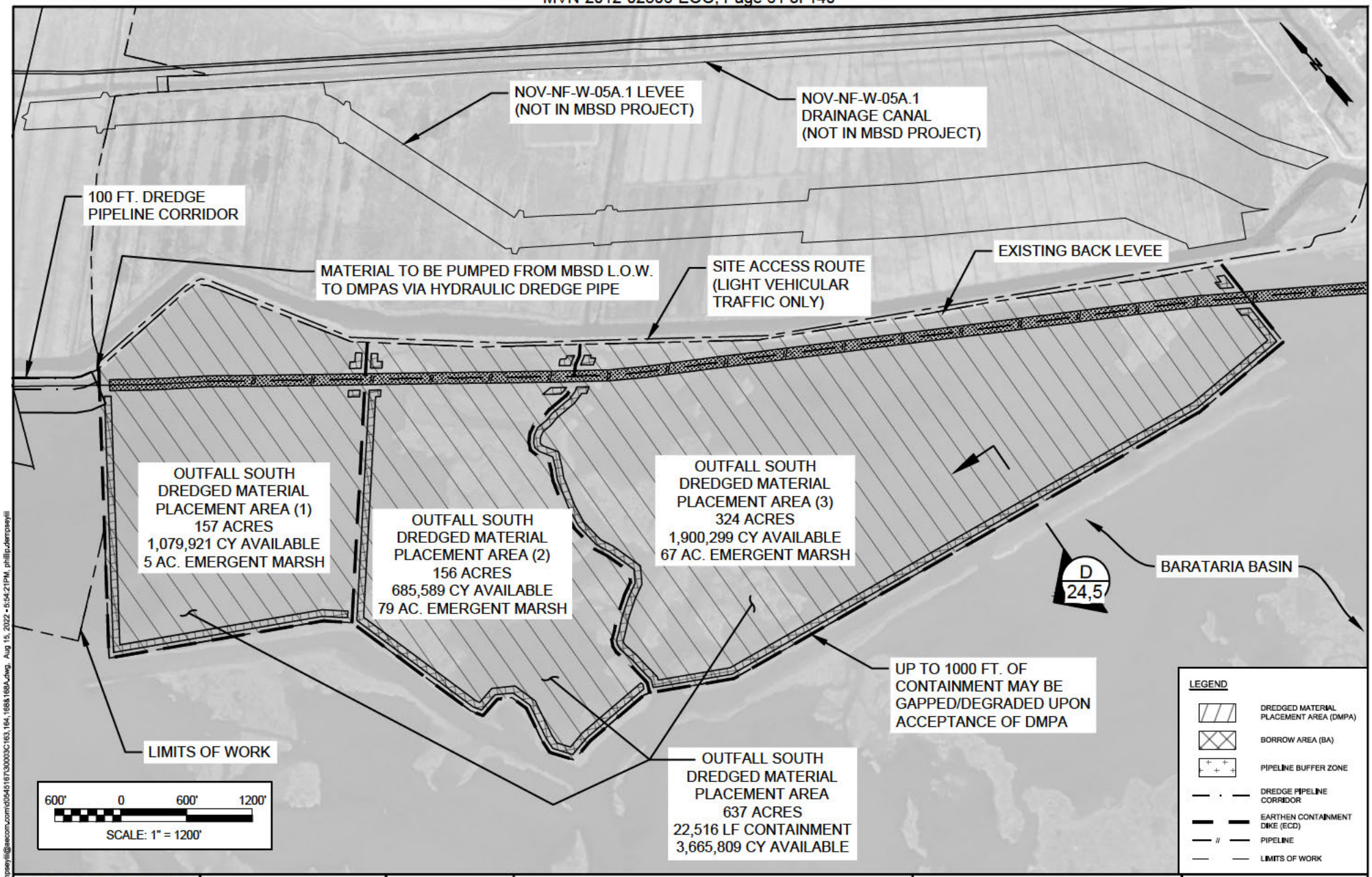
MID-BARATARIA SEDIMENT DIVERSION

DMPA NORTH PLAN

CPRA PROJECT NUMBER: BA-0153
AECOM PROJECT NUMBER: 60649021
DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL

DRAWING FIGURE 24 | SHEET 1 OF 5



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MID-BARATARIA SEDIMENT DIVERSION

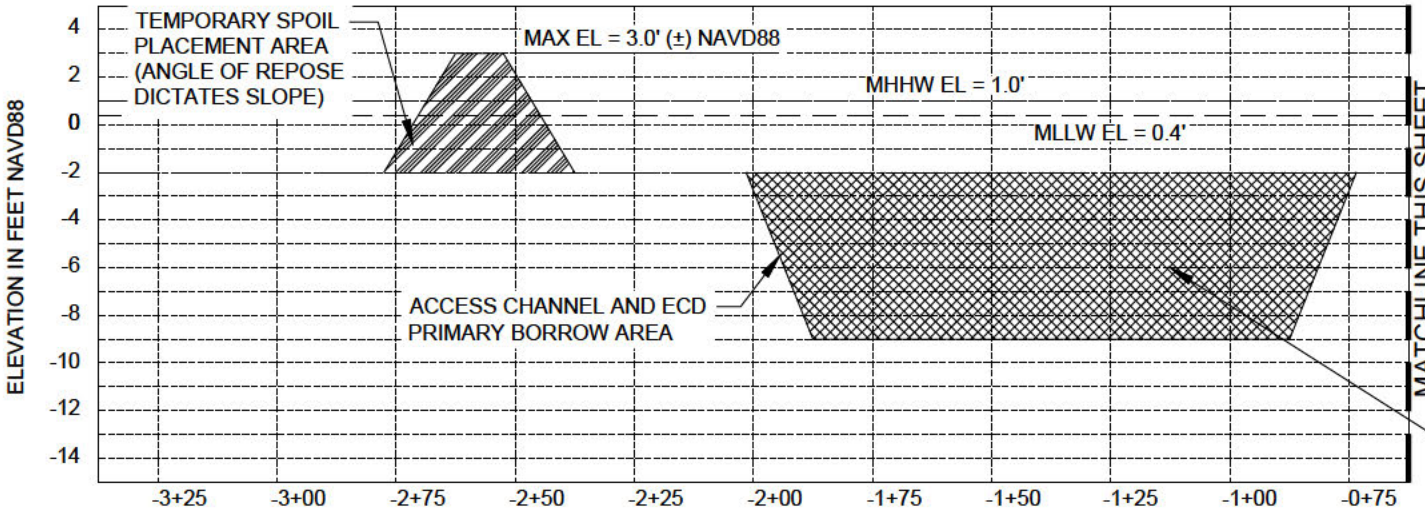
CPRA PROJECT NUMBER: BA-0153

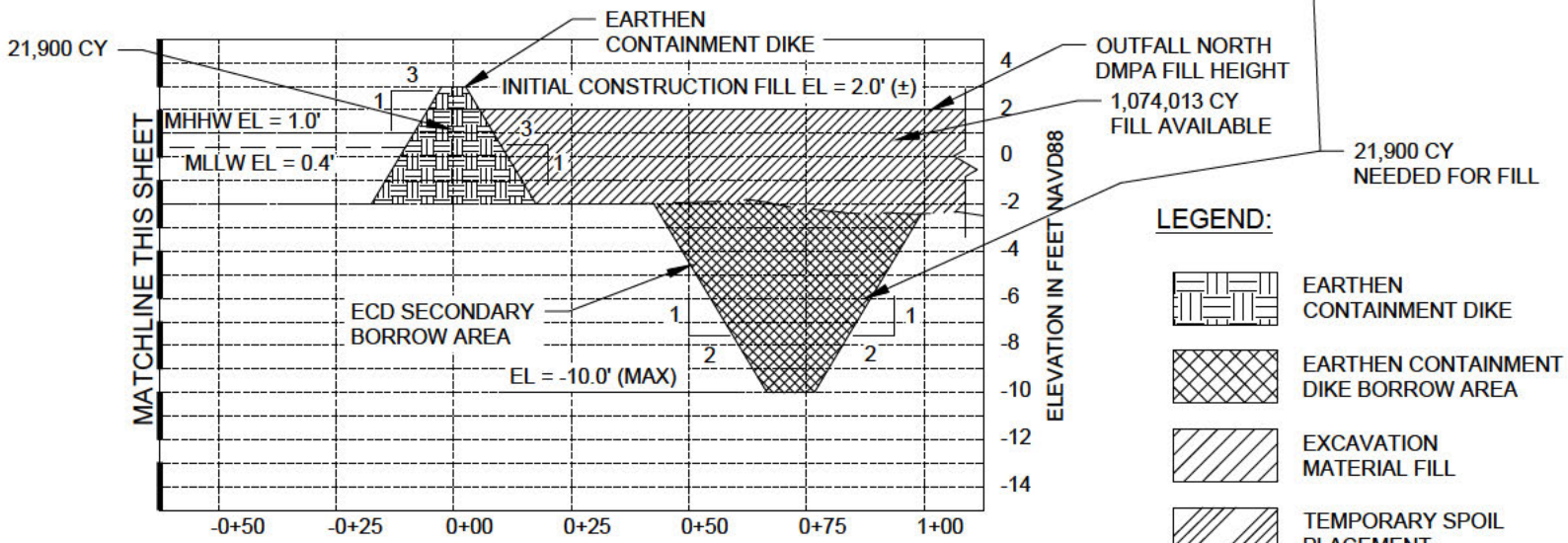
AECOM PROJECT NUMBER: 60649021

DMPA
SOUTH PLAN

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 24 | SHEET 2 OF 5





LEGEND:

- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- EXCAVATION MATERIAL FILL
- TEMPORARY SPOIL PLACEMENT
- EXISTING MUDLINE

4' 0 4' 8'
VERTICAL SCALE: 1" = 8'

20' 0 20' 40'
HORIZONTAL SCALE: 1" = 40'

A
24,1

OUTFALL NORTH DMPA
EARTHEN CONTAINMENT DIKE
TYPICAL SECTION

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COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

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ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

DMPA SECTION A

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DATE: AUGUST 2022

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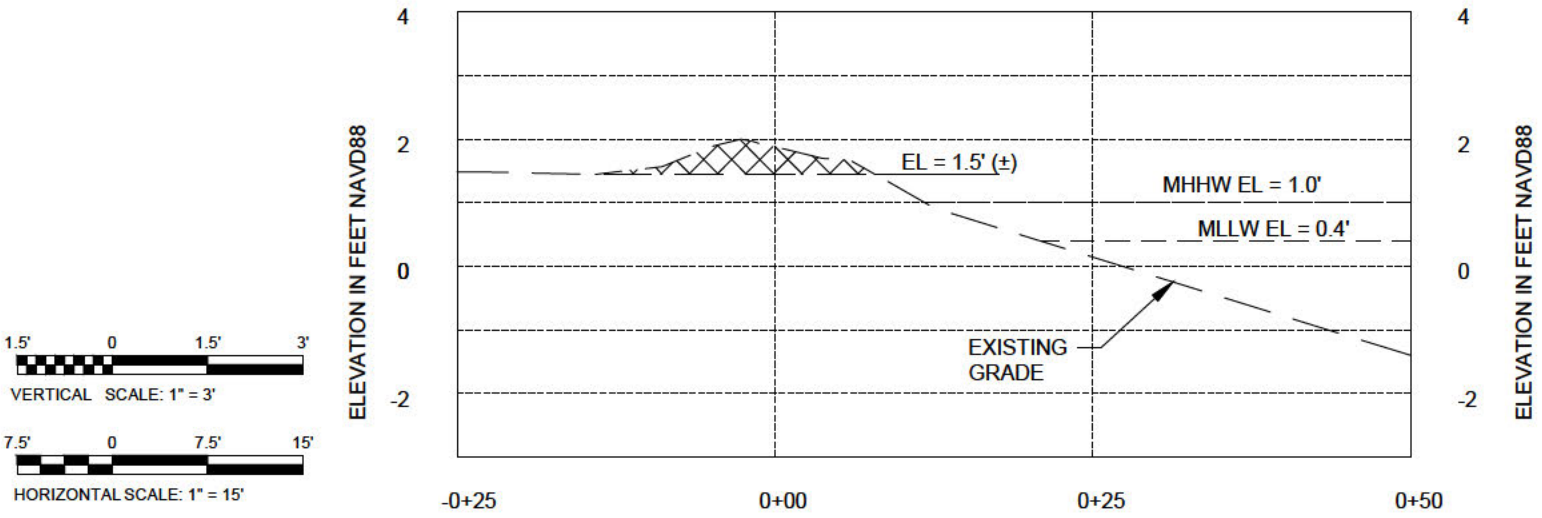
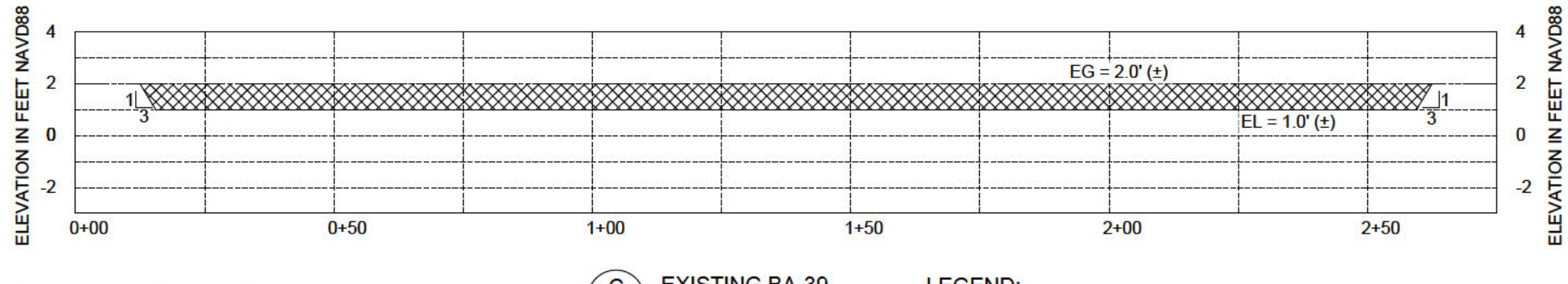
DRAWING FIGURE 24 | SHEET 3 OF 5



B 24,1 EXISTING BA-39 GAPPING DETAIL



C 24,1 EXISTING BA-39 GAPPING DETAIL

LEGEND:

- EARTHEN CONTAINMENT DIKE
- EXCAVATION MATERIAL FILL
- EARTHEN CONTAINMENT DIKE BORROW AREA
- TEMPORARY SPOIL PLACEMENT
- EXISTING MUDLINE

PRELIMINARY FOR PERMIT PURPOSE ONLY

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LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

DMPA SECTION B & C

CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DATE: AUGUST 2022

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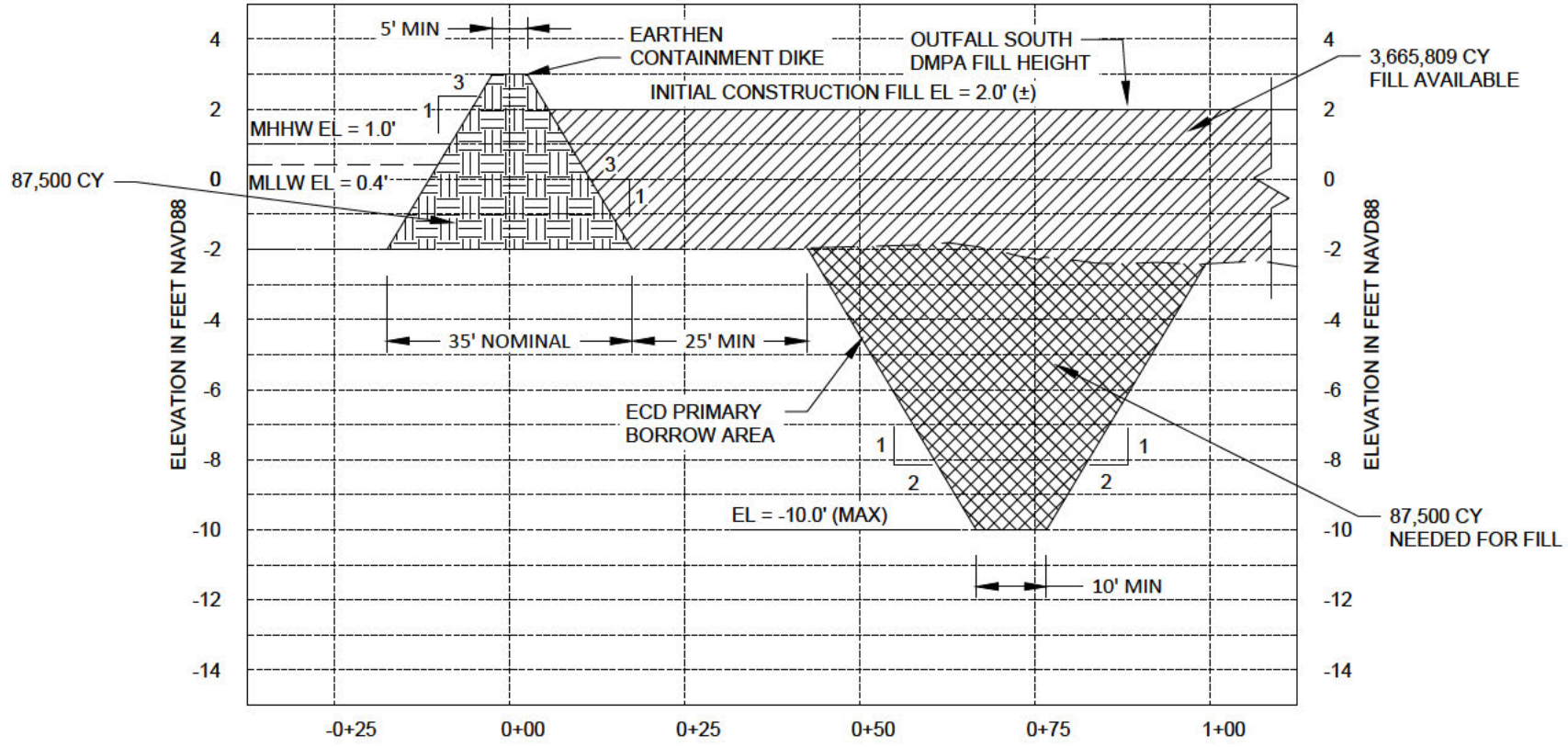
DRAWING FIGURE 24 | SHEET 4 OF 5



D
24,2

OUTFALL SOUTH DMPA
EARTHEN CONTAINMENT DIKE
TYPICAL SECTION

LEGEND:

- EARTHEN CONTAINMENT DIKE
- EXCAVATION MATERIAL FILL
- EARTHEN CONTAINMENT DIKE BORROW AREA
- EXISTING MUDLINE

2.5' 0 2.5' 5'
VERTICAL SCALE: 1" = 5'

12.5' 0 12.5' 25'
HORIZONTAL SCALE: 1" = 25'

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COASTAL PROTECTION AND RESTORATION AUTHORITY
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MID-BARATARIA SEDIMENT DIVERSION

DMPA SECTION D

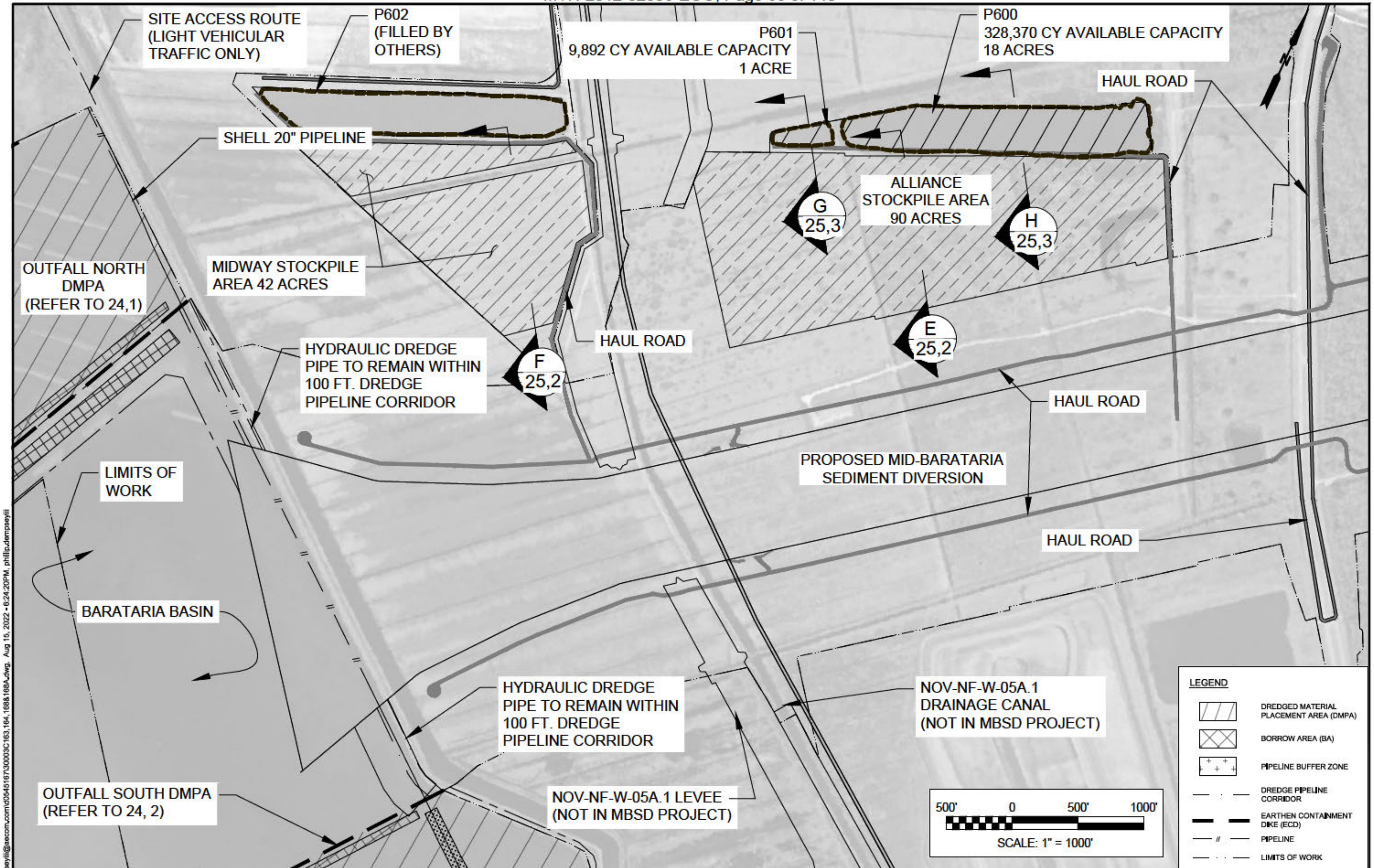
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL

DRAWING FIGURE 24 | SHEET 5 OF 5

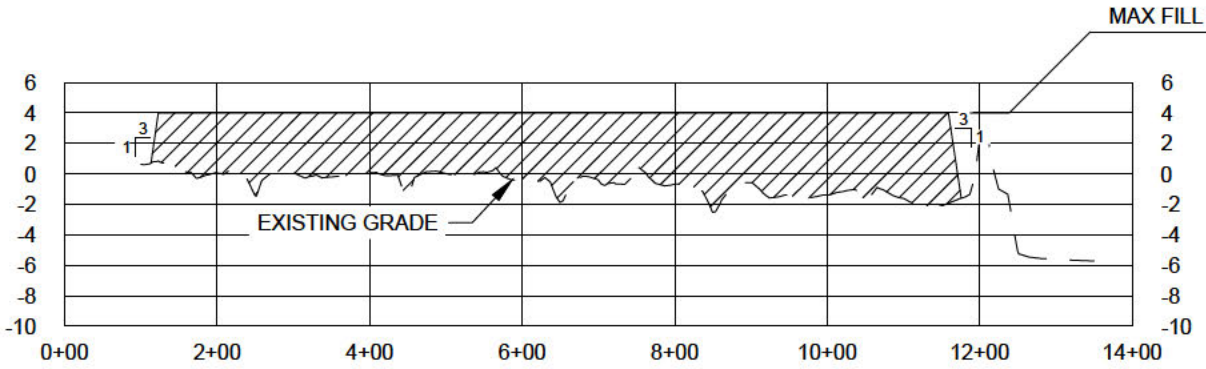


PRELIMINARY FOR PERMIT PURPOSE ONLY BRUCE LELONG — ENGINEER OF RECORD; CIVIL — DISCIPLINE LA. — STATE; 29393 — LICENSE NO.; AUGUST 2022 — DATE	AECOM 8555 UNITED PLAZA BLVD SUITE 300 BATON ROUGE, LA 70809 225-922-5700	COASTAL PROTECTION AND RESTORATION AUTHORITY CPRA	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	MID-BARATARIA SEDIMENT DIVERSION
				CPRA PROJECT NUMBER: BA-0153
				AECOM PROJECT NUMBER: 60649021
			DRAWN BY: PD — DESIGNED BY: PO	APPROVED BY: BL

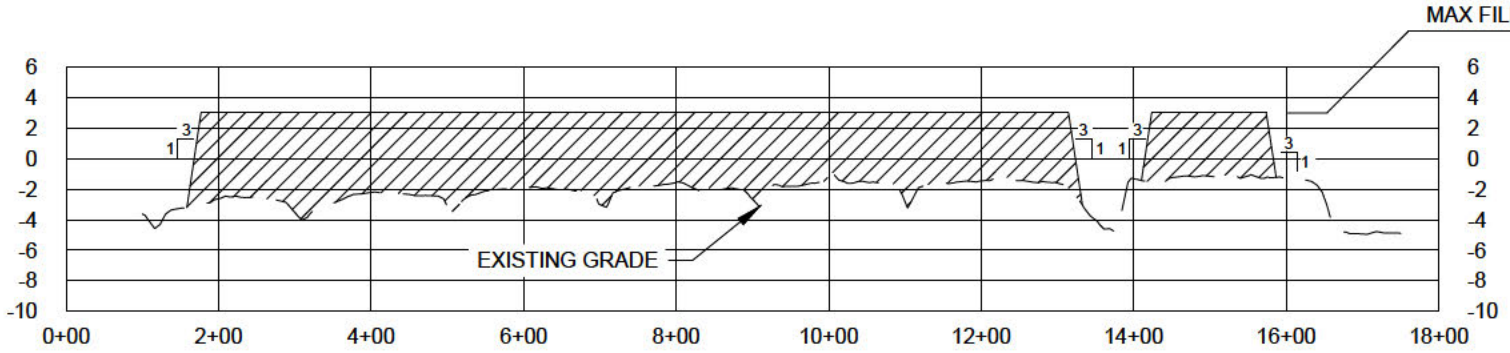
STOCKPILE AREA PLAN	
DATE:	AUGUST 2022
DRAWING FIGURE 25	SHEET 1 OF 3

NOTE:

ALL ELEVATIONS ARE IN FEET NAVD88



E 25,1 ALLIANCE STOCKPILE AREA TYPICAL SECTION



F 25,1 MIDWAY STOCKPILE AREA TYPICAL SECTION

6.25' 0 6.25' 12.5'

VERTICAL SCALE: 1" = 12.5'

125' 0 125' 250'

HORIZONTAL SCALE: 1" = 250'

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CPRA PROJECT NUMBER: BA-0153

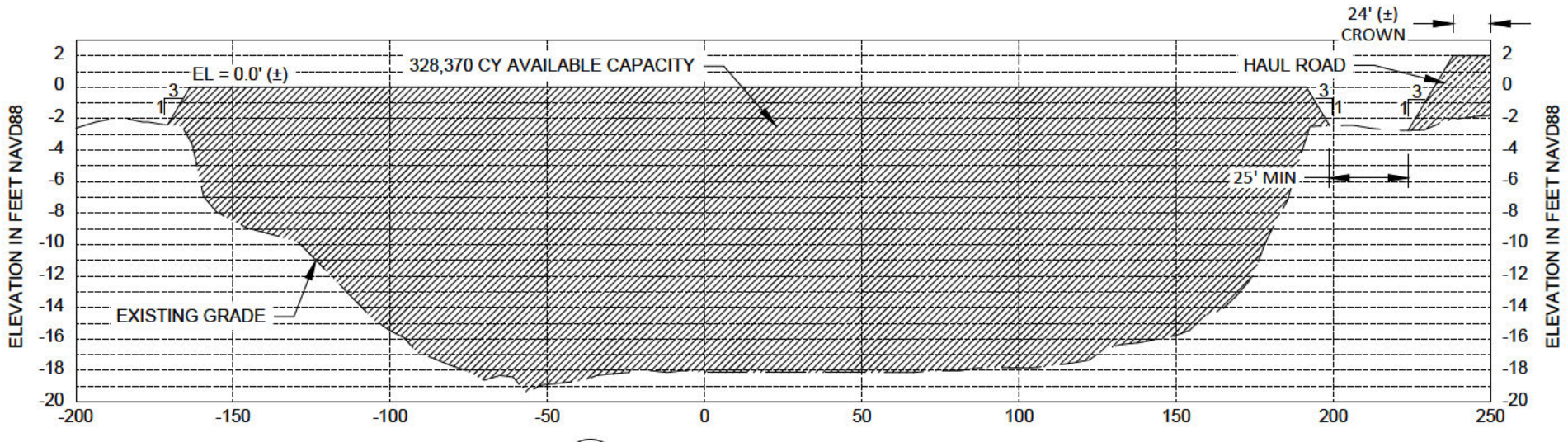
AECOM PROJECT NUMBER: 60649021

STOCKPILE AREA SECTIONS E & F

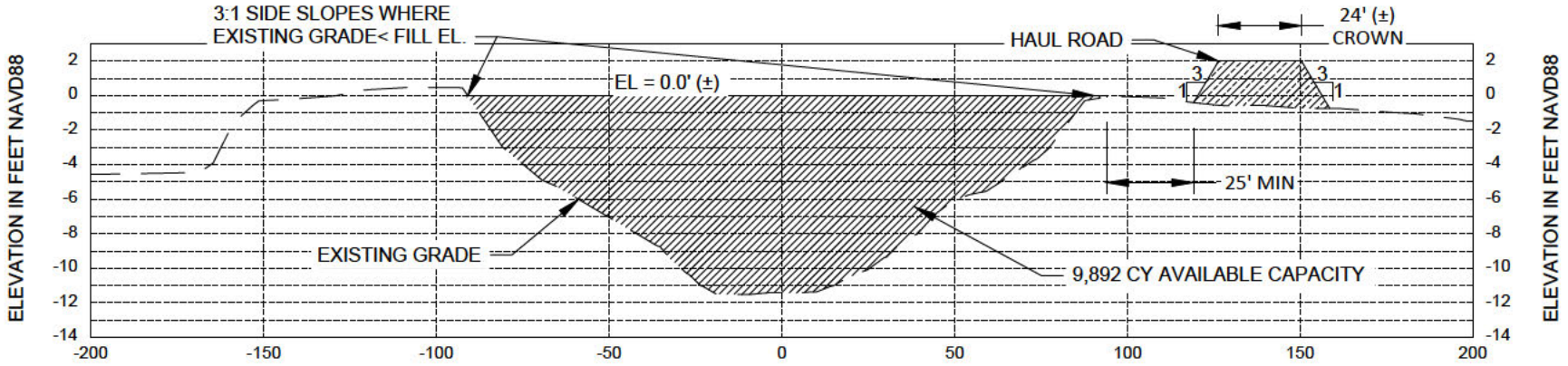
DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL

DRAWING FIGURE 25 | SHEET 2 OF 3



G 25,1 P600 EXISTING BORROW PIT TYPICAL SECTION



H 25,1 P601 EXISTING BORROW PIT TYPICAL SECTION

5' 0 5' 10'
VERTICAL SCALE: 1" = 10'

25' 0 25' 50'
HORIZONTAL SCALE: 1" = 50'

LEGEND:

EXCAVATION MATERIAL FILL

HAUL ROAD HATCH

EXISTING MUDLINE

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MID-BARATARIA SEDIMENT DIVERSION

CPRA PROJECT NUMBER: BA-0153

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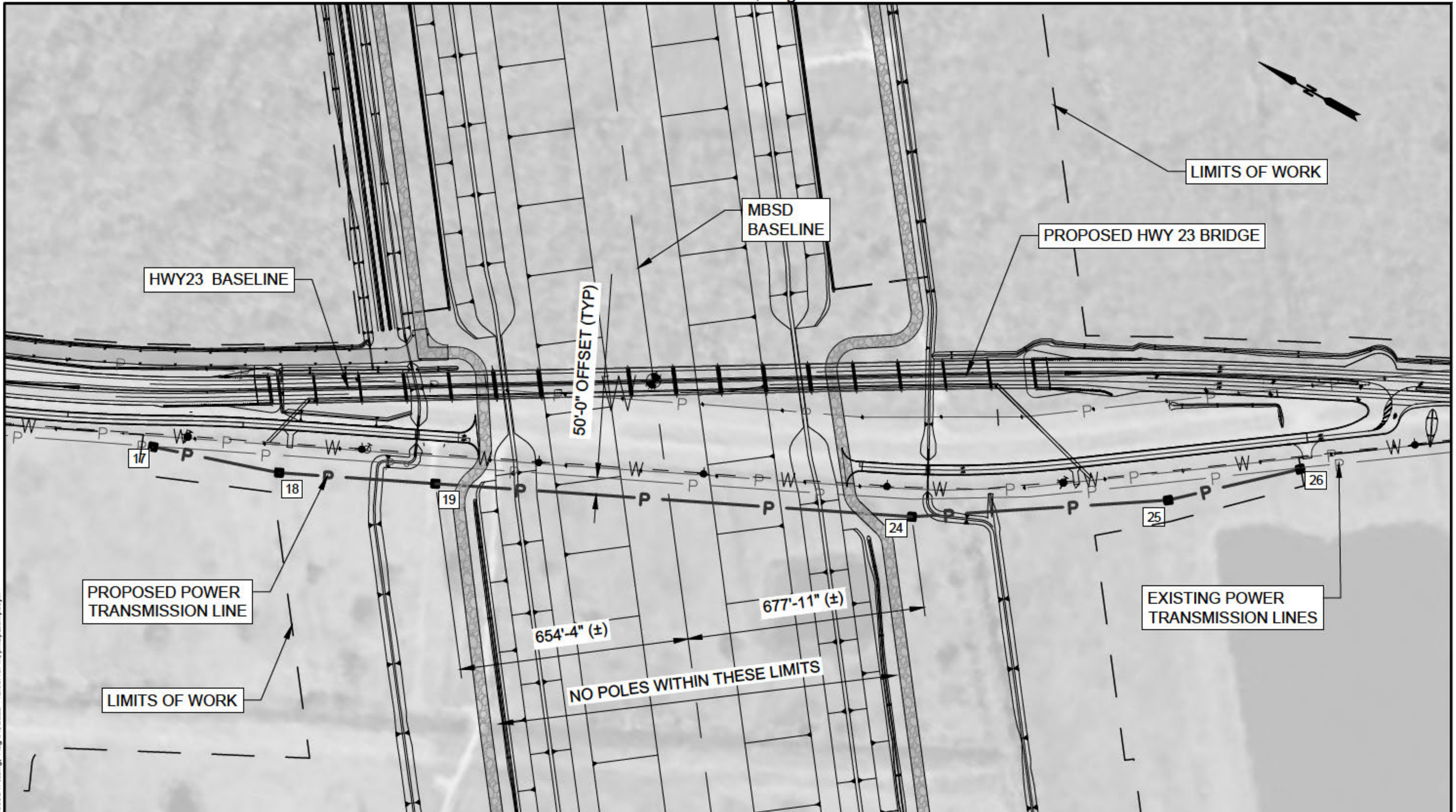
BORROW PIT SECTIONS G & H

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL

DRAWING FIGURE 25 | SHEET 3 OF 3



LEGEND:

- EXISTING POWER LINES
- PROPOSED TRANSMISSION LINES
- 18 — PROPOSED POWER POLE NUMBER

POWER TRANSMISSION RELOCATION PLAN

SCALE: NTS

NOTES:

1. LINE LIMITS ARE BASED ON 50'-0" OFFSET FROM 7:1 CHANNEL SIDE SLOPE GEOMETRY AND TOE OF GUIDE LEVEE OVERBUILD AT EL 19.35
2. CALLOUTS 17,18,19,24,25, AND 26 ARE NEW TRANSMISSION POLES

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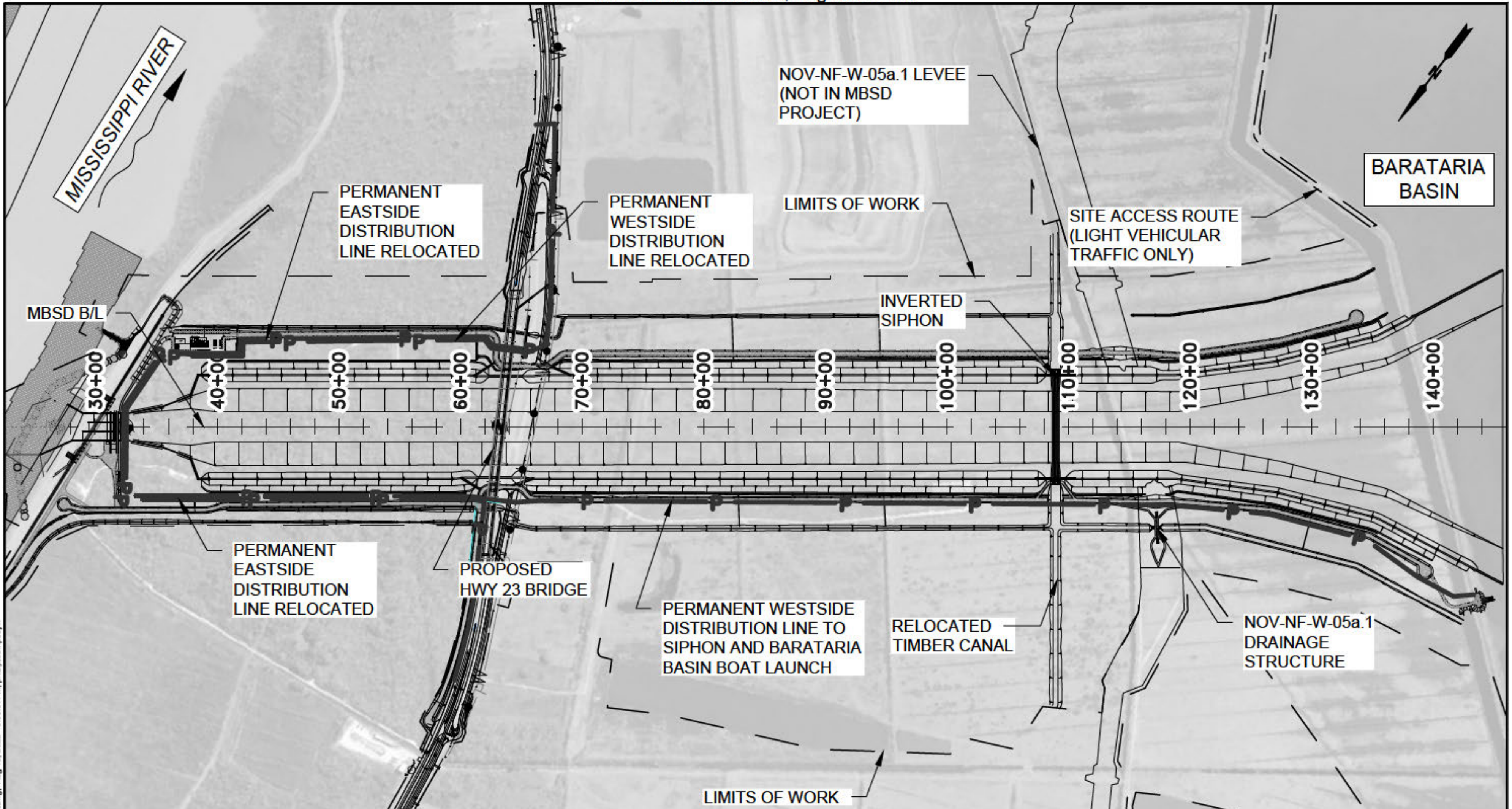
			DRAWN BY: PD / DESIGNED BY: PO	APPROVED BY: BL

POWER TRANSMISSION RELOCATION PLAN

DATE: AUGUST 2022

DRAWING FIGURE 26 — SHEET 1 OF 1



POWER DISTRIBUTION LINES RELOCATION PLAN

SCALE: NTS

LEGEND:

- P — EXISTING POWER LINES
- P — PROPOSED EASTSIDE POWER LINES
- P — PROPOSED WESTSIDE POWER LINES

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STATE	LICENSE NO.	DATE	

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CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION

POWER DISTRIBUTION LINES RELOCATION PLAN

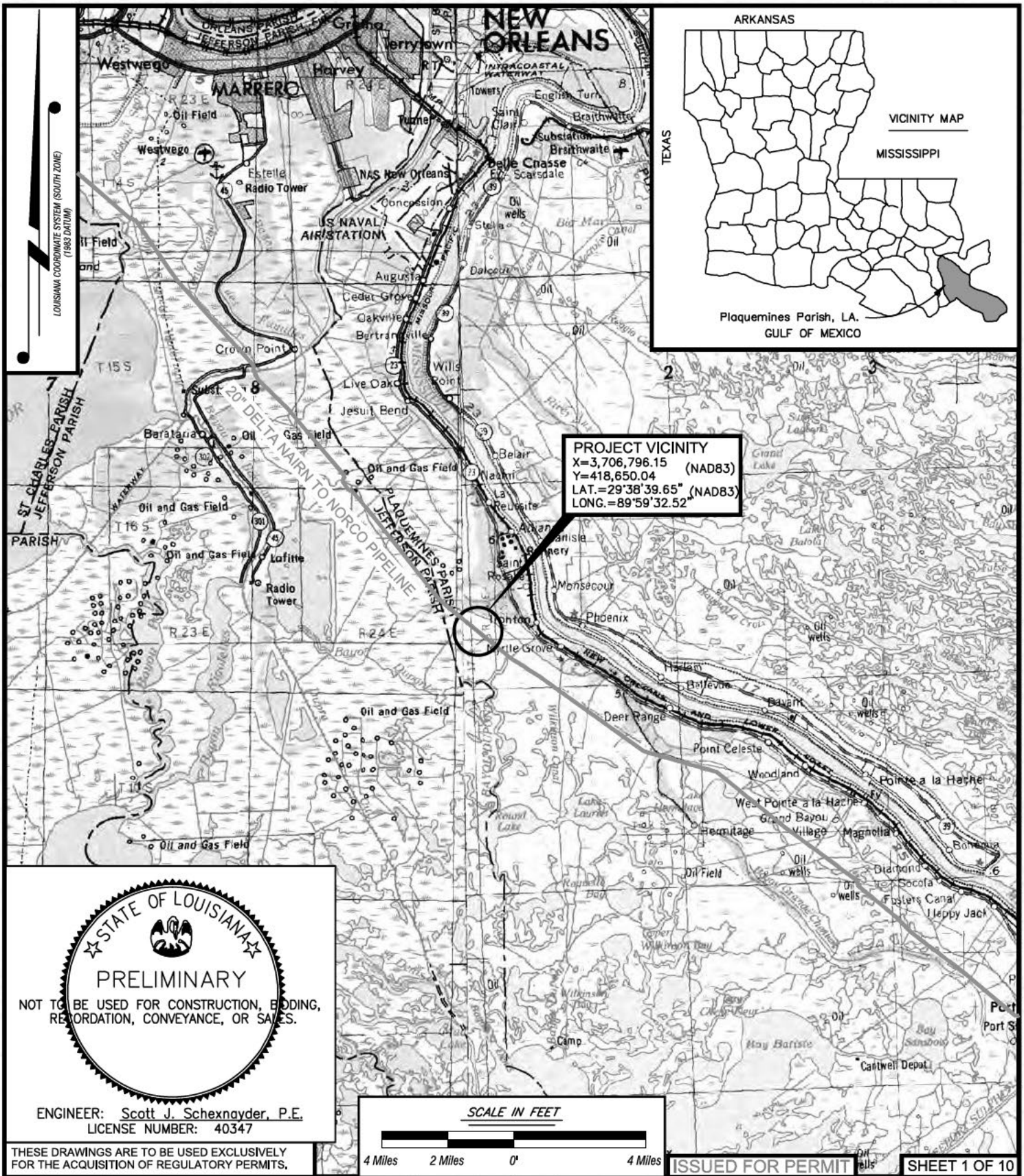
CPRA PROJECT NUMBER: BA-0153

AECOM PROJECT NUMBER: 60649021

DATE: AUGUST 2022

DRAWN BY: PD | DESIGNED BY: PO | APPROVED BY: BL | DRAWING FIGURE 27 | SHEET 1 OF 1

C:\pwworking\aecom_ds16_na\phillip.dempseyiii@aecom.com\d0545167\30003C171.dwg, Aug 15, 2022 - 6:08:37PM, phillip.dempseyiii



STATE OF LOUISIANA

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, OR SALES.

ENGINEER: Scott J. Schexnayder, P.E.
LICENSE NUMBER: 40347

THESE DRAWINGS ARE TO BE USED EXCLUSIVELY FOR THE ACQUISITION OF REGULATORY PERMITS.

ISSUED FOR PERMIT

SHEET 1 OF 10

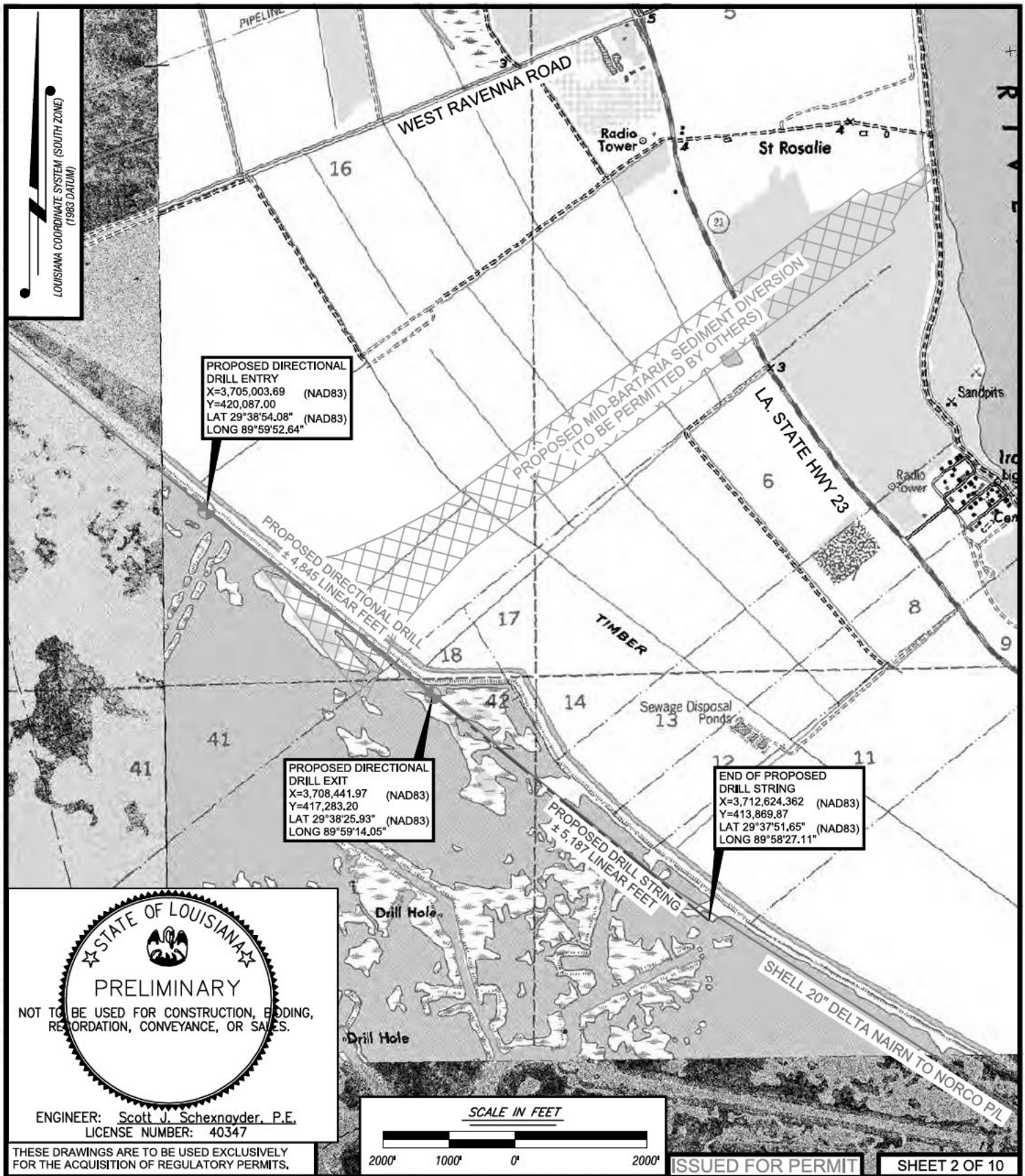
REV	DATE	DESCRIPTION OF REVISION	ES NO.	BY	APP
03	7/13/22	REVISED PER COMMENTS		MSL	SJS
02	6/01/22	REVISED PER COMMENTS		MSL	SJS
01	3/24/22	REVISED PER COMMENTS		LDE	SJS

DELTA CRUDE

PL SEG - NAIRN TO NORCO 20 IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA1	REV. 03
BY:	TBS 2020.1074		



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SHEET 2 OF 10

REV	DATE	DESCRIPTION OF REVISION	ES NO.	BY	APP
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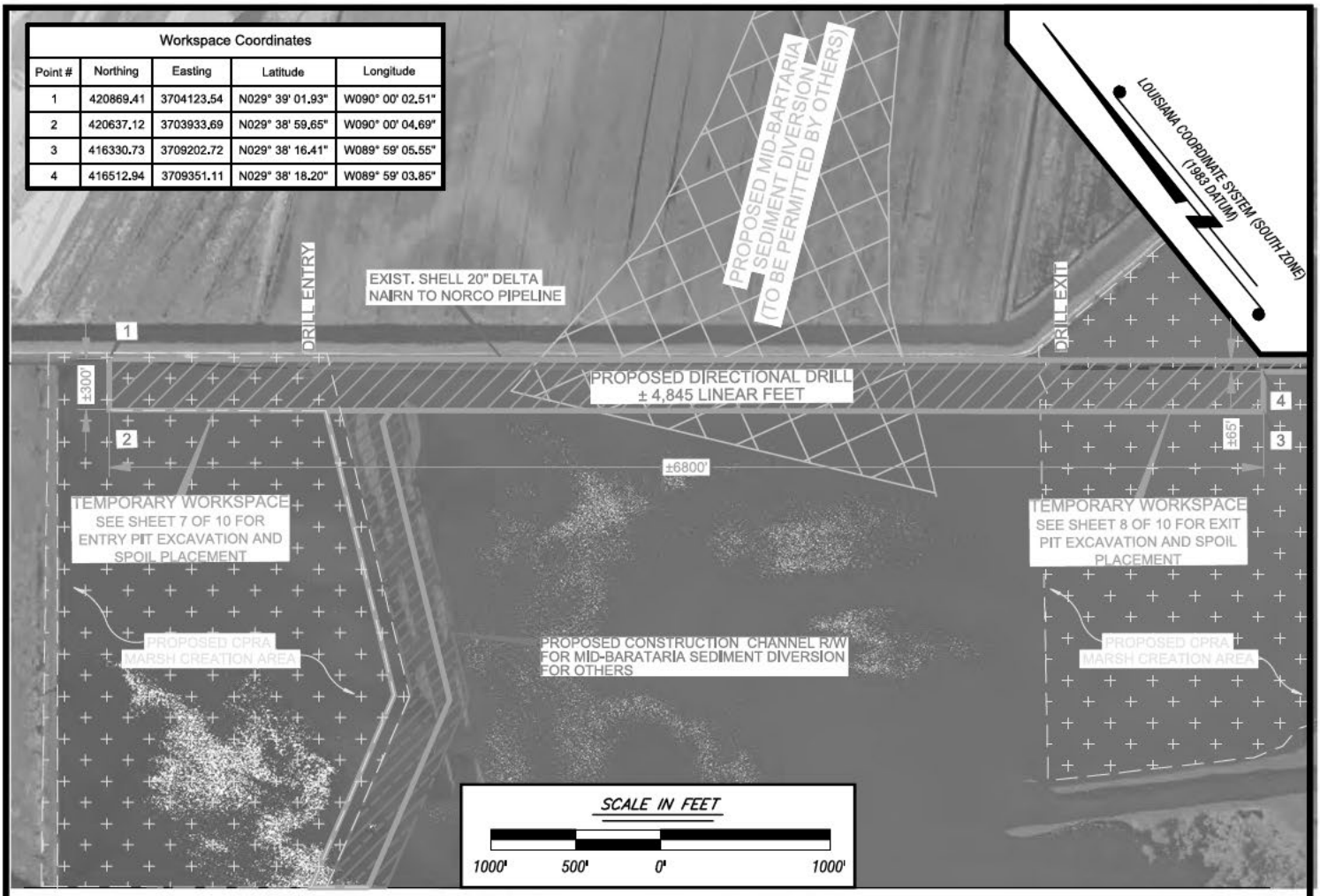
DELTA CRUDE

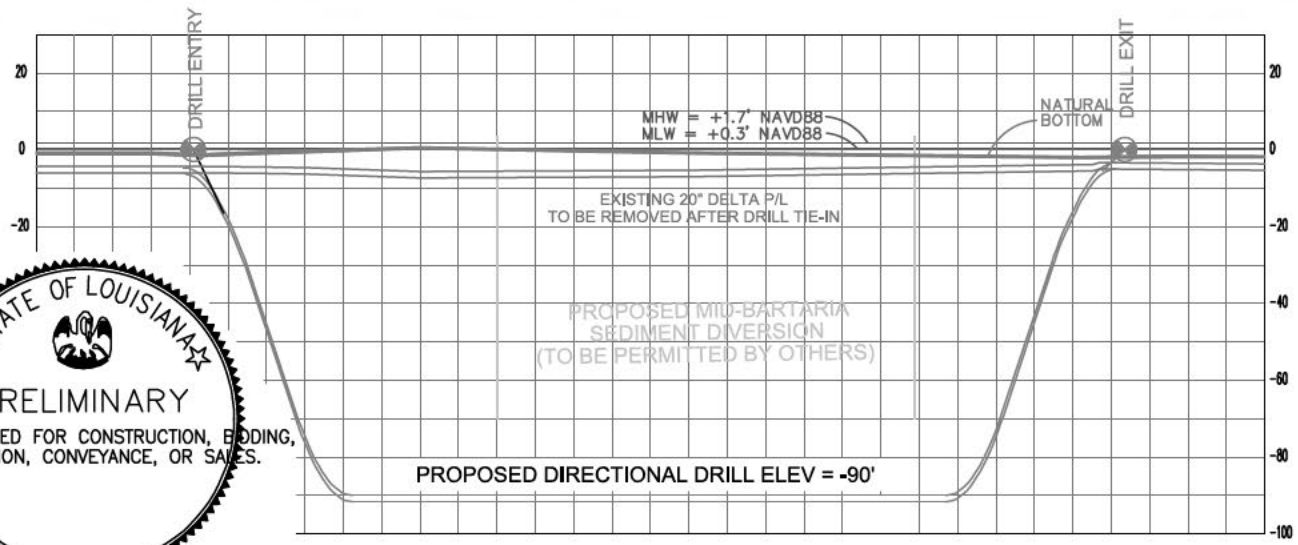
PL SEG - NAIRN TO NORCO 20IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA2	REV. 03
BY:	TBS-2020.1074		

Workspace Coordinates				
Point #	Northing	Easting	Latitude	Longitude
1	420869.41	3704123.54	N029° 39' 01.93"	W090° 00' 02.51"
2	420637.12	3703933.69	N029° 38' 59.65"	W090° 00' 04.69"
3	416330.73	3709202.72	N029° 38' 16.41"	W089° 59' 05.55"
4	416512.94	3709351.11	N029° 38' 18.20"	W089° 59' 03.85"





STATE OF LOUISIANA

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ENGINEER: Scott J. Schexnayder, P.E.
LICENSE NUMBER: 40347

HORIZONTAL SCALE: 1" = 1000'
VERTICAL SCALE: 1" = 50'

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SHEET 3 OF 10

REV	DATE	DESCRIPTION OF REVISION	ES NO.	BY	APP
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01	3/24/22	REVISED PER COMMENTS		LDE	SJS

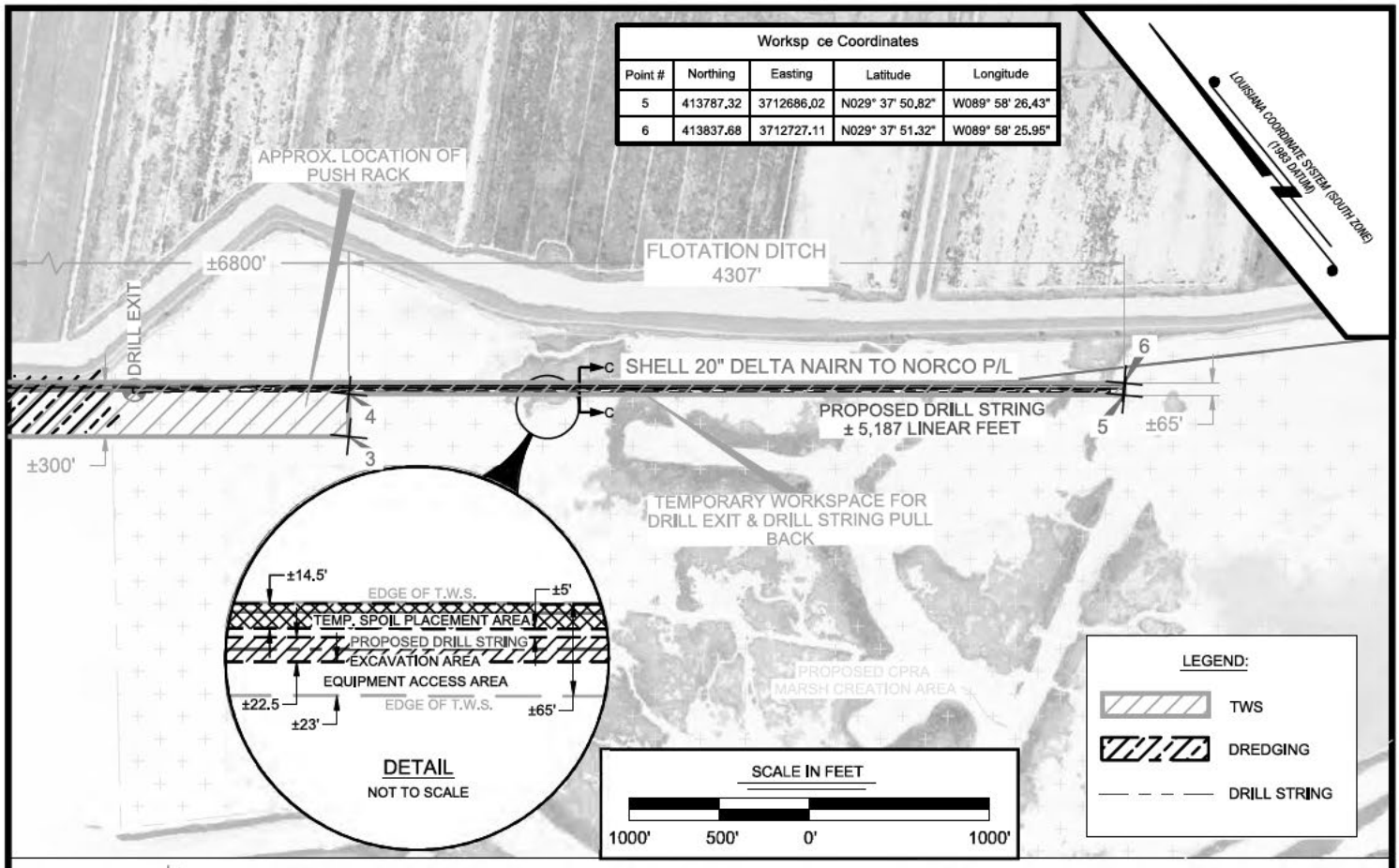
DELTA CRUDE

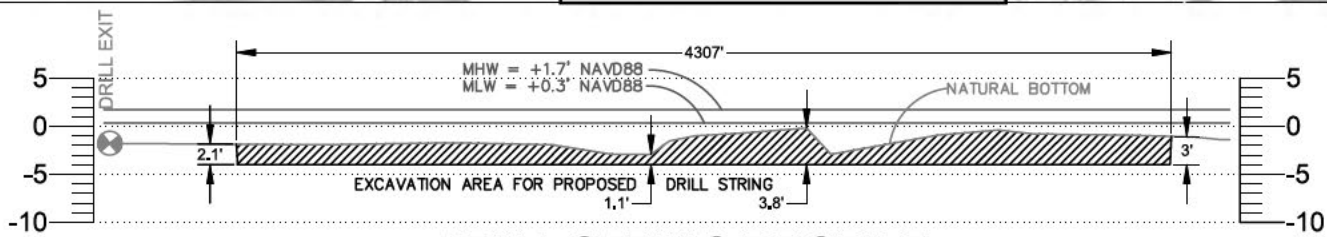
PL SEG - NAIRN TO NORCO 20IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA3	REV. 03
BY:	TBS-2020.1074		

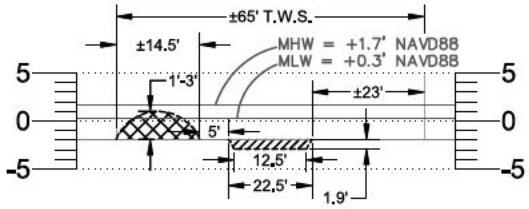
Worksp ce Coordinates				
Point #	Northing	Easting	Latitude	Longitude
5	413787.32	3712686.02	N029° 37' 50.82"	W089° 58' 26.43"
6	413837.68	3712727.11	N029° 37' 51.32"	W089° 58' 25.95"





DRILL STRING PROFILE

NOT TO SCALE



CROSS-SECTION "C-C"

NOT TO SCALE

STATE OF LOUISIANA

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, OR SALES.

ENGINEER: Scott J. Schexnayder, P.E.
LICENSE NUMBER: 40347

NOTE: THE EXCAVATION IS INTENDED AS A FLOTATION DITCH FOR THE PULL BACK STRING. A PUSH RACK WILL FABRICATE THE PULL BACK STRING AND FLOAT TOWARDS THE SOUTHEAST.

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ISSUED FOR PERMIT

SHEET 4 OF 10

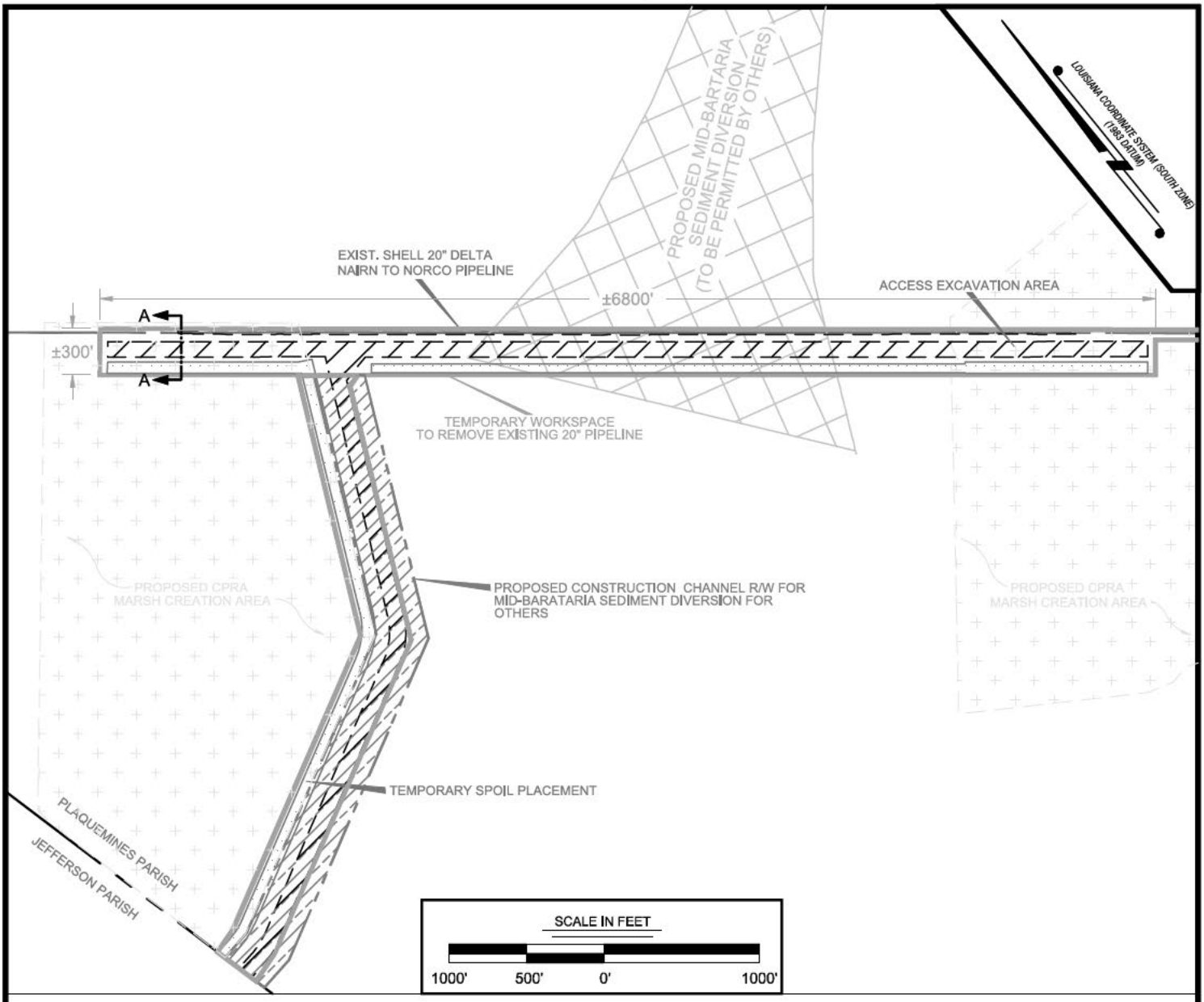
REV	DATE	DESCRIPTION OF REVISION	ES NO.	BY	APP
03	7/13/22	REVISED PER COMMENTS		MSL	SJS
02	6/01/22	REVISED PER COMMENTS		MSL	SJS
01	3/24/22	REVISED PER COMMENTS		LDE	SJS

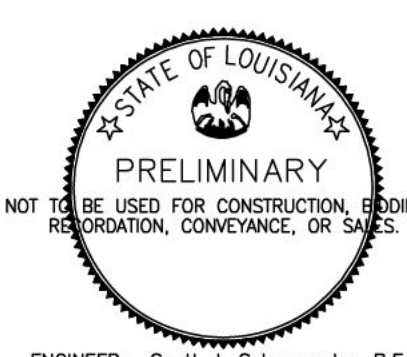
DELTA CRUDE

PL SEG - NAIRN TO NORCO 20IN.

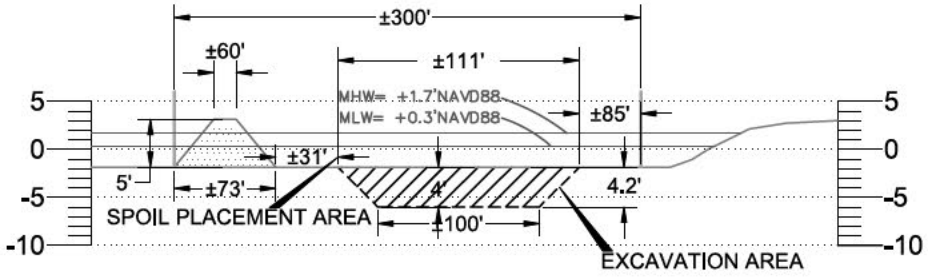
20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA4	REV. 03
BY:	TBS-2020.1074		





ENGINEER: Scott J. Schexnayder, P.E.
LICENSE NUMBER: 40347



CROSS-SECTION "A-A"

NOT TO SCALE

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ISSUED FOR PERMIT

SHEET 5 OF 10

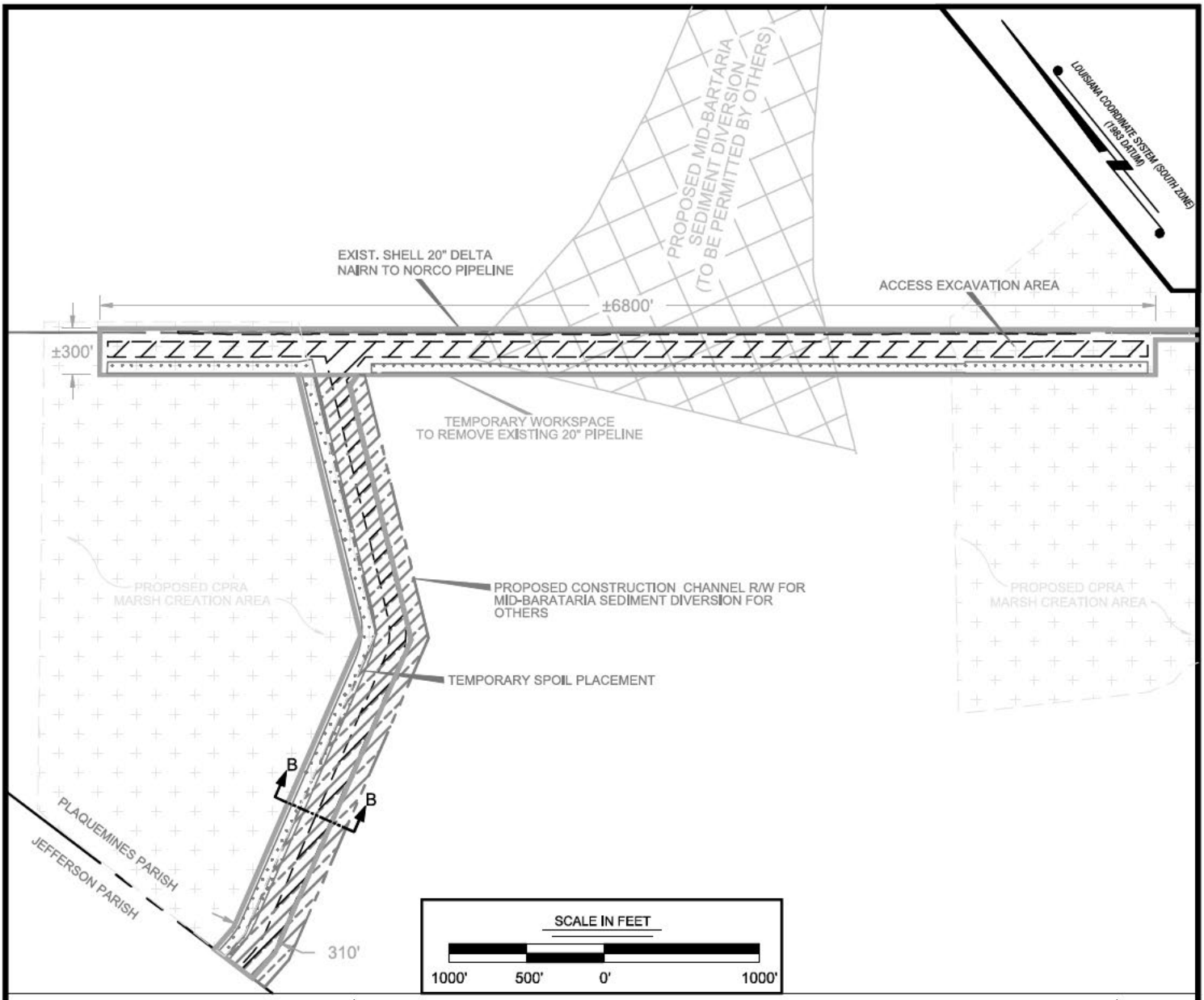
REV	DATE	DESCRIPTION OF REVISION	ES NO.	BY	APP
03	7/13/22	REVISED PER COMMENTS		MSL	SJS
02	6/01/22	REVISED PER COMMENTS		MSL	SJS
01	3/24/22	REVISED PER COMMENTS		LDE	SJS

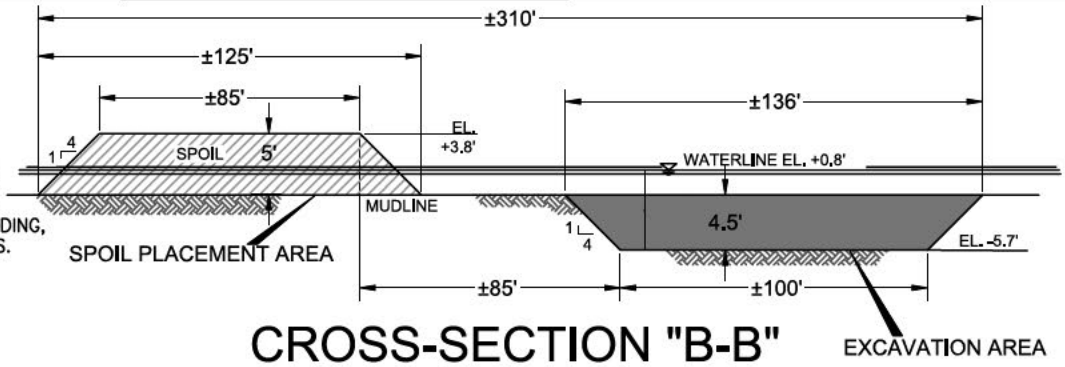
DELTA CRUDE

PL SEG - NAIRN TO NORCO 20IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA5	REV. 03
BY:	TBS-2020.1074		





STATE OF LOUISIANA

PRELIMINARY

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ENGINEER: SCOTT J. SCHEXNAYDER, P.E.
LICENSE NUMBER: 40347

CROSS-SECTION "B-B"

NOT TO SCALE

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ISSUED FOR PERMIT

SHEET 6 OF 10

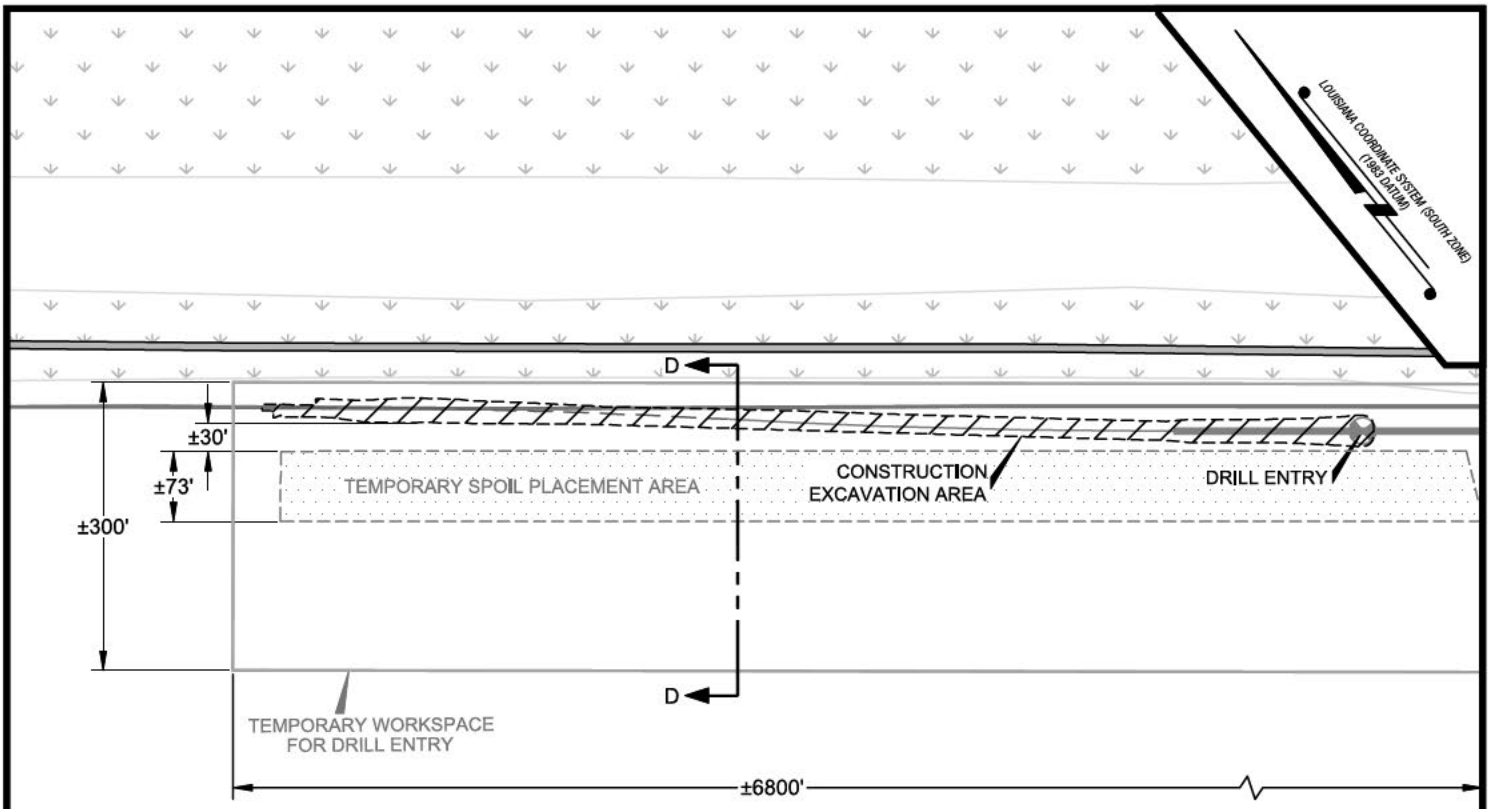
REV	DATE	DESCRIPTION OF REVISION	ES NO.	BY	APP
03	7/13/22	REVISED PER COMMENTS		MSL	SJS
02	6/01/22	REVISED PER COMMENTS		MSL	SJS
01	3/24/22	REVISED PER COMMENTS		LDE	SJS

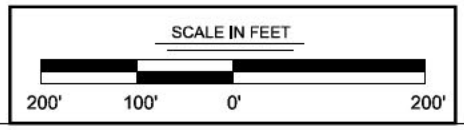
DELTA CRUDE

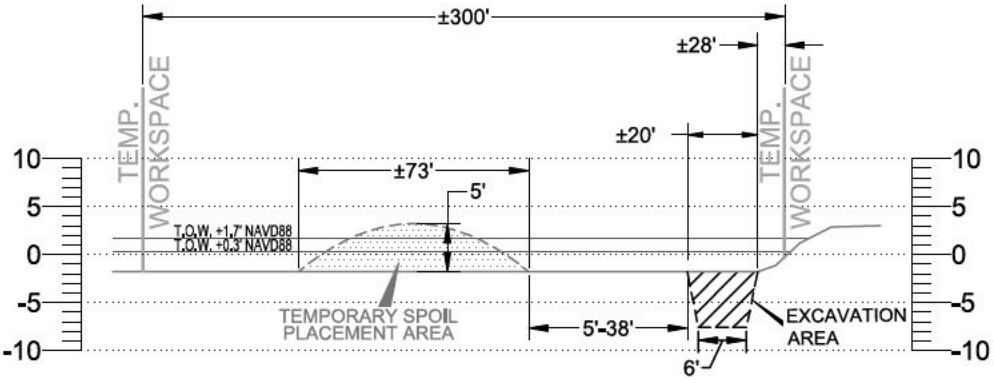
PL SEG - NAIRN TO NORCO 20IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA5B	REV. 03
BY:	TBS-2020.1074		







CROSS-SECTION "D-D"

NOT TO SCALE

STATE OF LOUISIANA

PRELIMINARY

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ENGINEER: SCOTT J. SCHEXNAYDER, P.E.
LICENSE NUMBER: 40347

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SHEET 7 OF 10

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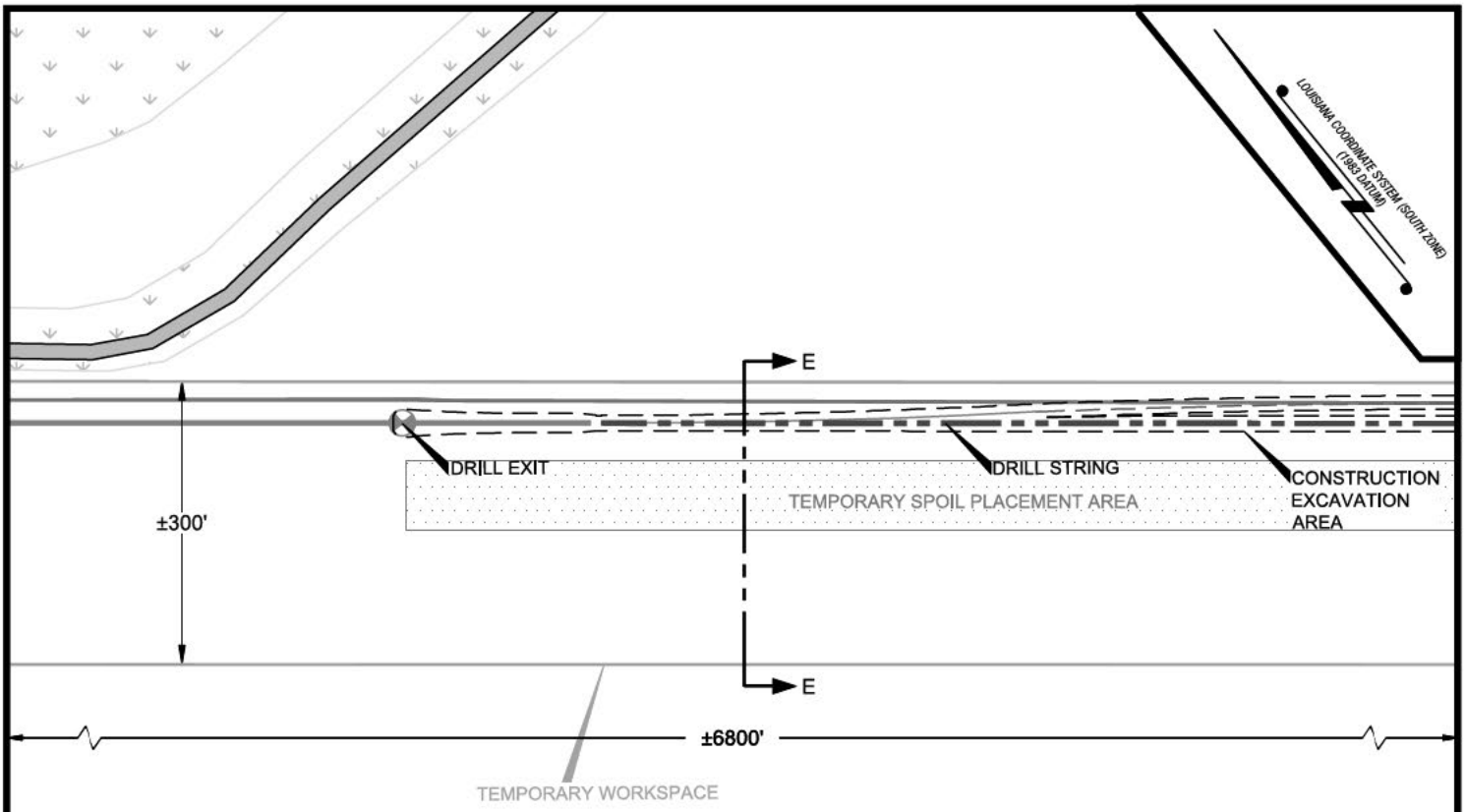
02	6/01/22	REVISED PER COMMENTS		MSL	SJS
01	3/24/22	REVISED PER COMMENTS		LDE	SJS

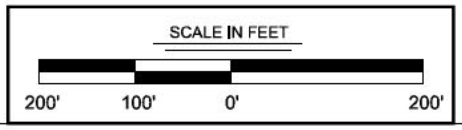
DELTA CRUDE

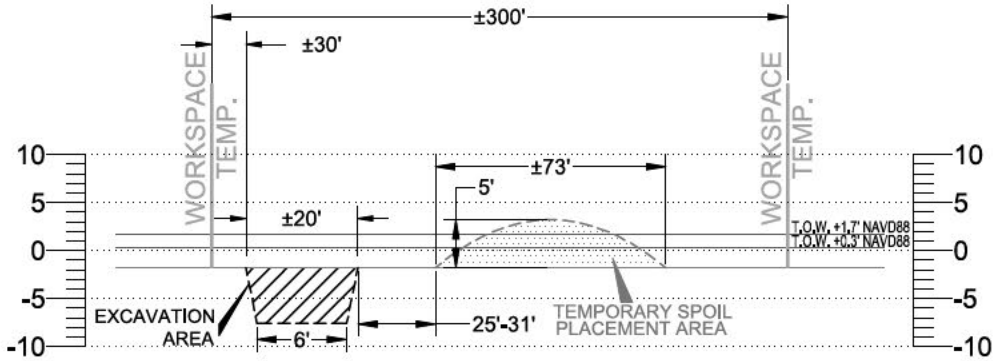
PL SEG - NAIRN TO NORCO 20IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA6	REV. 03
BY:	TBS-2020.1074		







CROSS-SECTION "E-E"

NOT TO SCALE

STATE OF LOUISIANA

PRELIMINARY

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LICENSE NUMBER: 40347

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SHEET 8 OF 10

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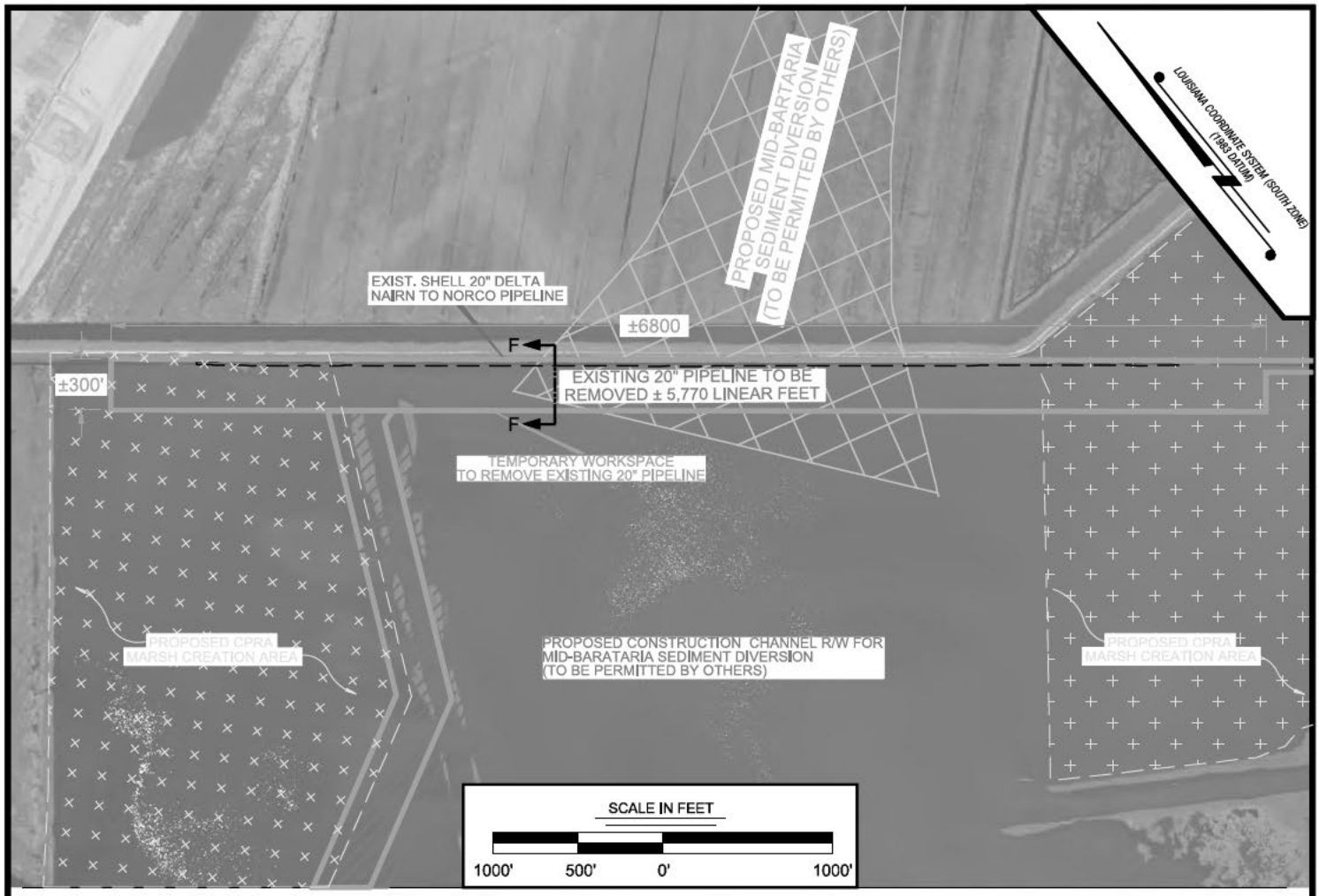
01	3/24/22	REVISED PER COMMENTS		LDE	SJS

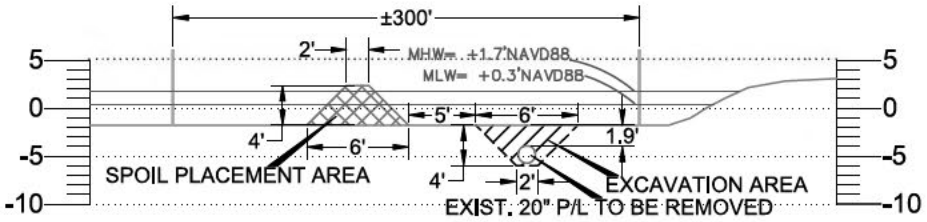
DELTA CRUDE

PL SEG - NAIRN TO NORCO 20IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA7	REV. 03
BY:	TBS-2020.1074		





CROSS-SECTION "F-F"

NOT TO SCALE

STATE OF LOUISIANA

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LICENSE NUMBER: 40347

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SHEET 9 OF 10

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01	3/24/22	REVISED PER COMMENTS		LDE	SJS

DELTA CRUDE

PL SEG - NAIRN TO NORCO 20IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA8	REV. 03
BY:	TBS-2020.1074		

NOTES:

ALL STRUCTURES, FACILITIES, WELLS AND PIPELINES/FLOWLINES OCCURRING IN OPEN WATER AREAS, OR IN OILFIELD CANALS, OR SLIPS SHALL BE REMOVED WITHIN 120 DAYS OF ABANDONMENT OF THE FACILITIES FOR THE HEREIN PERMITTED USE, UNLESS PRIOR WRITTEN APPROVAL TO LEAVE SUCH STRUCTURES IN PLACE IS RECEIVED FROM THE COASTAL MANAGEMENT DIVISION. THIS CONDITION DOES NOT PRECLUDE THE NECESSITY FOR REVISING THE CURRENT PERMIT OR OBTAINING A SEPARATE COASTAL USE PERMIT, SHOULD ONE BE REQUIRED FOR SUCH ACTIVITIES.

AS-BUILT DRAWINGS SHALL BE SUBMITTED WITHIN 30 DAYS OF COMPLETION OF THIS PROJECT TO THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, COASTAL MANAGEMENT DIVISION AND OFFICE OF CONSERVATION, PIPELINE SAFETY DIVISION, POST OFFICE BOX 44487, BATON ROUGE, LA 70804-4487.

IN ORDER TO ENSURE THE SAFETY OF ALL PARTIES, THE PERMITEE SHALL CONTACT THE LOUISIANA ONE CALL SYSTEM (1-800-272-3020) A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION (DIGGING, DREDGING, JETTING, ETC.) OR DEMOLITION ACTIVITY.

THE PERMITEE SHALL ALSO CONTACT OTHER GOVERNMENTAL ENTITIES THAT MAY HAVE OPTED OUT OF THE ONE CALL PROGRAM . THESE GOVERNMENTAL ENTITIES MAY HAVE OPERATIONS LOCATED IN THE AREA OF THIS PROJECT.

ALL STRUCTURES WILL BE MARKED AND LIGHTED IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS.

THE QUANTITIES AND ACREAGES OF IMPACT DESCRIBED HEREAFTER FOR THE RELOCATION OF THE PIPELINE WILL PRECEDE AND OVERLAP WITH THE AREAS WHERE THE OVERALL PROJECT CONSTRUCTION EXCAVATION AND FILL WILL OCCUR, SUCH AS BENEFICIAL USE RESTORATION AREAS AND THE OUTFALL CONSTRUCTION DREDGING AND ARMORING. FOR IMPACT ANALYSIS, THE TEMPORARY HDD IMPACTS TO WETLANDS AND WATER BOTTOMS ARE INCLUDED WITHIN THE RESPECTIVE LOCATIONS (OUTFALL NORTH, OTF, OUTFALL SOUTH 1 AND 2).

APPROXIMATELY 14.7 ACRES OF WATERBOTTOMS WILL BE IMPACTED FOR DRILL ENTRY / DRILL EXIT LOCATIONS.

APPROXIMATELY 37,435 CUBIC YARDS OF NATIVE MATERIAL WILL BE EXCAVATED FOR DRILL ENTRY / DRILL EXIT. THE NATIVE MATERIAL WILL BE USED AS BACKFILL UPON COMPLETION.

APPROXIMATELY 8.2 ACRES OF WATERBOTTOMS WILL BE IMPACTED FOR DRILL STRING LAY AREA AND FOR PULL BACK AREA.

APPROXIMATELY 4,625 CUBIC YARDS OF NATIVE MATERIAL WILL BE EXCAVATED FOR DRILL STRING LAY AREA. THE NATIVE MATERIAL WILL BE USED AS BACKFILL UPON COMPLETION.

APPROXIMATELY 7.6 ACRES OF WATERBOTTOMS WILL BE IMPACTED DURING REMOVAL OF EXISTING 20" PIPELINE.

APPROXIMATELY 3,573 CUBIC YARDS OF NATIVE MATERIAL WILL BE EXCAVATED FOR THE REMOVAL OF THE EXISTING 20" PIPELINE. THE NATIVE MATERIAL WILL BE USED AS BACKFILL UPON COMPLETION.

STATE OF LOUISIANA

PRELIMINARY

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ENGINEER: SCOTT J. SCHEXNAYDER, P.E.
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SHEET 10 OF 10

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01	3/24/22	REVISED PER COMMENTS		LDE	SJS

DELTA CRUDE

PL SEG - NAIRN TO NORCO 20IN.

20" DELTA NAIRN TO NORCO PIPELINE
MID-BARATARIA SEDIMENT DIVERSION DIRECTIONAL DRILL
PLAQUEMINES PARISH, LOUISIANA

DATE:	6/09/2021	SPLC-GOM-DL-SA9	REV. 03
BY:	TBS-2020.1074		

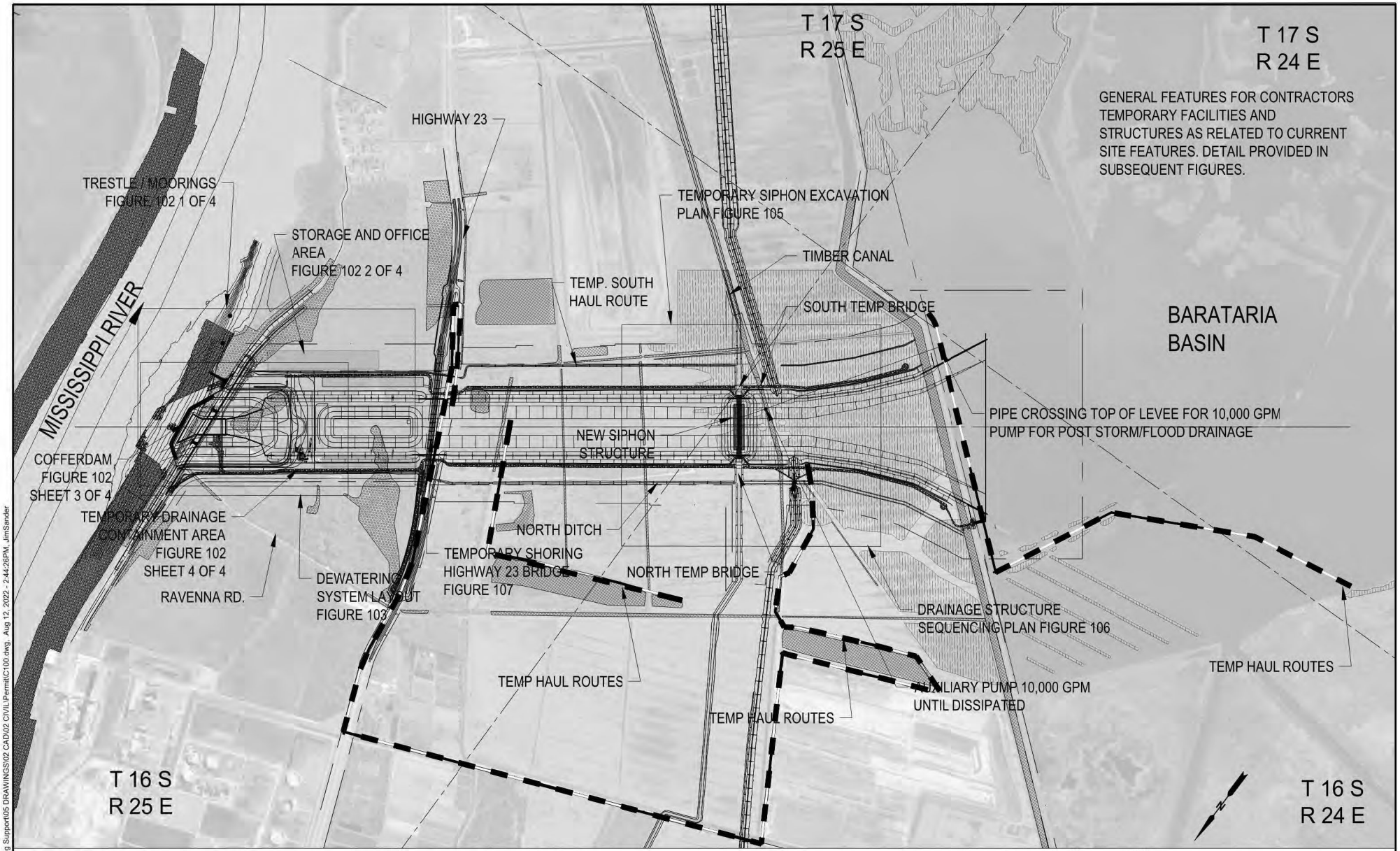


Photo Source: Google Earth Pro, Photo Date: 1/17/2021

PRELIMINARY FOR PERMIT PURPOSE ONLY

WILLIAM RUSHING — ENGINEER OF RECORD | CIVIL — DISCIPLINE
LA. — STATE | 21891 — LICENSE NO. | AUGUST 2022 — DATE

ARCHER WESTERN ALBERICI JOINT VENTURE
9654 BROOKLINE AVE,
SUITE 100
BATON ROUGE, LA 70816
512-845-1366

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA

CPRA PROJECT NUMBER: BA-153

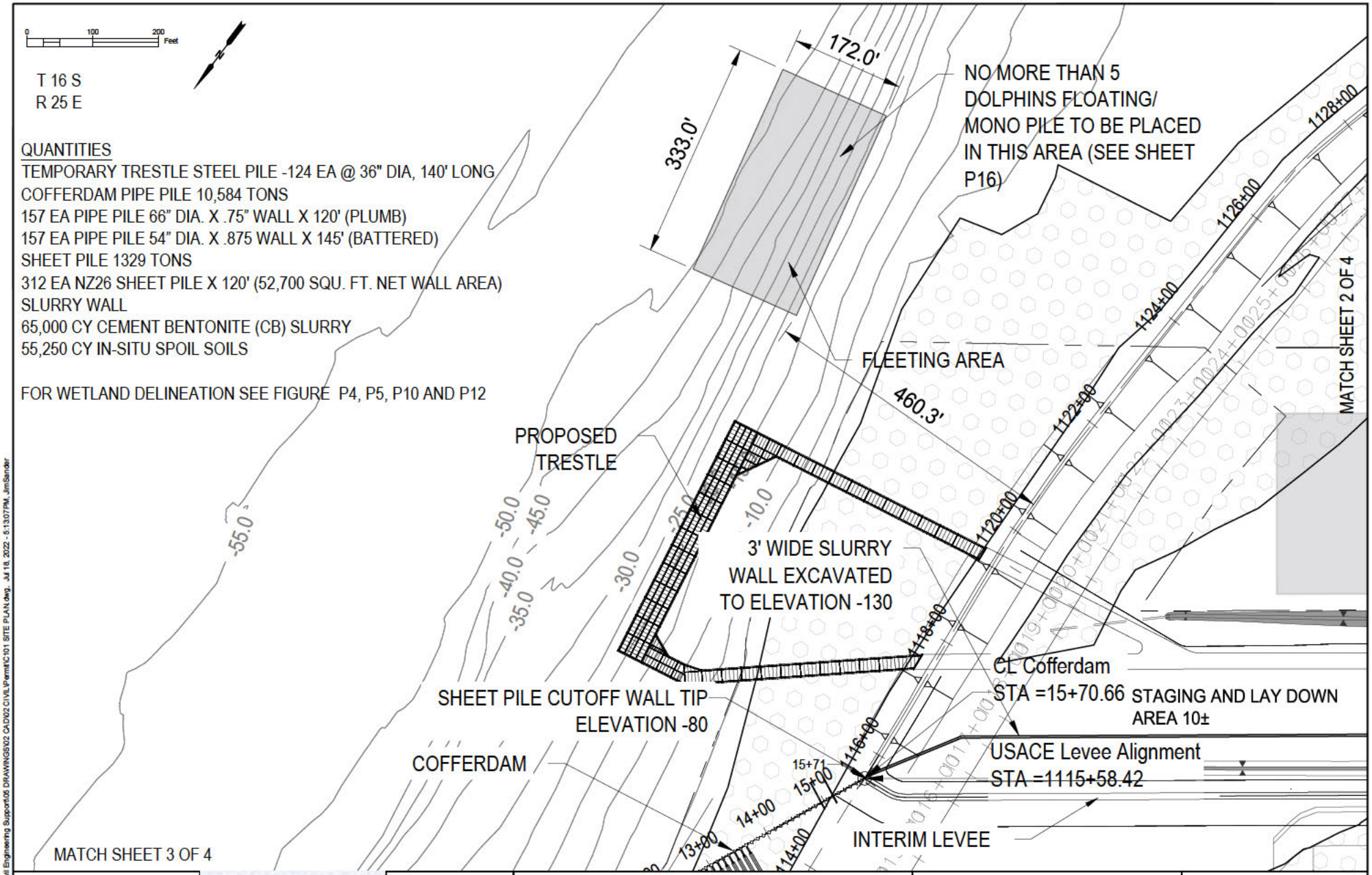
AECOM PROJECT NUMBER: 60591673

OVERALL SITE PLAN

DATE: AUGUST 2022

DRAWN BY: | DESIGNED BY: | APPROVED BY: | DRAWING FIGURE 101 | SHEET 1 of 1

Z:\2019 Projects\19 014 00 - Alberici - Civil Engineering Support\05 DRAWINGS\02 CAD\02 CIVIL\Permit\C100.dwg, Aug 12, 2022 - 2:44:26PM, JimSander



PRELIMINARY FOR PERMIT PURPOSE ONLY

WILLIAM RUSHING — ENGINEER OF RECORD | CIVIL — DISCIPLINE
LA. — STATE | 21891 — LICENSE NO. | JULY 2022 — DATE

ARCHER WESTERN ALBERICI JOINT VENTURE
9654 BROOKLINE AVE,
SUITE 100
BATON ROUGE, LA 70816
512-845-1366

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA

SITE PLAN

CPRA PROJECT NUMBER: BA-153
AECOM PROJECT NUMBER: 60591673
DATE: JULY 2022

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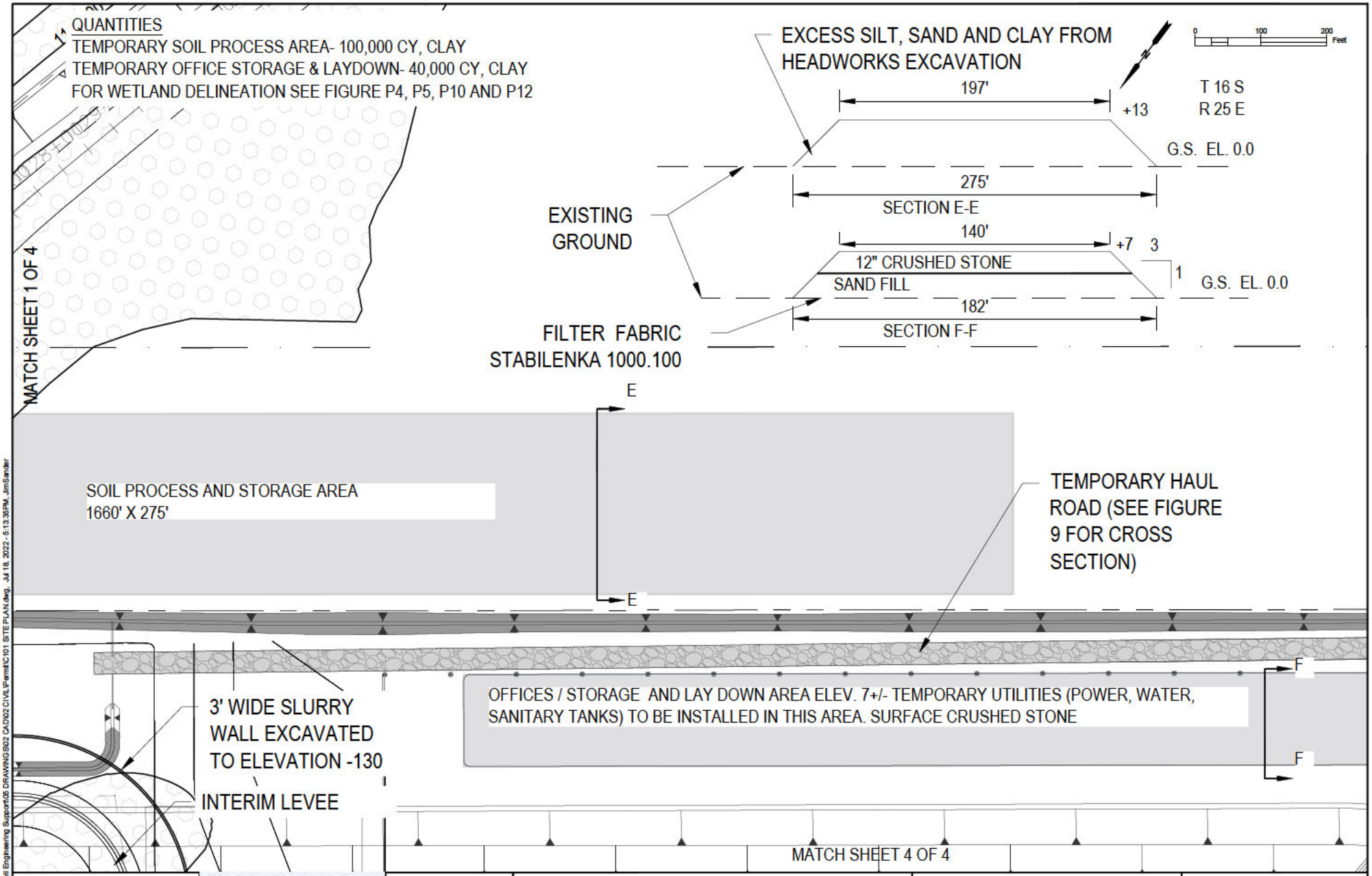

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COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
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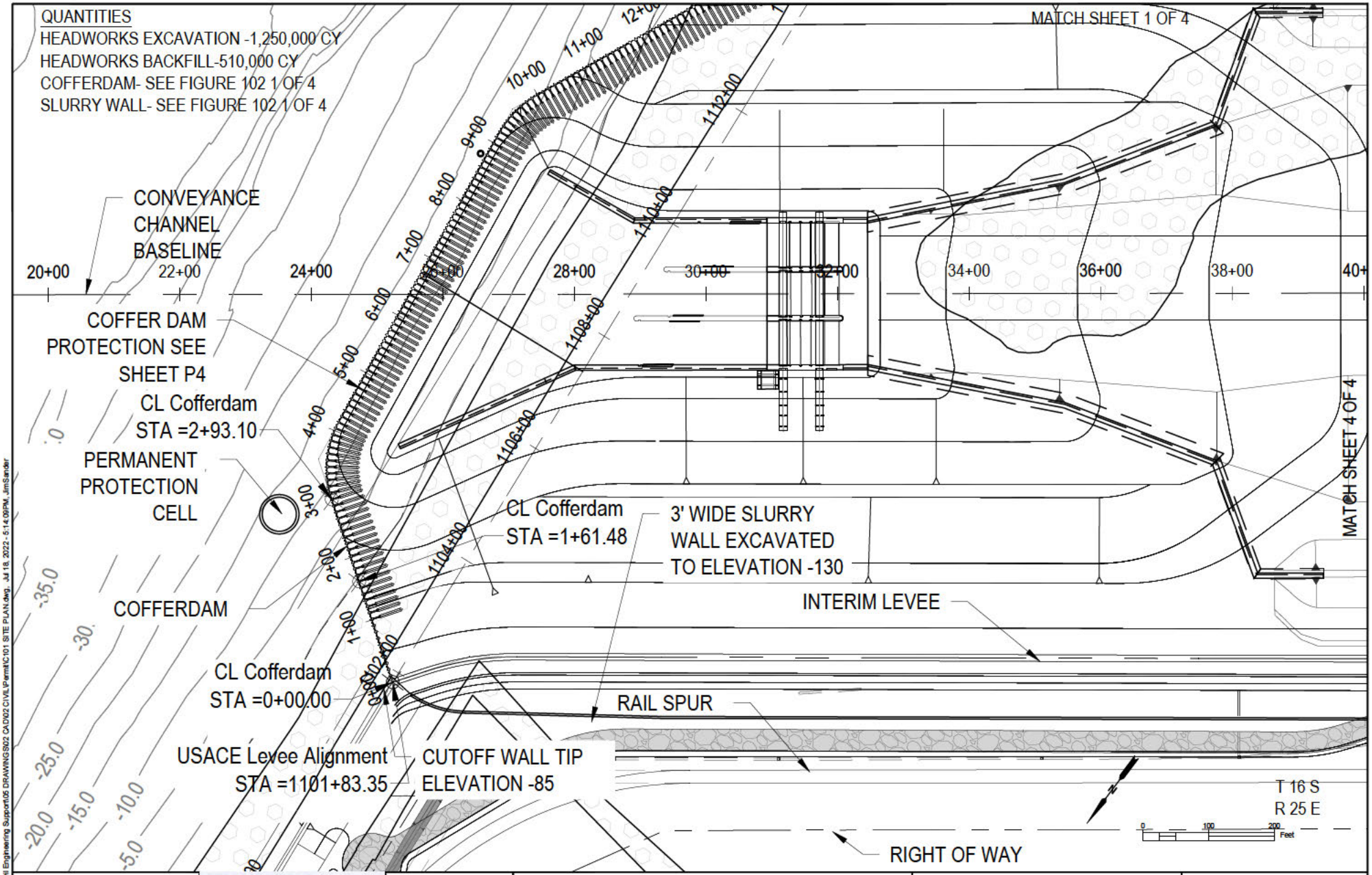

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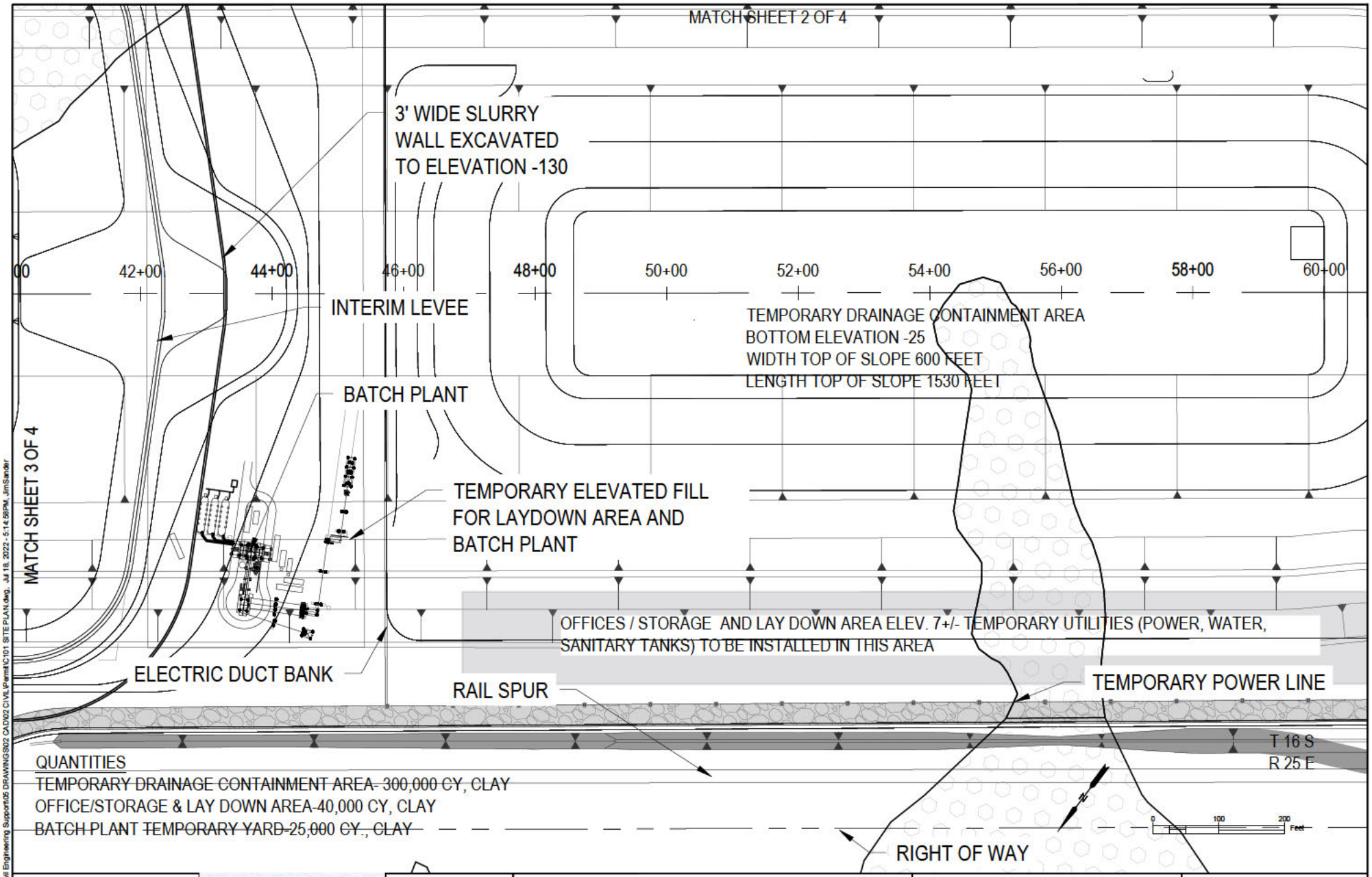

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AECOM PROJECT NUMBER: 60591673

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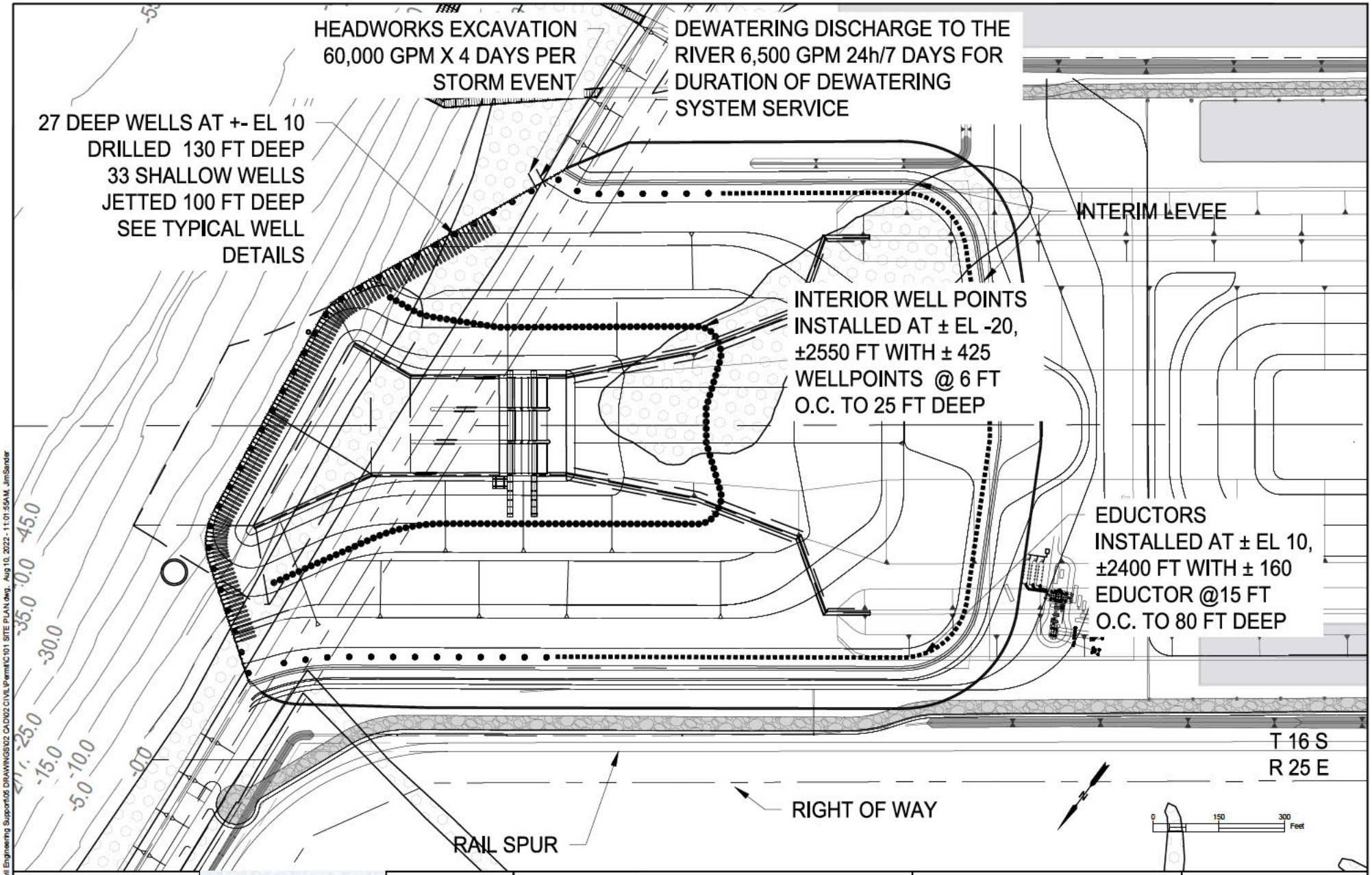

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MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA

DEWATERING PLAN

CPRA PROJECT NUMBER: BA-153
AECOM PROJECT NUMBER: 60591673
DATE: AUGUST 2022

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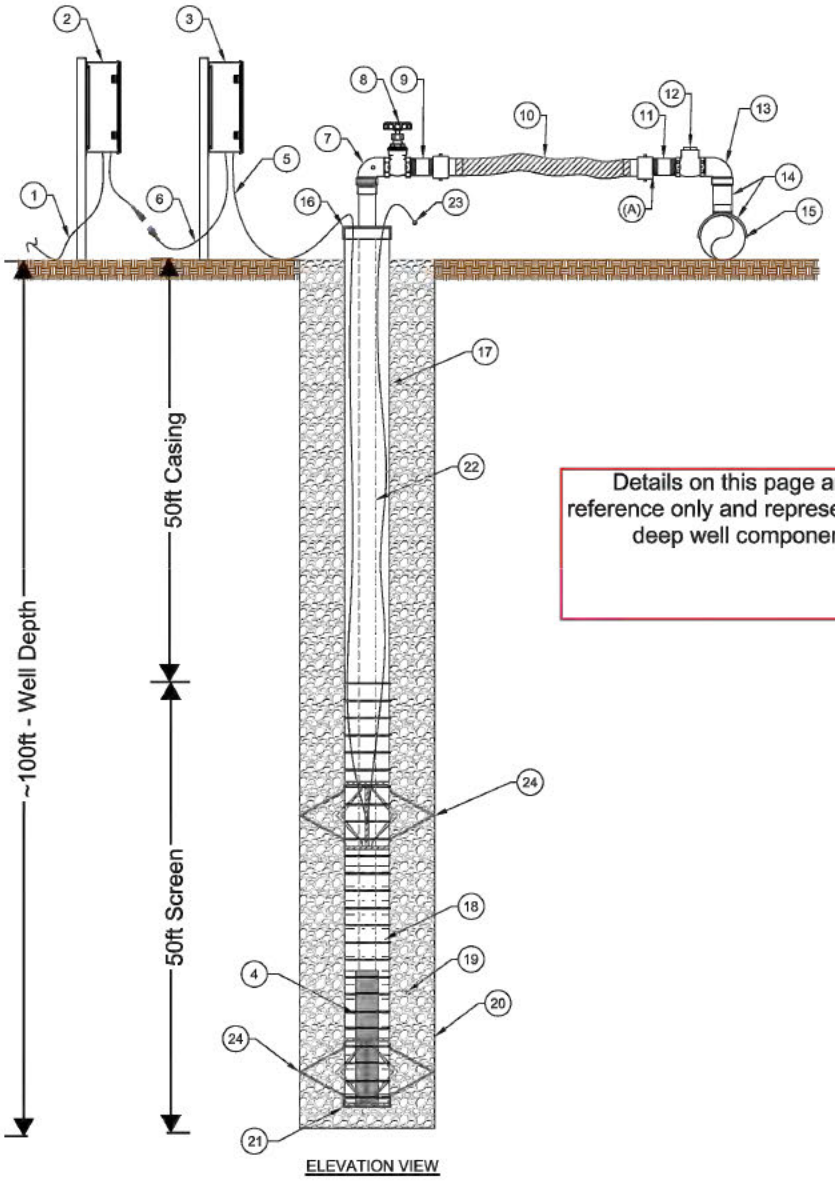
MATERIAL LIST				
NO.	QTY.	U.O.M	SIZE	EQUIPMENT
1	1	EA	4/4 SOW	ELECTRICAL DISTRIBUTION CABLE (IF APPLICABLE)
2	1	EA	-	JUNCTION BOX w/50AMP WEATHER TIGHT TWISTLOCK CONNECTOR (IF APPLICABLE)
3	1	EA	-	PUMP CONTROL BOX
4	1	HP	3HP-7.5HP	SUBMERSIBLE PUMP
5	1	EA	100FT	PUMP CABLE
6	1	EA	-	PIGTAIL w/50AMP WEATHER TIGHT TWISTLOCK PLUG - TO CONNECT CONTROL BOX TO JUNCTION BOX
7	1	IN	2" - 4"	STREET ELBOW w/ SAMPLE PORT
8	1	IN		GATE VALVE- ISOLATION VALVE
9	1	IN		PIPE NIPPLE
10*	1	IN		SWING HOSE-PIN LUG FEMALE STANDARD 10' LENGTH -PRESSURE RATED FOR THE SYSTEM
11	1	IN		PIPE NIPPLE
12	1	IN		CHECK VALVE
13	1	IN		STREET ELBOW
14	1	IN		TEE/ SADDLE w/NIPPLE
15	1	IN	6"-12"	DISCHARGE PIPE
-	-	IN	6"-8"	CASING DIA.
16	1	EA	-	WELL CAP OR WELL SEAL
17	1	FT	50'	CASING LENGTH
18	1	FT	50'	WELLSCREEN LENGTH
-	-	IN	0.030	WELLSCREEN-SLOT
19	1	EA	-	WELLPACK, ENGINEERED
20	1	FT	100'	BOREHOLE DEPTH
-	-	IN	16-20"	BOREHOLE DIA.
21	1	EA	-	CAP BOTTOM
22	1	IN	2"- 4"	PUMP RISER PIPE-ADAPTED TO MALE THREAD ON TOP
23	1	EA	-	SAFETY CABLE FOR PUMP RETRIEVAL
24	-	EA	-	CENTRALIZER (AS REQUIRED)
* USE PIN LUG (FEMALE SWIVEL) UP TO 4"				
ITEMS 7,8,9 MAKE UP A "GATE VALVE ASSEMBLY"				
ITEMS 11,12,13 MAKE UP A "CHECK VALVE ASSEMBLY"				



ELEVATION VIEW

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AECOM PROJECT NUMBER: 60591673

DEWATERING WELL DETAIL
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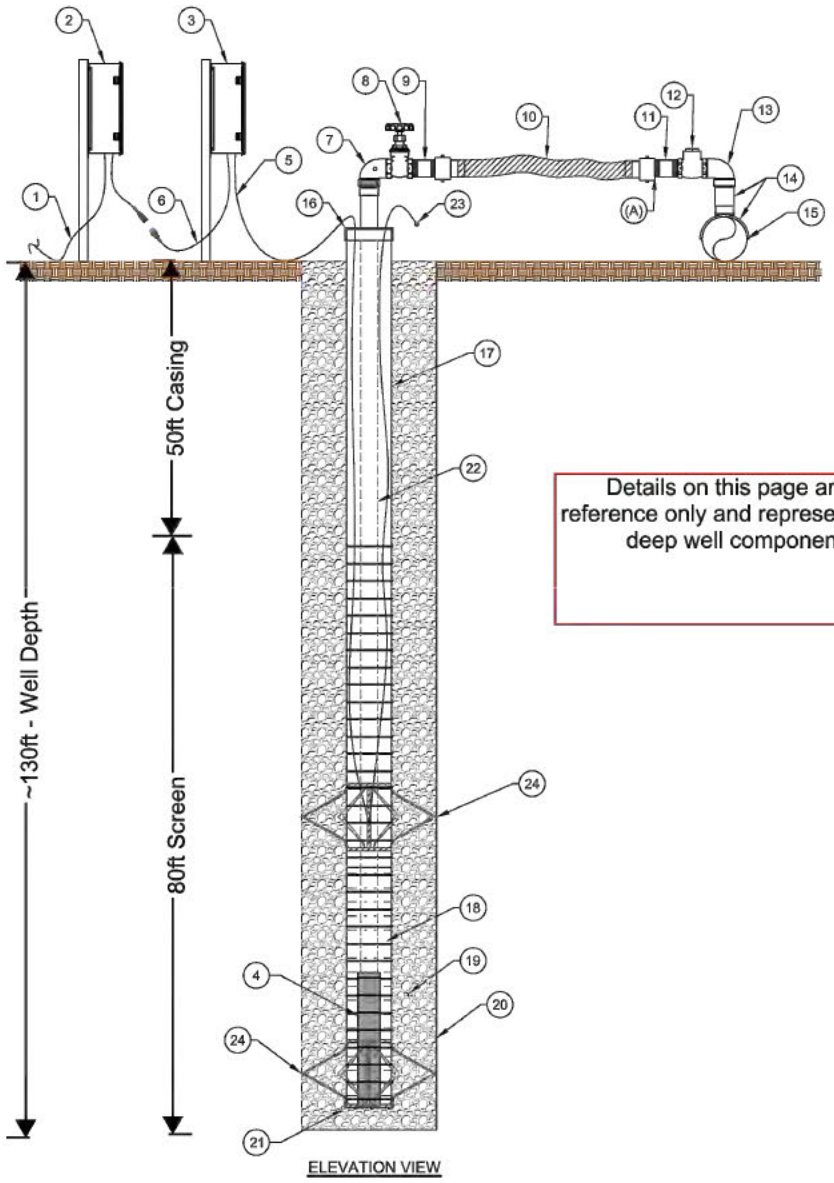
MATERIAL LIST

NO.	QTY.	U.O.M	SIZE	EQUIPMENT
1	1	EA	4/4 SOW	ELECTRICAL DISTRIBUTION CABLE (IF APPLICABLE)
2	1	EA	-	JUNCTION BOX w/50AMP WEATHER TIGHT TWISTLOCK CONNECTOR (IF APPLICABLE)
3	1	EA	-	PUMP CONTROL BOX
4	1	HP	3HP-7.5HP	SUBMERSIBLE PUMP
5	1	EA	100FT	PUMP CABLE
6	1	EA	-	PIGTAIL w/50AMP WEATHER TIGHT TWISTLOCK PLUG - TO CONNECT CONTROL BOX TO JUNCTION BOX
7	1	IN	2" - 4"	STREET ELBOW w/ SAMPLE PORT
8	1	IN		GATE VALVE- ISOLATION VALVE
9	1	IN		PIPE NIPPLE
10"	1	IN		SWING HOSE-PIN LUG FEMALE STANDARD 10' LENGTH -PRESSURE RATED FOR THE SYSTEM
11	1	IN		PIPE NIPPLE
12	1	IN		CHECK VALVE
13	1	IN		STREET ELBOW
14	1	IN		TEE/ SADDLE w/NIPPLE
15	1	IN	6"-12"	DISCHARGE PIPE
-	"	IN	6"-8"	CASING DIA.
16	1	EA	-	WELL CAP OR WELL SEAL
17	1	FT	50'	CASING LENGTH
18	1	FT	80'	WELLSCREEN LENGTH
-	-	IN	0.030	WELLSCREEN-SLOT
19	1	EA	-	WELLPACK, ENGINEERED
20	1	FT	130'	BOREHOLE DEPTH
-	-	IN	24"	BOREHOLE DIA.
21	1	EA	-	CAP BOTTOM
22	1	IN	2"-4"	PUMP RISER PIPE-ADAPTED TO MALE THREAD ON TOP
23	1	EA	-	SAFETY CABLE FOR PUMP RETRIEVAL
24	-	EA	-	CENTRALIZER (AS REQUIRED)

* USE PIN LUG (FEMALE SWIVEL) UP TO 4"

ITEMS 7,8,9 MAKE UP A "GATE VALVE ASSEMBLY"

ITEMS 11,12,13 MAKE UP A "CHECK VALVE ASSEMBLY"



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BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA

CPRA PROJECT NUMBER: BA-153

AECOM PROJECT NUMBER: 60591673

DEWATERING WELL DETAIL

DATE: AUGUST 2022

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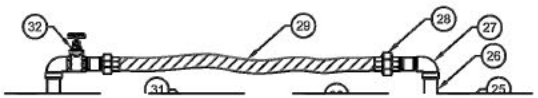
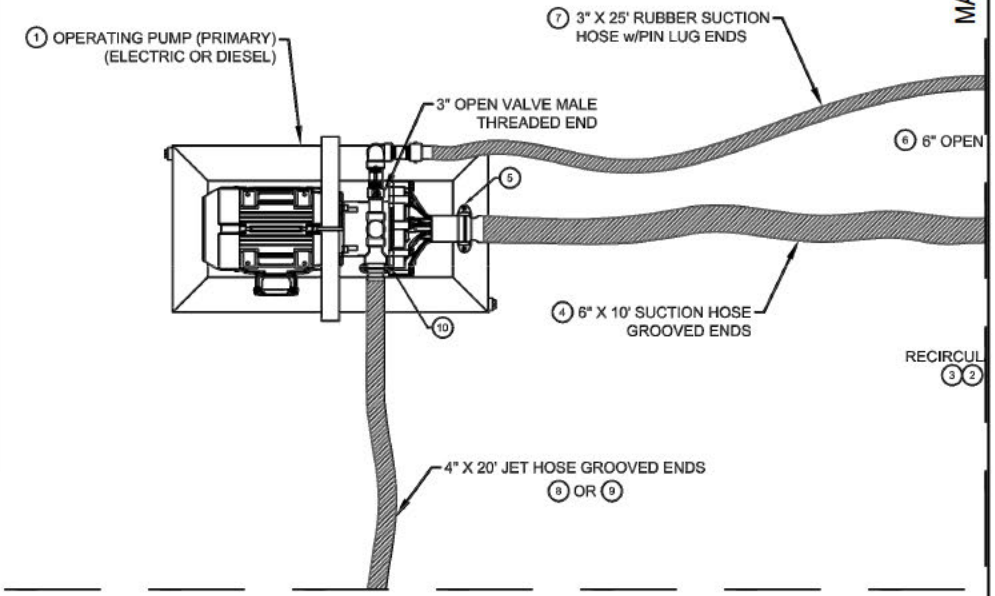
MATERIAL LIST

NO.	QTY.	SIZE	EQUIPMENT
PUMPSTATION:			
1	-	6" x 4"	JET PUMP w/ 4" x 3" TEE, w/ VALVE-3" BY PASS IS THREADED- 4" OUTLET GROOVED w/PRESSURE GAUGE
2	-	-	RECIRCULATING TANK w/ 6" OVERFLOW
3	-	6"	DISCHARGE PIPE, PVC OR SPECIFY, BUT MUST ATTACH TO OVERFLOW FITTING
4	-	6" x 10'	SUCTION HOSE, GROOVED ENDS VICTTAULIC TYPE
5	-	6"	GROOVED COUPLING
6	-	6"	BUTTERFLY VALVE FOR TANK OUTLET WITH AN ADAPTER TO SUCTION HOSE TYPE
7	-	3" x 20'	SUCTION/ DISCHARGE HOSE TO CONNECT PUMP BY PASS TO TANK-3" PIN LUG
8	-	4" x 10'	JET HOSE, VIC X VIC
9	-	4" x 20'	JET HOSE, VIC X VIC
10	-	4"	VIC COUPLING
PRESSURE PIPE:			
11	-	4"	TEE w/ISOLATING VALVE w/VIC END ON INLET SIDE AND HDPE ADAPTER ON OUTLET SIDE
12	-	4"	HDPE PIPE, SDR 17, w/1" INLET SADDLES (10' O.C) (100 PSI MAXIMUM SYSTEM PRESSURE)
13	-	4"	CAP, HDPE (NOT SHOWN)
14	-	4"	90° ELBOW, HDPE
15	-	4"	BUTTERFLY OR OTHER ISOLATION VALVE w/ HDPE ENDS (NOT SHOWN)
RETURN LINE:			
16	-	6"	TEE, GROOVED ON OUTLET SIDE, IF CONNECTING THE RETURN SIDES TOGETHER. OTHERWISE RUN LINES TO RECIRULATING
17	-	6"	HDPE PIPE, SDR 17, w/1-1/4" INLETSADDLES (10' O.C)
18	-	6"	CAP, HDPE (NOT SHOWN)
19	-	6"	90° ELBOW HPDE
20	-	6"	BUTTERFLY VALVE WITH HDPE ENDS (NOT SHOWN)
EDUCTOR & PIPEING:			
21	-	2"	EDUCTOR JET (INSIDE OF 2" CASING PIPE)
22	-	1" x 3"	DRAFT TUBE (LENGTH MAY CHANGE PENDING SCREEN LENGTH) (ATTACHED TO EDUCTOR JET)
23	-	2" x 3'	PVC WELLSCREEN WITH CAP
24	-	2"	RISER PIPE, PVC SCH. 40
25	-	2"x 1-1/4"x 1"	GRIFFIN SPECIAL TEE, SLIP x SLIP x THREAD, PVC SCH. 40
26	-	1-1/4"	RISER PIPE, PVC SCH. 80 THREADED
27	-	1-1/4"	90° ELBOW, SLIP x MALE NPT THREAD FOR TOP OF RISER
28	-	1-1/4"	TURNED COUPLING, ONE PER EACH EDUCTOR AND EACH RISER
29	-	1-1/4" x 3'	PRESSURE HOSE
30	-	1" x 3'	PRESSURE HOSE
31	-	1"	GATE VALVE ASSEMBLY
32	-	1-1/4"	GATE VALVE ASSEMBLY
OTHER ITEMS:			
33	-	4"-6"	FLOW METER





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MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA

CPRA PROJECT NUMBER: BA-153

AECOM PROJECT NUMBER: 60591673

DEWATERING WELL DETAIL

DATE: AUGUST 2022

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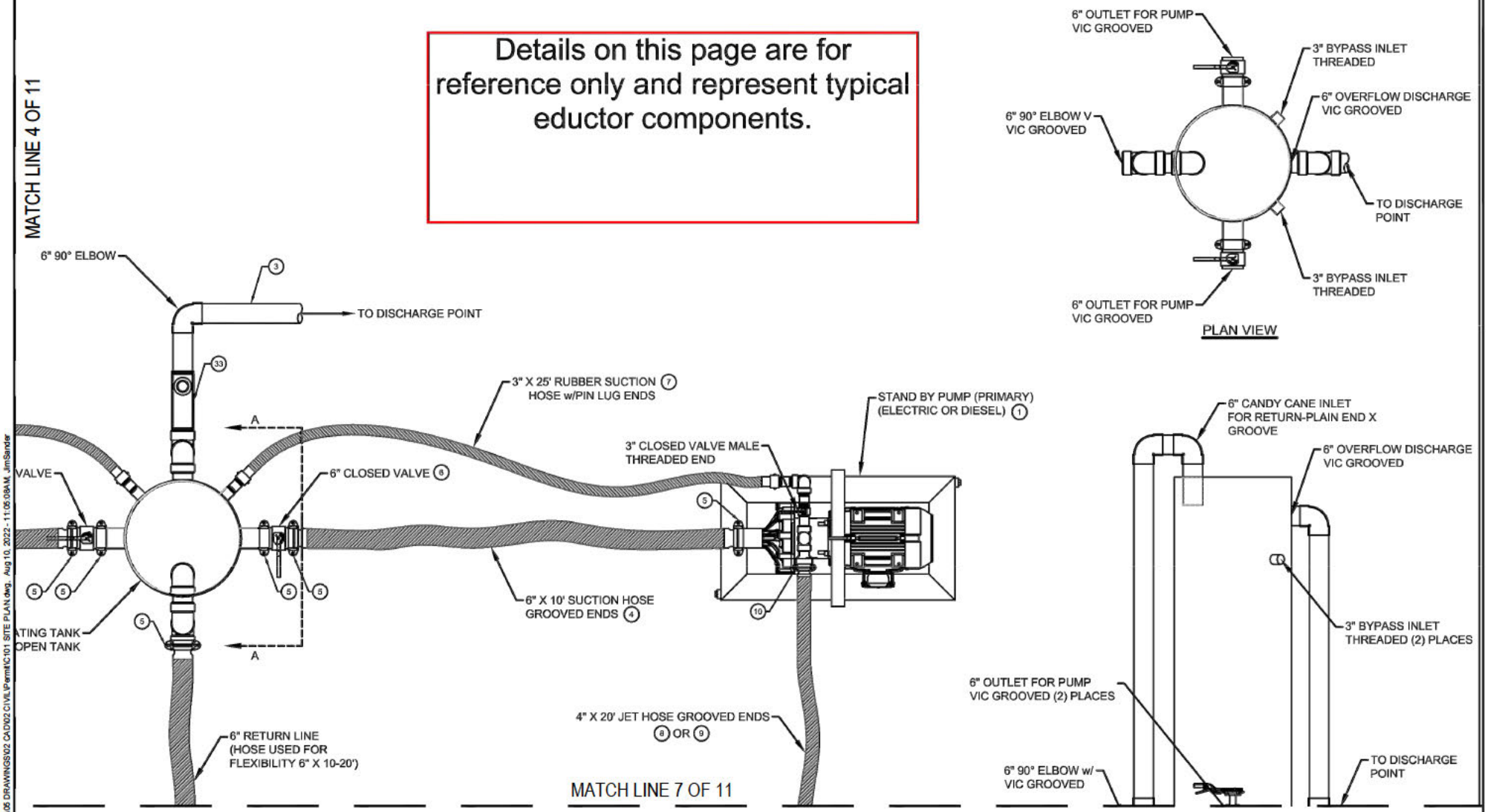

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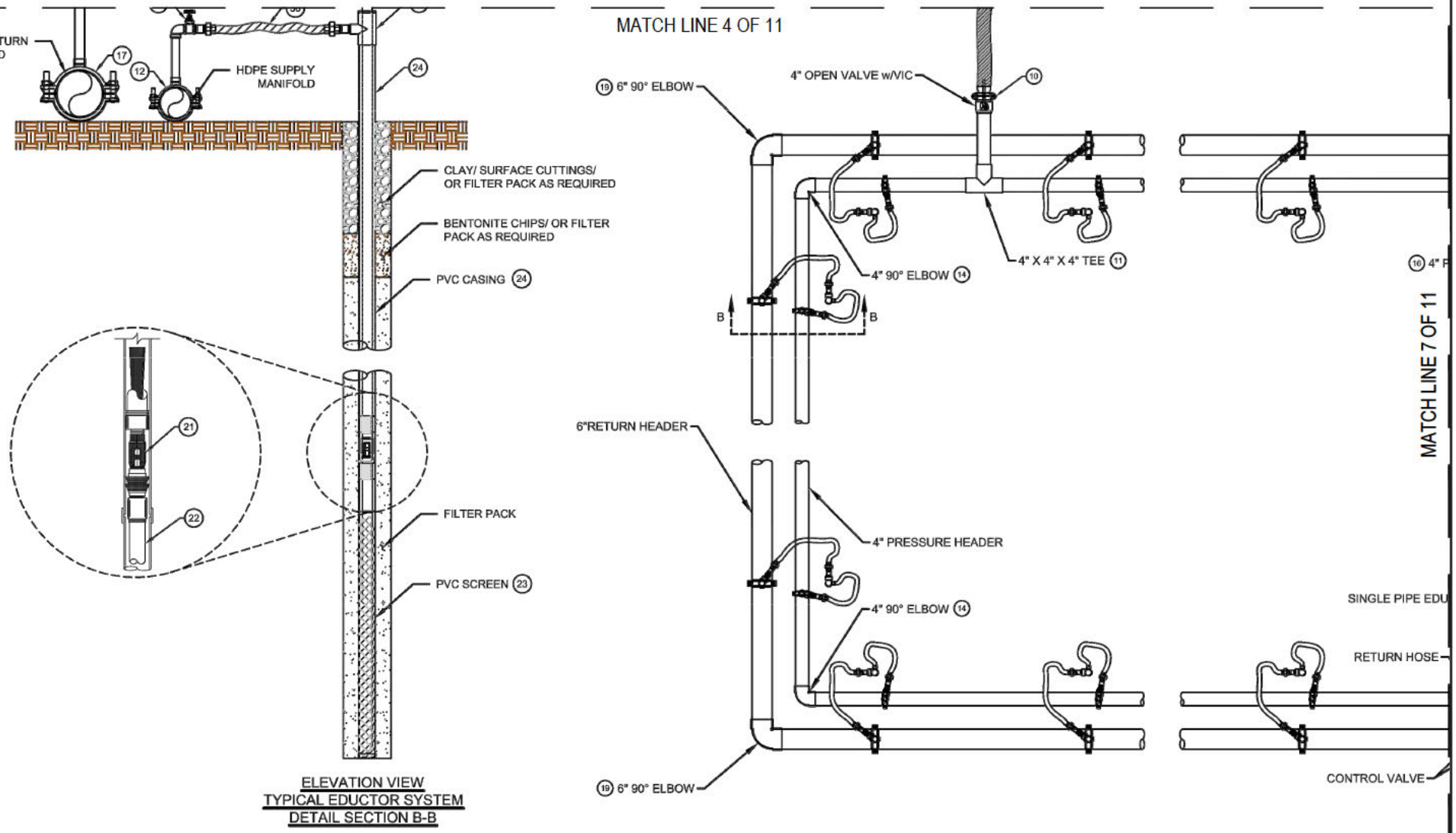

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MID-BARATARIA SEDIMENT DIVERSION
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AECOM PROJECT NUMBER: 60591673

DEWATERING WELL DETAIL
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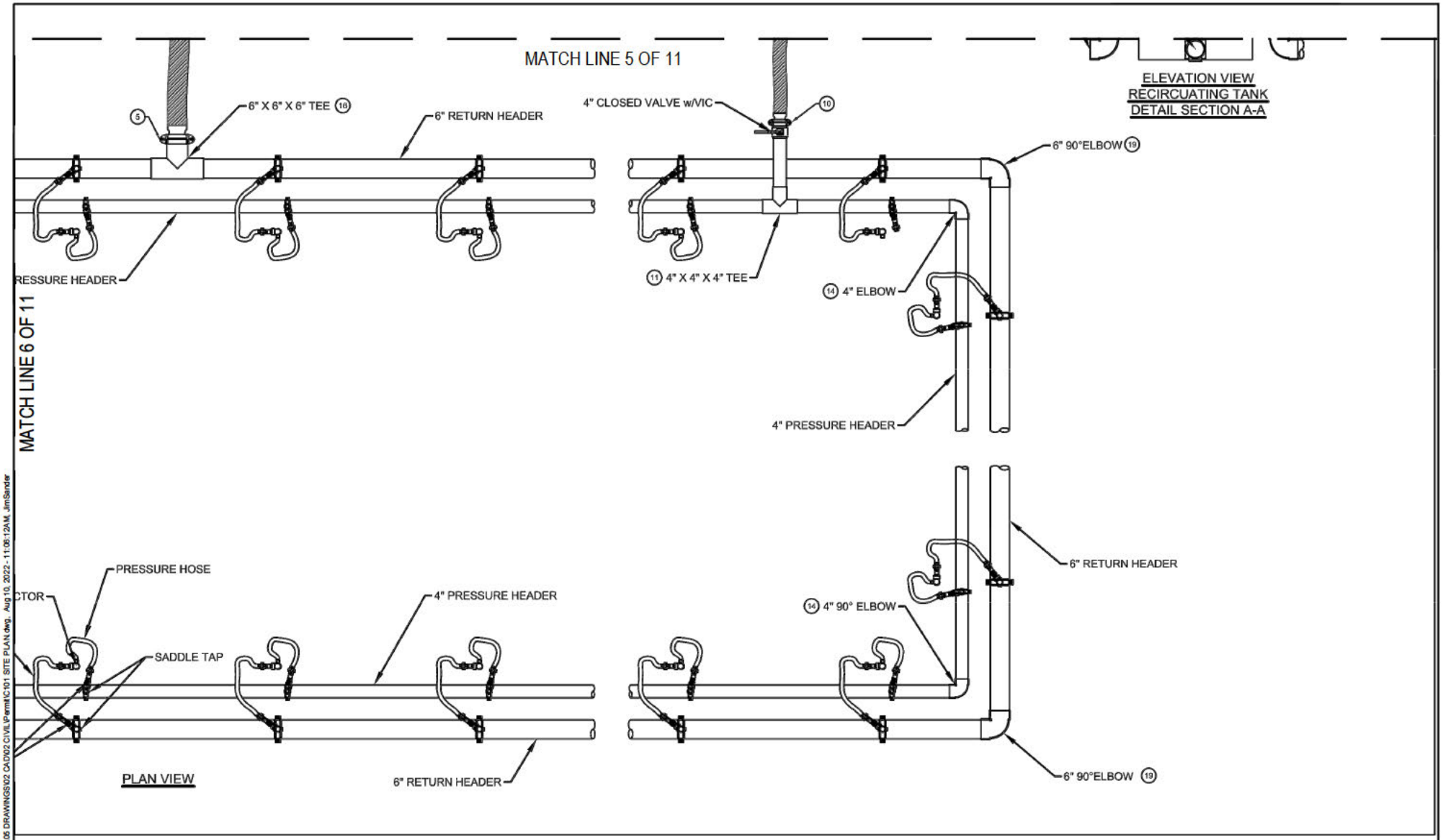

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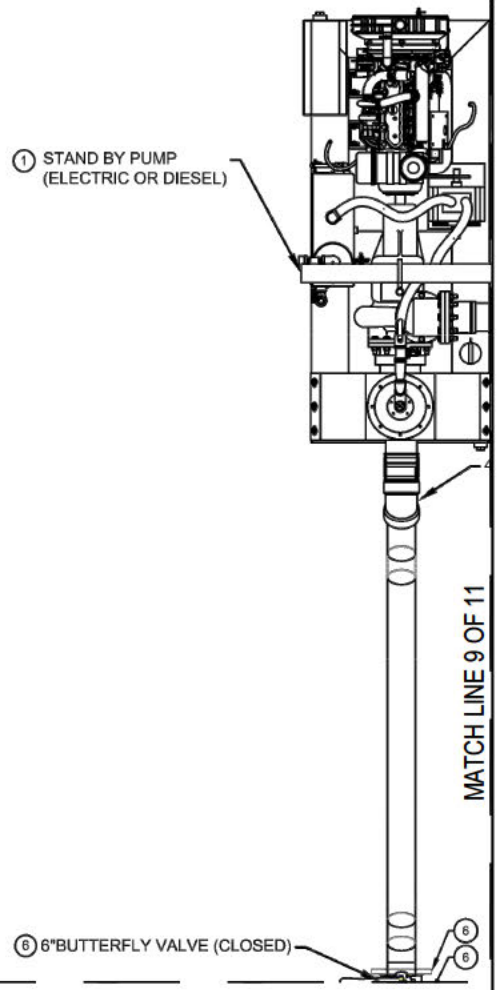
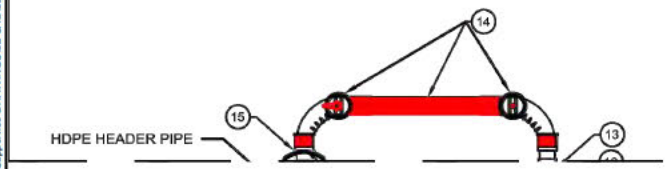
MATERIAL LIST

NO.	QTY.	SIZE	EQUIPMENT
PUMPSTATION:			
1	-	6"	WELLPOINT PUMP
2	-	6"	RUBBER HOSE, PRESSURE RATED SYSTEM PRESSURE, GROOVE X GROOVE w/GROOVE ADAPTER TO MATCH DISCHARGE PIPE/HOSE
HEADER PIPE			
3	-	6"	TEE, w/ (2) HEADER COUPLING
4	-	6"	RUBBER "HEADER" COUPLING
5	-	6"	90° ELBOW, w/ (1) HEADER COUPLING
6	-	6"	BUTTERFLY VALVE, w/HEADER FLANGE ADAPTER's AND (1) HEADER COUPLING
7	-	6"	CAP, w/HEADER COUPLING
8	-	6"	45° ELBOW, w/ (1) HEADER COUPLING (AS REQUIRED)
9	-	1-1/2"	HEADER PLUG, TO PLUG AN UNUSED INLETS. (AS REQUIRED) COUPLINGS
10	-	6"	HDPE HEADER PIPE, w/ 7 INLETS PER 20' PIPE AND (1) HEADER COUPLING (12" LONG)
WELLPOINT & PIPEING:			
11	-	1-1/2"X 3'	PVC WELLPOINT (OR SELF JET WELLPOINT)
12	-	1-1/2"	RISER PIPE, PVC SCH. 40 (OR GALVANIZED THREADED STEEL PIPE w/COUPLING IF USING SELF JET WELLPOINT)
13	-	1-1/2"	SLIP FITTING
14	-	1-1/2"	SWING JOINT, w/ CLEAR PVC 90° ELBOW, AND BUTTERFLY VALVE ON ONE SIDE
15	-	1-1/2"	GROMMET
OTHER ITEMS:			
-	-	-	-





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LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
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MID-BARATARIA SEDIMENT DIVERSION
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CPRA PROJECT NUMBER: BA-153

AECOM PROJECT NUMBER: 60591673

DEWATERING WELL DETAIL

DATE: AUGUST 2022

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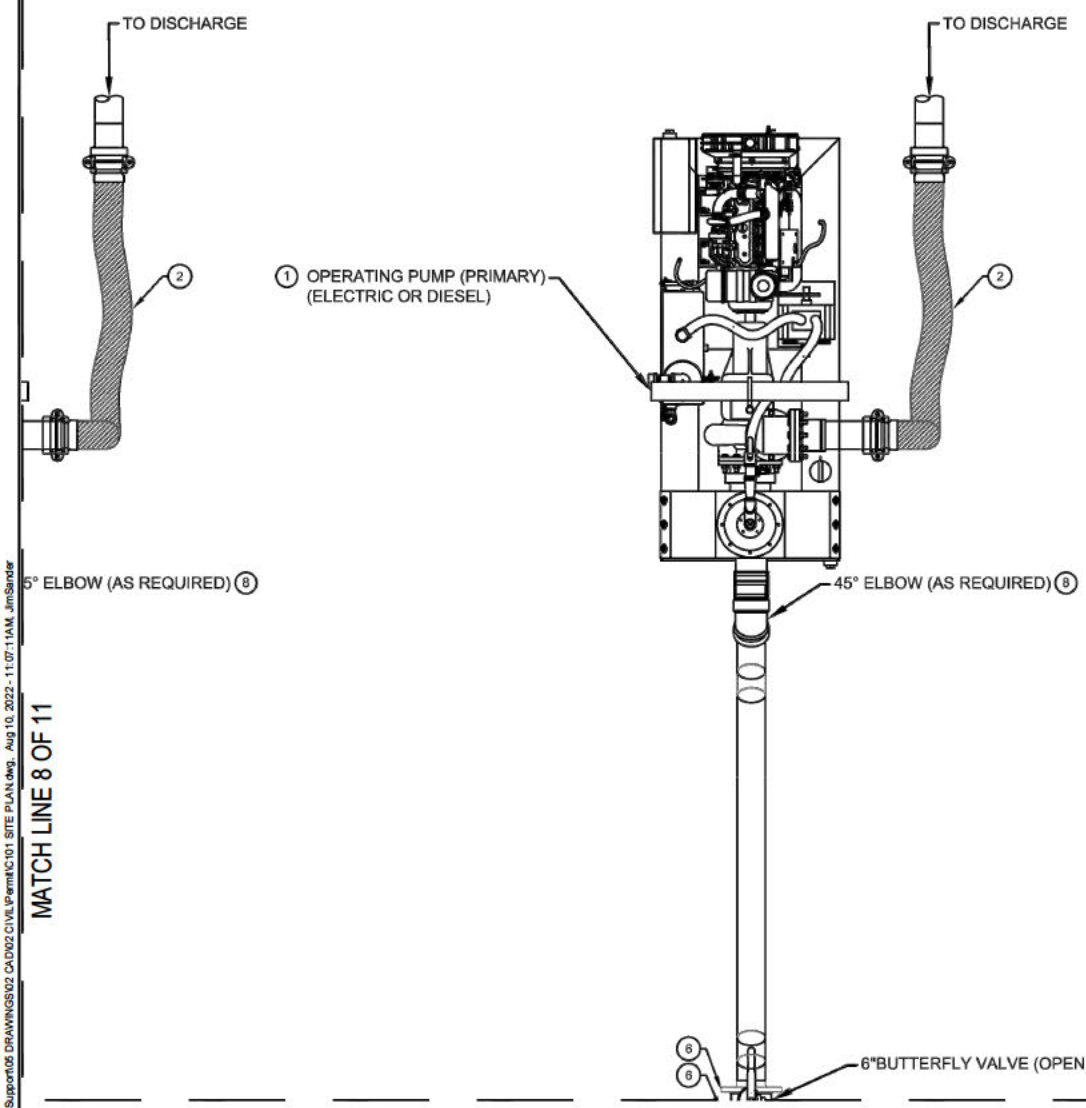

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AECOM PROJECT NUMBER: 60591673

DEWATERING WELL DETAIL

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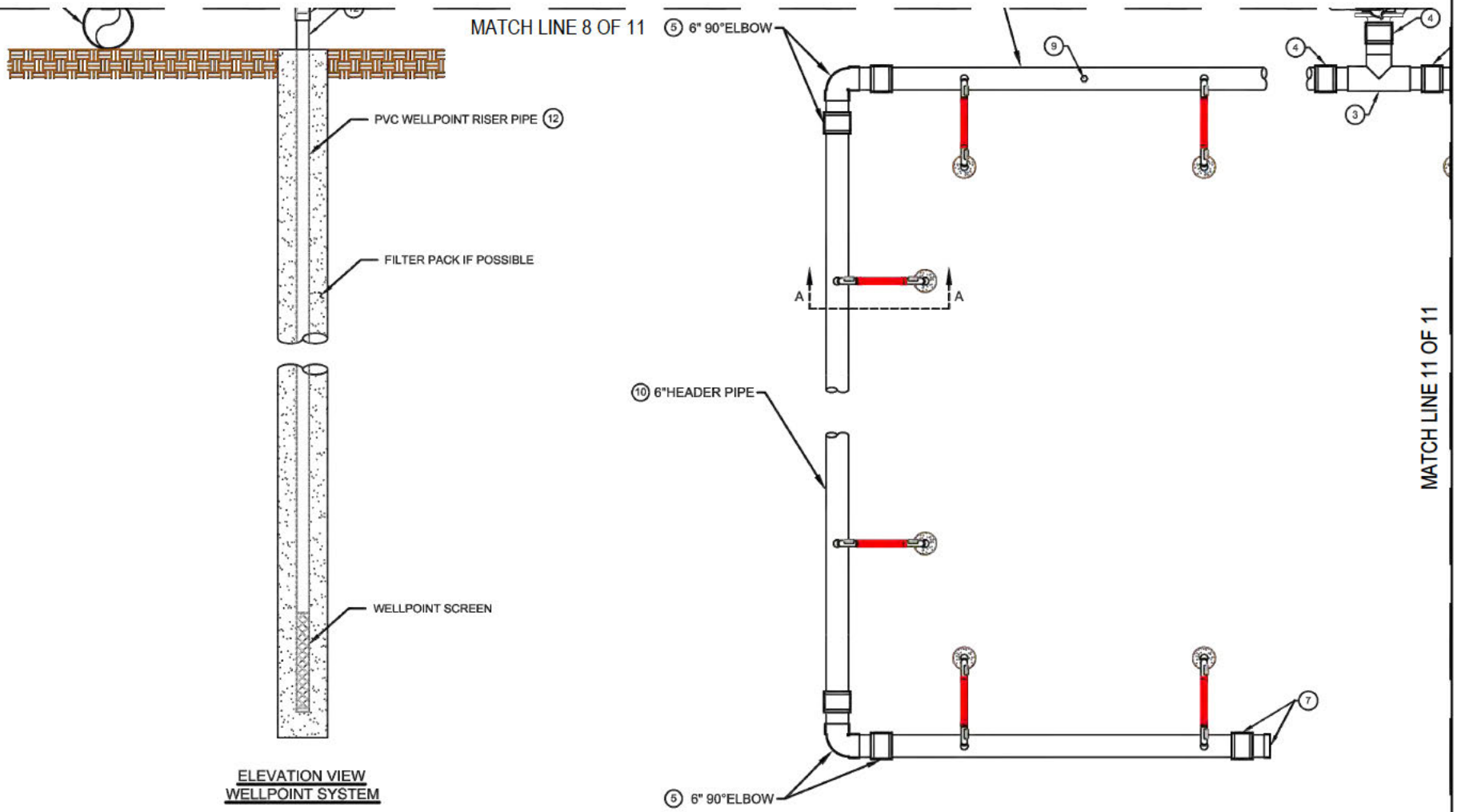

ELEVATION VIEW
WELLPOINT SYSTEM

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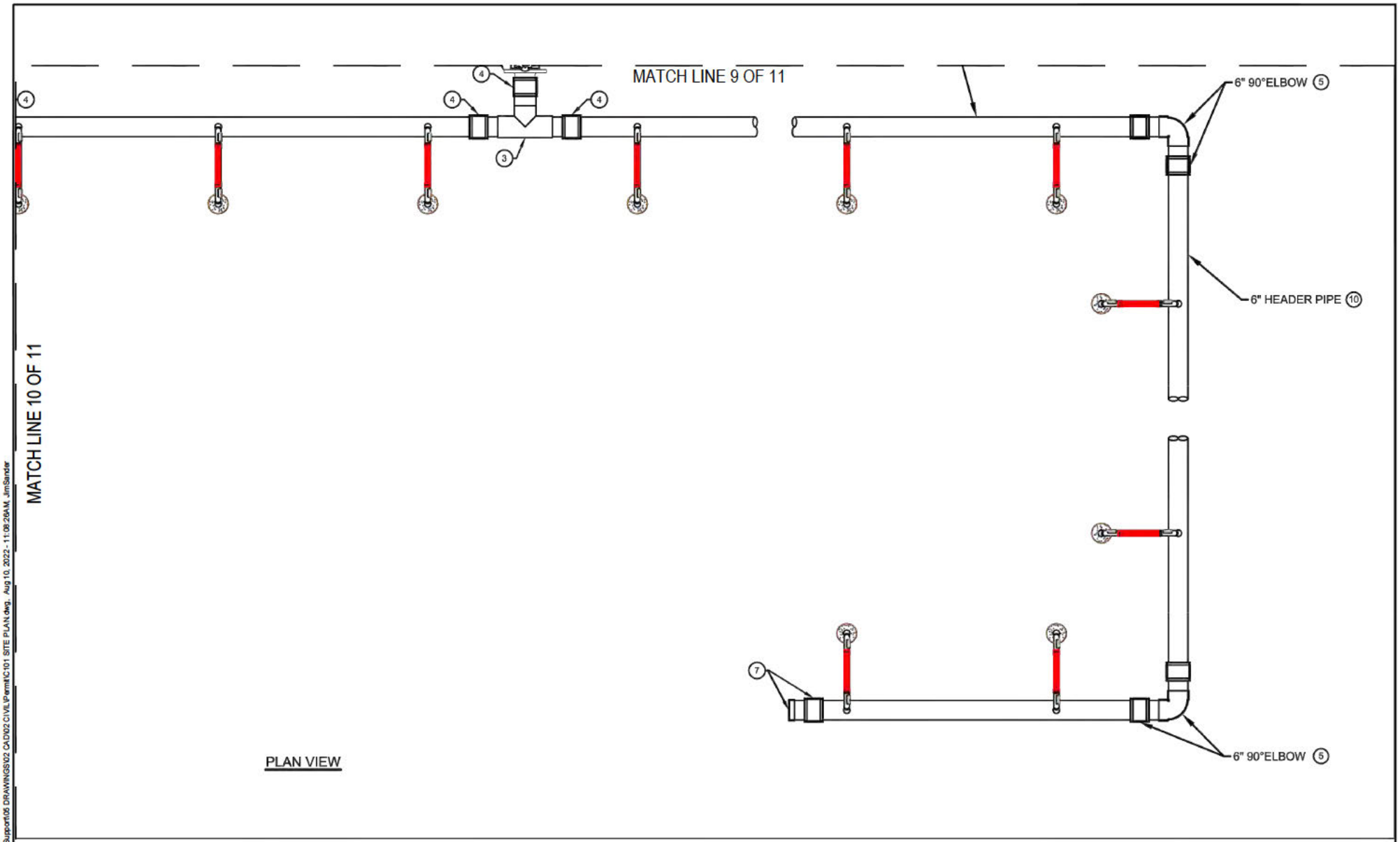

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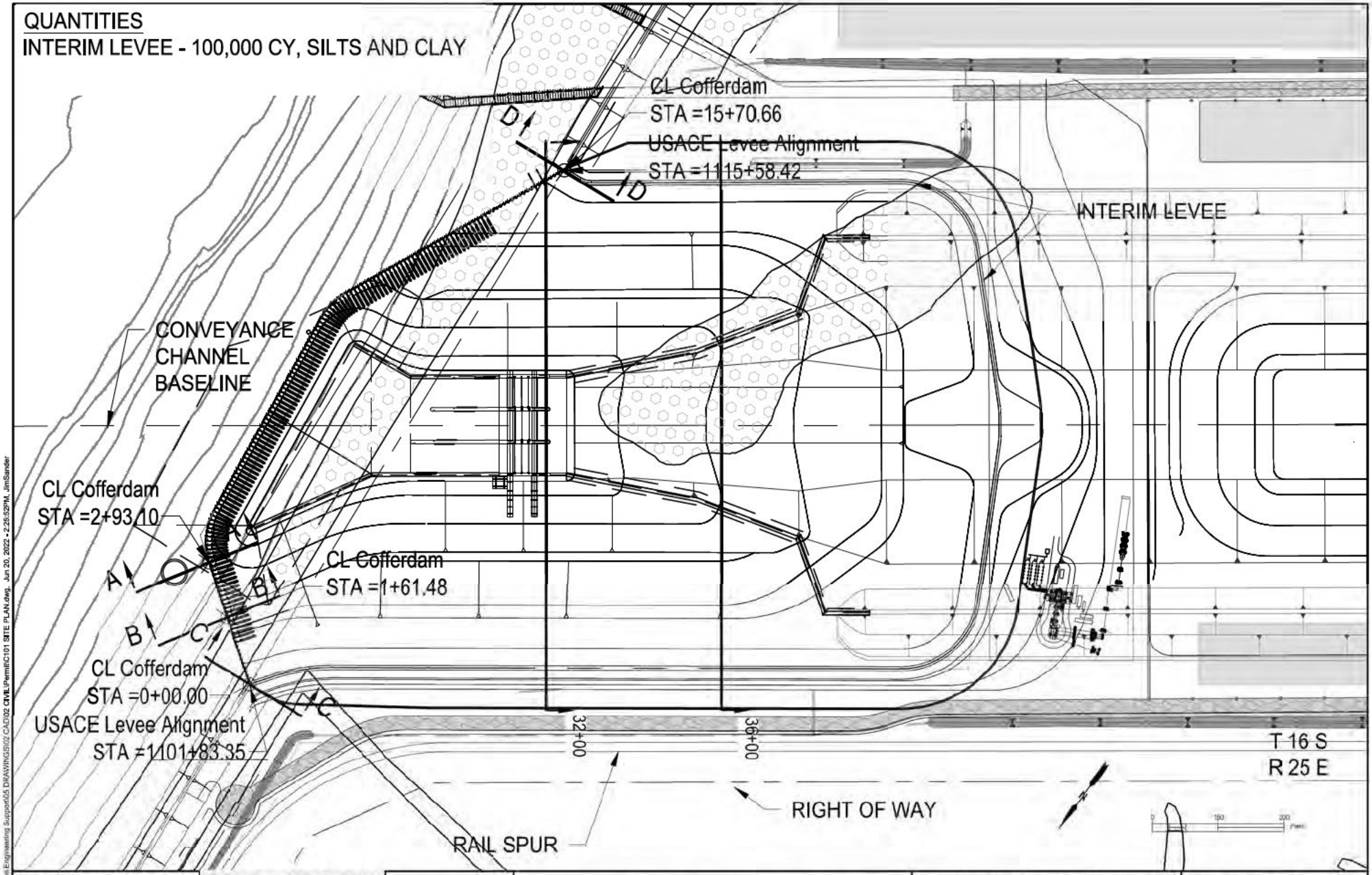

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AECOM PROJECT NUMBER: 60591673

SECTION SITE PLAN

DATE: JUNE 2022

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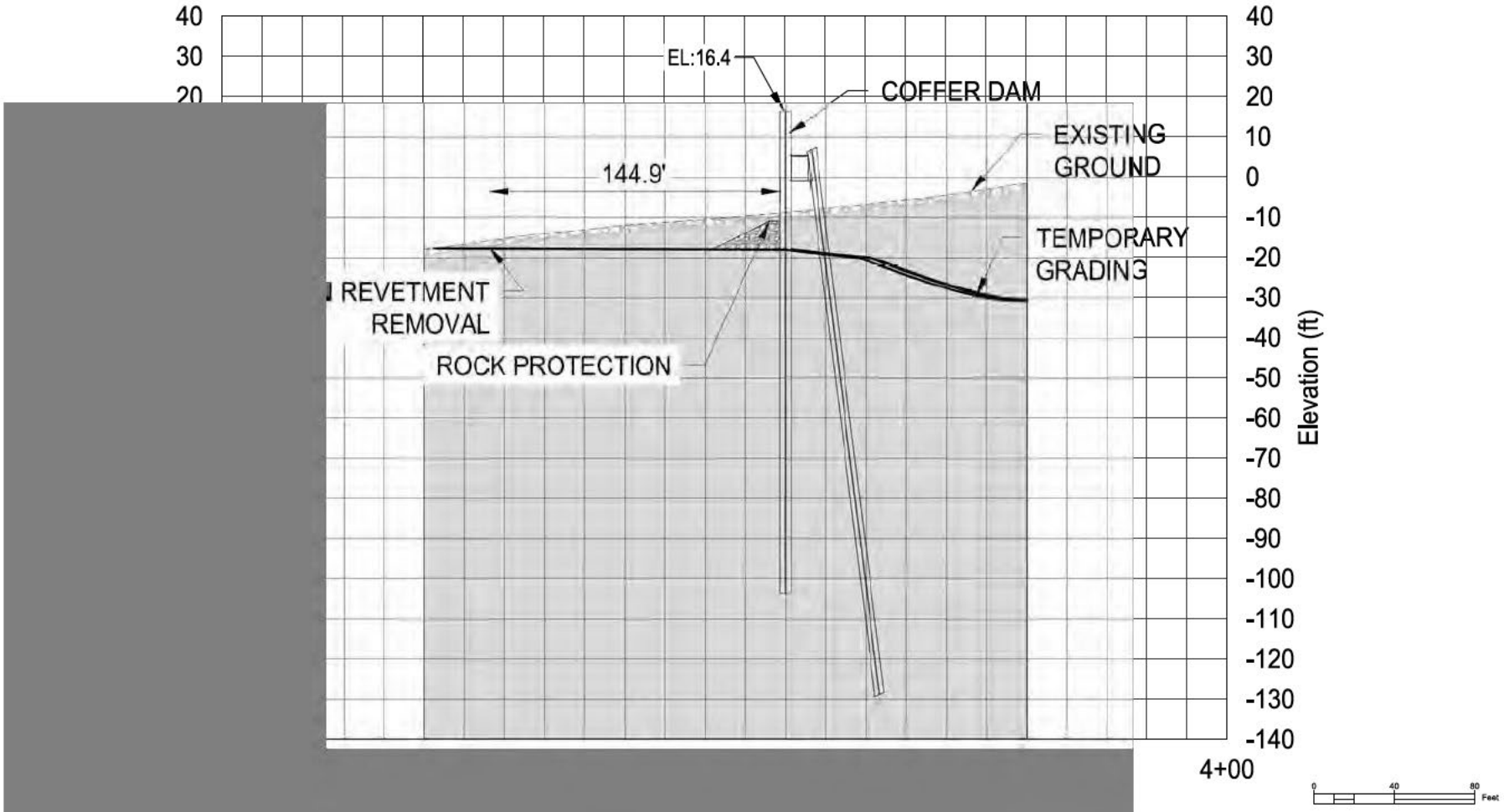

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COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COA
ENG
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A SEDIMENT DIVERSION
NES PARISH, LOUISIANA
BER: BA-153
UMBER: 60591673

SECTION A-A

DATE: JUNE 2022

DRAWING FIGURE 104 | SHEET 2 of 7

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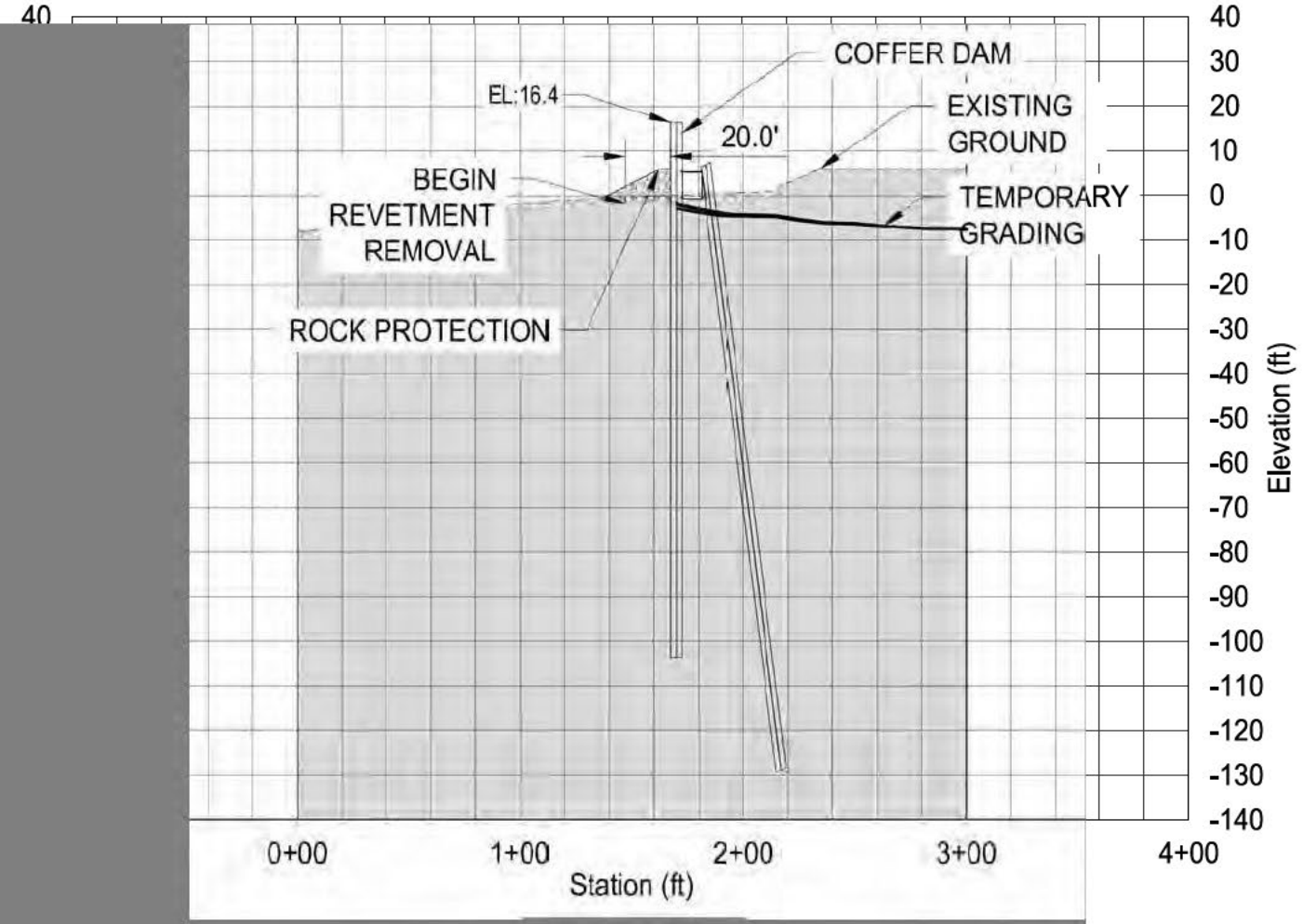

0 40 80 Feet

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COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

LOUISIANA COA
ENG
DRAWN BY

A SEDIMENT DIVERSION
NES PARISH, LOUISIANA
BER: BA-153
UMBER: 60591673

SECTION B-B

DATE: JUNE 2022

DRAWING FIGURE 104 | SHEET 3 of 7

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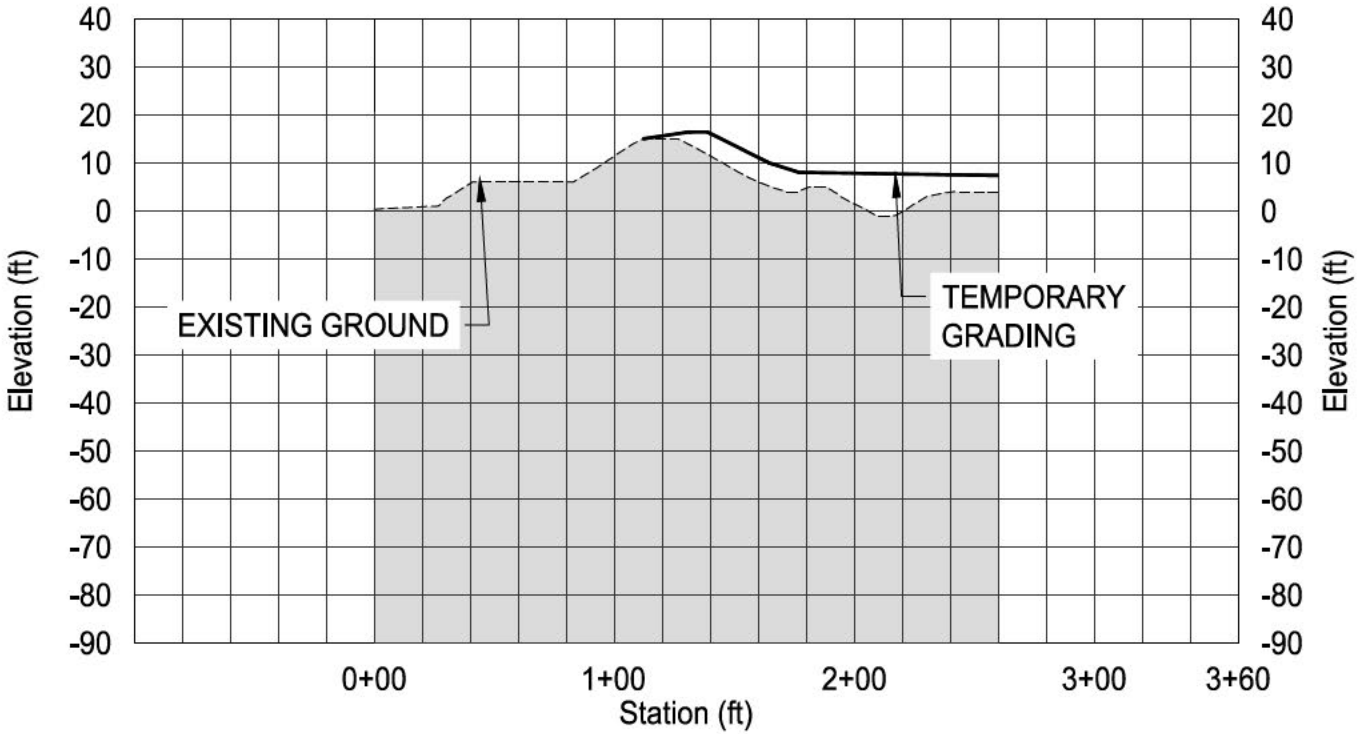

SECTION C-C

0 40 80 Feet

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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

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BATON ROUGE, LOUISIANA 70802

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PLAQUEMINES PARISH, LOUISIANA

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AECOM PROJECT NUMBER: 60591673

SECTION C-C
COFFERDAM TIE INTO MRL

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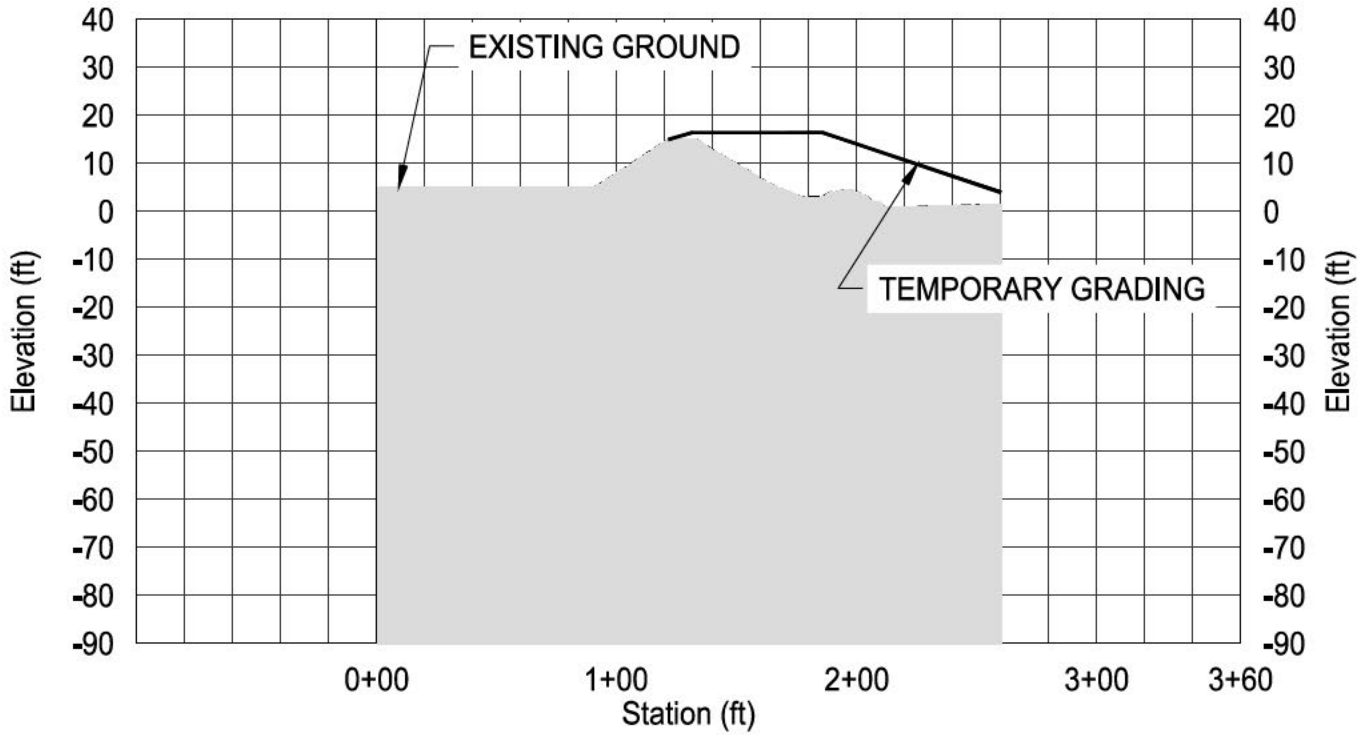

SECTION D-D

0 40 80 Feet

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SECTIONS D-D
COFFERDAM TIE INTO MRL
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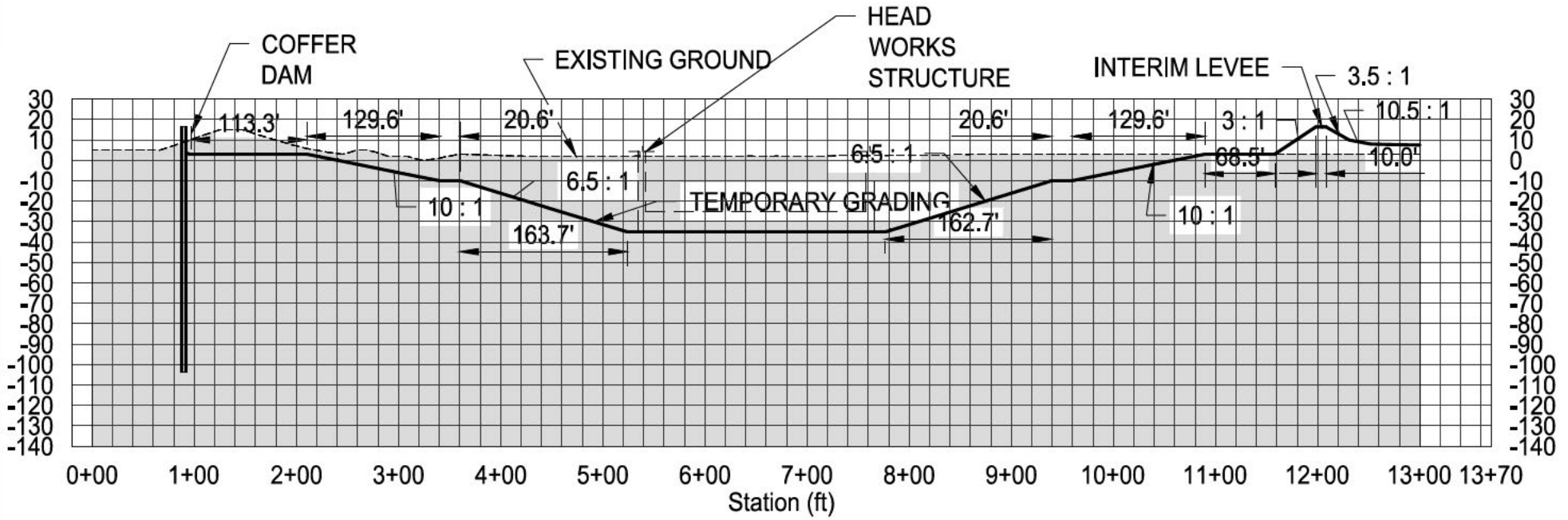
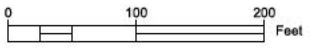
DRAWING FIGURE 104 | SHEET 5 of 7



SECTION STA 32+00



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COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
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MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA
CPRA PROJECT NUMBER: BA-153
AECOM PROJECT NUMBER: 60591673

SECTION STA 32+00
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DRAWING FIGURE 104
SHEET 6 of 7

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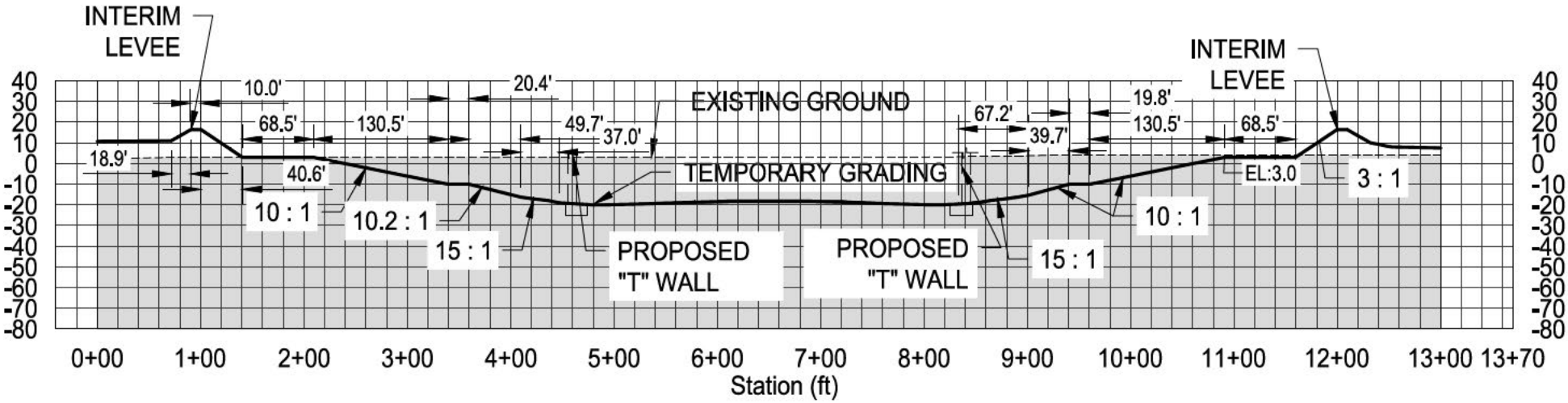

SECTION STA 36+00

0 100 200 Feet

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MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA

CPRA PROJECT NUMBER: BA-153

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SECTION STA 36+00

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DRAWING FIGURE 104

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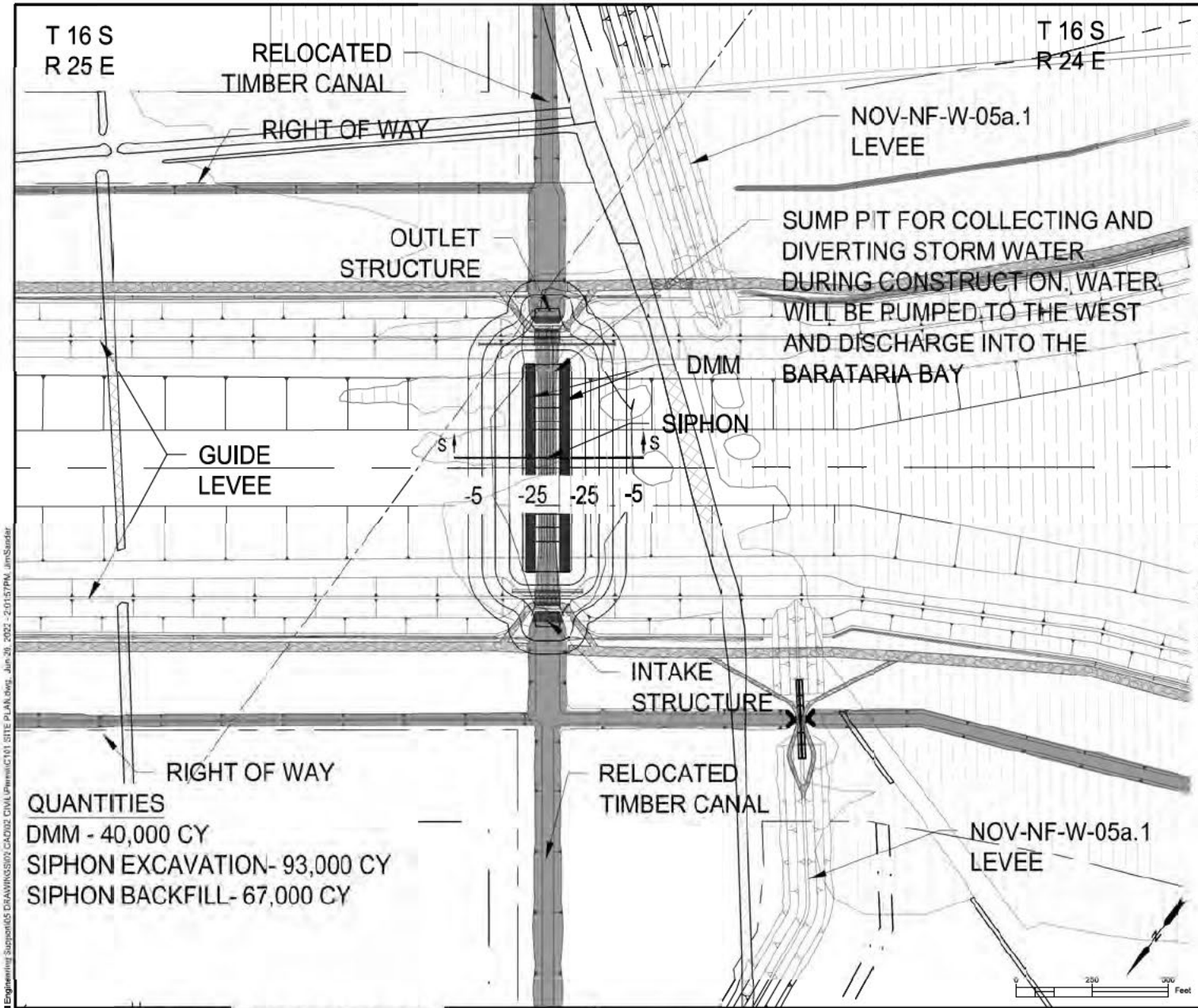
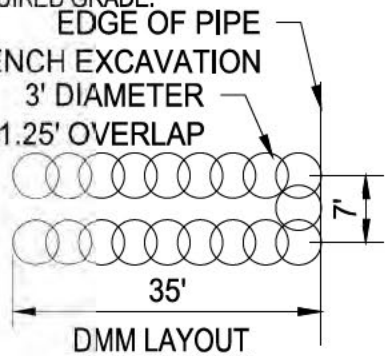


QUANTITIES
DMM - 40,000 CY
SIPHON EXCAVATION- 93,000 CY
SIPHON BACKFILL- 67,000 CY

SEQUENCE OF WORK - EXCAVATION

1. EXCAVATE INTAKE STRUCTURE AND OUTLET STRUCTURE AREAS TO ELEVATION -15.0.
2. EXCAVATE CHANNEL AREA TO ELEVATION - 25.0
3. PLACE DMM (DEEP MIXING METHOD) ON BOTH SIDES OF SIPHON PIPE TRENCH EXCAVATION AREA.
   TOP ELEV. -28
   TIP ELEV. -55
   WIDTH 35 FEET
4. EXCAVATE TRENCH FOR INSTALLATION OF SIPHON PIPE PLACEMENT TO ELEVATION -38.12 SLOPING END OF TRENCH AT 1V:9H.
5. PLACE MUD SLAB AT BOTTOM OF EXCAVATION TO ELEVATE -37.12
6. INSTALL SIPHON PIPE AND CONSTRUCT INLET AND OUTLET STRUCTURES
7. PLACE FLOWABLE FILL UNDER PIPES TO REQUIRED ELEVATION.
8. BACK FILL TO FINAL SLOPE AND CHANNEL DESIGN GRADES.
9. PLACE STONE PROTECTION TO REQUIRED GRADE.



DMM LAYOUT
NTS

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SIPHON EXCAVATION PLAN

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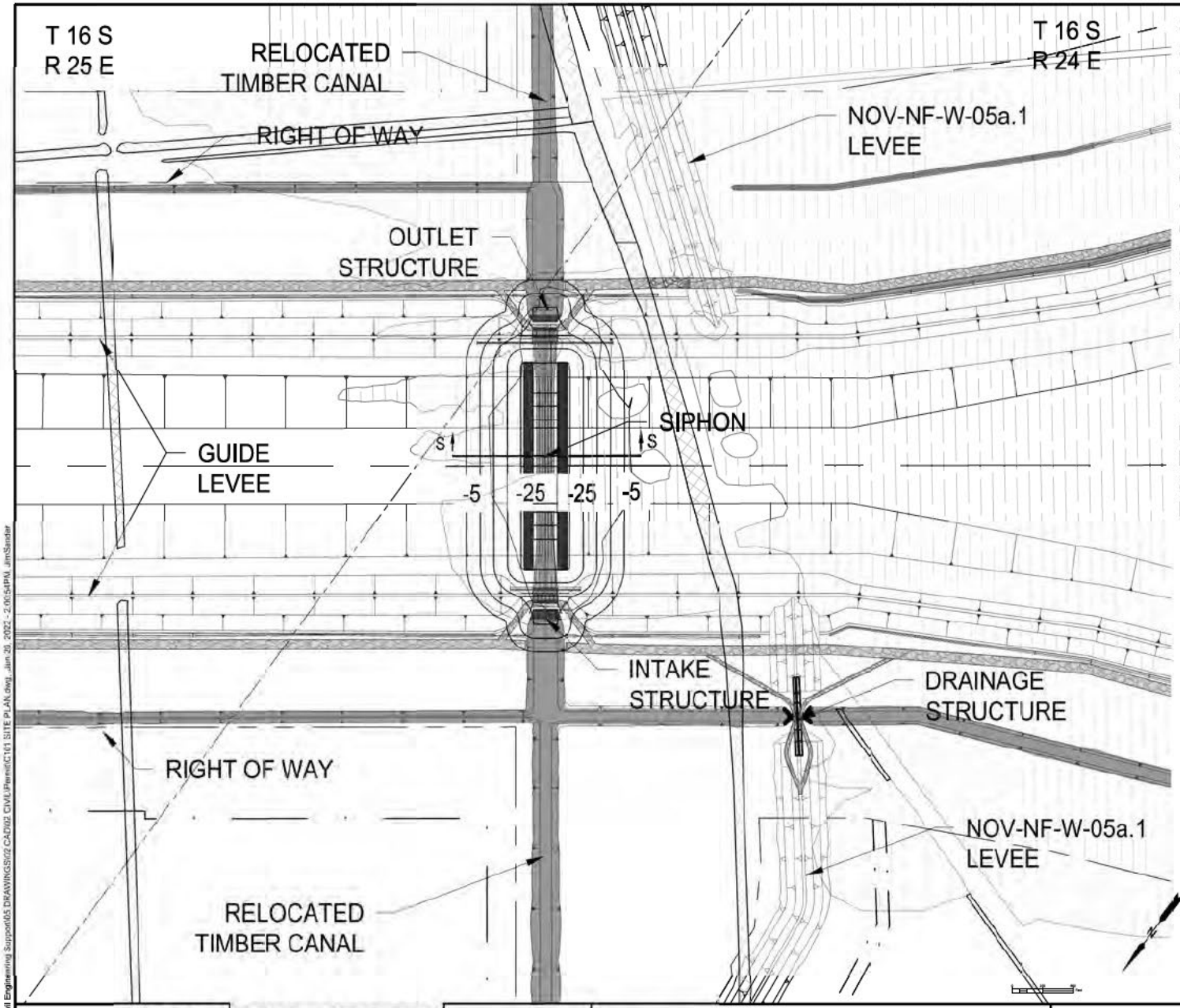

SEQUENCE OF WORK - DRAINAGE STRUCTURE

1. EXCAVATE PERIMETER DITCHES TO DIRECT DRAINAGE TO TIMBER CANAL
2. EXCAVATE FOR SIPHON INSTALLATION
3. EXCAVATE FOR CONSTRUCTION OF SLUICE GATE STRUCTURE
4. COMPLETE SIPHON INSTALLATION AND GUIDE LEVEES UP TO TIMBER CANAL
5. REDIRECT DRAINAGE FROM NORTH TIMBER CANAL TO SIPHON
6. DIRECT DRAINAGE FROM WEST SIDE OF NOV-NF-W-05A.1 LEVEE THROUGH THE DRAINAGE STRUCTURE TO THE SIPHON STRUCTURE.
7. PLACE DMM IN AREA OF TIMBER CANAL FOR PLACEMENT OF GUIDE LEVEE EMBANKMENT.
8. COMPLETE CLOSURE OF GUIDE LEVEES TO NOV-NF-W-05A.1 LEVEE.

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DRAINAGE STRUCTURE CONSTRUCTION SEQUENCING PLAN

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DRAWING FIGURE 106 | SHEET 1 of 1

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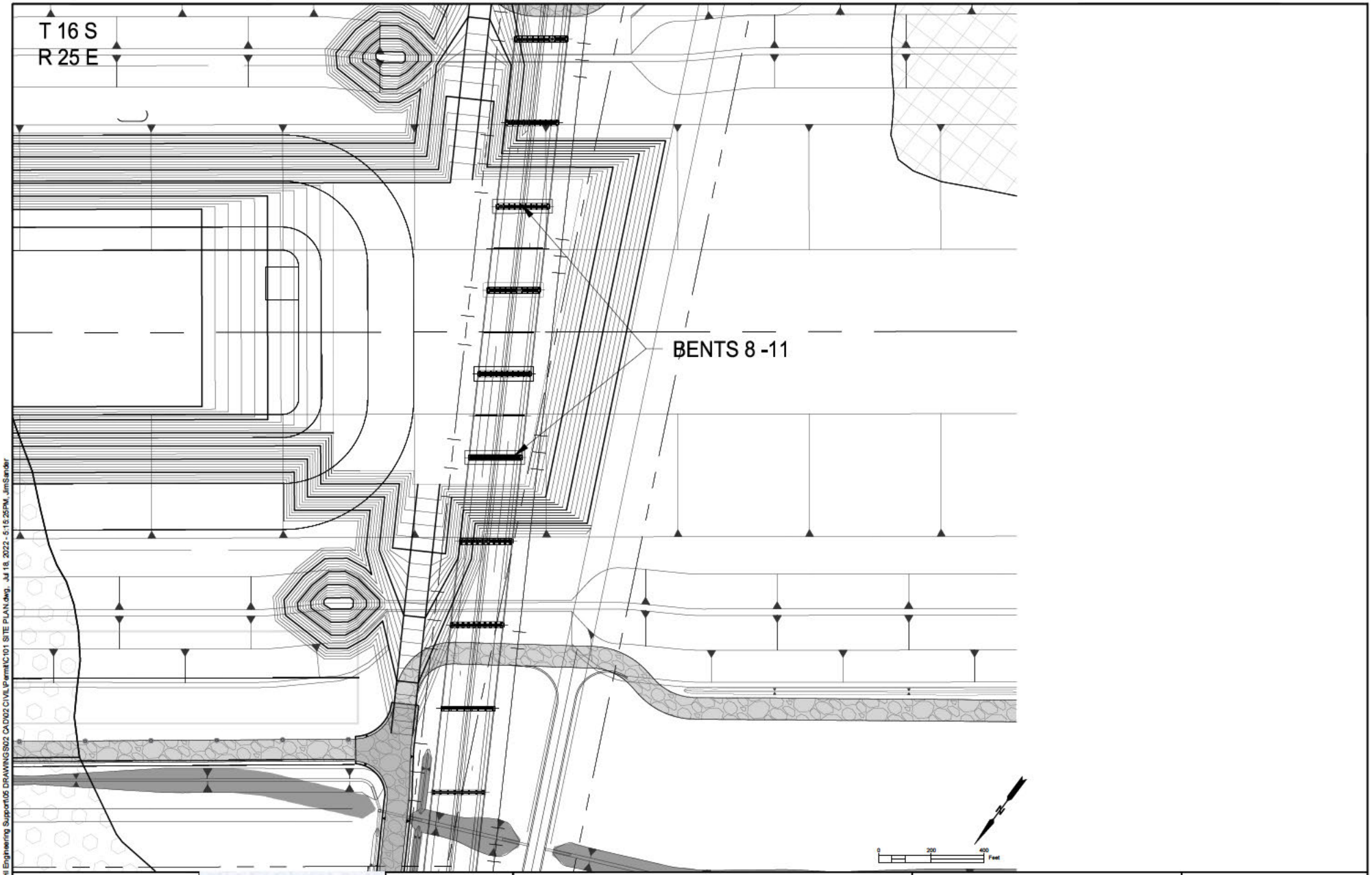

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HIGHWAY 23 SITE PLAN

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DRAWING FIGURE 107
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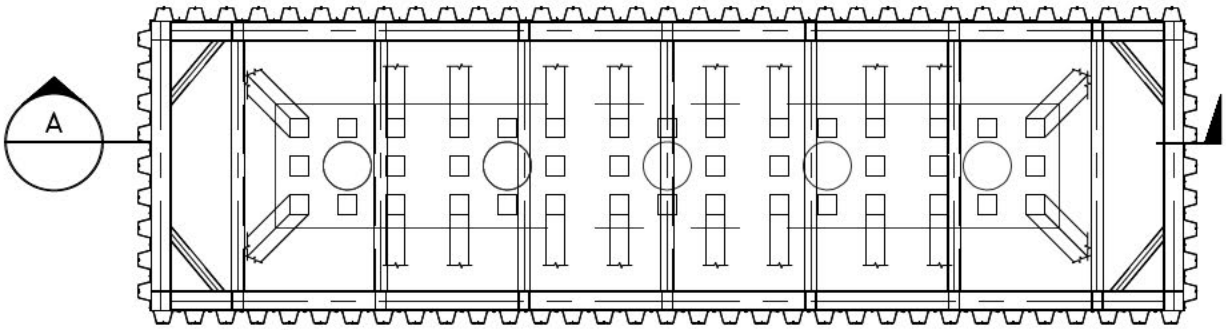

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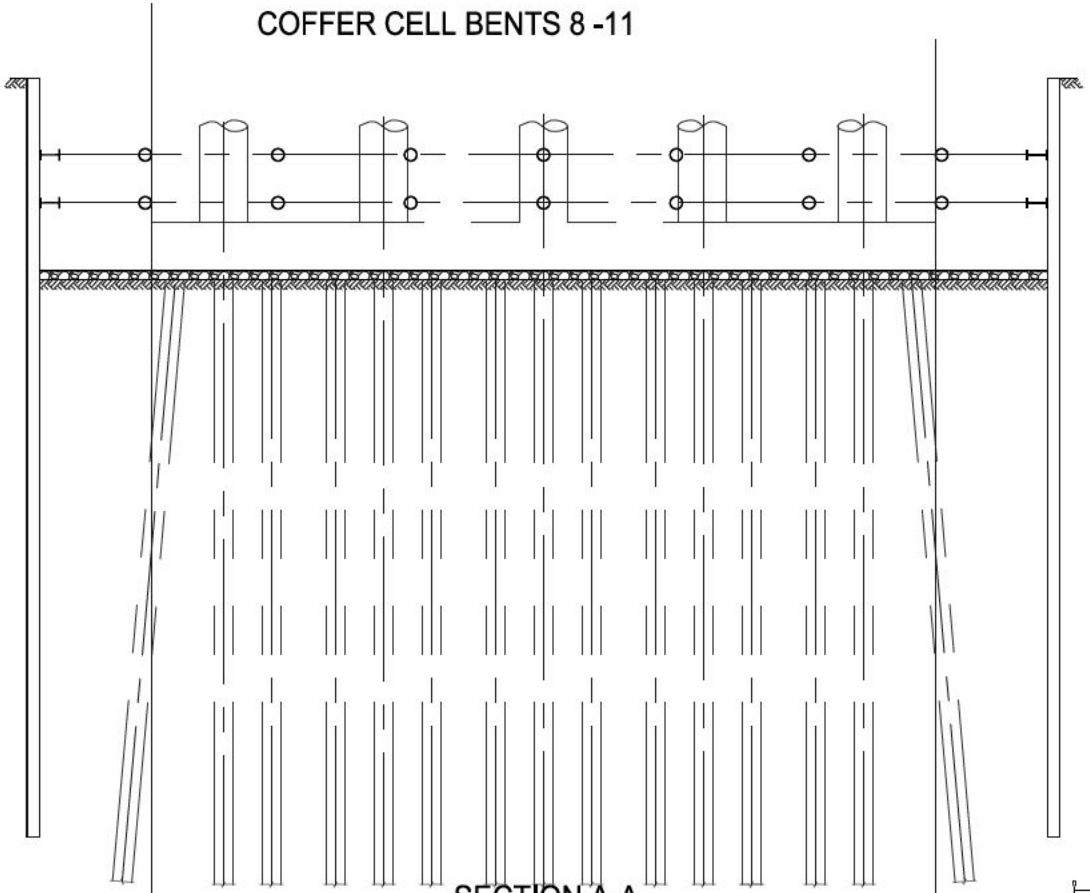
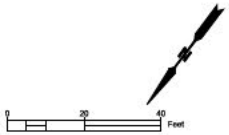


SECTION A-A



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CPRA PROJECT NUMBER: BA-153

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HIGHWAY 23 DETAIL

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DRAWING FIGURE 107 | SHEET 2 of 2

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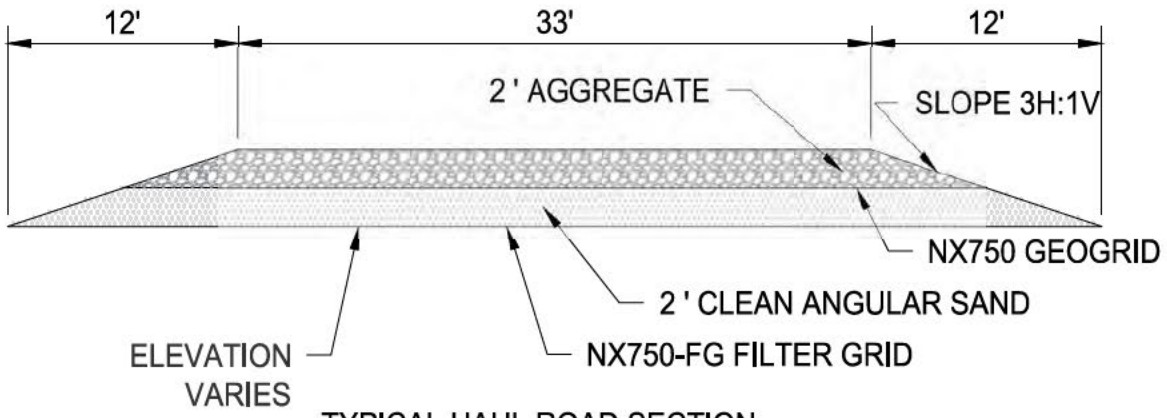
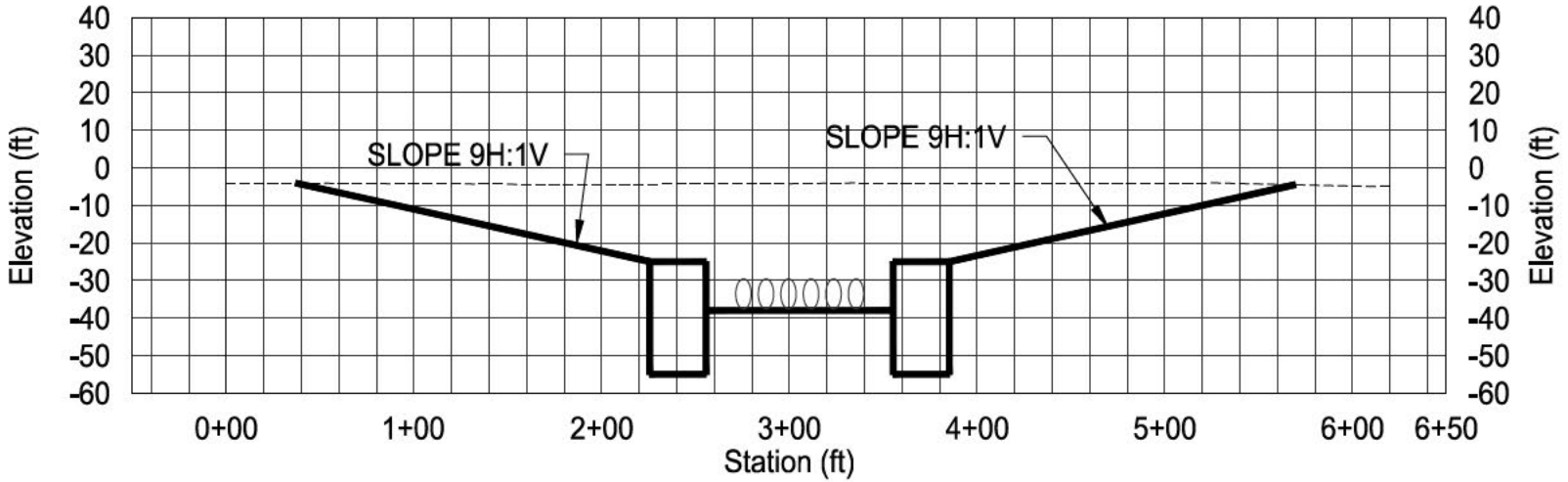
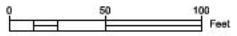


TYPICAL HAUL ROAD SECTION
N.T.S



SECTION S-S



SEE FIGURE 106

PRELIMINARY FOR PERMIT PURPOSE ONLY

WILLIAM RUSHING — ENGINEER OF RECORD
CIVIL — DISCIPLINE
LA — STATE
21891 — LICENSE NO.
JUNE 2022 — DATE

ARCHER WESTERN ALBERICI JOINT VENTURE
9654 BROOKLINE AVE,
SUITE 100
BATON ROUGE, LA 70816
512-845-1366

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA

CPRA PROJECT NUMBER: BA-153

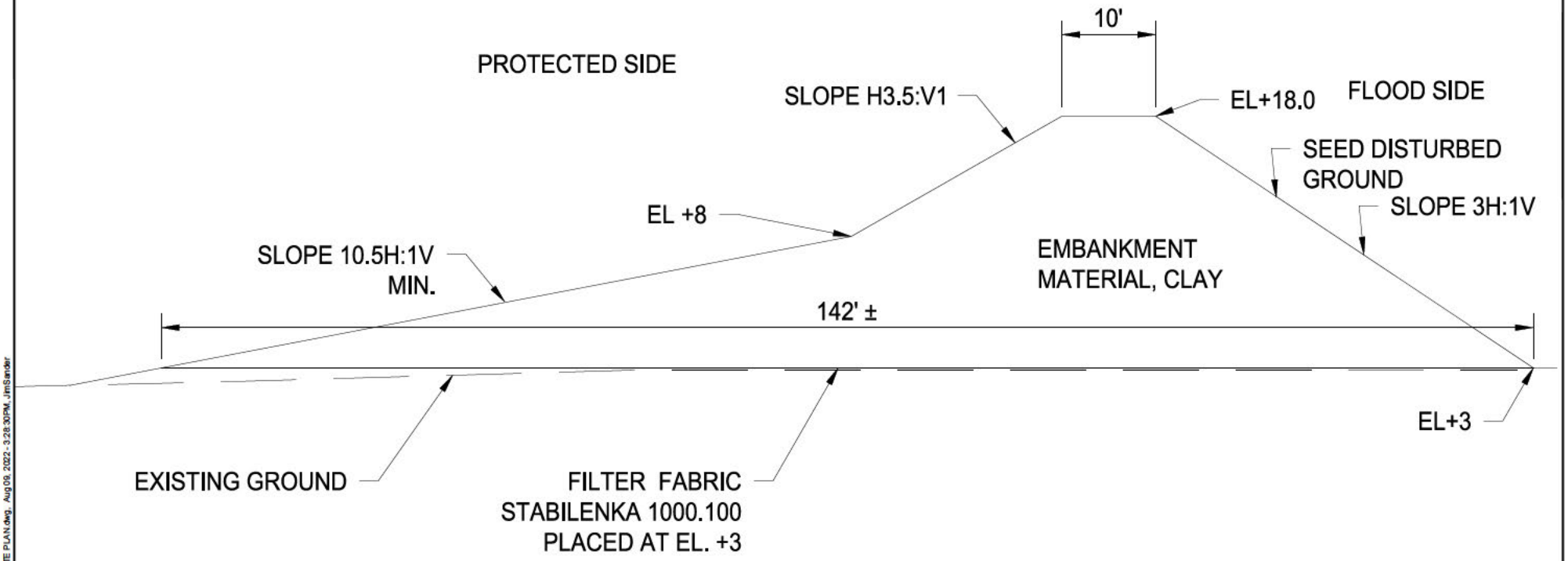
AECOM PROJECT NUMBER: 60591673

DETAIL SHEET

DATE: JUNE 2022

DRAWN BY: | DESIGNED BY: | APPROVED BY: | DRAWING FIGURE 108 | SHEET 1 of 1

Z:\2019 Projects\19 014 00 - Alberici - Civil Engineering Support\05 DRAWINGS\02 CAD\02 CIVIL\Permit\C101 SITE PLAN.dwg, Jun 20, 2022 - 1:51:59PM, JimSander



TYPICAL INTERIM LEVEE SECTION
NTS

PRELIMINARY FOR PERMIT PURPOSE ONLY

WILLIAM RUSHING — ENGINEER OF RECORD | CIVIL — DISCIPLINE
LA. — STATE | 21891 — LICENSE NO. | AUGUST 2022 — DATE

ARCHER WESTERN ALBERICI JOINT VENTURE
9654 BROOKLINE AVE,
SUITE 100
BATON ROUGE, LA 70816
512-845-1366

COASTAL PROTECTION AND RESTORATION AUTHORITY — CPRA

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

MID-BARATARIA SEDIMENT DIVERSION
PLAQUEMINES PARISH, LOUISIANA

CPRA PROJECT NUMBER: BA-153

AECOM PROJECT NUMBER: 60591673

TYPICAL INTERIM LEVEE SECTION

DATE: AUGUST 2022

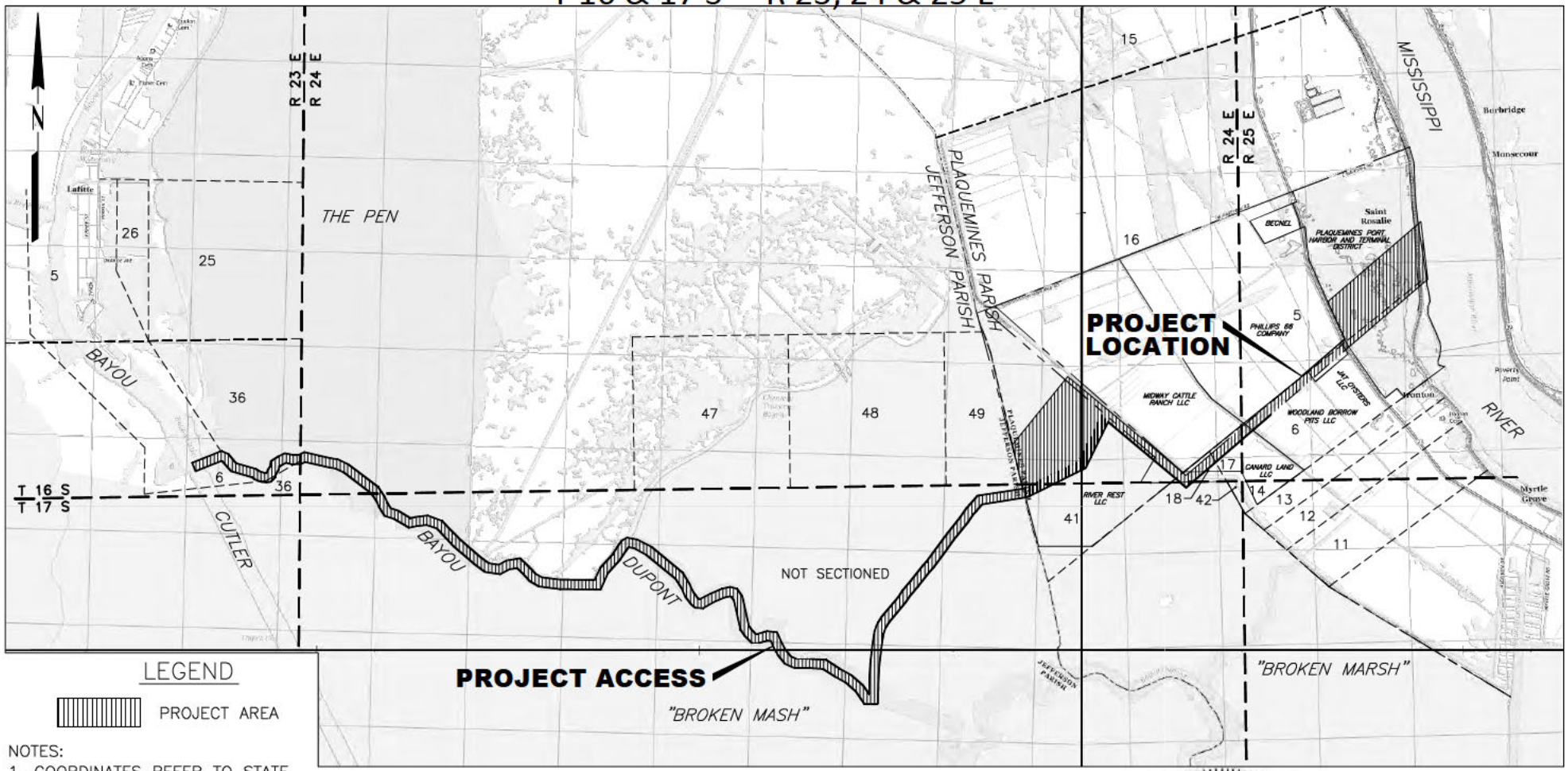
DRAWN BY: | DESIGNED BY: | APPROVED BY:

DRAWING FIGURE 109 | SHEET 1 of 1

Z:\2019 Projects\19 014 00 - Alberici - Civil Engineering Support\05 DRAWINGS\02 CAD\02 CIVIL\Permit\C101 SITE PLAN.dwg, Aug 09, 2022 - 3:28:30PM, JimSander

JEFFERSON AND PLAQUEMINES PARISHES, LA.

T 16 & 17 S R 23, 24 & 25 E



LEGEND

PROJECT AREA

NOTES:

1. COORDINATES REFER TO STATE PLANE – LOUISIANA SOUTH.
2. ELEVATIONS REFER TO NAVD 88.
3. BASE MAP PREPARED FROM USGS QUADRANGLES "PHOENIX", LA.", LAFITTE, LA., THREE BAYOU BAY, LA., & "LAKE LAURIER, LA."

VICINITY MAP

1 1/2 0 1 2 MILES

STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0036320
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
6-21-22

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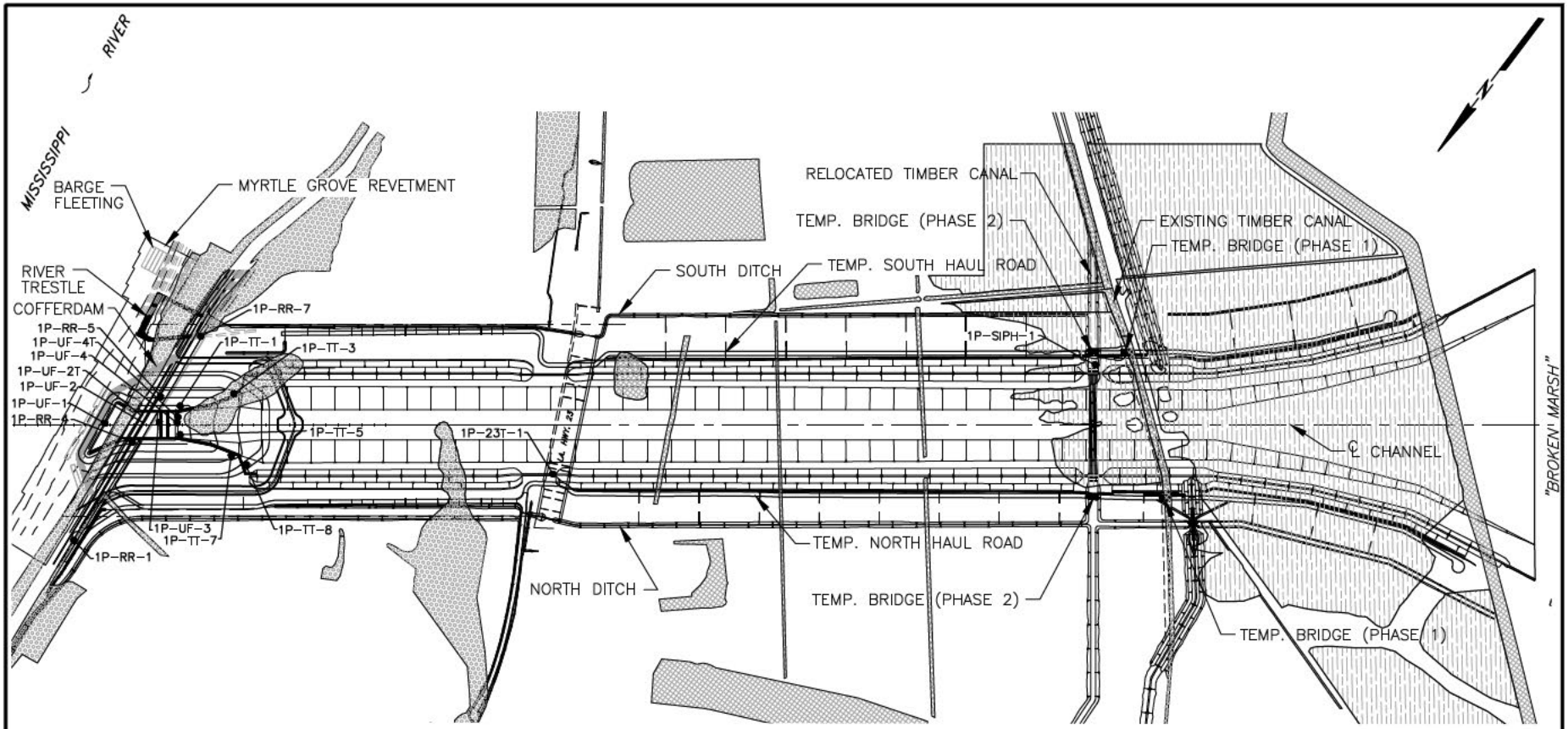
MID BARATARIA SEDIMENT DIVERSION
VICINITY MAP

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P1

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.



LEGEND

- POND / WATER
- FORESTED WETLANDS
- EMERGENT WETLANDS
- 1P-XX-X STATIC TEST PILE LOCATION

OVERALL PROJECT PLAN

1250 625 0 1250 2500 FT.

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MID BARATARIA SEDIMENT DIVERSION
OVERALL PROJECT PLAN

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P2

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7/21/22 10:35 A.M.

LOCATION SCHEDULE

NO.	X LONG.	Y LAT.	ELEV.	STATION ON MRL BASELINE	OFFSET FROM MRL BASELINE
① CORNER TRESTLE	3,716,375.22 89°57'43.16"	424,585.64 29°39'37.28"	19.0	1115+27.67	422.37' LT.
② CORNER TRESTLE	3,716,448.03 89°57'42.39"	424,198.43 29°39'33.44"	19.0	1119+25.38	450.52' LT.
③ CORNER TRESTLE	3,716,261.46 89°57'44.45"	424,564.25 29°39'37.08"	19.0	1115+36.77	306.98' LT.
④ CENTER TRESTLE AT MRL BASELINE	3,715,981.89 89°57'47.66"	424,303.38 29°39'34.53"	18.5	1117+68.10	O.L.
⑤ CENTER TRESTLE AT MRL BASELINE	3,716,002.89 89°57'47.44"	424,126.40 29°39'32.78"	18.5	1119+44.93	O.L.

LEGEND

- POND/ WATER
- FORESTED WETLANDS
- EMERGENT WETLANDS

RIVER TRESTLE EL. 19.0'

B/L STA. 1121+48.9

B/L STA. 1116+65.6

WETLANDS LAYDOWN AREA EL. +11.0'

MISSISSIPPI RIVER

CONC. SLOPE PAVING

COFFERDAM

MYRTLE GROVE REVETMENT

DIVERSION CHANNEL BASELINE

MRL LEVEE BASELINE

WETLANDS

TOE OF LEVEE

N.O. & L.C.R.R. (TO BE REMOVED)

L.W.R.P.

42'

22'

29'

10'

30

20

0

25+00

30+00

35+00

200 100 0 200 400 FT.

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MID BARATARIA SEDIMENT DIVERSION
RIVER TRESTLE LOCATION PLAN

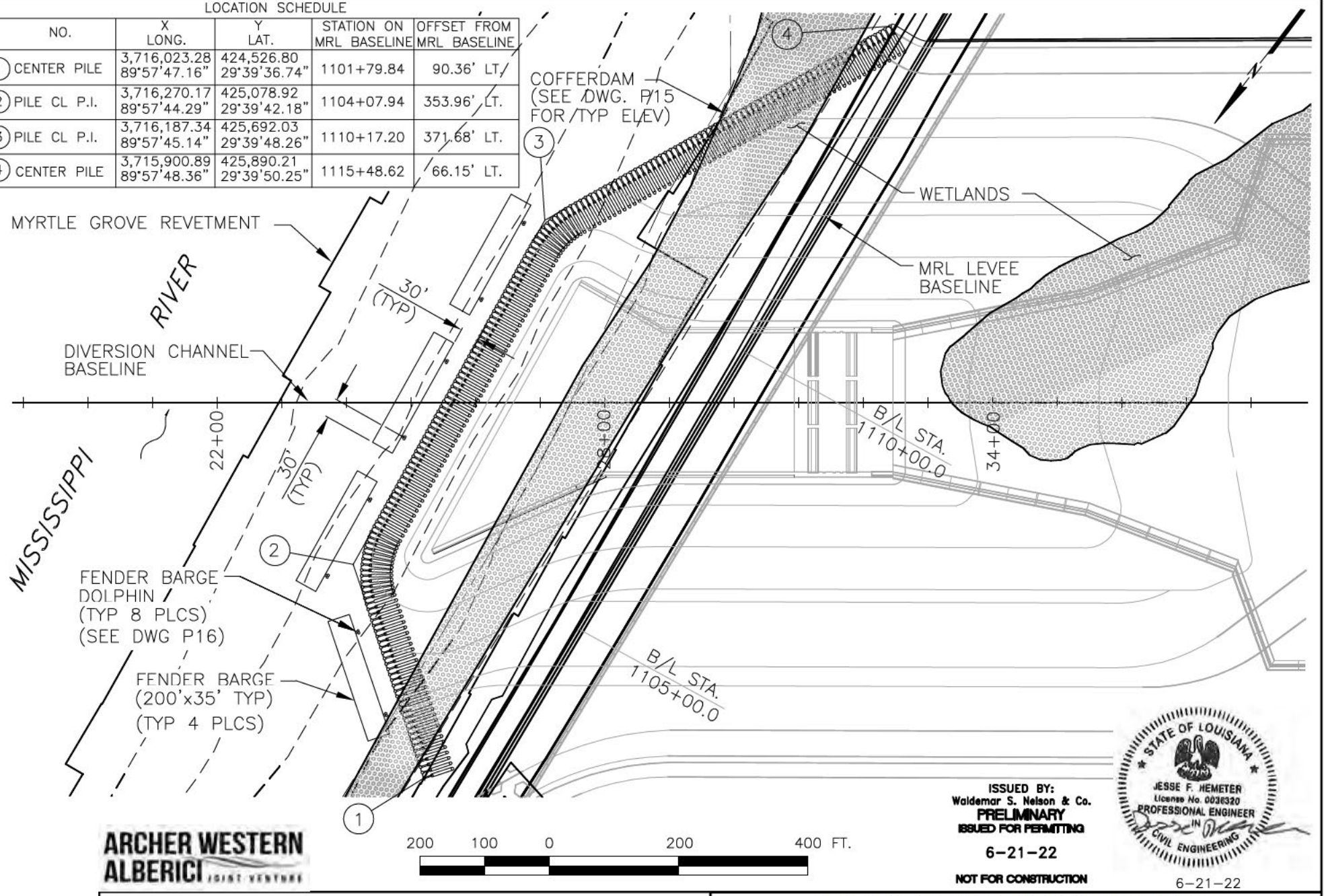
DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P3

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.

LOCATION SCHEDULE

NO.	X LONG.	Y LAT.	STATION ON MRL BASELINE	OFFSET FROM MRL BASELINE
(1) CENTER PILE	3,716,023.28 89°57'47.16"	424,526.80 29°39'36.74"	1101+79.84	90.36' LT.
(2) PILE CL P.I.	3,716,270.17 89°57'44.29"	425,078.92 29°39'42.18"	1104+07.94	353.96' LT.
(3) PILE CL P.I.	3,716,187.34 89°57'45.14"	425,692.03 29°39'48.26"	1110+17.20	371.68' LT.
(4) CENTER PILE	3,715,900.89 89°57'48.36"	425,890.21 29°39'50.25"	1115+48.62	66.15' LT.



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MID BARATARIA SEDIMENT DIVERSION
COFFERDAM LOCATION PLAN

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P4

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

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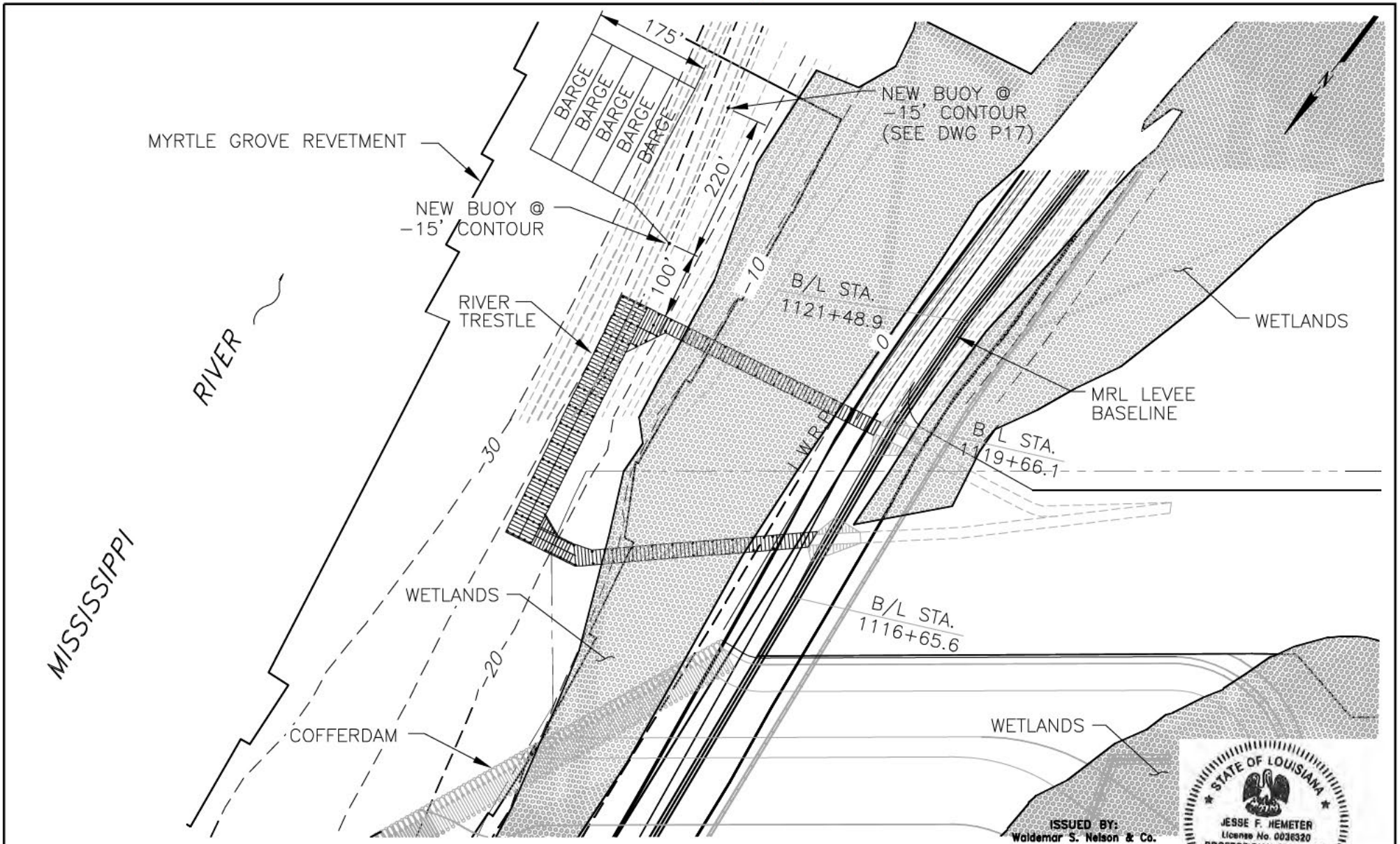

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6-21-22

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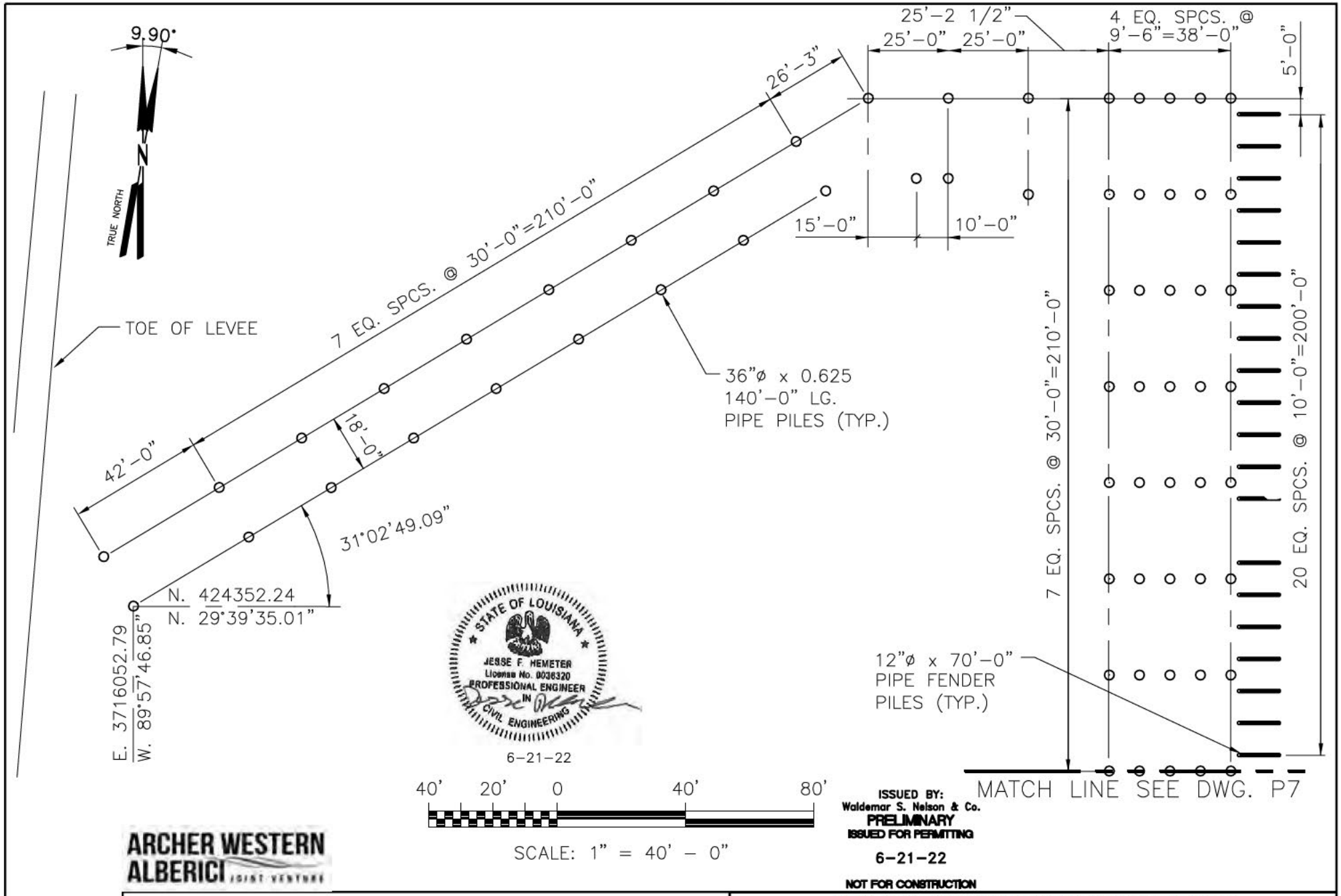
MID BARATARIA SEDIMENT DIVERSION
BARGE FLEETING LOCATION PLAN

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P5

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.



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MID BARATARIA SEDIMENT DIVERSION
RIVER TRESTLE - PARTIAL PILE PLAN

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P6

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.

MATCH LINE SEE DWG. P6

12"ø x 70'-0"
PIPE FENDER
PILES (TYP.)

7 EQ. SPCS. @ 30'-0"=180'-0"

17 EQ. SPCS. @ 10'-0"=170'-0"

5'-0"

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IN CIVIL ENGINEERING

6-21-22

E. 3716052.79
W. 89°57'46.69"

N. 424352.24
N. 29°39'32.98"

36"ø x 0.625
140'-0" LG.
PIPE PILES (TYP.)

12'-0"
14'-0"
12'-0"

10'-9 1/4"

9'-2 3/4"

18'-0"

N. 424200.02

42'-0"

8 EQ. SPCS. @ 30'-0"=240'-0"

20'-0"

4 EQ. SPCS.
@ 9'-6"=38'-0"

9'-10 1/4"

11'-5 3/4"

40' 20' 0 40' 80'

SCALE: 1" = 40' - 0"

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MID BARATARIA SEDIMENT DIVERSION
RIVER TRESTLE - PARTIAL PILE PLAN

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P7

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

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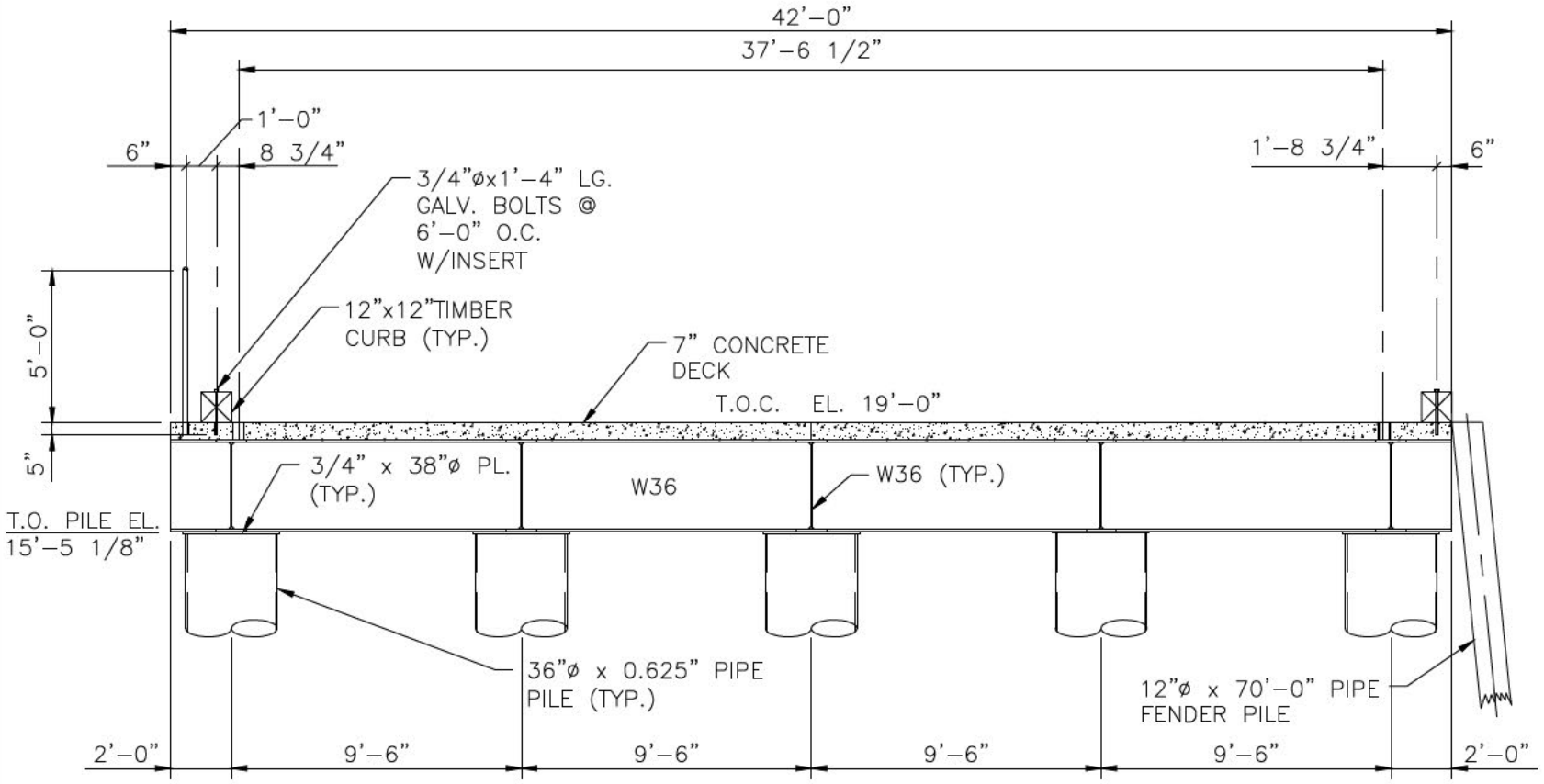

SECTION A / P3

SCALE: 3/16"=1'–0"

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License No. 0038320
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2–15–22

ARCHER WESTERN ALBERICI JOINT VENTURE

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MID BARATARIA SEDIMENT DIVERSION
RIVER TRESTLE SECTIONS 1 OF 2

DATE	SCALE	JOB NO.	DRAWING NO.
11–9–21	NOTED	20200029	P8

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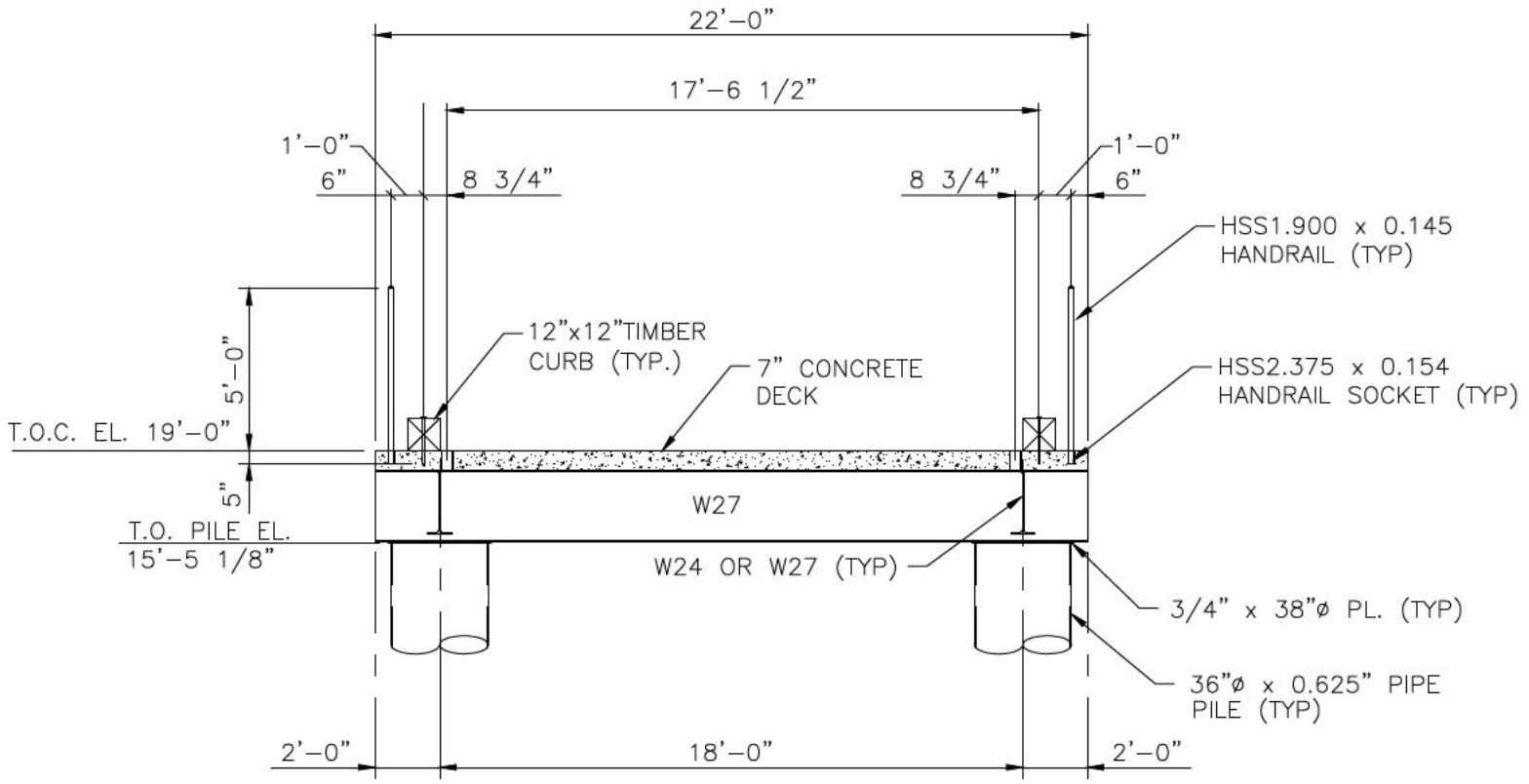
2/15/22 10:35 A.M.



SECTION B

SCALE: 3/16"=1'–0"

P3

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2–15–22

ARCHER WESTERN ALBERICI JOINT VENTURE

WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
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MID BARATARIA SEDIMENT DIVERSION
RIVER TRESTLE SECTIONS 2 OF 2

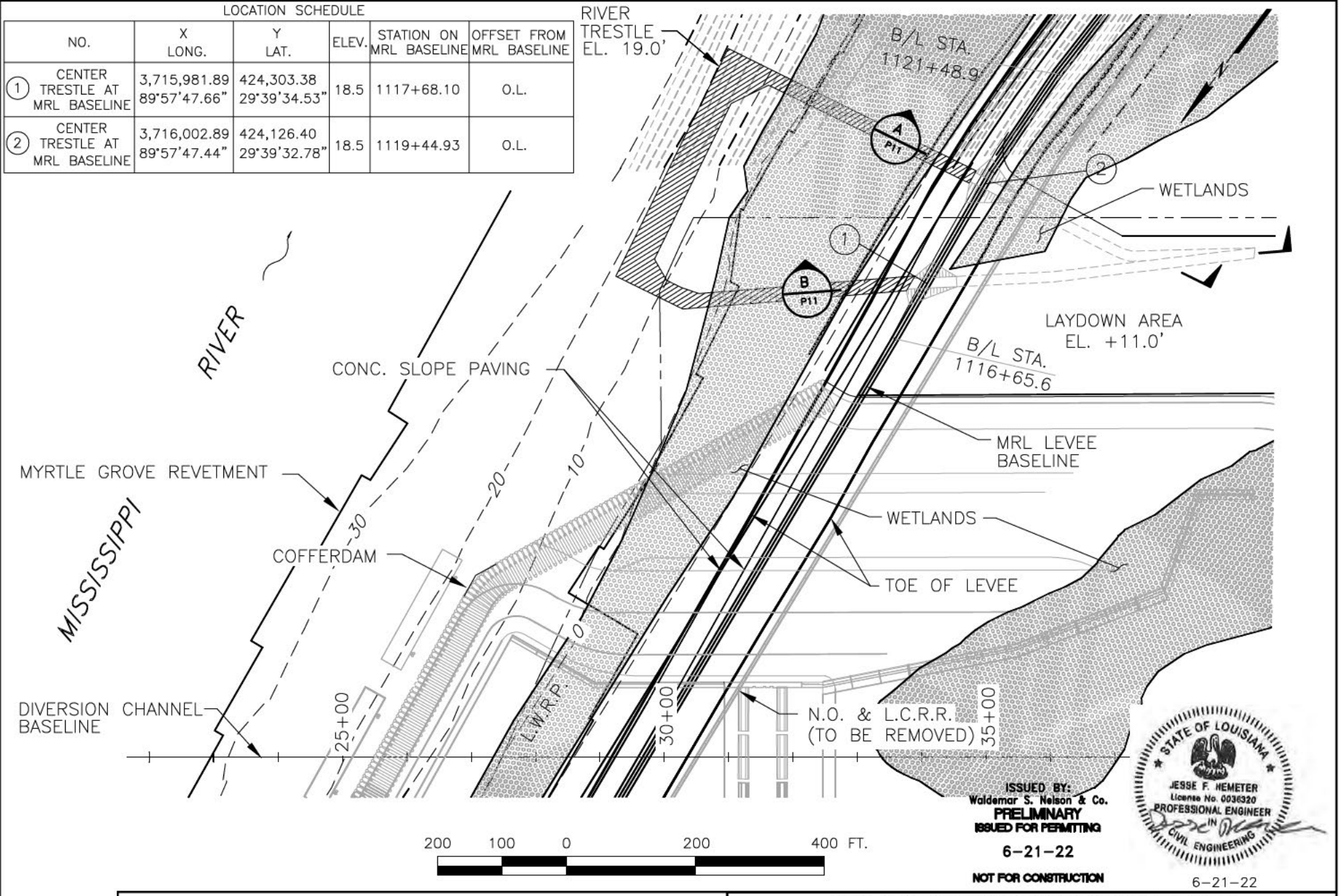
DATE	SCALE	JOB NO.	DRAWING NO.
11–9–21	NOTED	20200029	P9

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.

LOCATION SCHEDULE

NO.	X LONG.	Y LAT.	ELEV.	STATION ON MRL BASELINE	OFFSET FROM MRL BASELINE
(1) CENTER TRESTLE AT MRL BASELINE	3,715,981.89 89°57'47.66"	424,303.38 29°39'34.53"	18.5	1117+68.10	O.L.
(2) CENTER TRESTLE AT MRL BASELINE	3,716,002.89 89°57'47.44"	424,126.40 29°39'32.78"	18.5	1119+44.93	O.L.



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6-21-22

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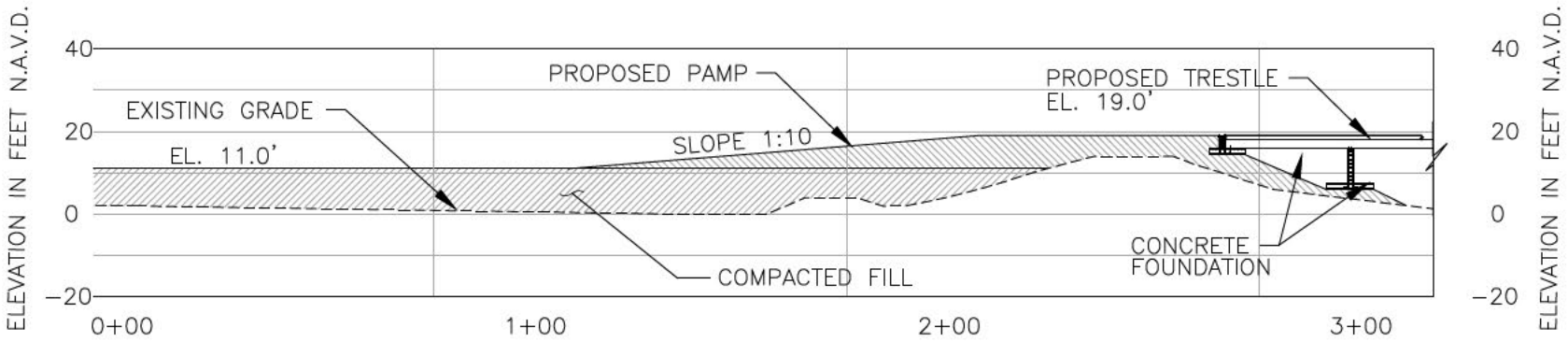
MID BARATARIA SEDIMENT DIVERSION
LEVEE RAMP LOCATION PLAN

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P10

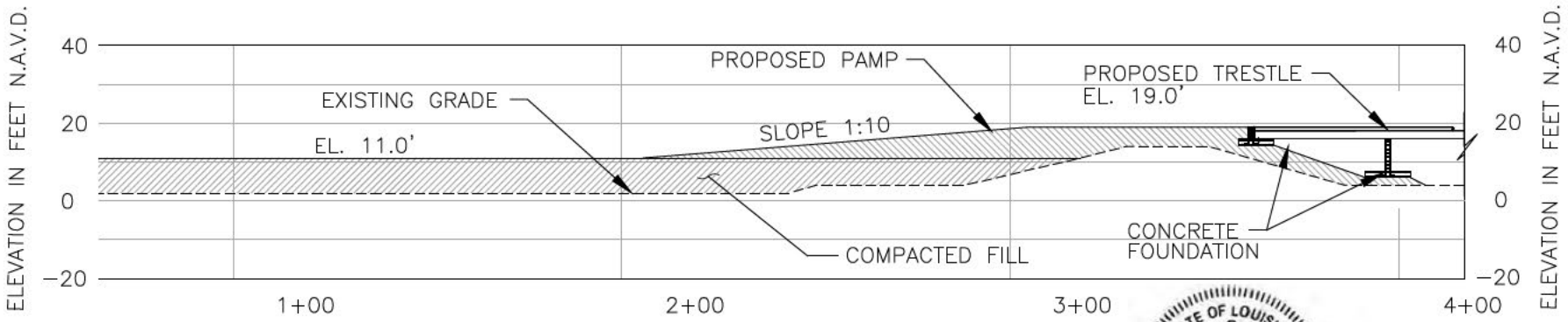
DESIGNED BY: J.F.HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.



SECTION A
P10

SCALE: 1"=40'−0"



SECTION B
P10

SCALE: 1"=40'−0"

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MID BARATARIA SEDIMENT DIVERSION
LEVEE RAMP SECTIONS

DATE	SCALE	JOB NO.	DRAWING NO.
11−9−21	NOTED	20200029	P11

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

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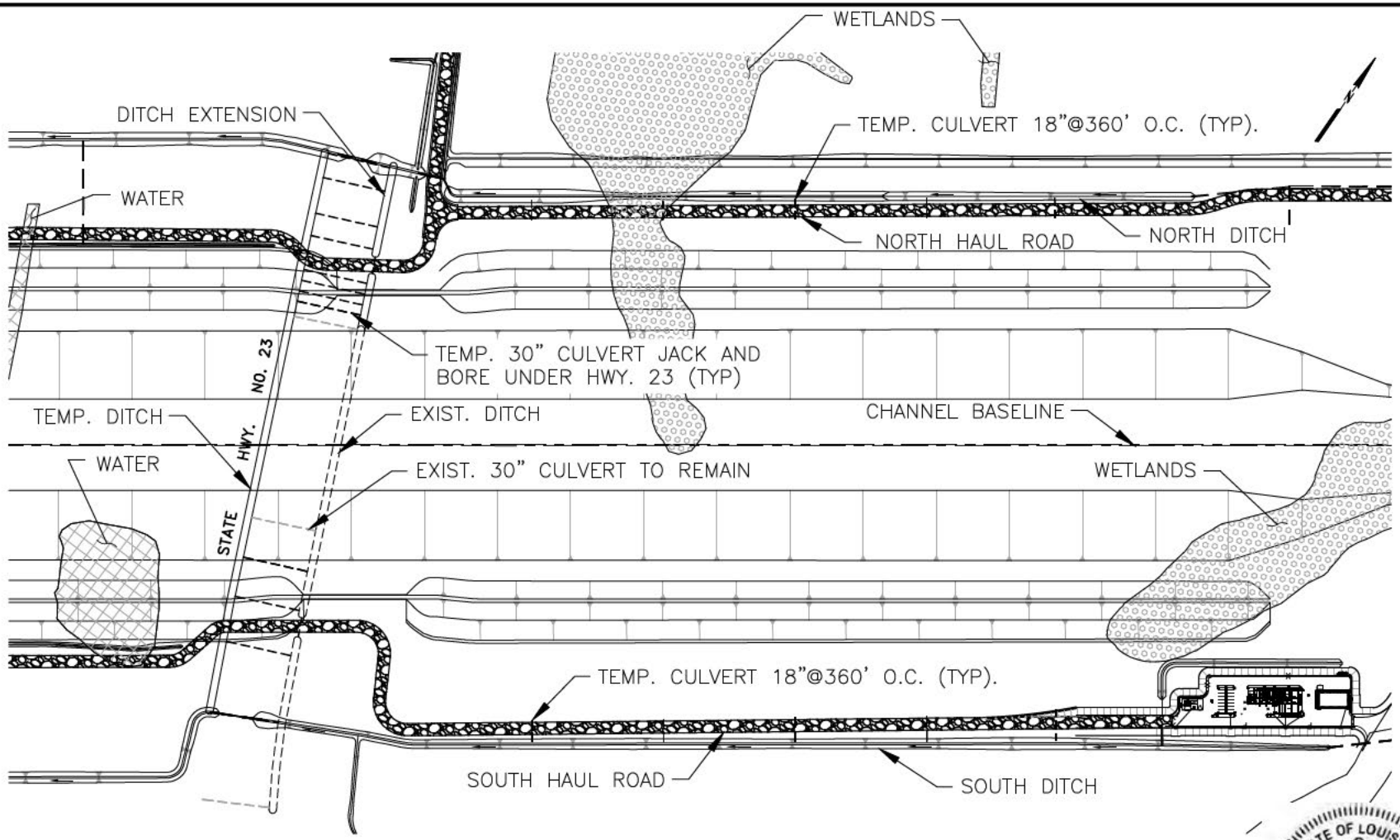

TEMPORARY DRAINAGE PLAN

SCALE: 1"=400'

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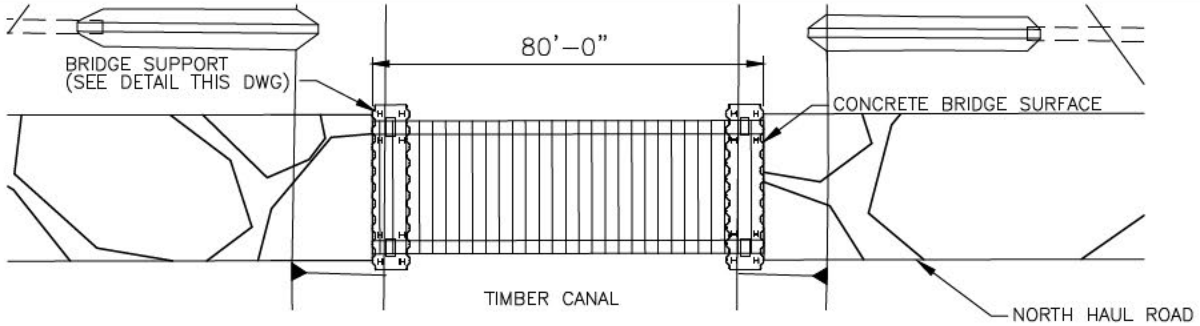
MID BARATARIA SEDIMENT DIVERSION
TEMPORARY DRAINAGE PLAN

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P12

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

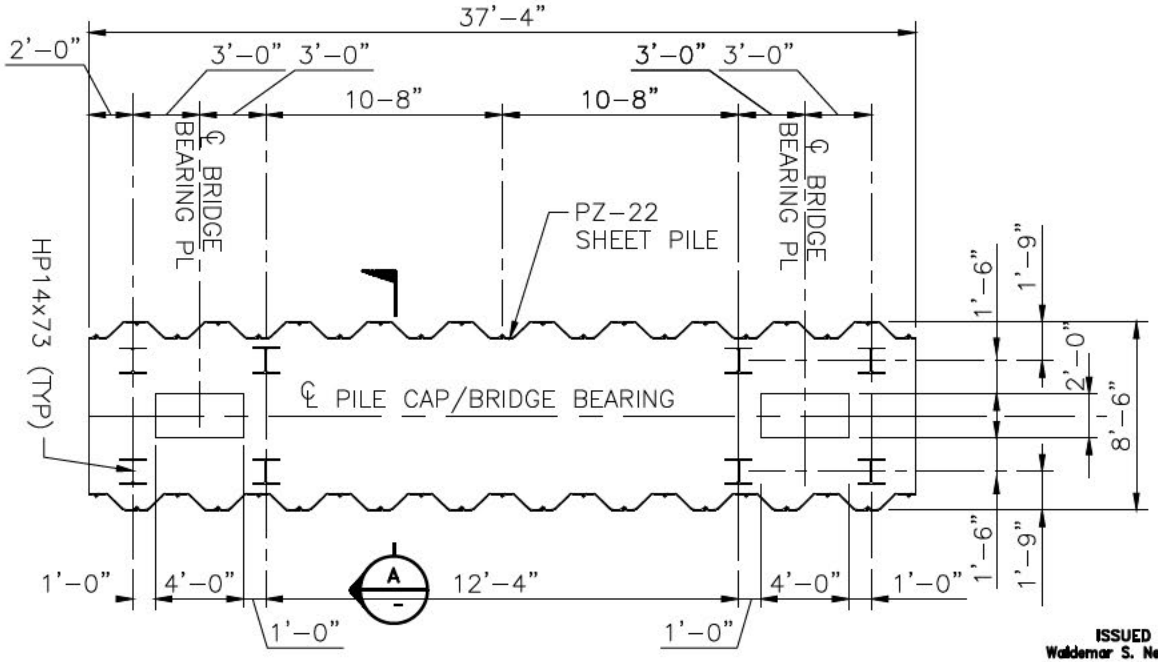
2/15/22 10:35 A.M.



TEMPORARY BRIDGE PLAN – PHASE 1 & 2

SCALE: 1" = 40'

(SOUTH SIDE OPP. HAND)



BRIDGE SUPPORT DETAIL

SCALE: 1/8" = 1'–0"

(WEST SIDE OPP. HAND)

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PROFESSIONAL ENGINEER
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2–15–22

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WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDIMENT DIVERSION
TEMPORARY TIMBER CANAL BRIDGE PLAN AND DETAIL

DATE	SCALE	JOB NO.	DRAWING NO.
11–9–21	NOTED	20200029	P13

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

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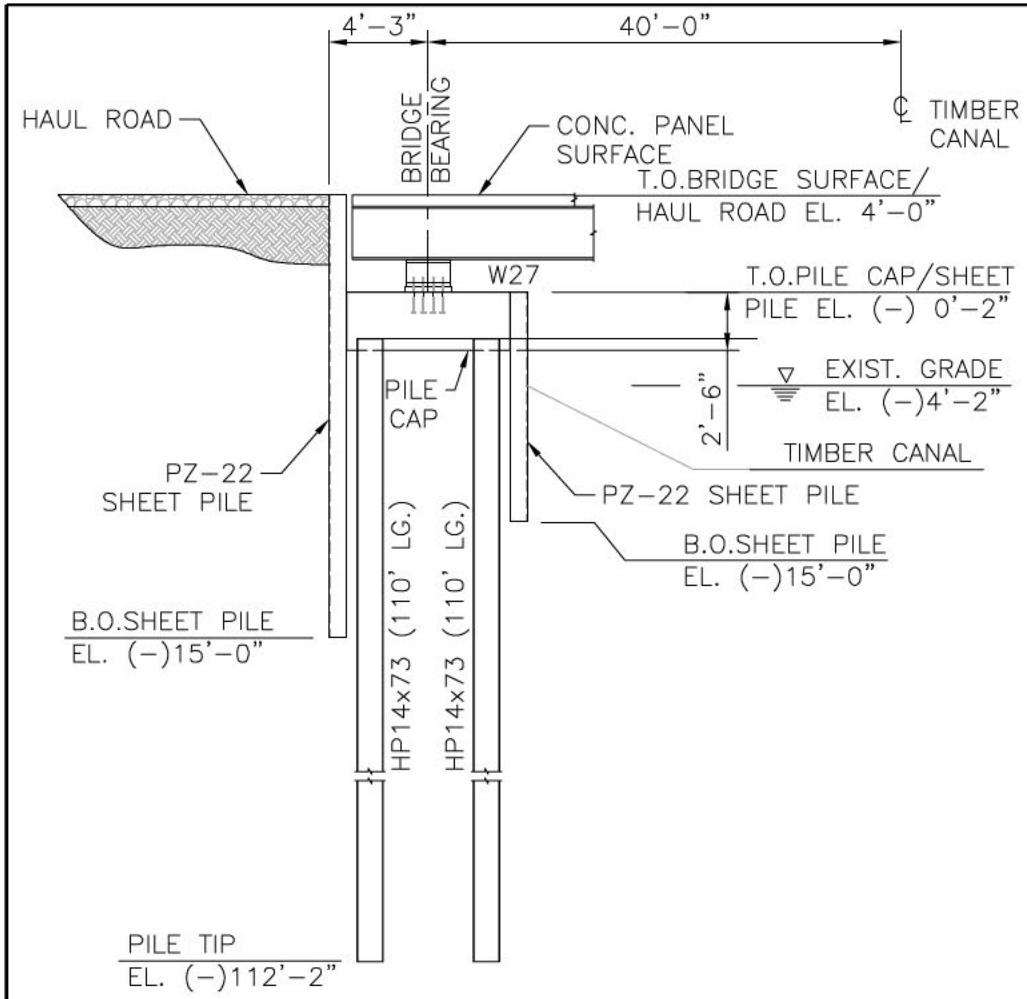

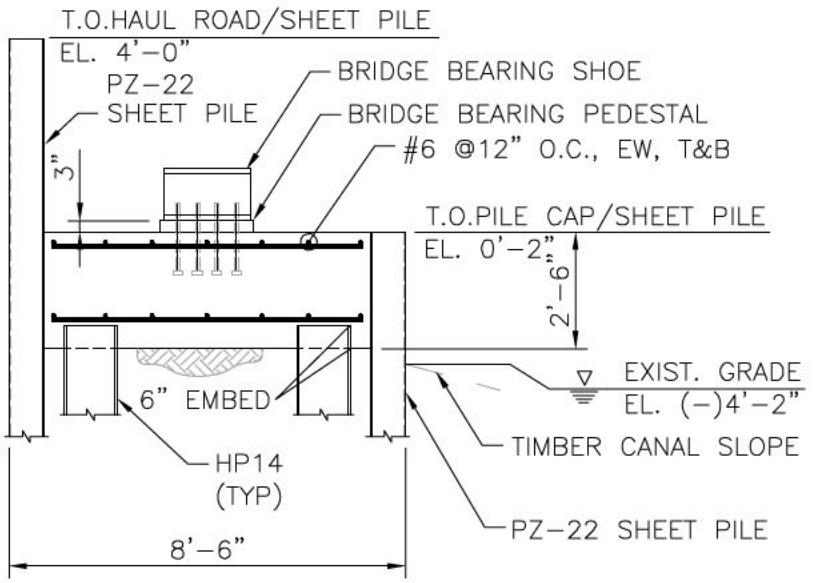

A
P13 P14
SECTION
SCALE: 1/4"=1'-0"

BRIDGE FOUNDATION ELEVATION

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

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PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2-15-22

ARCHER WESTERN ALBERICI JOINT VENTURE

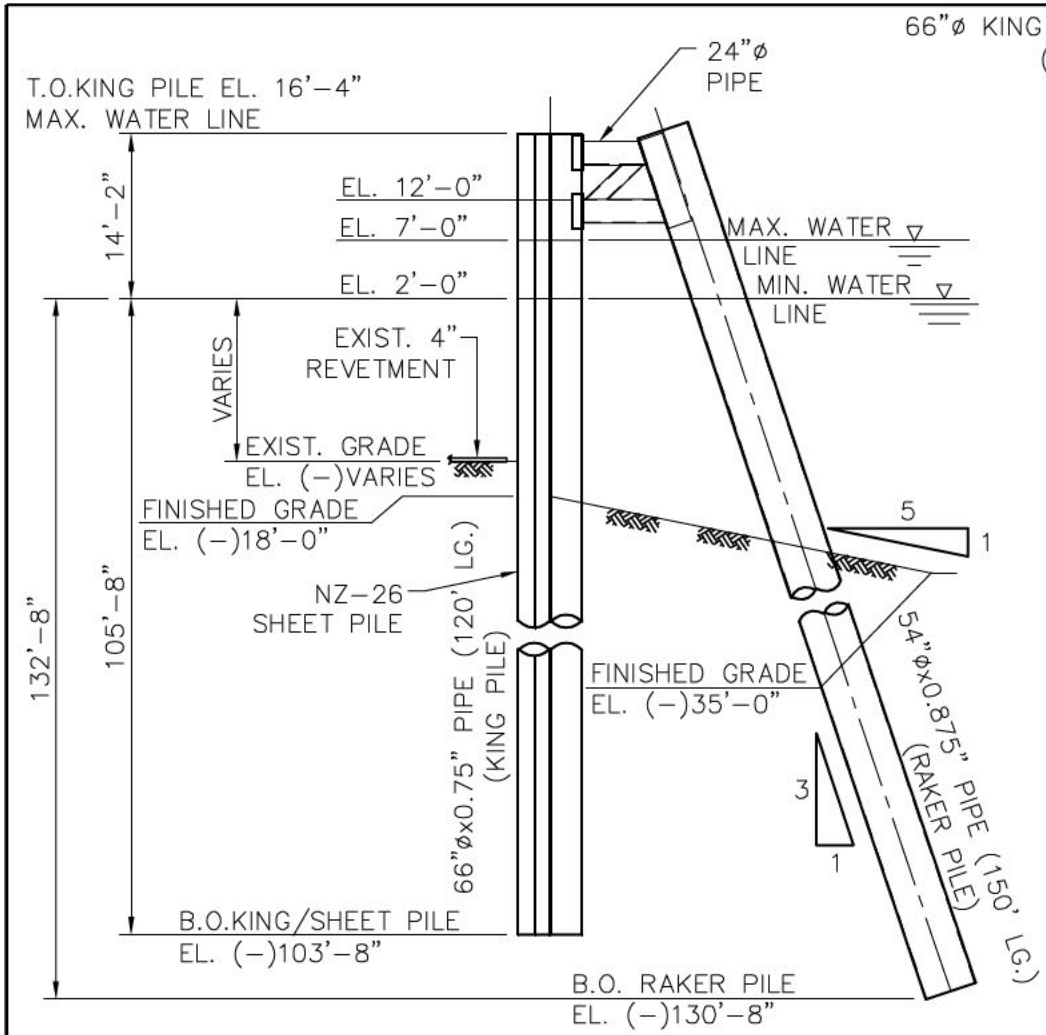
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

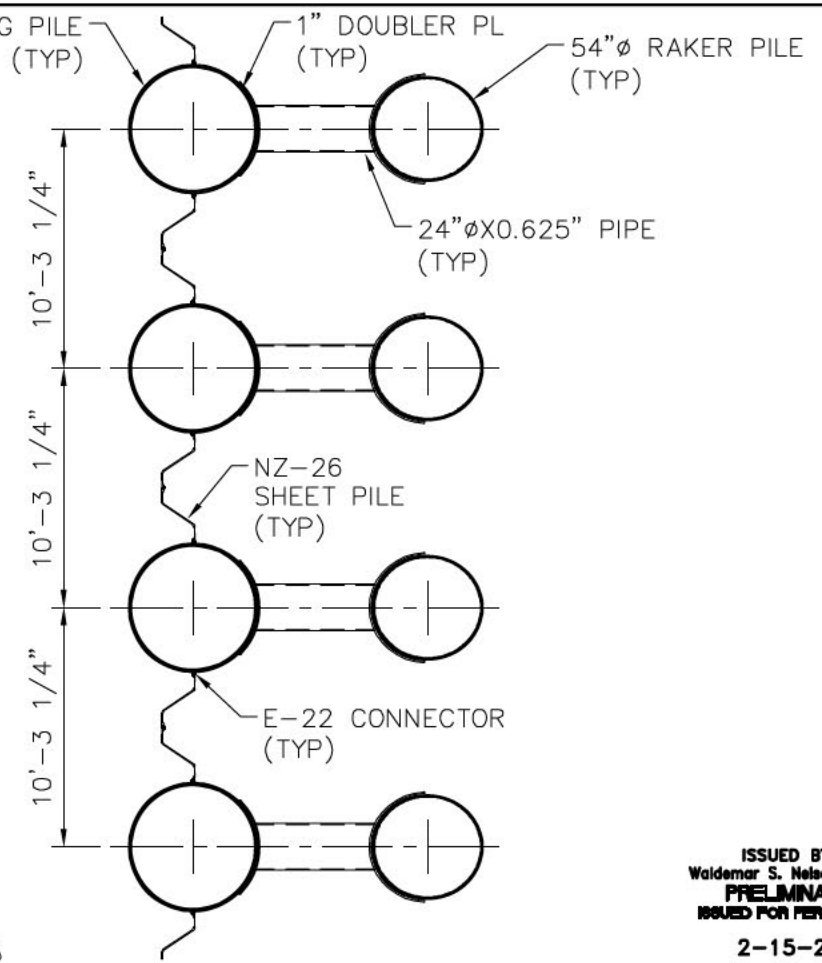
MID BARATARIA SEDIMENT DIVERSION
TEMPORARY TIMBER CANAL BRIDGE SECTION AND ELEVATION

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P14

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.





(TYP 177 PLCS)

COFFERDAM ELEVATION

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

COFFERDAM PARTIAL PLAN

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

ISSUED BY:
Waldemar S. Nelson & Co.
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ISSUED FOR PERMITTING
2-15-22
NOT FOR CONSTRUCTION

STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0036320
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

2-15-22

ARCHER WESTERN ALBERICI JOINT VENTURE

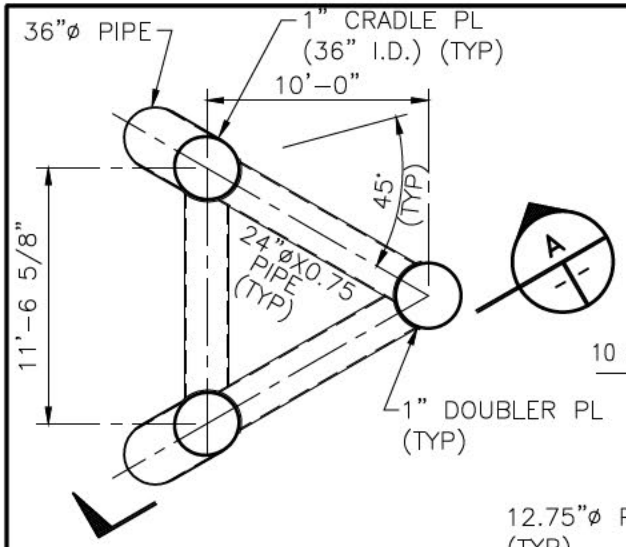
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDIMENT DIVERSION
COFFERDAM PLAN AND ELEVATION

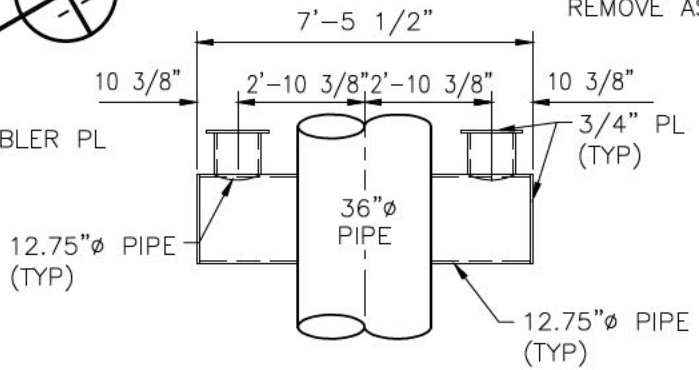
DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P15

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

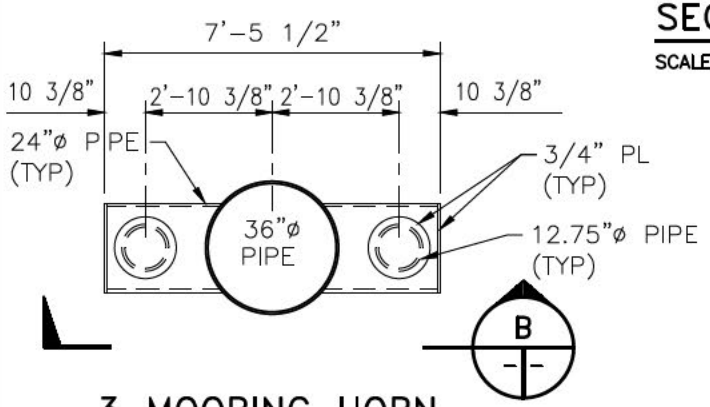
2/15/22 10:35 A.M.



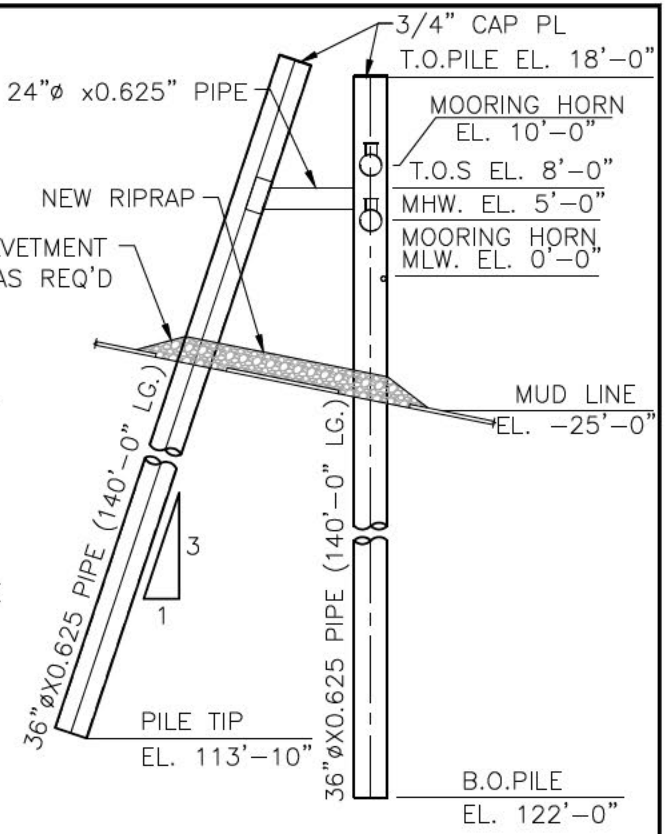
3 PILE DOLPHIN PLAN
SCALE: 1/4"=1'-0"



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



3 MOORING HORN
SCALE: 1/4"=1'-0"



SECTION A
SCALE: 1/8"=1'-0"

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STATE OF LOUISIANA
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2-15-22

ARCHER WESTERN ALBERICI JOINT VENTURE

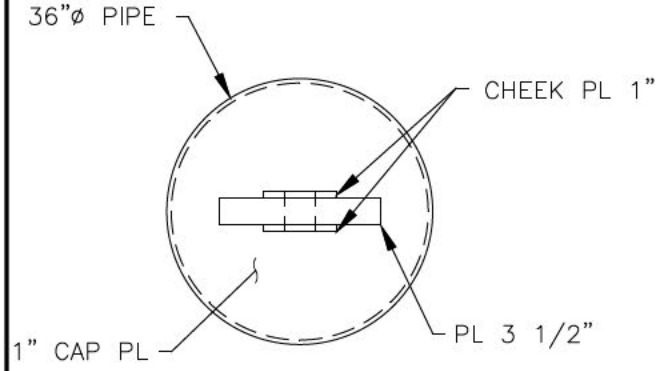
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDIMENT DIVERSION
3 PILE DOLPHIN PLAN, SECTIONS, AND DETAILS

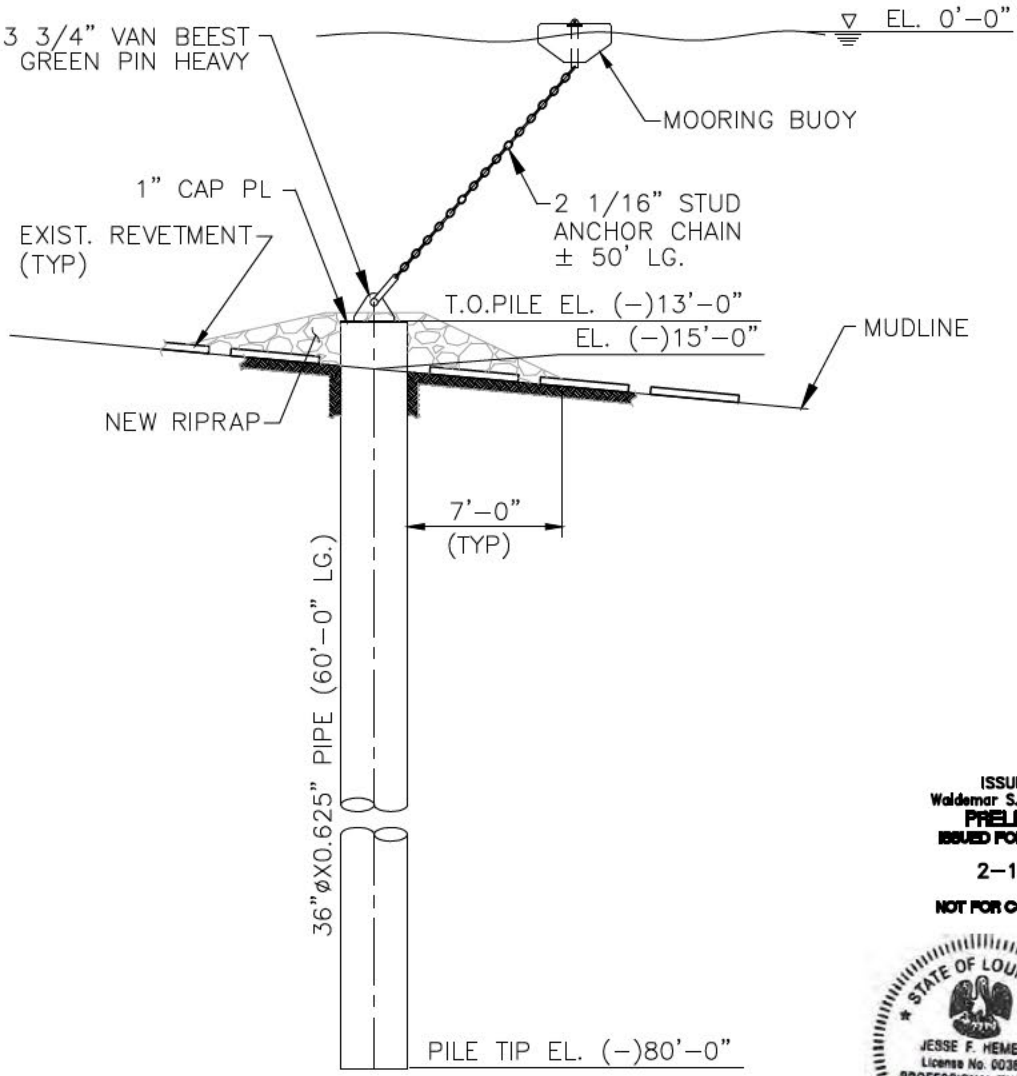
DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P16

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.



MOORING BUOY PLAN
SCALE: 1/2"=1'-0"



(TYP 2 PLCS)

MOORING BUOY ELEVATION
SCALE: 1/8"=1'-0"

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PRELIMINARY
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2-15-22
NOT FOR CONSTRUCTION

STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0038320
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

2-15-22

ARCHER WESTERN ALBERICI JOINT VENTURE

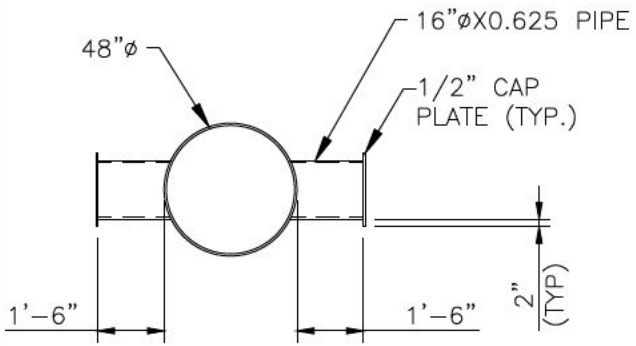
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDIMENT DIVERSION
BARGE MOORING BUOY PLAN AND ELEVATION

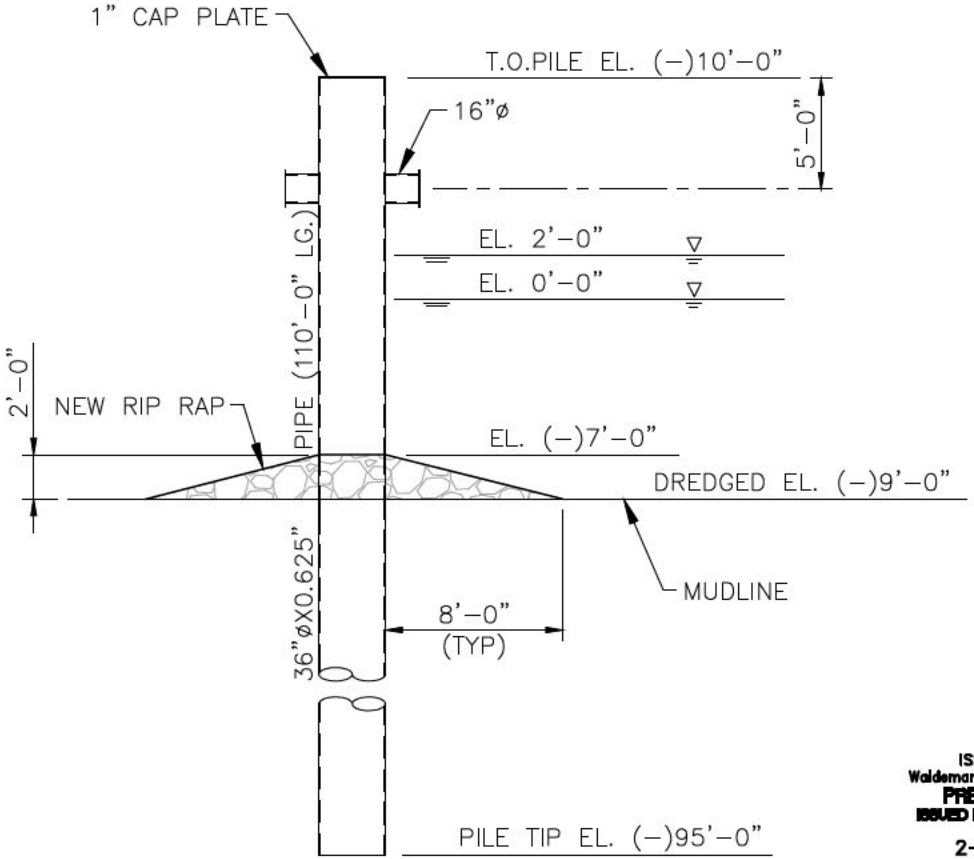
DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P17

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.



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



(TYP 2 PLCS)

MONOPILE ELEVATION
SCALE: 1/8"=1'-0"

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
ISSUED FOR PERMITTING
2-15-22
NOT FOR CONSTRUCTION

STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0038320
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

2-15-22

ARCHER WESTERN ALBERICI JOINT VENTURE

WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDIMENT DIVERSION
BARGE MOORING MONOPILE PLAN AND ELEVATION

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P18

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.

OVERALL EQUIPMENT APPROACH ROUTE

SCALE: 1" = 4000'

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
ISSUED FOR PERMITTING
6-21-22
NOT FOR CONSTRUCTION

STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0036320
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
6-21-22

ARCHER WESTERN ALBERICI JOINT VENTURE

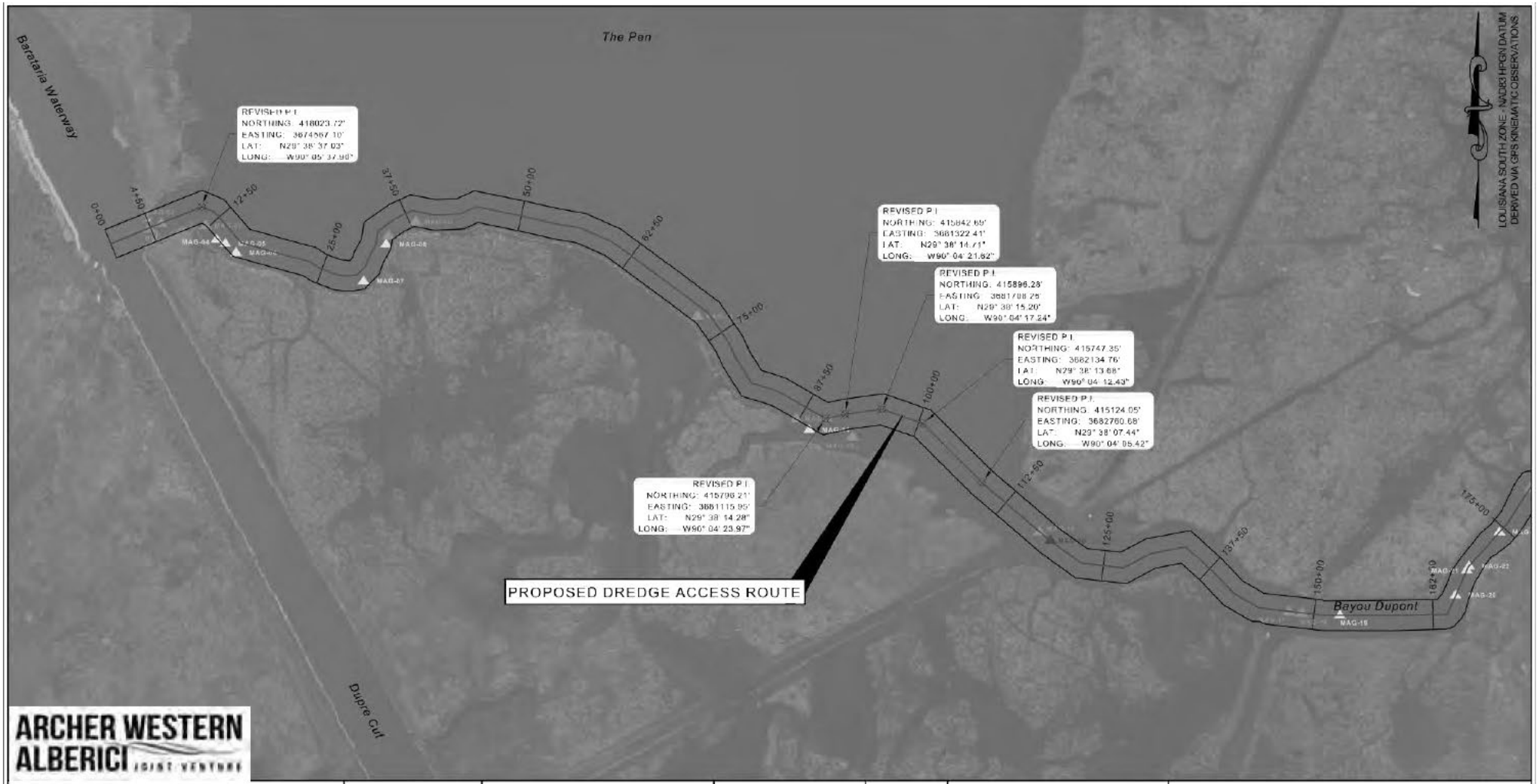
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDIMENT DIVERSION
OVERALL EQUIPMENT APPROACH ROUTE

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P19

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.



ARCHER WESTERN ALBERICI JOINT VENTURE

STATE OF LOUISIANA
KEITH J. ROBERTS
REGISTERED PROFESSIONAL LAND SURVEYOR
07/20/22

MAG LEGEND	LEGEND
1-50 GAMMAS	MRSD DREDGE ACCESS ROUTE ALIGNMENT
51-100 GAMMAS	SURVEY SECTION LINES
101-500 GAMMAS	LIMITS OF RIGHT-OF-WAY
501-1000 GAMMAS	
> 1001 GAMMAS	

REVISED BY:	DATE:

HORIZONTAL SCALE
1" = 1,000'
1,000' 0' 500' 1,000'

DATE: 07/20/2022 JOB# 2201071

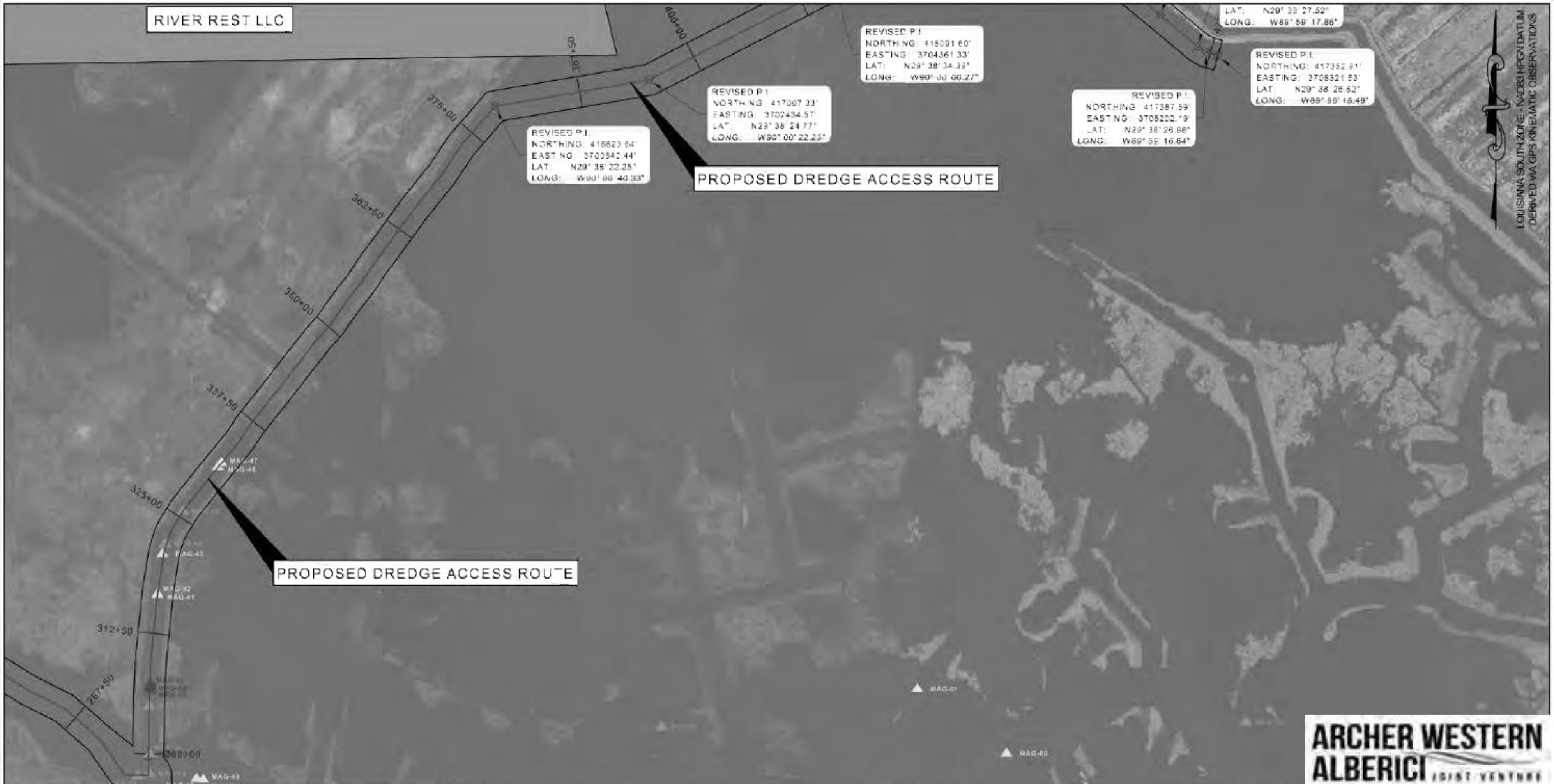
HYDROTERRA
Alberici

ARCHER WESTERN / ALBERICI JOINT VENTURE
PRE-CONSTRUCTION SURVEY
MID-BARATARIA SEDIMENT DIVERSION PROJECT
DREDGE ACCESS ROUTE SURVEY
SURVEY PLAN VIEW
JEFFERSON & PLAQUEMINES PARISH, LA

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 212 JACOBS RUN, SCOTT, LA 70583

FILE: AWA Pre-Construction Survey_REV_07-20-22.dwg SHEET: 6 OF 9

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
ISSUED FOR PERMITTING
7-21-22
NOT FOR CONSTRUCTION



STATE OF LOUISIANA
KEITH J. ROBERTS
REGISTERED PROFESSIONAL LAND SURVEYOR
07/20/22

MAG LEGEND	
▲	1-50 GAMMAS
▲	51-100 GAMMAS
▲	101-500 GAMMAS
▲	501-1000 GAMMAS
▲	> 1001 GAMMAS

LEGEND	
———	MBSD DREDGE ACCESS ROUTE ALIGNMENT
———	SURVEY SECTION LINES
———	LIMITS OF RIGHT-OF-WAY

REVISED BY:	DATE:

HORIZONTAL SCALE
1" = 1,000'
1,000' 0' 500' 1,000'

DATE: 07/20/2022
JOB# 2201071

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ARCHER WESTERN / ALBERICI JOINT VENTURE
PRE-CONSTRUCTION SURVEY
MID-BARATARIA SEDIMENT DIVERSION PROJECT
DREDGE ACCESS ROUTE SURVEY
SURVEY PLAN VIEW
JEFFERSON & PLAQUEMINES PARISH, LA

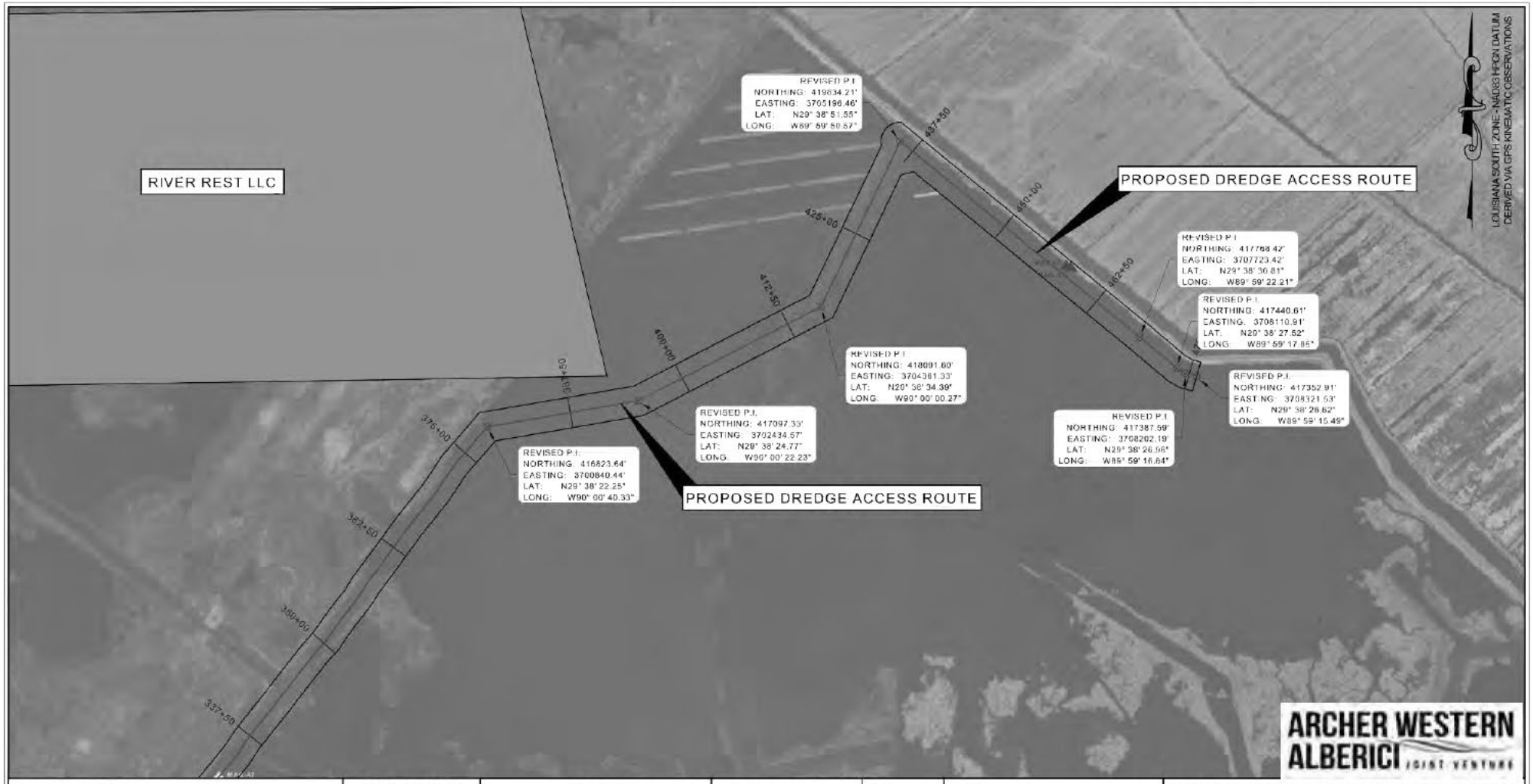
PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 212 JACOBS RUN, SCOTT, LA 70583

FILE: AWA Pre-Construction Survey_REV_07-20-22.dwg

SHEET: 8 OF 9

P21

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
ISSUED FOR PERMITTING
7-21-22
NOT FOR CONSTRUCTION



STATE OF LOUISIANA
KEITH J. ROBERTS
REG. 4700
REGISTERED PROFESSIONAL
LAND SURVEYOR
07/20/22

MAG LEGEND	
▲	1-50 GAMMAS
▲	51-100 GAMMAS
▲	101-500 GAMMAS
▲	501-1000 GAMMAS
▲	> 1001 GAMMAS

LEGEND	
———	MBSD DREDGE ACCESS ROUTE ALIGNMENT
———	SURVEY SECTION LINES
———	LIMITS OF RIGHT-OF-WAY

REVISED BY:	DATE:

HORIZONTAL SCALE
1" = 1,000'
1,000' 0' 500' 1,000'

DATE: 07/20/2022 JOB# 2201071

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ARCHER WESTERN / ALBERICI JOINT VENTURE
PRE-CONSTRUCTION SURVEY
MID-BARATARIA SEDIMENT DIVERSION PROJECT
DREDGE ACCESS ROUTE SURVEY
SURVEY PLAN VIEW
JEFFERSON & PLAQUEMINES PARISH, LA

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 212 JACOBS RUN, SCOTT, LA 70583

FILE: AWA Pre-Construction Survey_REV_07-20-22.dwg SHEET: 9 OF 9

P22

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
ISSUED FOR PERMITTING
7-21-22
NOT FOR CONSTRUCTION

MBSD Dredge Access Route Alignment

PI Station	Northing	Easting	Latitude	Longitude	Distance	Direction
0+00.00	417,634.7433'	3,673,610.8022'	29° 38' 33.28"	90° 05' 48.71"		
					360.92'	N67° 44' 54"E
3+60.92	417,847.2884'	3,674,129.6077'	29° 38' 35.34"	90° 05' 42.80"		
					471.74'	N68° 01' 56"E
10+32.66	418,023.7203'	3,674,567.1011'	29° 38' 37.04"	90° 05' 37.82"		
					145.51'	S86° 48' 54"E
11+78.17	417,966.4336'	3,674,700.8521'	29° 38' 36.46"	90° 05' 36.31"		
					426.44'	S41° 13' 44"E
16+04.61	417,643.3146'	3,674,983.9123'	29° 38' 33.23"	90° 05' 33.16"		
					453.07'	S74° 07' 09"E
20+57.69	417,521.7300'	3,675,417.6926'	29° 38' 31.98"	90° 05' 28.24"		
					287.98'	S75° 04' 41"E
23+45.67	417,447.5741'	3,675,695.9615'	29° 38' 31.22"	90° 05' 25.10"		
					131.28'	S57° 32' 21"E
24+76.95	417,377.2123'	3,675,806.7318'	29° 38' 30.51"	90° 05' 23.85"		
					284.24'	S89° 54' 12"E
26+81.29	417,306.9039'	3,675,998.6276'	29° 38' 28.79"	90° 05' 21.68"		
					116.28'	S84° 35' 12"E
27+97.57	417,295.9311'	3,676,114.3687'	29° 38' 28.67"	90° 05' 20.37"		
					82.95'	N81° 38' 36"E
28+80.52	417,307.9870'	3,676,196.4617'	29° 38' 29.78"	90° 05' 19.44"		
					135.37'	N48° 26' 33"E
30+35.89	417,404.8466'	3,676,291.2480'	29° 38' 30.73"	90° 05' 18.36"		
					90.15'	N17° 21' 47"E
31+06.04	417,490.8872'	3,676,318.1427'	29° 38' 31.58"	90° 05' 18.04"		
					161.00'	N29° 16' 30"E
32+67.04	417,631.6493'	3,676,397.1664'	29° 38' 32.96"	90° 05' 17.13"		
					138.86'	N8° 32' 29"E
34+06.50	417,768.9683'	3,676,417.7393'	29° 38' 34.32"	90° 05' 16.88"		
					254.78'	N54° 46' 16"E
36+41.29	417,904.4022'	3,676,609.5746'	29° 38' 35.64"	90° 05' 14.69"		
					85.09'	N65° 31' 09"E
38+24.38	417,961.2421'	3,676,715.9641'	29° 38' 36.38"	90° 05' 12.80"		
					243.12'	S79° 27' 33"E
40+67.51	417,916.7659'	3,677,814.7858'	29° 38' 35.92"	90° 05' 10.09"		

MBSD Dredge Access Route Alignment

PI Station	Northing	Easting	Latitude	Longitude	Distance	Direction
					265.50'	N87° 56' 21"E
43+33.00	417,947.8567'	3,677,260.0492'	29° 38' 36.00"	90° 05' 07.09"		
					153.81'	N65° 14' 04"E
45+16.53	418,024.8541'	3,677,446.9509'	29° 38' 36.74"	90° 05' 05.38"		
					465.85'	S79° 19' 39"E
49+52.66	417,933.0041'	3,677,903.1946'	29° 38' 35.76"	90° 05' 00.03"		
					423.07'	S77° 29' 23"E
54+05.73	417,838.9611'	3,678,316.1909'	29° 38' 34.81"	90° 04' 55.36"		
					286.35'	S80° 10' 42"E
56+42.05	417,798.0372'	3,678,599.0518'	29° 38' 34.38"	90° 04' 52.32"		
					160.69'	S66° 09' 58"E
60+02.74	417,652.8884'	3,678,878.9790'	29° 38' 32.90"	90° 04' 49.00"		
					785.42'	S53° 39' 31"E
67+88.15	417,287.4551'	3,679,551.6517'	29° 38' 28.23"	90° 04' 41.65"		
					460.48'	S53° 07' 36"E
72+48.64	416,911.1433'	3,679,880.0014'	29° 38' 25.45"	90° 04' 37.75"		
					380.09'	S34° 33' 22"E
76+35.73	416,592.6076'	3,680,099.9362'	29° 38' 22.28"	90° 04' 35.30"		
					193.53'	S25° 14' 05"E
78+27.25	416,419.3573'	3,680,181.5847'	29° 38' 20.55"	90° 04' 34.39"		
					287.02'	S32° 09' 51"E
81+24.27	416,167.9179'	3,680,339.7044'	29° 38' 18.05"	90° 04' 32.63"		
					185.97'	S73° 32' 27"E
83+10.24	416,115.2267'	3,680,518.0533'	29° 38' 17.51"	90° 04' 30.62"		
					122.79'	S70° 35' 05"E
84+33.04	416,074.2742'	3,680,633.8155'	29° 38' 17.09"	90° 04' 29.33"		
					52.31'	S60° 00' 42"E
85+15.35	416,035.1316'	3,680,705.1097'	29° 38' 16.67"	90° 04' 28.52"		
					474.26'	S60° 01' 46"E
89+89.61	415,796.2122'	3,681,115.9533'	29° 38' 14.28"	90° 04' 23.88"		
					211.63'	N77° 18' 46"E
92+01.24	415,842.6911'	3,681,322.4129'	29° 38' 14.72"	90° 04' 21.54"		
					389.55'	N82° 05' 33"E
95+90.79	415,898.2831'	3,681,708.2595'	29° 38' 15.21"	90° 04' 17.26"		
					451.75'	S70° 45' 03"E

MBSD Dredge Access Route Alignment

PI Station	Northing	Easting	Latitude	Longitude	Distance	Direction
100+42.54	415,723.3499'	3,682,134.0583'	29° 38' 13.69"	90° 04' 12.35"		
					883.34'	S43° 07' 33"E
109+25.87	415,124.0529'	3,682,768.8766'	29° 38' 07.45"	90° 04' 05.33"		
					495.87'	S45° 35' 28"E
114+21.74	414,802.7215'	3,683,138.3447'	29° 38' 04.23"	90° 04' 01.09"		
					443.25'	S49° 17' 38"E
118+65.00	414,513.0405'	3,683,474.3600'	29° 38' 01.33"	90° 03' 57.32"		
					400.95'	S54° 18' 41"E
122+65.95	414,278.7317'	3,683,800.8142'	29° 37' 58.98"	90° 03' 53.66"		
					444.91'	S83° 27' 51"E
127+10.86	414,229.0884'	3,684,242.8342'	29° 37' 58.43"	90° 03' 48.66"		
					326.34'	N62° 19' 02"E
130+37.20	414,380.0968'	3,684,531.0170'	29° 37' 59.90"	90° 03' 45.37"		
					373.55'	N76° 14' 21"E
134+10.75	414,450.4425'	3,684,897.9969'	29° 38' 00.53"	90° 03' 41.20"		
					361.70'	S47° 47' 39"E
137+72.45	414,207.4569'	3,685,165.9190'	29° 37' 58.11"	90° 03' 38.19"		
					331.15'	S43° 22' 02"E
141+03.59	413,966.7226'	3,685,393.3099'	29° 37' 55.70"	90° 03' 35.63"		
					314.67'	S59° 58' 01"E
144+18.26	413,809.2313'	3,685,665.7308'	29° 37' 54.12"	90° 03' 32.56"		
					678.54'	S83° 27' 46"E
150+96.80	413,731.9795'	3,686,339.8572'	29° 37' 53.28"	90° 03' 24.95"		
					738.47'	S89° 49' 32"E
158+35.27	413,729.7308'	3,687,078.3219'	29° 37' 53.17"	90° 03' 16.58"		
					365.77'	N88° 52' 30"E
164+01.04	413,740.7843'	3,687,643.9834'	29° 37' 53.22"	90° 03' 10.17"		
					543.07'	N23° 42' 42"E
169+44.11	414,238.0065'	3,687,862.3706'	29° 37' 58.12"	90° 03' 07.64"		
					611.18'	N41° 51' 43"E
175+55.28	414,693.1825'	3,688,270.2311'	29° 38' 02.58"	90° 03' 02.95"		
					398.87'	N32° 48' 40"E
179+54.15	415,028.4137'	3,688,436.3660'	29° 38' 05.87"	90° 03' 00.47"		
					242.63'	N35° 57' 32"E
180+96.78	415,141.8665'	3,688,570.1206'	29° 38' 07.01"	90° 02' 59.50"		

STATE OF LOUISIANA
KEITH J. ROBERTS
REG. NO. 4780
REGISTERED PROFESSIONAL LAND SURVEYOR
07/20/22

ARCHER WESTERN ALBERICI JOINT VENTURE

REVISED BY:	DATE:

HYDROTERRA

Alberici

ARCHER WESTERN / ALBERICI JOINT VENTURE
PRE-CONSTRUCTION SURVEY
MID-BARATARIA SEDIMENT DIVERSION PROJECT
DREDGE ACCESS ROUTE SURVEY
ALIGNMENT REPORTS
JEFFERSON & PLAQUEMINES PARISH, LA

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 212 JACOBS RUN, SCOTT, LA 70583

DATE: 07/20/2022 | JOB# 2201071 | FILE: AWA Pre-Construction Survey_REV_07-20-22.dwg | SHEET: 3 OF 9

P23

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
ISSUED FOR PERMITTING
7-21-22
NOT FOR CONSTRUCTION

MBSD Dredge Access Route Alignment

PI Station	Northing	Easting	Latitude	Longitude	Distance	Direction
					326.78'	N50° 55' 18"E
182+23.59	415,215.0955'	3,688,679.3505'	29° 38' 07.68"	90° 02' 58.29"		
					275.24'	S08° 14' 22"E
184+96.80	415,157.5665'	3,688,943.5577'	29° 38' 07.10"	90° 02' 55.27"		
					531.43'	S63° 54' 05"E
190+08.24	414,932.2752'	3,689,403.1442'	29° 38' 04.82"	90° 02' 50.09"		
					489.35'	S59° 37' 07"E
194+97.59	414,627.8952'	3,689,781.3501'	29° 38' 01.70"	90° 02' 45.64"		
					512.82'	S51° 32' 26"E
200+10.40	414,290.5072'	3,690,198.5996'	29° 37' 58.38"	90° 02' 41.15"		
					338.22'	S50° 58' 58"E
203+69.82	414,076.7701'	3,690,462.2109'	29° 37' 56.25"	90° 02' 38.22"		
					432.31'	S52° 43' 05"E
208+02.82	413,712.2331'	3,690,696.1599'	29° 37' 52.60"	90° 02' 35.59"		
					287.04'	S23° 11' 10"E
210+89.86	413,448.4557'	3,690,809.1708'	29° 37' 49.97"	90° 02' 34.35"		
					316.70'	S28° 32' 58"E
214+00.55	413,205.4531'	3,691,002.7956'	29° 37' 47.55"	90° 02' 32.18"		
					115.30'	S51° 25' 33"E
215+15.85	413,133.4357'	3,691,092.5477'	29° 37' 46.82"	90° 02' 31.17"		
					166.67'	S88° 27' 10"E
216+82.51	413,128.9558'	3,691,259.4536'	29° 37' 46.76"	90° 02' 29.23"		
					414.34'	N60° 23' 16"E
220+96.86	413,333.6959'	3,691,619.6763'	29° 37' 48.75"	90° 02' 25.18"		
					402.98'	N65° 35' 51"E
224+99.84	413,500.1545'	3,691,986.8562'	29° 37' 50.35"	90° 02' 21.02"		
					243.43'	N76° 44' 49"E
227+43.27	413,555.9421'	3,692,223.6047'	29° 37' 50.88"	90° 02' 18.31"		
					155.78'	S72° 06' 27"E
228+97.06	413,508.7463'	3,692,369.9450'	29° 37' 50.40"	90° 02' 16.66"		
					240.41'	S58° 10' 35"E
231+37.48	413,319.7518'	3,692,518.5377'	29° 37' 48.51"	90° 02' 15.00"		
					310.21'	S11° 43' 35"E
234+47.67	413,016.0239'	3,692,581.5810'	29° 37' 45.50"	90° 02' 14.32"		
					375.75'	S13° 33' 14"E

MBSD Dredge Access Route Alignment

PI Station	Northing	Easting	Latitude	Longitude	Distance	Direction
238+23.42	412,651.7365'	3,692,669.6417'	29° 37' 41.87"	90° 02' 13.37"		
					349.89'	S15° 46' 35"E
241+73.21	412,311.0054'	3,692,752.9447'	29° 37' 38.50"	90° 02' 12.47"		
					212.76'	S34° 09' 12"E
243+85.97	412,134.9415'	3,692,872.3880'	29° 37' 36.74"	90° 02' 11.14"		
					218.63'	S46° 39' 24"E
246+04.60	411,943.1817'	3,693,075.0250'	29° 37' 34.83"	90° 02' 08.87"		
					166.74'	N87° 40' 49"E
248+31.33	411,953.4505'	3,693,241.6209'	29° 37' 34.83"	90° 02' 06.98"		
					310.39'	N73° 13' 38"E
251+41.72	412,034.9920'	3,693,538.8123'	29° 37' 35.73"	90° 02' 03.60"		
					238.36'	S85° 48' 14"E
253+80.08	412,014.2606'	3,693,775.7808'	29° 37' 35.45"	90° 02' 00.92"		
					335.97'	S22° 20' 24"E
257+16.05	411,704.0554'	3,693,903.1887'	29° 37' 32.37"	90° 01' 59.48"		
					275.62'	S31° 13' 23"E
259+84.67	411,473.6498'	3,694,045.0251'	29° 37' 30.03"	90° 01' 57.90"		
					340.30'	S39° 55' 19"E
263+29.97	411,209.6643'	3,694,265.4123'	29° 37' 27.43"	90° 01' 55.46"		
					290.08'	S65° 14' 25"E
266+20.05	411,088.1728'	3,694,529.8297'	29° 37' 26.19"	90° 01' 52.49"		
					523.40'	N58° 25' 15"E
271+43.45	411,362.5965'	3,695,053.0267'	29° 37' 28.28"	90° 01' 46.56"		
					480.44'	S86° 30' 35"E
276+23.89	411,073.3480'	3,695,532.5788'	29° 37' 25.93"	90° 01' 41.13"		
					348.58'	S58° 56' 57"E
279+72.48	410,787.6159'	3,696,000.8749'	29° 37' 23.05"	90° 01' 35.87"		
					425.62'	S82° 53' 05"E
283+98.10	410,533.6214'	3,696,279.7191'	29° 37' 22.09"	90° 01' 31.60"		
					504.14'	S49° 00' 08"E
289+02.24	410,202.6928'	3,696,760.2075'	29° 37' 17.78"	90° 01' 27.33"		
					437.17'	S34° 34' 25"E
293+39.40	409,902.9320'	3,697,008.2832'	29° 37' 14.18"	90° 01' 24.57"		
					243.00'	N90° 00' 00"E
295+82.40	409,902.9320'	3,697,251.2806'	29° 37' 14.15"	90° 01' 21.81"		

MBSD Dredge Access Route Alignment

PI Station	Northing	Easting	Latitude	Longitude	Distance	Direction
					819.02'	N0° 46' 02"E
306+01.42	410,721.8826'	3,697,262.2675'	29° 37' 22.26"	90° 01' 21.58"		
					394.01'	N2° 37' 42"E
309+95.44	411,115.4815'	3,697,280.3119'	29° 37' 26.15"	90° 01' 21.33"		
					673.68'	N5° 32' 14"E
316+69.11	411,785.6245'	3,697,340.2152'	29° 37' 32.78"	90° 01' 20.46"		
					423.89'	N8° 49' 32"E
320+93.01	412,204.9998'	3,697,414.2550'	29° 37' 36.92"	90° 01' 19.62"		
					185.05'	N17° 01' 54"E
322+78.06	412,381.4373'	3,697,468.4571'	29° 37' 38.66"	90° 01' 19.03"		
					90.25'	N25° 06' 04"E
323+68.31	412,463.1627'	3,697,506.7422'	29° 37' 39.47"	90° 01' 18.59"		
					232.46'	N32° 00' 01"E
326+00.77	412,660.2960'	3,697,629.9260'	29° 37' 41.41"	90° 01' 17.17"		
					391.58'	N38° 40' 49"E
329+92.35	412,965.9851'	3,697,874.6556'	29° 37' 44.40"	90° 01' 14.35"		
					502.69'	N39° 13' 54"E
334+95.03	413,355.3617'	3,698,192.5824'	29° 37' 48.22"	90° 01' 10.70"		
					220.23'	N33° 27' 02"E
337+15.26	413,539.1139'	3,698,313.9773'	29° 37' 50.03"	90° 01' 09.30"		
					219.01'	N38° 34' 13"E
339+34.27	413,710.3427'	3,698,450.5221'	29° 37' 51.71"	90° 01' 07.73"		
					256.30'	N38° 36' 22"E
341+90.57	413,910.0326'	3,698,610.4462'	29° 37' 53.67"	90° 01' 05.89"		
					225.74'	N37° 33' 39"E
344+16.32	414,089.5812'	3,698,748.0599'	29° 37' 55.44"	90° 01' 04.31"		
					419.74'	N38° 05' 43"E
348+36.06	414,419.9086'	3,699,007.0266'	29° 37' 58.67"	90° 01' 01.33"		
					211.11'	N41° 35' 31"E
350+47.16	414,577.7931'	3,699,147.1638'	29° 38' 00.21"	90° 00' 59.73"		
					138.72'	N33° 41' 34"E
351+85.89	414,693.2143'	3,699,224.1190'	29° 38' 01.35"	90° 00' 58.84"		
					184.00'	N35° 56' 38"E
353+69.89	414,842.1807'	3,699,332.1262'	29° 38' 02.81"	90° 00' 57.60"		
					6.97'	N53° 13' 09"E

STATE OF LOUISIANA
KEITH J. ROBERTS
REG. No.
REGISTERED PROFESSIONAL LAND SURVEYOR
07/20/22

ARCHER WESTERN ALBERICI JOINT VENTURE

REVISED BY: | DATE:

HYDROTERRA

Alberici

ARCHER WESTERN / ALBERICI JOINT VENTURE
PRE-CONSTRUCTION SURVEY
MID-BARATARIA SEDIMENT DIVERSION PROJECT
DREDGE ACCESS ROUTE SURVEY
ALIGNMENT REPORTS
JEFFERSON & PLAQUEMINES PARISH, LA

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 212 JACOBS RUN, SCOTT, LA 70583

DATE: 07/20/2022 | JOB# 2201071 | FILE: AWA Pre-Construction Survey_REV_07-20-22.dwg | SHEET: 4 OF 9

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
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7-21-22
NOT FOR CONSTRUCTION

MBSD Dredge Access Route Alignment						
PI Station	Northing	Easting	Latitude	Longitude	Distance	Direction
353+76.85	414,846.6384'	3,699,337.4802'	29° 38' 02.85"	90° 00' 57.53"		
					96.50'	N38° 05' 56"E
354+73.36	414,922.5811'	3,699,397.0245'	29° 38' 03.60"	90° 00' 56.85"		
					110.52'	N37° 48' 56"E
355+83.88	415,009.8939'	3,699,464.7894'	29° 38' 04.46"	90° 00' 56.07"		
					98.23'	N32° 50' 54"E
356+82.11	415,092.4164'	3,699,518.0703'	29° 38' 05.27"	90° 00' 55.46"		
					89.90'	N32° 48' 55"E
357+72.01	415,167.9737'	3,699,566.7922'	29° 38' 06.01"	90° 00' 54.89"		
					243.57'	N36° 51' 02"E
360+15.58	415,362.8769'	3,699,712.8675'	29° 38' 07.92"	90° 00' 53.21"		
					495.84'	N36° 01' 29"E
365+11.42	415,763.8922'	3,700,004.4881'	29° 38' 11.86"	90° 00' 49.86"		
					463.95'	N38° 36' 31"E
369+75.37	416,126.4320'	3,700,293.9887'	29° 38' 15.41"	90° 00' 46.53"		
					361.65'	N33° 52' 08"E
373+37.02	416,426.7190'	3,700,495.5371'	29° 38' 18.36"	90° 00' 44.21"		
					525.83'	N48° 59' 2[illegible]"E
378+62.85	416,823.6355'	3,700,840.4386'	29° 38' 22.25"	90° 00' 40.25"		
					1,617.45'	N80° 15' 29"E
394+80.31	417,097.3290'	3,702,434.5662'	29° 38' 24.78"	90° 00' 22.15"		
					2,168.17'	N62° 42' 17"E
416+48.48	418,091.6002'	3,704,361.3257'	29° 38' 34.40"	90° 00' 00.18"		
					1,932.39'	N25° 36' 2[illegible]"E
435+80.87	419,834.2090'	3,705,196.4618'	29° 38' 53.55"	89° 59' 50.49"		
					3,263.89'	S50° 44' 02"E
468+44.76	417,768.4167'	3,707,723.4179'	29° 38' 30.81"	89° 59' 22.13"		
					507.55'	S49° 46' 13"E
473+52.32	417,440.6120'	3,708,110.9132'	29° 38' 27.52"	89° 59' 17.78"		
					105.56'	S59° 50' 55"E
474+57.87	417,387.5928'	3,708,202.1875'	29° 38' 26.99"	89° 59' 16.75"		
					124.28'	S73° 47' 36"E
475+82.15	417,352.9063'	3,708,321.5265'	29° 38' 26.63"	89° 59' 15.40"		

STATE OF LOUISIANA
KEITH J. ROBERTS
REG. [illegible]780
REGISTERED
PROFESSIONAL
LAND SURVEYOR
7-20-22

ARCHER WESTERN ALBERICI JOINT VENTURE

REVISED BY:	DATE:

HYDROTERRA

Alberici

ARCHER WESTERN / ALBERICI JOINT VENTURE
PRE-CONSTRUCTION SURVEY
MID-BARATARIA SEDIMENT DIVERSION PROJECT
DREDGE ACCESS ROUTE SURVEY
ALIGNMENT REPORTS
JEFFERSON & PLAQUEMINES PARISH, LA

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 212 JACOBS RUN, SCOTT, LA 70583

DATE: 07/20/2022 | JOB# 2201071 | FILE: AWA Pre-Construction Survey_REV_07-20-22.dwg | SHEET: 5 OF 9

ISSUED BY:
Waldemar S. Nelson & Co.
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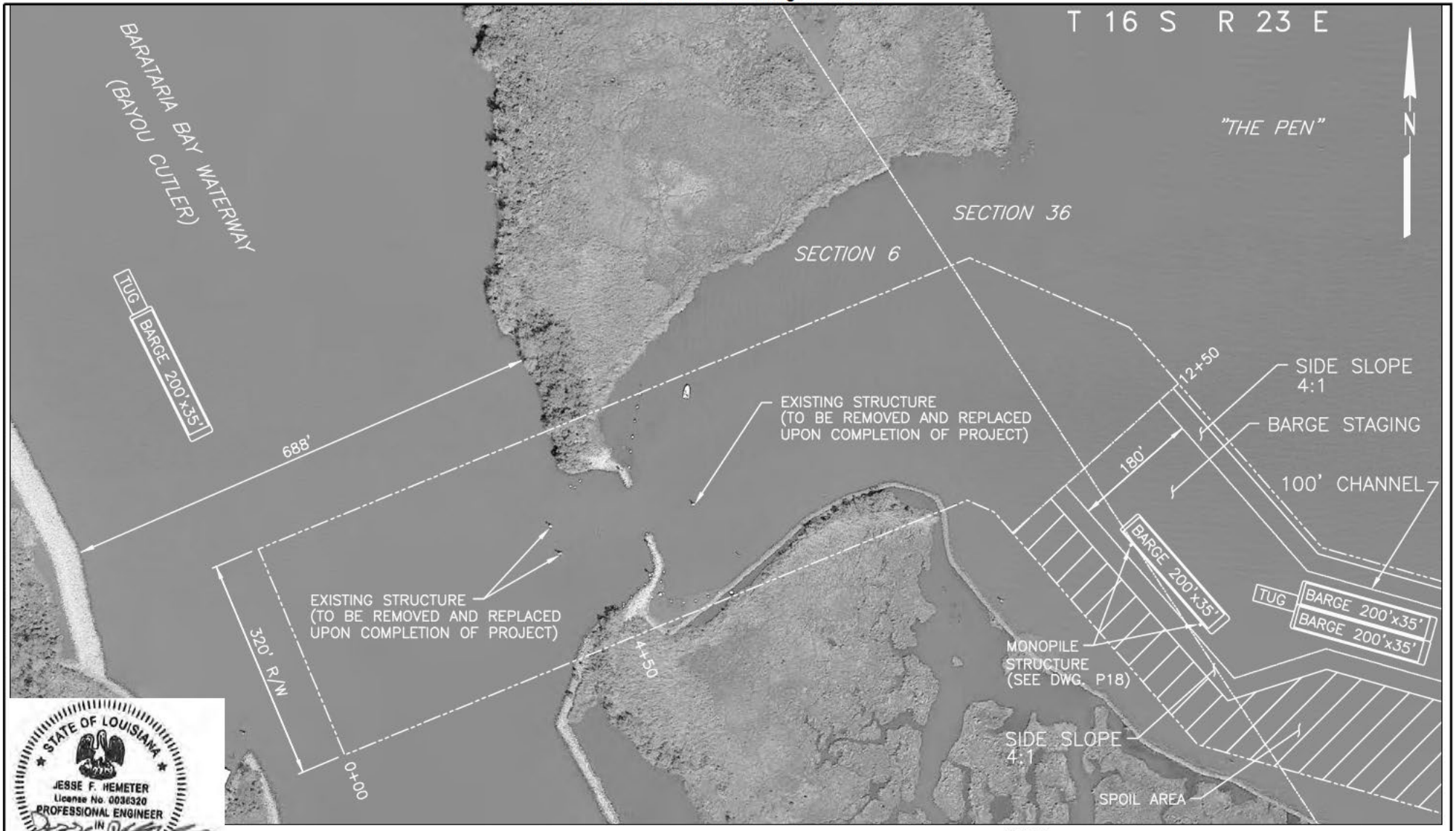
7-21-22
NOT FOR CONSTRUCTION



STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0036320
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
ISSUED FOR PERMITTING
6-21-22
NOT FOR CONSTRUCTION

ENTRANCE DETAIL

SCALE: 1" = 200'

NOTES:

1. SPOIL SHALL BE PLACED IN HATCHED AREAS ONLY.
2. SPOIL SHALL NOT BE PLACED OVER SHORELINE PROTECTION, EXISTING VEGETATION, OR ANY OTHER EXISTING OBJECTS OR STRUCTURES.
3. SPOIL MUST BE PLACED WITHIN THE 320' RIGHT OF WAY.

ARCHER WESTERN ALBERICI JOINT VENTURE

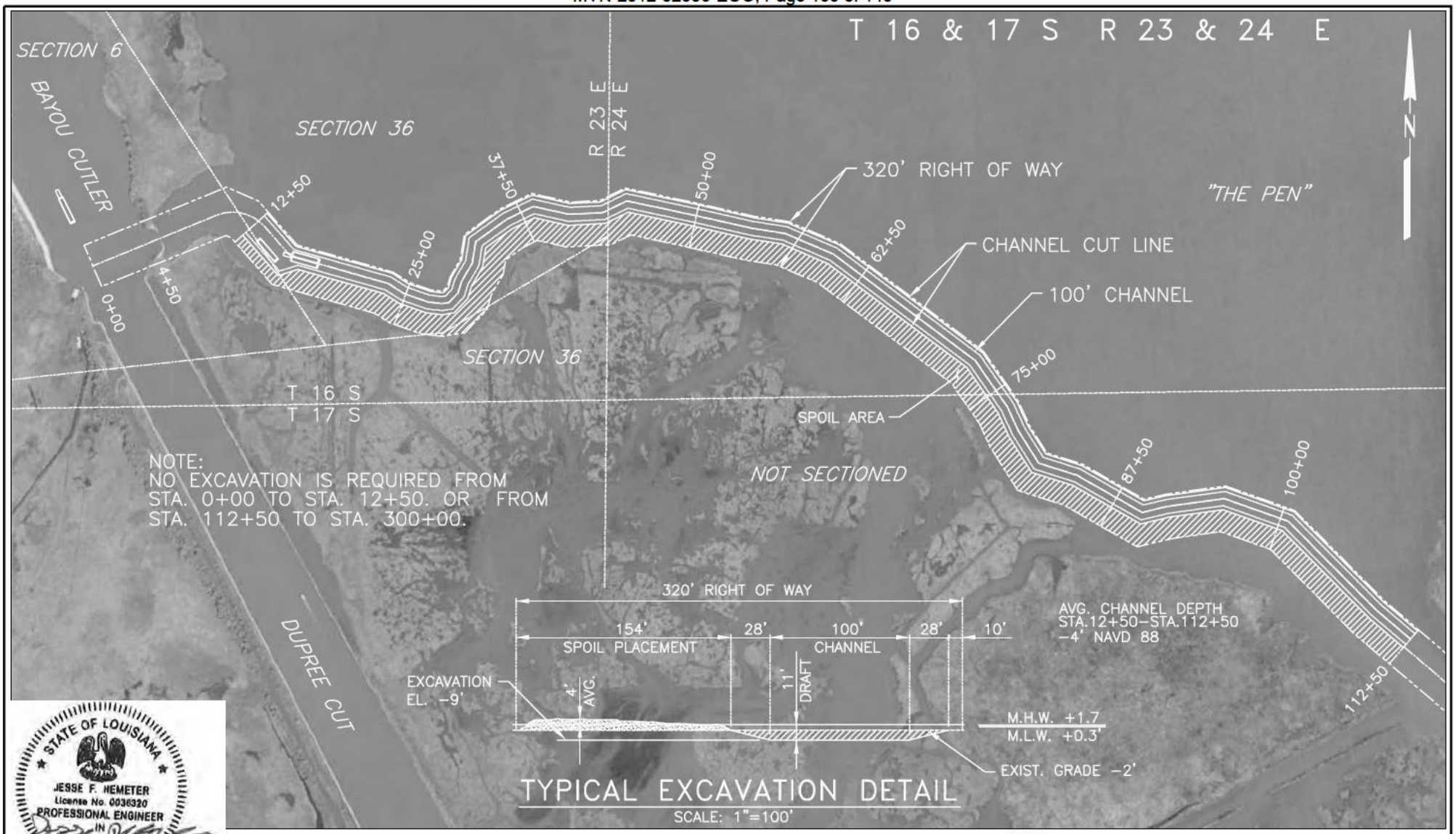
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDIMENT DIVERSION
EQUIPMENT ENTRANCE DETAIL

DATE	SCALE	JOB NO.	DRAWING NO.
11-9-21	NOTED	20200029	P26

DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/1522 10:35 A.M.



STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0036320
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
FOR PERMIT PURPOSE ONLY
6–21–22
NOT FOR CONSTRUCTION

ARCHER WESTERN ALBERICI JOINT VENTURE

SPOIL PLACEMENT PLAN

SCALE: 1" = 1000'

NOTES:

1. SPOIL SHALL BE PLACED IN HATCHED AREAS ONLY.
2. SPOIL SHALL NOT BE PLACED OVER SHORELINE PROTECTION, EXISTING VEGETATION, OR ANY OTHER EXISTING OBJECTS OR STRUCTURES.
3. SPOIL MUST BE PLACED WITHIN THE 320' RIGHT OF WAY.

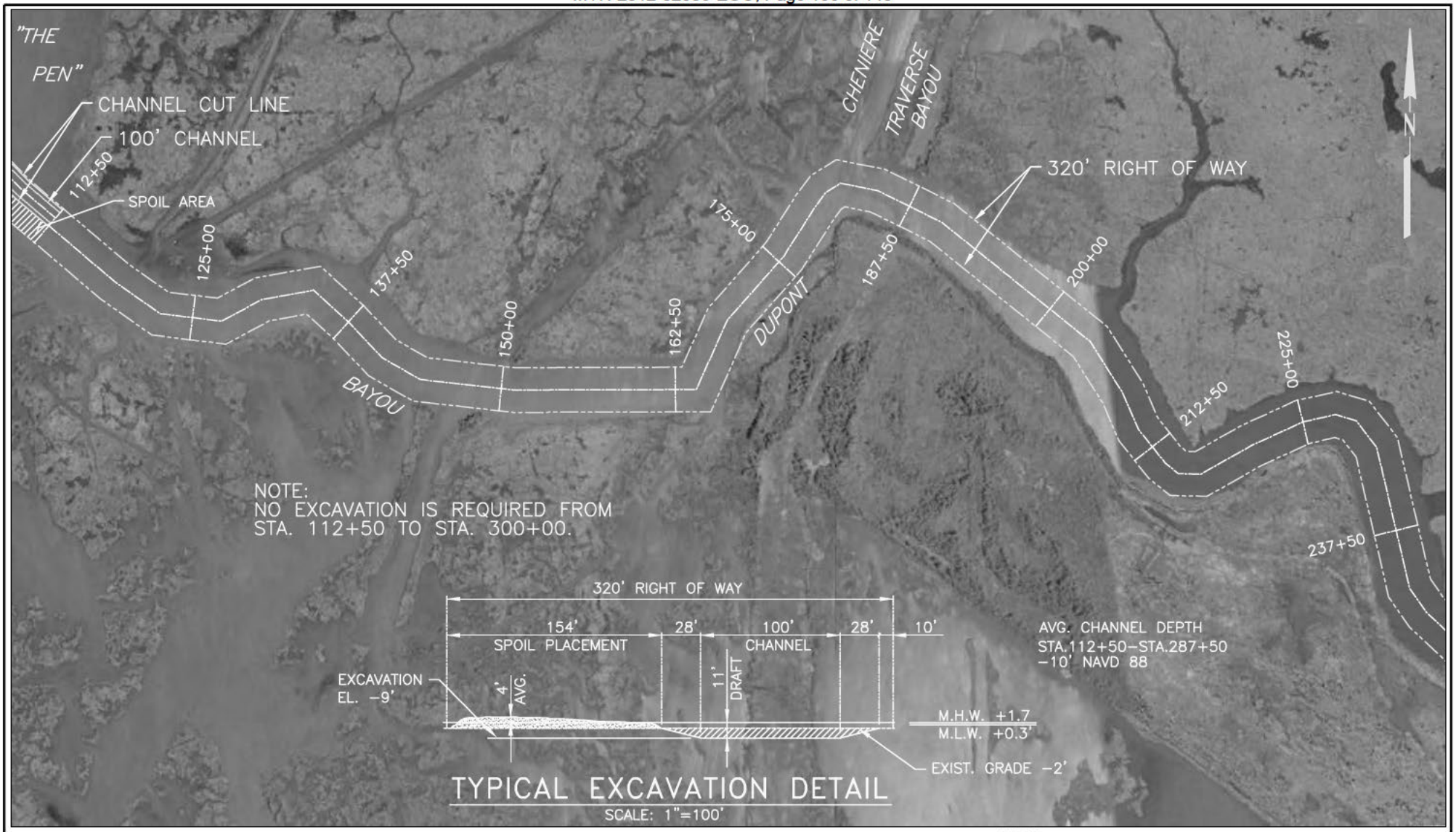
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDIMENT DIVERSION
SPOIL PLACEMENT PLAN

DATE	SCALE	JOB NO.	DRAWING NO.
11–9–21	NOTED	20200029	P27

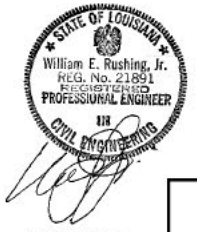
DESIGNED BY: J.F. HEMETER REGISTRATION NO. 38320 STATE: LA.

2/15/22 10:35 A.M.



TYPICAL EXCAVATION DETAIL

SCALE: 1"=100'



6/21/22

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
FOR PERMIT PURPOSE ONLY
6-21-22
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SPOIL PLACEMENT PLAN

SCALE: 1" = 1000'

NOTES:

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2. SPOIL SHALL NOT BE PLACED OVER SHORELINE PROTECTION, EXISTING VEGETATION, OR ANY OTHER EXISTING OBJECTS OR STRUCTURES.
3. SPOIL MUST BE PLACED WITHIN THE 320' RIGHT OF WAY.

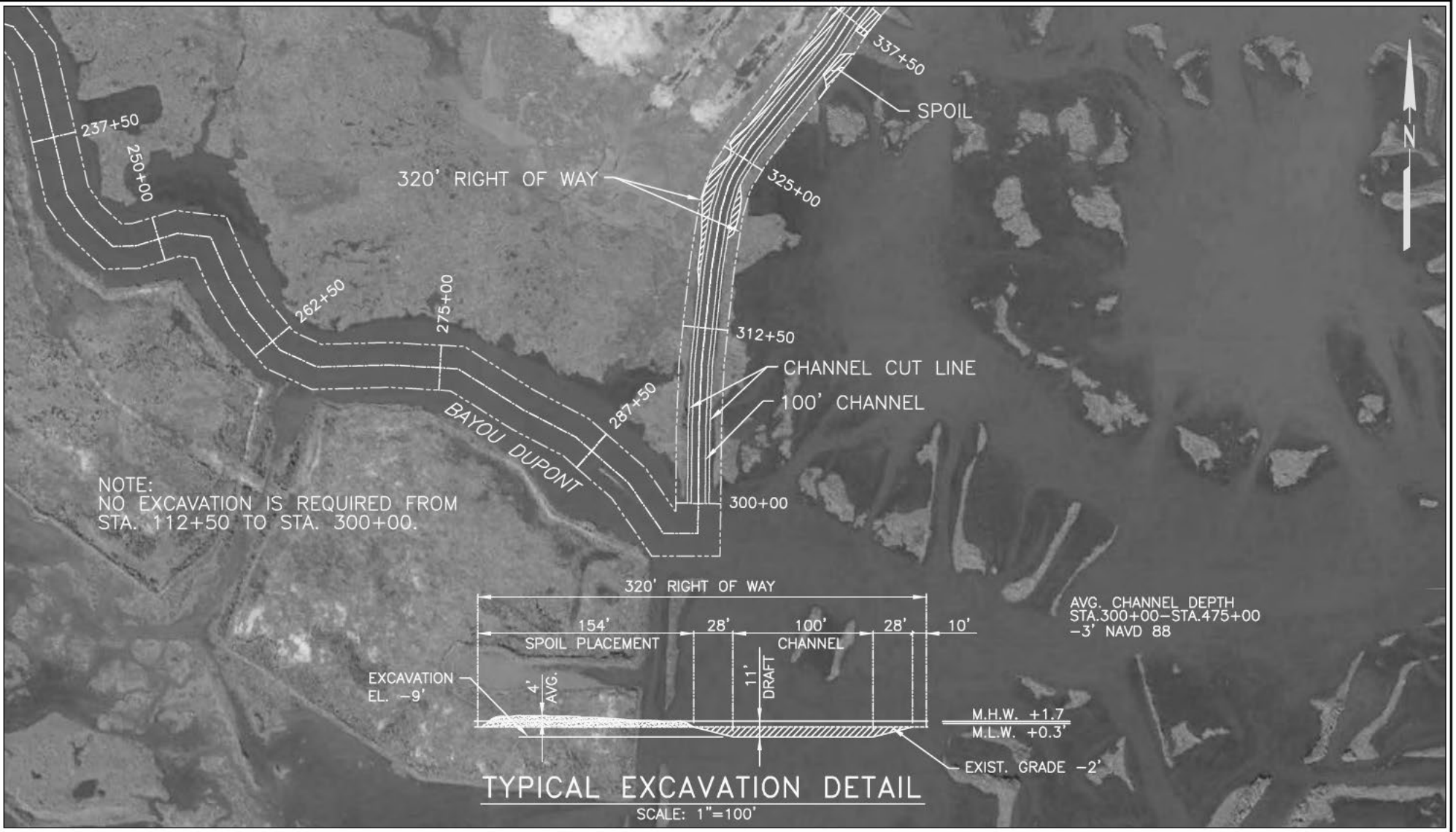
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDEMENT DIVERSION
SPOIL PLACEMENT PLAN 2 OF 5

DATE	SCALE	JOB NO.	DRAWING NO.
3-16-21	NOTED	20200029	P28

DESIGNED BY: W.E.R. REGISTRATION NO. 21891 STATE: LA.

3/26/21 10:35 A.M.



TYPICAL EXCAVATION DETAIL

SCALE: 1"=100'

STATE OF LOUISIANA
William E. Rushing, Jr.
REG. No. 21891
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

6/21/22

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
FOR PERMIT PURPOSE ONLY
6-21-22
NOT FOR CONSTRUCTION

SPOIL PLACEMENT PLAN

SCALE: 1" = 1000'

NOTES:

1. SPOIL SHALL BE PLACED IN HATCHED AREAS ONLY.
2. SPOIL SHALL NOT BE PLACED OVER SHORELINE PROTECTION, EXISTING VEGETATION, OR ANY OTHER EXISTING OBJECTS OR STRUCTURES.
3. SPOIL MUST BE PLACED WITHIN THE 320' RIGHT OF WAY.

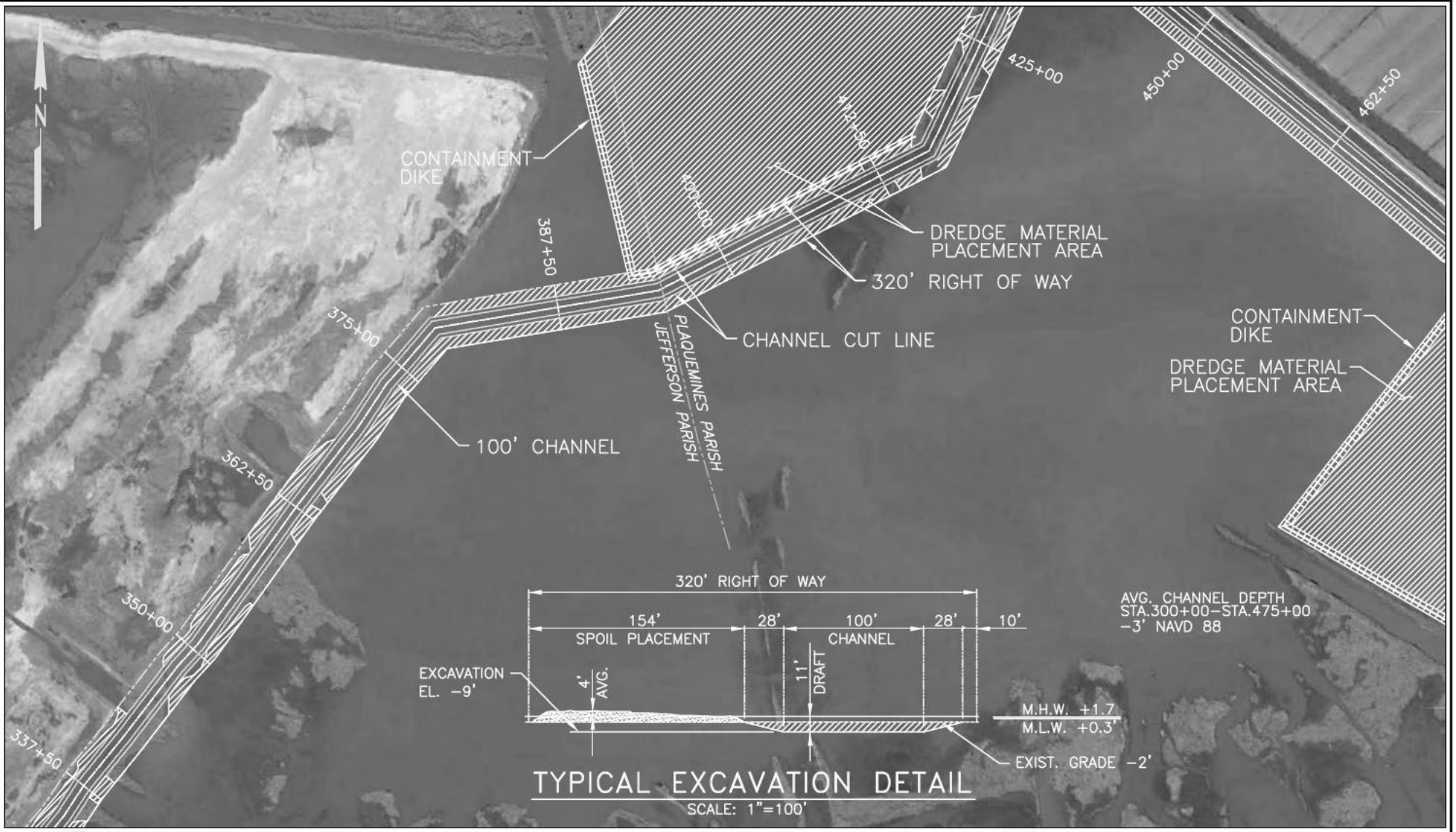
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDEMENT DIVERSION
SPOIL PLACEMENT PLAN 3 OF 5

DATE	SCALE	JOB NO.	DRAWING NO.
3-16-21	NOTED	20200029	P29

DESIGNED BY: W.E.R. REGISTRATION NO. 21891 STATE: LA.

3/26/21 10:35 A.M.



TYPICAL EXCAVATION DETAIL

SCALE: 1"=100'

STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0036320
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

8/1/22

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
FOR PERMIT PURPOSE ONLY
8-1-22
NOT FOR CONSTRUCTION

SPOIL PLACEMENT PLAN

SCALE: 1" = 1000'

NOTES:

1. SPOIL SHALL BE PLACED IN HATCHED AREAS ONLY.
2. SPOIL SHALL NOT BE PLACED OVER SHORELINE PROTECTION, EXISTING VEGETATION, OR ANY OTHER EXISTING OBJECTS OR STRUCTURES.
3. SPOIL MUST BE PLACED WITHIN THE 320' RIGHT OF WAY.

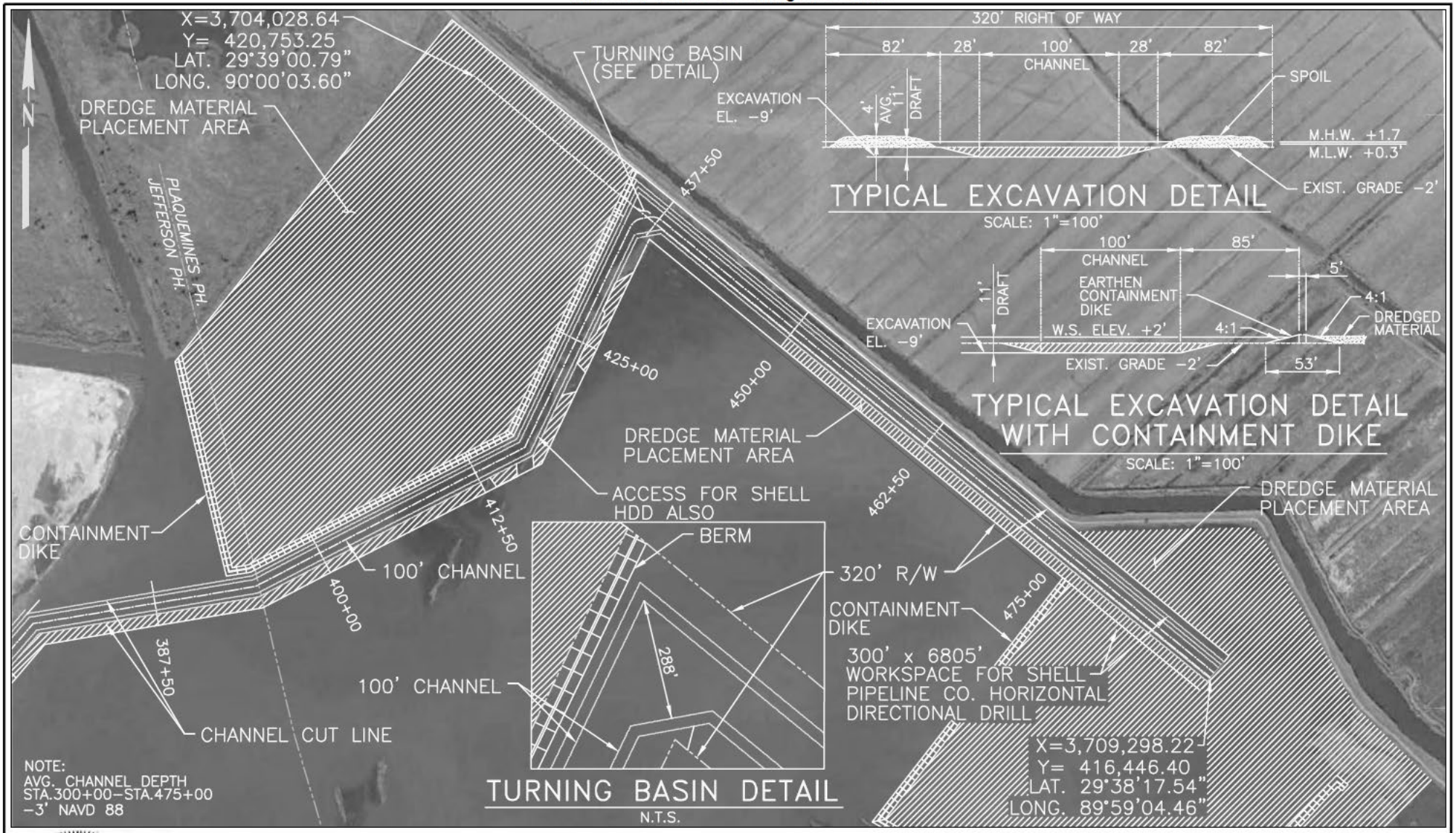
WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDEMENT DIVERSION
SPOIL PLACEMENT PLAN 4 OF 5

DATE	SCALE	JOB NO.	DRAWING NO.
3-16-21	NOTED	20200029	P30

DESIGNED BY: W.E.R. REGISTRATION NO. 21891 STATE: LA.

8/1/22 10:35 A.M.



STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0038320
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
FOR PERMIT PURPOSE ONLY
8-1-22
NOT FOR CONSTRUCTION

SPOIL PLACEMENT PLAN

SCALE: 1" = 1000'

NOTES:

1. SPOIL SHALL BE PLACED IN HATCHED AREAS ONLY.
2. SPOIL SHALL NOT BE PLACED OVER SHORELINE PROTECTION, EXISTING VEGETATION, OR ANY OTHER EXISTING OBJECTS OR STRUCTURES.
3. SPOIL MUST BE PLACED WITHIN THE 320' RIGHT OF WAY.

8/1/22

WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDEMENT DIVERSION
SPOIL PLACEMENT PLAN 5 OF 5

DATE	SCALE	JOB NO.	DRAWING NO.
3-16-21	NOTED	20200029	P31

DESIGNED BY: W.E.R. REGISTRATION NO. 21891 STATE: LA.

8/1/22 10:35 A.M.

STATE OF LOUISIANA
JESSE F. HEMETER
License No. 0038320
PROFESSIONAL ENGINEER
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8/1/22

ISSUED BY:
Waldemar S. Nelson & Co.
PRELIMINARY
FOR PERMIT PURPOSE ONLY
8-1-22
NOT FOR CONSTRUCTION

SPOIL PLACEMENT PLAN

SCALE: 1" = 1200'

NOTES:

1. SPOIL SHALL BE PLACED IN HATCHED AREAS ONLY.
2. SPOIL SHALL NOT BE PLACED OVER SHORELINE PROTECTION, EXISTING VEGETATION, OR ANY OTHER EXISTING OBJECTS OR STRUCTURES.
3. SPOIL MUST BE PLACED WITHIN THE 320' RIGHT OF WAY.

WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

MID BARATARIA SEDEMENT DIVERSION
SHELL 24" HORIZONTAL DIRECTIONAL DRILL

DATE	SCALE	JOB NO.	DRAWING NO.
3-31-22	NOTED	20200029	P32

DESIGNED BY: W.E.R. REGISTRATION NO. 21891 STATE: LA.

8/1/22 10:35 A.M.

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

WHEREAS, the State of Louisiana, acting by and through the Coastal Protection and Restoration Authority (CPRA), proposes to construct the Mid-Barataria Sediment Diversion (MBSD), a large-scale sediment diversion in the Barataria Basin for the purpose of reconnecting and re-establishing sustainable deltaic processes between the Mississippi River and the Barataria Basin through the delivery of sediment, freshwater, and nutrients to support the long-term viability of existing and planned coastal restoration efforts and to help restore habitat and ecosystem services injured in the northern Gulf of Mexico as a result of the *Deepwater Horizon* (DWH) oil spill; and

WHEREAS, on June 22, 2016, the CPRA submitted a permit application for a Department of Army permit for MBSD to the New Orleans District of the U.S. Army Corps of Engineers (CEMVN) under the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Appropriation Act of 1899, as amended (33 U.S.C. 403) (hereafter "Section 10/404"), and a request for permission under Section 14 of the Rivers and Harbors Appropriation Act of 1899 (33 U.S.C. 408) (hereafter "Section 408"); and

WHEREAS, CEMVN has determined that the proposed MBSD project has the potential for significant impacts and requires an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) to inform CEMVN's permit decision (CEMVN, 2021, Draft Environmental Impact Statement for the Mid-Barataria Sediment Diversion Project. Plaquemines and Jefferson Parishes, Louisiana). The CEMVN Regulatory permit processing number is MVN-2012-2806-EOO; and

WHEREAS, the United States Environmental Protection Agency (EPA), the National Oceanic and Atmospheric Administration (NOAA), the United States Department of the Interior (DOI), and the United States Department of Agriculture (USDA) are cooperating agencies and CEMVN is lead federal agency for the EIS and these agencies have executed a Memorandum of Understanding (MOU) dated September 11, 2017, to specify duties and obligations among Federal Agencies; and

WHEREAS, the executed MOU among Federal Agencies states that CEMVN is coordinating with the Louisiana State Historic Preservation Office (LA SHPO) and Tribal Nations; and

WHEREAS, EPA, NOAA, DOI, and USDA are Federal Agencies who may fund the construction of the MBSD project as natural resource trustees under the Oil Pollution Act of 1990 (33 U.S.C. 2701) and are the federal agency members of the Louisiana Trustee Implementation Group for the *Deepwater Horizon* oil spill; and

WHEREAS, demonstration of National Historic Preservation Act of 1966 (NHPA), as amended (formerly 16 U.S.C. 470), Section 106 compliance is a necessary predecessor to a permit decision; and

WHEREAS, CEMVN, EPA, NOAA, DOI, and USDA have determined that the MBSD project is an “Undertaking” pursuant to the NHPA and will have an adverse effect on properties included or eligible for inclusion in the National Register of Historic Places (National Register or NRHP); and

WHEREAS, CEMVN, EPA, NOAA, DOI, and USDA have designated CEMVN as the lead federal agency for Section 106 of the NHPA for the MBSD project pursuant to 36 CFR 800.2(a)(2); and

WHEREAS, CEMVN as lead federal agency has invited EPA, NOAA, DOI, and USDA to concur in this Agreement pursuant to 36CFR 800.6(c)(3); and

WHEREAS, CEMVN has elected to fulfill the collective responsibilities of these agencies under Section 106 of the NHPA for the Undertaking through the execution and implementation of this Programmatic Agreement (Agreement) as provided in 36 CFR 800.14(b); and

WHEREAS, CEMVN notified the Advisory Council on Historic Preservation (ACHP) of the potential for this Undertaking to adversely affect historic properties pursuant to the ACHP's implementing regulations (36 CFR Part 800); and

WHEREAS, the ACHP accepted the invitation to participate in consultation to develop this Agreement and to seek ways to avoid, minimize, or mitigate adverse effects on historic properties; and

WHEREAS, CEMVN acknowledges Tribes as sovereign nations which have a unique Government-to-Government relationship with the federal government and its agencies; CEMVN further acknowledges its Trust Responsibility to those Tribes; and

WHEREAS, CEMVN made a reasonable and good faith effort to identify any Tribes that may attach religious and cultural significance to historic properties that will be affected by the Undertaking; and

WHEREAS, the CEMVN has invited the Alabama-Coushatta Tribe of Texas, Chitimacha Tribe of Louisiana, Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, Muscogee (Creek) Nation, Seminole Nation of Oklahoma, Seminole Tribe of Florida, and the Tunica-Biloxi Tribe of Louisiana to consult in the development of this Agreement. The Seminole Nation of Oklahoma has deferred to the Chitimacha Tribe, and the Muscogee (Creek) Nation has chosen not to participate in further coordination; and

WHEREAS, the Chitimacha Tribe of Louisiana, and the Choctaw Nation of Oklahoma have participated in the development of this Agreement and CEMVN has invited each of them to sign this Agreement as an Invited Signatory; and

WHEREAS, the Mississippi Band of Choctaw has participated in the development of this Agreement and CEMVN has invited them to concur in this Agreement; and

WHEREAS, CEMVN has and will continue to consult with any interested Tribe who may have not yet requested to consult; and

WHEREAS, the CEMVN has taken appropriate measures to identify other parties that may be interested specifically in the development of this Agreement, by notification to the Presidents of Plaquemines and Jefferson Parishes, as well as to historical associations within these parishes, and has invited such parties to participate in the development and implementation of this Agreement; and

WHEREAS, CPRA is the Applicant and Proponent for MBSD project and has participated in the development of this Agreement and has been invited to sign this Agreement as an Invited Signatory; and

WHEREAS, the terms Signatory and Signatories will include reference to Invited Signatories throughout the remainder of this Agreement; and

WHEREAS, if an Invited Signatory chooses not to sign this Programmatic Agreement, then that party is instead regarded as a Consulting Party; and

WHEREAS, CEMVN in collaboration with CPRA as permit Applicant, with SHPO, with federally recognized Tribes, and with the ACHP have defined two Areas of Potential Effect (APE) for the MBSD Project as depicted in Appendix B; and

WHEREAS, after agreement upon two APEs for the MBSD, Phase I investigations comprehensively, and Phase II investigations in a portion of the Construction APE, have occurred in order to identify historic properties within the APEs; and

WHEREAS, CEMVN consulted with LA SHPO and Tribes on June 30, 2020 and on June 6, 2022 and determined that there are five (5) historic properties (16PL107, 16JE2, 16JE3, 16JE11, 16JE147) for which effects must be taken into account, in the MBSD APEs; and

WHEREAS, for the purpose of considering effects to historic properties, Site 16JE237 has an undetermined eligibility but will be treated as an historic property, and so a total of six (6) historic properties exist within the MBSD APEs; and

WHEREAS, CEMVN consulted with the ACHP, SHPO, Tribal Historic Preservation Officers (THPO) and federally recognized Indian Tribes as defined under 36 CFR 800.16(m) (Tribes), and other appropriate Consulting Parties in developing this Agreement to take into consideration the effects of the MBSD project upon historic properties pursuant to 36 CFR 800.14(b); and

WHEREAS, the CEMVN has considered the nature of MBSD construction and operation and likely effects on historic properties and has taken steps to involve the individuals, organizations and entities likely to be interested and has involved the public through the NEPA process, which affords interested persons, organizations and government agencies an opportunity to review and comment on proposed major federal actions that are evaluated in a NEPA document; and

WHEREAS, the CEMVN has taken steps to notify the wider public. The public scoping process included three meetings held in Jefferson and Plaquemines Parishes, on 20, 25, and 27 July 2017. Notices of the public scoping meetings were sent through email distribution lists, posted on CEMVN's Mid-Barataria Sediment Diversion EIS website: (http://www.mvn.usace.army.mil/Missions/Regulatory/Permits/Mid-Barataria-Sediment-Diversion-EIS), and mailed to public libraries, government agencies, and interested groups and individuals. Scoping meeting dates and locations were advertised in the following local newspapers on the following dates in 2017:

i. Plaquemines Gazette, July 4 and 11;
ii. The Times Picayune, July 5 and 14; and
iii. The Advocate, July 5 and 17.

The newspaper scoping meeting ads stated that Vietnamese translation would be available at the meetings, and that translation services in other languages were available upon request; and

WHEREAS, a draft version of this Programmatic Agreement was published with the Draft EIS. A Notice of Availability (NOA) for the MBSD Draft EIS was published in the Federal

Register. The formal Draft EIS comment period along with public meeting dates was announced through a Public Notice that was published to the CEMVN's Project website, emailed to interested parties, and advertised in local media. During the 90-day comment period regarding the Draft EIS, interested persons and organizations were invited to review and comment on the Draft EIS, including Sections 3.24 and 4.24 regarding cultural and historical resources and anticipated impacts from the MBSD on those resources, as well as to review and comment on the draft Programmatic Agreement and Alternative Mitigation Plan. CEMVN considered these comments in finalizing this Programmatic Agreement and responses to these comments are included in Appendix B to the Final EIS. Additional details regarding public outreach related to the EIS are included in Chapter 7 of the Final EIS; and

NOW, THEREFORE, the CEMVN, LA SHPO, and ACHP agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the Undertaking on historic properties.

STIPULATIONS

CEMVN shall ensure compliance with the following measures:

I. Correspondence

A. Electronic mail (email) will serve as the official correspondence method for all communications regarding this Agreement and its provisions. See Appendix A for a list of contacts and email addresses. Contact information in Appendix A may be updated as needed without an amendment to this Agreement. It is the responsibility of each Consulting Party to immediately inform the CEMVN of any change in name, address, email address, or phone number of any point-of-contact. The CEMVN will forward this information to all Signatories by email. Failure of any Consulting Party to notify the CEMVN of any change to a point-of-contact's information shall not be grounds for asserting that notice of a proposed action was not received.

B. All standard response timeframes established by 36 CFR Part 800 will apply to this Agreement, unless an alternative response timeframe is agreed to by the CEMVN, LA SHPO, Tribes, and CPRA. The CEMVN may request expedited review by the LA SHPO and Tribes on a case by case basis. Such expedited review period shall not be less than 10 working days.

II. Tribal Consultation

A. The CEMVN has made a reasonable and good faith effort to identify Tribes that might attach religious and cultural significance to historic properties that might be affected by the Undertaking or that might be affiliated with the APE for the MBSD project.

B. The CEMVN has and will continue to consult with federally recognized Tribes in a manner that acknowledges the Government-to-Government relationship with federally recognized Tribes, including those who participated in the consultation to develop this Agreement and also those that request in writing to be a Consulting Party in the consultation to be carried out under the terms of this Agreement (collectively referred to as "Consulting Tribes").

C. The CEMVN will provide the Consulting Tribes with an executed copy of this Agreement and has or will provide all Consulting Tribes with copies of all plans, determinations, and findings provided to the LA SHPO.

III. Public Involvement

A. The CEMVN, in consultation with the LA SHPO, will continue to provide members of the public who express interest in the effects of the MBSD project upon historic properties with a description of the Undertaking and the provisions of this Agreement.

B. To the extent permitted under applicable federal laws and regulations (e.g., Section 304 of the NHPA, Section 9 of the Archaeological Resources Protection Act [ARPA]), the CEMVN will release to the public documents developed pursuant to this Agreement, including effects determinations. Specific cultural resources data will not be released to the general public or be released as part of NEPA documents.

IV. Other Consulting Parties

A. The CEMVN, in consultation with the LA SHPO, will continue efforts during the duration of this Agreement to identify other parties with a demonstrated interest in the Undertaking and its effects on historic properties and invite them to be Consulting Parties in the consultation to be carried out under the terms of this Agreement.

B. The CEMVN will maintain a record of stakeholders who are invited to be or accepted as Consulting Parties in the consultation process for the MBSD project and carried out under the terms of this Agreement maintain it as part of the project file.

C. If any dispute arises regarding a written request by a stakeholder to be recognized as a Consulting Party, the CEMVN will contact the ACHP and provide all appropriate documentation. The ACHP will participate in the resolution of the issue.

V. Identification, Evaluation, and Assessment of Effects Determinations

A. The CEMVN, in consultation with the LA SHPO, Consulting Tribes, and CPRA, defined the geographic areas within which the Undertaking will directly or indirectly cause alterations in the character or use of historic properties, referred to as an "Area of Potential Effect" (APE). All Consulting Parties agreed to define two distinct, but related, APEs: a Construction APE and an Operations APE. The figure documenting these APEs is attached as Appendix B. Each APE represents the geographic reach for potential direct, indirect, and cumulative effects upon historic properties. Reasonable and good faith identification and evaluation efforts were limited to the identified MBSD APEs.

B. The MBSD APEs were defined to include areas that will be directly or indirectly impacted by construction or operation of the MBSD as follows:

1. A Construction APE containing a conveyance channel, guide levees, a dredged Outfall Transition Feature (OTF), a railroad accommodation, a LA Hwy 23 bridge, and a Siphon, as well as any other activities associated with construction (i.e., access roads and staging areas), as shown in Appendix B;

2. An Operations APE consisting of the outfall and the delta formation area in the Barataria Basin as shown in Appendix B;

C. The MBSD's potential effects are recognized to be different for each of the defined APEs; therefore, cultural resources identification survey strategies were specifically designed for each APE as were the NRHP evaluation strategies. The results of identification and evaluation are as follows:

1. A cultural resources survey of the Operations APE was completed following a Scope of Work agreed to by all parties. The results of this survey were provided to all parties for review and concurrence. CEMVN concluded that:

    i. Twenty-eight (28) sites within the Operations APE are ineligible for the National Register.

    ii. Four (4) historic properties within the Operations APE are eligible for the National Register (16JE2, 16JE3, 16JE11, 16JE147).

    iii. One (1) property, not assessed for the National Register (16JE237), will be treated as NRHP-eligible.

    iv. In light of the anticipated effects of operation of the MBSD, CEMVN concluded that the APE contains historic properties that will be adversely affected by the MBSD.

2. Multiple previous cultural resources surveys of the Construction APE were completed by others. CPRA conducted a cultural resources survey within the Construction APE for this project. The results of the CPRA survey were provided to all parties for review and concurrence. CEMVN concluded that:

    i. Five (5) sites within the Construction APE are ineligible for the National Register.

    ii. No historic properties within the Construction APE had been determined eligible for the National Register.

    iii. Four (4) archaeological sites within the Construction APE had not been previously assessed for the National Register (16PL107, 16PL165, 16PL269, 16PL280).

        1. CEMVN has determined that properties 16PL165 and 16PL280 (St. Rosalie Plantation Cemetery #2) are outside of the construction footprint and avoidance measures will be put in place to ensure they are not inadvertently affected.

        2. 16PL269 has been determined ineligible for NRHP, and will not be further treated.

        3. St. Rosalie Plantation (16PL107 Locus One) was investigated, following a Scope of Work agreed to by all parties, and was determined to be NRHP-eligible.

    iv. CEMVN will proceed in implementation of Stipulation VI. C for the portion of 16PL107 that was investigated, which is 16PL107 Locus One, hereafter referred to only as 16PL107.

VI. Resolution of Adverse Effects

A. Adverse Effects have been identified for the Operations APE for five NRHP-eligible archaeological sites.

1. CEMVN and the Consulting Parties have agreed to an alternative mitigation plan (see Appendix C) that includes three basic products:

    i. Peer-reviewed scholarly publication of an ethnohistoric overview regarding Tribes in the Barataria Basin and larger Mississippi River Delta region;

    ii. Compilation of information intended to be available only to Tribes that may more specifically elucidate their Tribal history and become useful in future consultations; and

iii. Public-facing components that may include a website or other accessible materials providing greater information to the public-at-large.

2. The alternative mitigation shall not exceed a cost of $350,000.

3. Alternative mitigation is not required if CEMVN denies CPRA a Permit for the Mid-Barataria Sediment Diversion.

B. If CEMVN issues the permit, CPRA will be responsible for implementation of the alternative mitigation plan.

1. Implementation will begin within 6 months following permit issuance.

2. Outline and draft versions of each product will be provided to all Consulting Parties for 60-day review and comment period.

3. Completion of all component parts of the alternative mitigation plan is estimated to occur within three (3) years.

4. When working with Tribes, CPRA or its Designee will ensure that work is coordinated via designated points of contact and will be sensitive to cultural and language differences per the respective requirements of each Tribal Government.

5. CEMVN will be available to help ensure proper protocols are followed in the collection of primary data.

C. Based on the outcome of the NRHP-determination for St. Rosalie Plantation (16PL107) outlined in Stipulation V.C., Signatories and Consulting Parties will proceed in negotiating a mitigation strategy that is tailored to the significance of the historic property, and may include, but is not necessarily limited to, one or more of the following:

1. Public Interpretation;

2. Historical, Architectural or Archaeological Monographs;

3. Ethnographic studies; and

4. Data recovery for archaeological properties.

5. Off-site mitigation may be considered if it is determined to better serve the public interest due to imminent construction activity. Off-site mitigation possibly includes the acquisition of property with similar historic significance, or preservation easements on property, as appropriate and legal.

D. Consultation to develop the Treatment Plan for 16PL107 will follow 36 CFR 800 and the resulting plan will become an Appendix to the Programmatic Agreement (Appendix D).

VII. Curation

A. Recovered archaeological collections from a required archaeological survey, evaluation, and/or mitigation plan remain the property of the landowner (either private, state, federal, etc.). CEMVN, in coordination with the LA SHPO and appropriate Tribe(s), may, as determined through consultation, encourage private landowners to transfer any recovered artifacts and related documentation to an appropriate archive or public or Tribal entity. CEMVN, in coordination with LA SHPO and Tribe(s), will work with all Tribal, State, and local agents to support steps that ensure the long-term curation of recovered artifacts and related documents through the transfer of the materials to a suitable repository as agreed to by CEMVN, LA SHPO, and appropriate Tribes(s) and following applicable State or Tribal guidelines.

VIII. Unanticipated Discoveries and Effects

A. CEMVN is responsible for complying with 36 CFR 800.13(a)1 in the event of inadvertent discoveries of historic properties during implementation of the Project. Discoveries of previously unidentified historic properties or unanticipated adverse effects to known historic properties are not anticipated, however if there is an inadvertent discovery or unanticipated effect, CEMVN will ensure that the following stipulations are met. If the discovery is or contains human remains, then Stipulation IX shall apply. CPRA will ensure that these provisions will be included in all construction, operations, and maintenance plans as well as ensuring that project managers brief field personnel.

B. Discovery During Construction Activities:

1. If an unanticipated discovery occurs during construction of the MBSD project, then the construction contractor will comply with CPRA's environmental protection construction specifications and immediately halt all construction activity at the location of discovery and a fifty (50) foot buffer zone will be defined in all directions and appropriate measures to protect the find from further disturbance will be identified and implemented. If the discovery is or contains human remains, then Stipulation IX shall apply. If the discovery does not contain human remains, then CPRA shall notify all Signatories of the discovery within 24 hours. CPRA and CEMVN shall assess available information as soon as reasonably feasible. Within 48 hours after this assessment, CEMVN will provide Signatories and Tribes all available information and

the assessments to consult on the interpretations and recommendations made. Within 7 days after invitation, Signatories and Tribes shall reply with any comment to the CEMVN recommendations.

2. If CEMVN, in consultation with the SHPO, Tribes, and other Consulting Parties, as appropriate, determines the site is either isolated, does not retain integrity sufficient for listing on the NRHP, or will not be further disturbed by construction activities, construction may resume within the fifty (50) foot radius buffer zone.

3. If CEMVN, in consultation with the SHPO, Tribes, and other Consulting Parties, as appropriate, determines that the discovery is eligible or of undetermined eligibility and cannot be avoided, CEMVN in coordination with CPRA will as soon as reasonably feasible determine actions that it can take to resolve adverse effects, and provide this recommendation to Signatories and Tribes within 48 hours of reaching this conclusion. The recommendation shall describe the CEMVN's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO, Tribes, and Consulting Parties shall respond within 7 days of the recommendation. CEMVN shall take into account their comments regarding National Register eligibility and proposed actions, and then work with CPRA to ensure that appropriate actions are carried out. CEMVN shall provide the LA SHPO, Tribes and Consulting Parties a report of the actions when they are completed.

4. Upon completion of the actions, CPRA will direct the contractor to resume work in the fifty (50) foot buffer area.

C. Discovery During Operation Activities:

1. If an unanticipated discovery occurs, CPRA shall notify all Signatories of the discovery within 24 hours of being aware of it. If the discovery is or contains human remains, then Stipulation IX shall apply. As soon as reasonably feasible, CPRA shall supply a SOI-qualified archaeologist to evaluate the discovery and make a written recommendation to CEMVN on the nature and eligibility of the discovery.

2. If CEMVN, in consultation with the SHPO, Tribes, and other Consulting Parties, as appropriate, determines the site is either isolated, does not retain integrity sufficient for listing on the NRHP, or will not be further disturbed then consultation is complete.

3. If CEMVN, in consultation with the SHPO, Tribes, and other Consulting Parties, as appropriate, determines that the discovery is eligible or of undetermined eligibility and impacts to the discovery are on-going, then CEMVN and CPRA will first assess whether further impacts to the discovery can be avoided. The feasible alternatives will be presented to

Consulting Parties. Consulting Parties will have 10 days to reply to the CEMVN and CPRA avoidance measures. If CEMVN, in consultation with the SHPO, Tribes, and other Consulting Parties, as appropriate, determines that further impacts to the discovery can be avoided, CPRA will implement measures to avoid the on-going impacts to the discovery. CEMVN will notify the Signatories and Tribes within 48 hours of agreement to avoidance measures, to summarize the discovery and steps for avoidance.

4. If CEMVN, in consultation with the SHPO, Tribes, and other Consulting Parties, as appropriate, determines that the discovery is eligible or of undetermined eligibility and cannot be avoided, then CEMVN in coordination with CPRA will as soon as reasonably feasible determine actions that it can take to resolve adverse effects, and provide this recommendation to Signatories and Tribes within 48 hours of reaching this conclusion. The recommendation shall describe the CEMVN's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO, Tribes, and Consulting Parties shall respond within 10 days of the recommendation. CEMVN shall take into account their comments regarding National Register eligibility and proposed actions, and then work with CPRA to ensure that appropriate actions are carried out. CEMVN shall provide the LA SHPO, Tribes and Consulting Parties a report of the actions when they are completed.

IX. Discovery of Human Remains

A. If abandoned cemeteries, unmarked graves, or human remains are discovered during construction or operation of the MBSD, CPRA will comply with the Louisiana Unmarked Human Burial Sites Preservation Act (La. R.S. 8:671 et seq.). CPRA will notify local law enforcement and the Louisiana Division of Archaeology (LDOA), within the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, by telephone to assess the nature and age of the human skeletal remains within twenty-four (24) hours of the discovery of unmarked human remains and will accompany local law enforcement personnel during all field investigations. If the appropriate local law enforcement official determines that the remains are not a crime scene, and the remains are more than 50 years old, LDOA has jurisdiction over the remains. In no instance will human remains be removed from the discovery site until jurisdiction is established. In cases where the LDOA assumes jurisdiction and the remains are determined to be American Indian, LDOA will consult with Tribes, CEMVN, and CPRA to determine the appropriate course of action.

X. Monitoring Plan

A. CPRA will comply with its Monitoring and Adaptive Management (MAM) Plan, relative to NHPA Section 106 requirements (Section 3.7.4.1), including the use of Secretary of the Interior Qualified Archaeologists to conduct an annual one-day reconnaissance of the Operations APE by boat. The first reconnaissance visit will occur within three months before the first operation of the MBSD and will document current conditions prior to operation for later, post-operation comparison. After operations begin, the reconnaissance survey will be performed annually for a period of 15 years. This reconnaissance team will take photographs and document visible changes to the landscape within the Operations APE, including in proximity to the NRHP properties (16JE2, 16JE3, 16JE11, 16JE147, 16JE237), with the particular attention to any evidence of previously undiscovered cultural resources and the appearance of human remains at known archaeological sites. If an apparent cultural resource is/are located by the reconnaissance team, CPRA will notify all Consulting Parties pursuant to Stipulation VIII. If apparent human remains are found the provisions of Stipulation IX will be followed. A report documenting the results of the annual survey will be provided to all Consulting Parties with 30 days after completion of the survey. CPRA shall share annual survey results as specified at Section 7.6 Compliance Reporting of its MAM Plan, only after CEMVN has been allowed to review proposed language and redact any specific location data for the historic properties or new findings or other sensitive data under applicable law and regulations.

XI. Dispute Resolution

A. Should any Signatory or Consulting Party to this Programmatic Agreement object at any time to any actions proposed or the manner in which the terms of this Agreement are implemented, that party will notify the CEMVN, who will seek to resolve such objection through consultation with the relevant parties, including LA SHPO, Consulting Tribes and CPRA, as appropriate.

B. If CEMVN determines that the objection cannot be resolved through consultation, the CEMVN shall forward all documentation relevant to the dispute to the ACHP, including any proposed resolution identified during consultation, copying all Signatories and Consulting Parties. The ACHP may provide its advice on the resolution of the objection within 10 business days of receiving adequate documentation. The other Signatories and Consulting Parties may also provide their advice on the resolution of the objection within that time frame.

C. Prior to reaching a final decision on the dispute, CEMVN will prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, Signatories, and Consulting Parties,

and will provide them with a copy of this written response. CEMVN will then proceed according to its final decision.

D. Any recommendation or comment provided by the ACHP will be understood to pertain only to the subject of the dispute, and the CEMVN's responsibilities to ensure fulfillment of all actions that are not subject of the dispute will remain unchanged.

XII. Administration of this Agreement

A. All Signatories to this Agreement shall meet according to an agreed timeframe to evaluate the effectiveness of this Agreement, beginning one (1) year after operation of the MBSD has begun. The CEMVN shall coordinate such meetings following the execution of this Agreement, and shall invite the Signatories and Consulting Parties to participate. At each meeting, held in manner and location as mutually agreed upon by the Signatories and Consulting Parties, the effectiveness of the Stipulations of this Agreement shall be discussed. The discussion of cumulative effects as addressed in Stipulation VIII shall be available for consideration at each agreed meeting, if no special conditions have required an additional meeting per Stipulation XV.

XIII. Effect of this Agreement

A. This Agreement will be signed in counterparts. The terms of the Agreement will not become effective until such time as a Department of the Army permit is executed for the MBSD.

B. CEMVN shall make compliance with this Agreement a special condition of any permit(s) it issues for the Undertaking.

C. CPRA agrees that in the event CEMVN grants its permit for the MBSD, it will comply with its obligations as set forth in the stipulations of this Agreement.

XIV. Duration of this Agreement

A. This Agreement will remain in effect for fifty (50) years from the date that operation of the MBSD begins, unless extended for a five-year period by written agreement negotiated by all Signatories.

XV. Changes to Permitted Actions

A. CPRA will construct and operate the diversion in accordance with its Department of Army (DA) Permit and the Monitoring and Adaptive Management (MAM) Plan. If CPRA submits an updated permit application

for a modification to the permitted project, it will notify CEMVN in writing of the proposed modification(s), and if new construction is proposed or if new areas may be affected outside the current APEs (Appendix B), it will include a map depicting the new areas potentially affected by the proposed changes. CEMVN will consider such a modification in accordance with the provisions of 33 CFR 325.7. Additionally, CEMVN will evaluate the proposed modification(s) to determine their potential to cause adverse effects to historic properties. CEMVN will notify the Signatories if the determination is for no adverse effect, and invite response. If CEMVN concludes the effects would be adverse or outside of the current APEs (Appendix B), then CEMVN will consult with Signatories and any other Consulting Parties to determine appropriate actions to resolve any adverse effects, including altering the proposed modification to avoid the adverse effects, or utilizing the alternative mitigation strategy to mitigate the adverse effects. If the adverse effects cannot be accounted for under the alternate mitigation strategy, CEMVN and the Consulting Parties will consult to amend this Agreement in accordance with Stipulation XVI.

XVI. Amendment of the Agreement

A. This Agreement may be amended when such an amendment is agreed to in writing by all the Signatories. Notwithstanding any provision of this Agreement, CEMVN, ACHP, LA SHPO, and any Invited Signatory may request that it be amended, whereupon these parties will consult to consider such amendment. The CEMVN will facilitate such consultation within thirty (30) days of receipt of the written request. Any amendment will be in writing and will be signed by the CEMVN, ACHP, LA SHPO, CPRA, and Invited Signatories, and shall be effective on the date of the final signature.

B. Appendices: Appendices may be amended at the request of CEMVN or another Signatory or Invited Signatory in the following manner:

1. CEMVN, on its own behalf or on behalf of another Signatory or Invited Signatory, shall notify the Signatories and Invited Signatories of the intent to modify the current Appendix or Appendices and shall provide a draft of the updated Appendix or Appendices to all Signatory and Invited Signatories.

2. If no Signatory or Invited Signatory objects in writing within thirty (30) days of receipt of the proposed modification, CEMVN shall date and sign the amended Appendix and provide a copy of the amended Appendix to the other Signatories. Such an amendment shall go into effect on the date CEMVN transmits the amendment to the other Signatories. If any Signatory or Invited Signatory objects in writing within thirty (30) days of receipt of the proposed modification, the modification shall not go into effect until agreed to as an amendment under subsection A.

3. Current List of Appendices:

    i. Appendix A: POCs and Contact Information

    ii. Appendix B: Memorandum Summarizing the APEs with Maps

    iii. Appendix C: Alternative Mitigation Plan

    iv. Appendix D: Reserved for St. Rosalie Archaeological Mitigation Plan

C. Any Amendments to this Agreement or the Appendices shall be posted to the CEMVN website for the environmental review of the MBSD project. The MBSD website link is: https://www.mvn.usace.army.mil/Missions/Regulatory/Permits/Mid-Barataria-Sediment-Diversion-EIS/

XVII. Termination of the Agreement

If any Signatory to this Agreement determines that its terms will not or cannot be carried out, that party will immediately consult with the other Signatories to attempt to develop an amendment per Stipulation XVI, above. If within thirty (30) days (or another time period agreed to by all Signatories) an amendment cannot be reached, any Signatory may terminate the Agreement upon written notification to the other Signatories. Once the Agreement is terminated, CEMVN must either (a) execute another Agreement pursuant to 36 CFR 800.14(b), or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. CEMVN will notify the Programmatic Agreement Signatories and Consulting Parties as to the course of action it will pursue.

XVIII. Addition of Another Federal Agency

In the event that another federal agency not initially a party to or subject to this Agreement receives an application for funding/license/permit for activities associated with the Undertaking as described in this Agreement, and the Undertaking remains unchanged, that agency may fulfill its Section 106 responsibilities by stating in a written letter to CEMVN, LA SHPO, and ACHP that it concurs with and will comply with the terms of this Agreement and that it will condition its authorization (funding/license/permit) on the Applicant's compliance with the terms of this PA. Such agreement shall be evidenced by filing the letter with the ACHP, providing notification to the other Consulting Parties, and implementation of the terms of this Agreement as appropriate.

Execution of this Agreement by the ACHP, CEMVN, and LA SHPO and the implementation of its terms, evidence that the CEMVN as lead federal agency (carrying

out the collective responsibilities for EPA, NOAA, DOI, and USDA) has taken into account the effects of the MBSD Project upon historic properties and has afforded the ACHP an opportunity to comment.

SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

U.S. Army Corps of Engineers, New Orleans District (CEMVN)

[redacted]

Date: 15SEP2022

Stephen F. Murphy
Colonel, Corps of Engineers
District Commander

SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

The Louisiana State Historic Preservation Officer

[redacted]_____ Date: 9/30/2022

Kristin P. Sanders,
Louisiana State Historic Preservation Officer

SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
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and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

The Advisory Council on Historic Preservation

[redacted]

Reid Nelson, Executive Director, Acting
ACHP

Date: 10.20.2022

INVITED SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

Louisiana Coastal Protection and Restoration Authority

[redacted]

Lawrence B. Haase,
Executive Director

Date: 9/28/22

INVITED SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
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and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

Choctaw Nation of Oklahoma

Nothing in this Agreement shall be construed to waive the sovereign rights and immunities of the Choctaw Nation of Oklahoma, its officers, employees, or agents

_____ Date: _____
Gary Batton, Chief

INVITED SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

Chitimacha Tribe of Louisiana

[redacted]

Melissa Darden, Chairman

Date: 10-20-2022

CONCURRING PARTY SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

Mississippi Band of Choctaw Indians

_____ Date: _____
Ben Cyrus, Chief

CONCURRING PARTY SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

U.S. Department of the Interior

[redacted]

Date: October 3, 2022

Mary Josie Blanchard, Principal Representative

CONCURRING PARTY SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

U.S. Environmental Protection Agency

[redacted]

Mary Kay Lynch
Alternate to Principal Representative

Date: October 3, 2022

CONCURRING PARTY SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
Louisiana State Historic Preservation Officer,
The Advisory Council on Historic Preservation
and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

United States Department of Agriculture

[redacted]

Ronald Howard, Director, Acting

Date: October 7, 2022

CONCURRING PARTY SIGNATORY PAGE

Programmatic Agreement
among
United States Army Corps of Engineers,
Chitimacha Tribe of Louisiana,
Choctaw Nation of Oklahoma,
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and
The Louisiana Coastal Protection and Restoration Authority
Regarding the
Mid-Barataria Sediment Diversion
River Mile 60.7-R, Plaquemines Parish, Louisiana

National Oceanic and Atmospheric Administration

[redacted]

Date: September 30, 2022

Christopher D. Doley
Principal Representative, National Oceanic and Atmospheric Administration
Chief, Habitat Restoration Division

Appendix A: Point of Contacts (POC)

CONTACT INFORMATION FOR SIGNATORIES

Signatories shall provide USACE with updated contact information as it becomes available, and revisions to this Appendix A will be made without an amendment to this Agreement.

Federally-Recognized Tribes	
Chitimacha Tribe of Louisiana Primary: Kimberly S. Walden, THPO Chitimacha Tribe of Louisiana 155 Chitimacha Loop Charenton, LA 70523 (337) 923-9923 kim@chitimacha.gov Method of contact for project notification and documentation: email to Primary contact. Method of contact for other communication: email, phone call	**Chitimacha Tribe of Louisiana** Secondary: Chairman Melissa Darden Chitimacha Tribe of Louisiana 155 Chitimacha Loop Charenton, LA 70523 (337) 924-4973
Choctaw Nation of Oklahoma Primary: Ian Thomson Historic Preservation Department Choctaw Nation of Oklahoma P.O. Box 1210 Durant, OK 74702 (580) 642-7981 ithompson@choctawnation.com Lindsey D. Bilyeu, MS Program Coordinator lbilyeu@choctawnation.com (580) 642-8377 Method of contact for project notification and documentation: email Senior Compliance Review Officer with a copy to THPO. Method of contact for other communication: email, phone call	**Choctaw Nation of Oklahoma** Secondary: Gary Batton, Chief Choctaw Nation of Oklahoma Attn: Choctaw Nation Historic Preservation Department P.O. Box 1210 Durant, OK 74702-1210 (800) 522-6170 gbatton@choctawnation.com

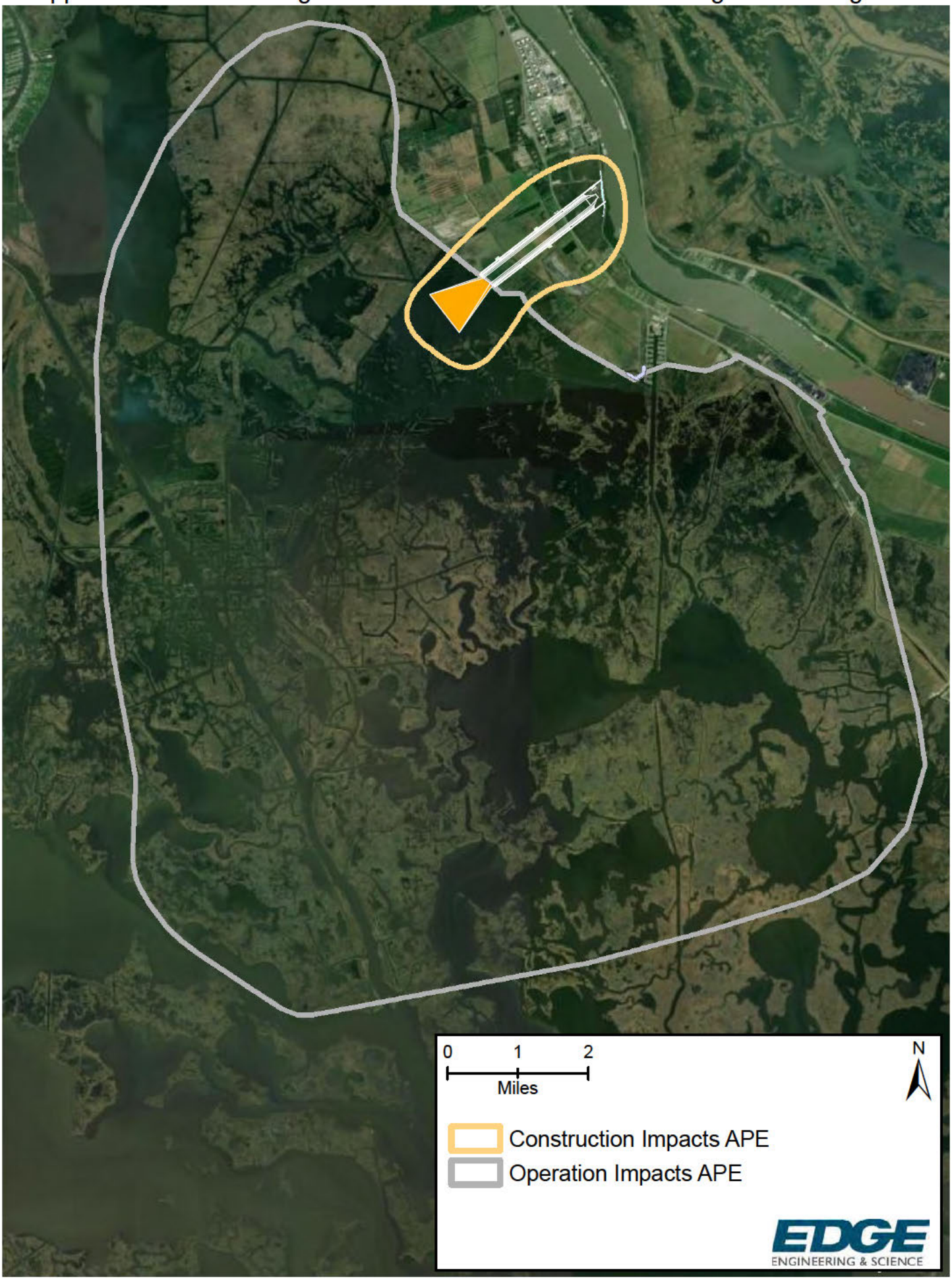
Mississippi Band of Choctaw Indians Primary: Ken Carleton, Tribal Archeologist Mississippi Band of Choctaw Indians 101 Industrial Road Choctaw, MS 39350 (601) 656-5251 ken.carleton@choctaw.org Method of contact for project notification and documentation: email to Primary contact. Method of contact for other communication: email, phone call	**Mississippi Band of Choctaw Indians** Secondary: Ben Cyrus, Chief Mississippi Band of Choctaw Indians 101 Industrial Road Choctaw, MS 39350 (601) 656-5251 info@choctaw.org
SHPOS & Independent Federal Organizations	
Advisory Council on Historic Preservation Primary: John Eddins, Program Analyst Advisory Council on Historic Preservation 401 F Street NW, Suite 308 Washington DC 20001-2637 (202) 517-0211 e106@achp.gov; jeddins@achp.gov Method of contact for project notification and documentation: email to e106@achp.gov and copy to Primary contact email. Method of contact for other communication: email, phone call	**Advisory Council on Historic Preservation** Secondary: Reid Nelson, Executive Director, Acting Office of Federal Agency Programs Advisory Council on Historic Preservation 401 F. Street NW, Suite 308 Washington, DC 20001-2637 (202) 517-0222 achp@achp.gov; rnelson@achp.gov Method of contact for project notification and documentation: email to e106@achp.gov and copy to Primary contact email. Method of contact for other communication: email, phone call
Louisiana State Historic Preservation Officer Primary: Chip McGimsey State Archaeologist Division of Archaeology PO Box 44247 Baton Rouge, LA 70804-4241 (225) 219-4598 cmcgimsey@crt.la.gov Method of contact for project notification and documentation: email at section106@crt.la.gov	**Louisiana State Historic Preservation Officer** Secondary: Rachel Watson Division of Archaeology PO Box 44247 Baton Rouge, LA 70804-4241 (225) 342-8165 rwatson@crt.la.gov Method of contact for project notification and documentation: section106@crt.la.gov Archaeological Site Forms: Submit to LA Division of Archaeology via email to siteforms@crt.la.gov.

Archaeological Site Forms: Submit to LA Division of Archaeology via email to siteforms@crt.la.gov. Reports: Hard copy and PDF on CD Method of contact for other communication: email, phone call	Reports: Hard copy and PDF on CD Method of contact for other communication: email, phone call
U.S. Army Corps of Engineers (USACE) Districts	
New Orleans District (CEMVN) Primary Paul J. Hughbanks, Archaeologist CEMVN-PDS-N 4700 Leake Ave. New Orleans, LA 70118 (504) 862-1100 Paul.J.Hughbanks@usace.army.mil Method of contact for project notification and documentation: email or receipt of hard copy Method of contact for other communication: email, phone call	**New Orleans District (CEMVN)** Secondary: Jason A. Emery, Cultural Resources RTS and District Tribal Liaison CEMVN-PDS-N 4700 Leake Ave. New Orleans, LA 70118 (504) 862-2364 Jason.a.emery@usace.army.mil
Other Federal Agencies	
U.S. Department of the Interior Primary: Ben Frater, Compliance Supervisor Gulf Restoration Office 341 N. Greeno Road Fairhope, AL 36532 (404) 314-8815 benjamin_frater@fws.gov Method of contact for project notification and documentation: email at michelle_eversen@fws.gov and copy to secondary contact. Method of contact for other communication: email, phone call	Secondary: Sarah Clardy, TIG Representative Gulf Restoration Office 341 N. Greeno Road Fairhope, AL (912) 276-4206 Sarah_clardy@fws.gov

U.S. Environmental Protection Agency Region 6 Primary: Robert Houston, Staff Director Communities, Tribes and Environmental Assessment Office of the Regional Administrator U.S. EPA Region 6 1201 Elm Street, Suite 500 Dallas, Texas 75270-2102 (214) 665-8565 houston.robert@epa.gov Method of contact for project notification and documentation: email to Primary and Secondary contacts. Method of contact for other communication: email, phone call	 Secondary: Doug Jacobson, EPA TIG Representative U.S. EPA Region 6 (WD-AM) 1201 Elm Street, Suite 500 Dallas, Texas 75270-2102 (214) 665-6692 jacobson.doug@epa.gov Method of contact for project notification and documentation: email to Primary and Secondary contacts. Method of contact for other communication: email, phone call
United States Department of Agriculture Primary: Ronald Howard Director, Acting USDA Gulf Coast Ecosystem Restoration Team 7578 Old Canton Road Madison, MS 39110 c. (601) 812-9449 ron.howard@usda.gov	 Secondary: Jon Morton Biologist USDA Gulf Coast Ecosystem Restoration Team 7578 Old Canton Road Madison, MS 39110 Jon.morton@usda.gov c. (601) 331-7327
National Oceanic and Atmospheric Administration Primary: Rachel Sweeney, Program Manager Deepwater Horizon Restoration Program NOAA Restoration Center 263 13th Ave S St Petersburg, FL 33701 (727) 551-5743 rachel.sweeney@noaa.gov Method of contact for all project notification and documentation: email to rachel.sweeney@noaa.gov	 Secondary: Christy Fellas, Compliance Coordinator Deepwater Horizon Restoration Program NOAA Restoration Center 263 13th Ave S St Petersburg, FL 33701 (727) 551-5714 christina.fellas@noaa.gov Method of contact for all project notification and documentation: email to christina.fellas@noaa.gov

Permit Applicant	
Louisiana Coastal Protection and Restoration Agency (CPRA)	
Primary: Elizabeth L. Davoli, Coastal Resources Scientist Manager 150 Terrace Ave Baton Rouge, LA 70802 (225) 342-4616 Elizabeth.Davoli@la.gov Method of contact for project notification and documentation: email or receipt of hard copy Method of contact for other communication: email, phone call	Secondary: Brad Barth, Operations Assistant Administrator 150 Terrace Ave Baton Rouge, LA 70802 (225) 342-4553 Bradley.Barth@la.gov Method of contact for project notification and documentation: email or receipt of hard copy

Appendix B: Final and Agreed APE Referenced within this Programmatic Agreement



Appendix C: Alternate Mitigation Plan for the Mid-Barataria Division PA

Native Americans have an enduring presence and deep history in Southeastern Louisiana. At the time of European contact, approximately twenty Native nations lived within the present political boundaries of Louisiana; and of that number, at least six nations occupied the Barataria region. By the eighteenth century, under increasing pressure from Anglo-Europeans east of the Mississippi River, several small nations migrated west to settle in colonial Louisiana where their descendants remain today. During Indian Removal in the antebellum period, some Native Americans driven from their eastern homelands came to settle in small groups or with relatives already established in Louisiana.

Throughout the eighteenth and nineteenth centuries, Southeastern Louisiana remained important to Native Americans in Louisiana. They participated in the eighteenth-century colonial market economy or came to the capital of New Orleans to represent their nations in counsel, negotiations, and treaties. Although conditions for the Tribes would change under the American administration, New Orleans remained a political and commercial center and a viable market for Native Americans into the twentieth century. Over the centuries, the Barataria region remained a place of importance for Native Americans, utilized by hunters and fishermen, and the women who gathered plants like Spanish moss, sassafras, swamp cane, and various herbs for their own use and for barter and sale to the colonists and later Americans.

Project Goals and Objectives:

This project will document Native Americans in Southeastern Louisiana between 1500 and 1900 AD, focusing on the larger Barataria region and associated segments of the Mississippi River where many coastal restoration projects are proposed or under development. As some Tribal communities were based wholly or in part on the north shore, St. Tammany and Tangipahoa parishes are included with Orleans and Jefferson parishes in the study area. Bounding the study area by Bayou Lafourche and the north shore of Lake Pontchartrain provides a spatially and environmentally discrete landscape reflecting the colonial/antebellum world of Southeastern Louisiana. Further research may extend the study area to include Terrebonne Parish.

The objective of this study is to prepare a comprehensive ethnohistoric overview documenting the Native American presence and history within the study area. To provide background and context for the research period, the study will:

1) examine the geologic and environmental history of the region to characterize how changes to the landscape, landforms, hydrology, and environment across the study area affected settlement and use of the study area over time;
2) examine the archaeological record and cultural history of the study area immediately prior to 1500 AD;
3) identify and provide a brief overview of Native nations in the region between ca. 1500 and 1699, the point of sustained European contact, including:

a. ancestral occupation and traditional use area(s);
b. cultural traditions including worldview, lifestyles, technology, and material culture;
c. broader patterns of ideology and trade.

The study will provide detailed ethnohistories of participating Tribes during the study period that examine how they responded to regional, national, and international encounters, events, and trends that affected, and often threatened, their cultural and physical survival. Research topics will be developed in consultation with the participating Tribes. Those topics may include, but will not be limited to:

1. participating Tribes at the point of contact;
2. how Tribal social and political organization at contact structured and influenced interactions with Europeans and other non-tribal communities, and how socio-political organization changed over time;
3. the effects that disease, slave-taking/trading, conflicts/wars, and other events and interactions had on population, settlement patterns, Tribal economies, and inter-relations;
4. changes to social and political relations, including changes in perceptions and status, under French, Spanish, and American administrations;
5. ancestral land and the ways in which ancestral territories were lost or reduced;
6. how Tribes were able to organize, form new alliances, gain recognition, and persist as sovereign nations beginning in the nineteenth century;
7. addressing the Tribe's connection to and relationship with the region today.

Methodology:

Information will be derived from a review of published literature, archival research, and ethnographic interviews conducted with knowledgeable members of consulting Tribes. Research sources many include, but not be limited to:

- archaeological and ethnographic studies;
- colonial records including the LA Superior Council and Cabildo;
- Catholic church records including baptismal, marriage, and burial records;
- U.S. Territorial records;
- traveler accounts, journals, and letters;
- Federal, state, parish, and local records, including War Department records, Indian agency records, land sales, legal proceedings, school records, and military records;
- genealogical records including census, marriage, and death records;
- Tribal archives
- Tribal histories and ethnographies;
- newspaper accounts;
- cartographic collections;

- photographic collections.

Interviews will be conducted with knowledgeable elders/Tribal members from each participating Tribe. Interviews will be digitally recorded in audio .wav and/or .mpg format. Interviews will be fully transcribed and returned to interviewees for review, correction, and/or additions. Depending upon the needs and objectives of the individuals interviewed and/or the participating Tribes, more than one interview may be conducted with some individuals. Group interviews may be also conducted.

Each Tribe will have the opportunity to participate in a week-long visit to the region. The purpose of the trip is to facilitate discussion of significant places within the region, better understand traditional uses of the landscape, and develop information on traditional lifeways and settlement patterns within the study area.

Products:

The proposed study will provide three products:

1) A scholarly publication detailing the results of the study. The report will address all of the topics identified in the proposed scope, and will include a detailed bibliography of references used in the study and/or applicable to the study goals. The presentation of graphical information (i.e., maps) illustrating the locations and patterns of movement of individual Tribes will be developed in consultation with each individual participating Tribe.

2) For each participating Tribe, information and/or a series of documents and/or maps that identify specific areas of Tribal occupation at known temporal intervals within the study period will be prepared in consultation with that Tribe. This information will only be made available to each participating Tribe and will not be publicly disclosed. This information will improve consultation with federal agencies by clarifying for each Tribe which projects and/or human remains discoveries they wish to consult on.

3) A public component: these can include but are not necessarily limited to:
    a) the development of a website that tells the Tribal history(s) in the study area through the extensive use of maps showing general patterns of settlement, floral/faunal use, migrations, etc. (but not identifying specific site locations), and historic photographs, paintings, and engravings paired with text developed from the scholarly publication. The inclusion of a number of artists' illustrations of Tribal life in various contexts/times would be an added way to tell these stories.
    b) Development of curriculum guides and information on Tribal history in Southeastern Louisiana during the study period for use in Louisiana schools.

Appendix D
St. Rosalie Archaeological Mitigation Plan

Phase III Data Recovery Plan to Mitigate Project Construction Impacts upon a National Register of Historic Places-eligible Archaeological Site within the Mid-Barataria Sediment Diversion (BS-0153), MVN-2012-02806-EOO, Plaquemines Parish, Louisiana, under the terms of an Agreement Between the United States Army Corps of Engineers, the Chitimacha Tribe of Louisiana, the Choctaw Nation of Oklahoma, the Louisiana State Historic Preservation Officer, the Advisory Council on Historic Preservation, the Louisiana Coastal Protection and Restoration Authority, and Other Consulting Parties

October 28, 2022

Introduction

The Louisiana Coastal Protection and Restoration Authority (CPRA) submitted a Joint Permit Application to the U.S. Army Corps of Engineers (USACE) New Orleans District (CEMVN) for construction of the Mid-Barataria Sediment Diversion (MBSD) Project (BA-0153). CEMVN, the lead federal agency, consulted with the Advisory Council on Historic Preservation (ACHP), the Louisiana State Historic Preservation Officer (SHPO) through the Louisiana Division of Archaeology (LDOA), Tribal Nations, CPRA, and the federal agencies that comprise the Louisiana Trustee Implementation Group (LA TIG) and executed a Programmatic Agreement to take into account the effect of the MBSD Project on historic properties within the Construction Impact Area of Potential Effects (APE). The Programmatic Agreement (unsigned) is included in Appendix A.

In 2022, R. Christopher Goodwin & Associates, Inc., (RCG&A) prepared a Phase II testing and evaluation report that recommended that Site 16PL107 Locus 1 within the MBSD Project Construction Footprint (Figure 1) be designated as eligible for listing in the National Register of Historic Places (NRHP) under criteria A (Evidence for activities or patterns pertaining to an area's development) and D (Potential for future research). CEMVN and SHPO concurred with the eligibility recommendation.

It is not possible for CPRA to modify the MBSD Project to avoid construction impacts to 16PL107 Locus 1 within the MBSD Project Construction Footprint (Figure 2). This data recovery plan proposes excavations that will be undertaken to mitigate the adverse effects of the MBSD Project to 16PL107 Locus 1 within the MBSD Project Construction Footprint. Data recovery investigations will likely be concurrent with Project construction activities undertaken outside of 16PL107 Locus 1. In the event these activities are undertaken concurrently, the archaeological field investigators will employ standard safety protocols, including the use of hard hats, safety-toed boots, and temporary fencing that will demarcate the boundary between 16PL107 Locus 1 from the remainder of the MBSD Project Construction Footprint investigations duration.

Project Background

The MBSD Project lies within Plaquemines Parish, Louisiana along the west bank of the Mississippi River at River Mile 60.7, near the vicinity of the community of Ironton, Louisiana, and the Phillips 66 Alliance Refinery; it is located approximately 8 miles east of Lafitte, Louisiana. The Project consists of a controlled sediment and freshwater intake diversion structure that would discharge sediment, freshwater, and nutrients from the Mississippi River into the Mid-Barataria Basin in Plaquemines and Jeffer-

son parishes. The Project includes construction of a Diversion Complex consisting of the intake structure, flared training walls in the Mississippi River, a gated control structure, a transition channel, and the conveyance channel, which includes guide levees and stability berms. The conveyance channel would be approximately 2 miles (3.2 kilometers [km]) long with an approximate bottom width of 250 feet (ft) (76 meters [m]), of which 873 ft (266 m) traverses site 16PL107. The construction footprint encompasses approximately 1,376 acres (ac) (557 hectares [ha]) in total.

CPRA submitted a Joint Permit Application in 2016 to CEMVN for a Section 404 Clean Water Act permit, Section 10 Rivers and Harbors Act permit, and Section 408 of the Rivers and Harbors Act permission. CEMVN prepared an Environmental Impact Statement to analyze the effects of the MBSD Project and its alternatives on the human and natural environment, including cultural resources, in order to inform its decision on the Section 10/404 permit and the Section 408 permission.

Site Location and Project Impacts

St. Rosalie Plantation, Site 16PL107, is located between LA 23 and the Mississippi River approximately 0.55 mi (0.89 km) south of the Phillips 66 Refinery and 0.86 mi (1.39 km) north of the town of Ironton (see Figure 2) and partially within the MBSD Project Construction Footprint. While the mapped site encompasses an area of 11.4 ha (28.1 ac), only portions of 16PL107 Locus 1 within the MBSD Project Construction Footprint have undergone archaeological investigations, including Phase I cultural resources survey (Vandagriff and Keen 2014) and Phase II testing and evaluation investigations (Cropley et al. 2017; Healey et al. 2020; Kirk et al. 2022). An area of mapped site measuring 5.8 ha (14.4 ac) is situated within the MBSD Project Construction Footprint. The most recent fieldwork at the site consisted of a Phase II testing and evaluation effort completed by RCG&A (Kirk et al. 2022) that investigated a portion of Site 16PL107, designated as Locus 1, situated within the MBSD Project Construction Footprint. The Phase III data recovery investigation proposed herein will focus on 16PL107 Locus 1 within the MBSD Project Construction Footprint, a block of what appears to be domestic/tenant housing associated with an impoverished, rural African-American community (Kirk et al. 2022).

A potential cemetery area marked on the 1948 USGS *Pointe a la Hache, Louisiana,* 15' series topographic quadrangle map was identified by ELOS in their 2019-2020 investigation of Site 16PL107 (Healey et al. 2020) on behalf of their client, Tallgrass Energy. Section 106 consultation was not completed for this investigation and NRHP eligibility remains undetermined for the portion of Site 16PL107 ELOS investigated, which is outside of the MBSD Construction Footprint. Referred to as the St. Rosalie Plantation Cemetery #2 and given the site number 16PL280, the mapped site boundaries put this burial ground outside of the MBSD Project Construction Footprint. However, a second cemetery marked on the 1948 USGS *Pointe a la Hache, Louisiana,* 15' series topographic quadrangle map appears to be situated partially within the MBSD Project Construction Footprint. The examination of this potential cemetery location is one component of the proposed data recovery investigations.

Construction of the MBSD Project would include clearing and grubbing of the Project site. The wooded area east of LA 23 would be cleared of trees, since these are not permitted near levees or stability berms. CPRA estimates the project would require approximately 5 years of construction. Mechanical and hydraulic excavation methods would be used to excavate the diversion channel. The intake system would be constructed using "in-the-dry" methods by installing an enclosed temporary dewatering cofferdam in the Mississippi River. The cofferdam system would tie into an interim levee that will provide the main line of flood risk reduction until construction of the gated control structure is completed.

16PL107 Context

The land which comprises St. Rosalie Plantation first appears in historic land records when it was purchased from Olivier de Vezin by Francis Bernoudy in 1776 (Arthur and Kernion 1999: 411-412; Guerin 2010; Louisiana Historical Association 2008; Voorhies 1973: 27, 150, 225). Residential buildings and infrastructure were es-

tablished between 1777 and 1779 (Lowrie 1834) and the property remained in Bernoudy's hands until it was purchased by John McDonough in 1816. Under these owners, the Plantation was not known as St. Rosalie and may not have even been associated with the cultivation of sugar. It was not until Andrew Durnford bought a series of land tracts from McDonough between 1828 and 1832 that St. Rosalie, as it is best known today, began to take shape. Durnford likely named the plantation after his mother, and began sugar cultivation by the 1820s (Kirk et al. 2022). Though Durnford was a person of color, one of the most interesting things about him was that he was a slaveholder, and the descendants of the 70 enslaved people he owned by 1850 likely lived and worked in the structures that this study aims to better understand.

Following Durnford's death in 1859, his probate proceedings acknowledged his widow as the legal head of both the Durnford family and the St. Rosalie sugar operations, with the land being divided between a former lessee, Edgard Marin, and Durnford's descendants following her death in 1866 (Kirk et al. 2022). In 1874, St. Rosalie Plantation was seized and put up for U.S. Marshal's Sale (Whitten 1981). It was subsequently purchased by John Dymond and James Lally, with Dymond continuing sugar operations on the land and increasing the acreage devoted to rice cultivation. Ultimately, Joseph B. Wilkinson ended up leasing a large tract of land on the plantation for sugar cane cultivation, and in 1881 Dymond and Lally sold the land to Wilkinson's son, Theodore Stark Wilkinson.

During the late nineteenth century, Wilkinson managed to amass roughly 15 miles of riverfront property along the Mississippi (Meyer 1981: 60), with St. Rosalie being just one of his several properties (Figure 3). In 1895, however, Wilkinson lost the land to William H. Norwood at Sheriff's Sale, though through his corporation, the Myrtle Grove Company, Ltd., he was able to lease the land and continue to cultivate sugar cane. In 1901, Wilkinson purchased the land outright again, where it remained until his death in 1921 when it passed through several tumultuous years of different ownership. In 1923, the plantation was owned by the Celeste Sugar Company, Inc., before it was sold to Southern States Realty Company, Inc., in 1927. In 1930 it was bought by Louisiana Citrus Lands, Inc. (Kirk et al. 2022); the portion of Locus 1 within the MBSD Project Construction Footprint has remained undeveloped since then and currently the land is owned by the Plaquemines Port Harbor and Terminal District, according to the Plaquemines Parish Assessor (Figure 4).

Previous Investigations at Site 16PL107

The general overview of previous investigations is presented below. Those previous investigations that examined areas within the MBSD Project Construction Footprint include Phase I cultural resources survey (Vandagriff and Keen 2014 [Report no. 22-4743]) and Phase II testing and evaluation efforts (Cropley et al. 2017 [Report no. 22-5654]; Healey et al. 2020 [Report no. 22-6623]; Kirk et al. 2022 [Report no. 22-7051]) (Figure 5).

Clemensen 1983

16PL107 originally was recorded as the St. Rosalie Plantation as it appeared on the 1883 Mississippi River Commission (MRC) map. Berle Clemensen described the site as an antebellum and post-bellum sugar and rice plantation that should contain a large number of artifacts, since it is sufficiently distanced far enough from the Mississippi River to have escaped destruction through erosion and levee construction (Louisiana Division of Archaeology, Louisiana Office of Cultural Development, Louisiana Department of Culture, Recreation and Tourism [SHPO] site form, 1983). The site form noted that the site was vegetated with grass and some trees, the land use was listed as "none," and little disturbance was noted at the site. No description of cultural material observed/recovered or the site remains were included on the site form. The site was recommended for further archaeological testing to assess its eligibility for listing in the National Register of Historic Places (NRHP).

Gray and Bundy 2012

Cultural Resources Analysts (CRA) investigated a portion of Site 16PL107 in 2012 during a Phase I cultural resources survey of what was then

a RAM Terminals project area in Plaquemines Parish (Gray and Bundy 2012). The northern St. Rosalie Plantation site boundary, as recorded by Clemensen, lay to the south of the CRA project area; the site boundaries were expanded to the north as a result of this project. CRA identified artifacts and partially intact architectural remains that appear to be associated with the nineteenth-century component at Site 16PL107 within the RAM Terminals project area.

The CRA field effort included pedestrian survey and the excavation of shovel tests at 30-m (98-ft) intervals throughout the project area. In addition to the shovel tests, CRA excavated a series of trenches within the site boundary. CRA collected 947 artifacts from Site 16PL107; 800 artifacts (84 percent) belonged to the architectural group. The architectural group artifacts (cut and wire nails in particular) suggested a date from the nineteenth through twentieth century. Significantly fewer artifacts belonging to the domestic group were recovered (n = 71). Domestic materials, based on date of manufacture, suggested a date range from the nineteenth through the twentieth century (South 1977). CRA concluded that the terminus post quem (TPQ), or earliest dates, and terminus ante quem (TAQ), or latest dates associated with artifact types recovered from Site 16PL107 generally were consistent with the depictions of nineteenth to twentieth century structures on the historic maps of the area. The distribution of artifacts CRA recovered from Site 16PL107 by functional group suggest that most of the domestic activities may have been conducted within the eastern half of the site.

The 1883 MRC map depicted in the CRA 2012 report shows a large structure associated with the St. Rosalie Plantation that could represent the sugar house or some other structure of industrial function (Figure 4). Smaller structures also are depicted to the northeast of the original structure shown on the 1935 MRC map (Figure 5). The distributional pattern associated with the functional artifact group suggests that these later structures may have been residential in function, possibly serving as tenant homes. Artifacts classified as personal items or belonging to the clothing group also were recovered from both surface and subsurface contexts in this area. Given the relevance of the newly recorded portion of Site 16PL107 to regional and local research themes, CRA recommended this site for further testing to assess its eligibility for listing in the NRHP under Criterion D, or for avoidance during all ground disturbing activities.

Vandagriff and Keen 2014

A Phase I cultural resources survey conducted in 2014 by HDR (Vandagriff and Keen 2014) on behalf of CPRA focused on those portions of the MBSD Project Diversion Complex not surveyed previously (measuring approximately 79 acres) within the MBSD Project Construction Footprint and included Site 16PL107 (St. Rosalie Plantation). The archaeological investigations of 16PL107 produced 1,014 artifacts and these originated primarily from surficial contexts. The majority of this artifact assemblage consisted of historic ceramics, which dated from the late 1700s to the early 1900s. As part of the investigation, an existing trench was examined and a flood deposit was recorded during the examination of the associated stratigraphic profile. Site 16PL107 was assessed as not eligible for listing in the NRHP due to a lack of integrity caused by a combination of periodic flooding from the nearby Mississippi River, ongoing cultivation, and structures demolition (Vandagriff and Keen 2014). The results of this survey were submitted to CEMVN and to the SHPO in September 2014. After a review of the report, the SHPO did not agree with HDR's conclusion that the portion of Site 16PL107 within the MBSD Project Construction Footprint was ineligible for the NRHP. As a result, SHPO recommended the NRHP eligibility of the portion of 16PL107 within the MBSD Project Construction Footprint be considered undetermined. The SHPO also recommended additional investigations be undertaken to assess NRHP eligibility if the site area could not be avoided by proposed MSBD Project construction activities.

Cropley et al. 2017

R. Christopher Goodwin & Associates, Inc. (RCG&A) completed Phase II investigations of the portion of 16PL107 investigated by HDR (see above) within the MBSD Project Construc-

tion Footprint in 2017 (Cropley et al. 2017) on behalf of CPRA. The Phase II testing and evaluation consisted of fieldwork as well as archival research. Fieldwork included mechanical stripping of 22 discrete areas within 16PL107 in the MBSD Project Construction Footprint in an effort to identify possible cultural features at these locations, as well as bucket augering to determine whether buried occupational surfaces, intact deposits, or features were present. The mechanical stripping effort resulted in the identification of five possible cultural features, which consisted of accumulations of disarticulated architectural materials, layers of stone cobbles, and debris push piles likely related to structure demolition. RCG&A recommended that the portion of the 16PL107 investigated within the MBSD Project Construction Footprint was not eligible for listing in the NRHP (Cropley et al. 2017).

Bilgri et al. 2018

Bilgri et al. (2018) of CRA completed a records review and Phase I cultural resource survey of a 185-acre property in Plaquemines Parish, Louisiana on behalf of their client, Coastal Engineering Solutions, LLC supporting the development of the Plaquemines Parish Port and Harbor Terminal District's proposed export facility. The survey area included the original recorded location (by Clemensen [1983]) of St. Rosalie Plantation. The CRA investigators recorded Site 16PL107 as consisting of a large scatter of mid-nineteenth to twentieth-century historic artifacts in surface and subsurface contexts. CRA observed numerous artifacts on the ground surface and recovered cultural material from shovel tests. The surface scatter and positive shovel tests formed an irregular but contiguous area roughly consistent with the locations of plantation structures depicted on the 1883, 1935, 1949, and 1961 MRC maps, as well as the 1944 USGS Point La Hache topographic quadrangle map. Shovel testing indicated that artifacts were present to depths reaching 77 cm (30 in) below the ground surface. The materials recovered by CRA suggests at least one, but possibly multiple, structures in the survey area with a formal sewage disposal system and a high degree of domestic activity. These materials suggest activities at the site likely date from the nineteenth through the early twentieth centuries.

Recommendations for Site 16PL107 included additional archaeological testing or avoidance as well as archival research to determine if there is any additional evidence that the historic cemeteries depicted on mid-twentieth century maps are present within the site area.

Healey et al. 2020

In late 2018, ELOS Environmental, LLC (ELOS) conducted an archival investigation and a pedestrian survey of a portion of St. Rosalie Plantation where two cemeteries were suspected to be present (Healey et al. 2020: 23) on behalf of their client, Tallgrass Energy. The results of this investigation were inconclusive and the locations of the two cemeteries remained unknown.

ELOS also conducted a Phase II cultural resource and cemetery investigation within 16PL107 between 2019 and 2020 (Healey et al. 2020) on behalf of their client, Tallgrass Energy, who owned the parcel on which 16PL107 is located. Tallgrass had plans to develop the tract for industrial purposes. This work was conducted to evaluate a 5.5-acre (2.2-hectare) portion of Site 16PL107 for NRHP eligibility and to investigate possible cemetery locations. Two Loci were identified as a result of the Phase I ELOS examination of St. Rosalie; Locus 1 being the southern portion of the site where the 2022 RCG&A investigation occurred (see below), and Locus 2 being further to the north within the boundaries of a gravel road. Field efforts consisted of shovel testing, mechanical stripping, trenching, test unit excavations, and the use of ground penetrating radar.

Fieldwork conducted at Locus 1, the designation of which was based on the result of the Phase I shovel testing completed within the MBSD Project Construction Footprint, consisted of the excavation of 801 shovel tests, 16 trenches, 10 scrape areas, and 20 test units resulting in the identification of 10 features and the recovery of 12,744 artifacts, including faunal material, historic ceramics, glass shards, metal fragments, as well as brick and mortar. The historic ceramic sherds included those dating from the Colonial era but the majority of ceramics dated to the nineteenth century. In addition, two possible cemetery areas

located on the eastern side of Locus 1 were investigated after one human element was recovered during the Phase II investigations of Locus 1 (Healey et al. 2020).

Work completed by ELOS at Locus 2 included the excavation of an additional eleven trenches where ELOS hoped to uncover the St. Rosalie Sugar House mentioned by CRA in their previous investigation (Gray and Bundy 2012). This structure could be seen on the 1883 MRC map and within the bounds of the site as they had been redrawn by CPRA. A total of sixteen architectural features, predominantly made of brick, were found within Locus 2. Trenching efforts were supplemented by an analysis of the area using Ground Penetrating Radar. Results of these two approaches suggest the existence of at least two structures and a potential third which likely represents the Sugar House in place from 1831-1964. Locus 2 is situated beyond the boundaries of the MBSD Project Construction Footprint. Section 106 consultation wasn't concluded for this Tallgrass Energy sponsored investigation.

Kirk et al. **2022**

RCG&A completed additional Phase II investigations of the St. Rosalie Plantation (16PL107) Locus 1 in 2022 (Kirk et al. 2022) on behalf of CPRA. The RCG&A field effort included mechanical stripping of 27 areas. These consisted of 21 Stripping Areas at an area designated Area North (i.e., ST-A through ST-U), and six (6) in an area designated Area South (i.e., ST-A through ST-F). This investigation also included the excavation of nine 1.0 x 1.0 m (3.3 x 3.3 ft) test units. These stripping areas and test units were placed in areas of 16PL107 Locus 1 not previously examined during the ELOS Phase II investigation (Healy et al. 2020). RCG&A identified 39 features; these included twenty-six brick architectural features, three refuse pits, two prepared pavements, and eight rubble features of indeterminate origin/function.

All Stripping Areas were predominantly located in portions of 16PL107 Locus 1 that had not clearly been previously investigated by ELOS, where no obstructions to the equipment were present (i.e., large oak trees), and varied in both shape and size. In general, most exposures measured between 1.0 m (3.3 ft) and 2.0 m (6.6 ft) in width and about 20 m (66 ft) in length. These locations were prioritized for investigation in an attempt to fill data gaps regarding 16PL107 Locus 1 within the MBSD Project Construction Footprint to make a recommendation on NRHP eligibility in order for USACE, SHPO, and consulting parties to determine if 16PL107 Locus 1 is a historic property and, if so, to determine if the undertaking (the MBSD Project) would have an adverse effect.

Nine test units were excavated during the course of the RCG&A evaluation of 16PL107 Locus 1. Units were placed within or adjacent to architectural and pit features identified in Area North at Stripping Areas ST-B (n=2), ST-C (n=1), ST-K (n=2), ST-L (n=1), ST-M (n=1), and ST-N (n=1). Within Area South, a single test unit was placed in association with Feature ST-B-Feature-1, a cobbled prepared surface.

Of particular note is Structure 7. Structure 7 consists of a single tabby-like pylon or pier (Feature ST-M-01) that does not articulate with anything. Three "conjure bottles," all associated with the tabby-like pylon or pier suggest that the structure represents a domestic one, as charms for protection like these are usually placed in residences as opposed to outbuildings (Haq 2016; Wilkie 1997).

The presence of the conjure bottles and African-American religion is a topic that is well understood anthropologically but not as thoroughly understood archaeologically. To connect the past to the present (*sensu* Wolf 2010), more sites containing the material culture of African-American spiritualism must be excavated and studied. St. Rosalie has the potential to offer that, and it could be that other structures on the property will offer more material culture pertaining to this or, in a best-case scenario, that one of the structures as yet undiscovered may have housed an African-American spiritual leader. Furthermore, church and voodoo society were historically not entirely separated (Port et al. 2002), and it could be equally as likely that the presence of conjure bottles lends further support to the notion that there was a church somewhere at St. Rosalie that acted as the community's main social center.

RCG&A recommended that portion of 16PL107 designated Locus 1 and located within the MBSD Project Construction Footprint as eligible for the NRHP under criteria A and D and as having the potential to further address topics and themes outlined in Louisiana's Comprehensive Archaeological Plan. USACE and SHPO concurred with this eligibility recommendation.

Statement of Significance

Site 16PL107 Locus 1 within the MBSD Project Construction Footprint has been determined eligible for the NRHP under Criterion A (Evidence for activities or patterns pertaining to an area's development) and Criterion D (Potential for future research).

Criterion A

The bulk of what is known about St. Rosalie Plantation comes from the period between 1828 and 1874, stretching into the lead up to the Civil War, the war itself, and its aftermath. It was between 1828 and 1832 that St. Rosalie was given its current moniker and was established as a sugar plantation. However, much of the material culture that has been recovered from St. Rosalie dates from the late nineteenth and early twentieth centuries. Features uncovered seemed to reflect domestic, residential structures, much too small to represent that of a big house. Thus, it appears that the seven structures identified by Kirk et al. (2022) within Locus 1 in the MBSD Project Construction Footprint seem to represent that of a small community, as is seen on historic maps between 1878 and 1948 (see Kirk et al. 2022: 21-22, 26, 29-30). The investigation of Locus 1 by Kirk et al. (2022) indicates that Locus 1 retains integrity and could yield significant information on this community (see below).

Having been interpreted as being primarily comprised of African-Americans, as was the case during the 1930 Census (U.S. Bureau of the Census 2017-2022 [1920-1930]), intact features and deposits of material culture representative of the St. Rosalie Plantation Community allow for an examination of the lives and cultural practices of a group that has only recently become an important avenue of study for archaeologists. Material culture from this site can provide a better insight into the daily lives and practices of rural African Americans who remained working at a sugar plantation following emancipation. These people have left little in the way of historical records, and thus archaeology provides one of the only viable ways to learn about their experiences, providing the site national, state, and local significance through its potential for further research and historic importance in preserving cultural developments related to African-American communities tied to agricultural activities between the Civil War and the Second World War.

Criterion D

RCG&A Phase II testing of Locus 1 within the MBSD Project Construction Footprint indicated that there are a number of intact cultural deposits which could provide important data on site configuration, domestic activities, social identity and status of individuals, cosmology and folklore, as well as subsistence practices. While plowing has disturbed soils over much of the site, buried features seem to have protected materials found around them and pit-features were found which extend well below the level of the plow zone, leaving large portions of these features undisturbed. Features discovered during Phase II excavations within the MBSD Project Construction Footprint (see Kirk et al. 2022) have identified the presence of no less than 7 structures within 16PL107 Locus 1. The size, shape, and function of these structures is, for the most part, unknown. Further investigations are needed to make these determinations. Features, and the material culture associated with them, will allow RCG&A to address research questions, research topics, and themes selected as important in Louisiana's Comprehensive Archaeological Plan (Girard et al. 2022).

Research Design and Research Questions

The general themes upon which RCG&A's data recovery will focus include: 1) Architectural and non-architectural feature configuration within the MBSD Project Construction Footprint; 2) Diet and changes therein of the occupants of the portion of 16PL107 Locus 1 within the MBSD Project Construction Footprint; 3) Material manifestations of cosmology; and, 4)

Social Identity and Status as indicated by the investigations completed at the MBSD Project Construction Footprint 16PL107 Locus 1 – all consistent with those described in Louisiana's Comprehensive Archaeological Plan (Girard et al. 2022) and all of which helped guide the development of this proposed data recovery plan. Plantation Economies and Societies – both before and after the Civil War – are considered one of the most important post-Contact topics in Louisiana, allowing researchers the ability to question established narratives relying on "the assumption that human social, political, economic, religious, and other connections are integrated into discrete 'cultural' packages" (Girard et al. 2022: 32). In essence, by exploring the material remains of "how plantation landscapes were organized in terms of economic efficiency, security, and power symbolism" (Girard et al. 2022: 53), we can begin to understand how the inhabitants of these institutions lived their lives, adapted to change, and fit into and engaged with dominant social structures through collective experiences at different scales (i.e., household, settlement, etc.).

These themes will be addressed through four overarching research questions that were developed, in part, following RCG&A's Phase II investigation of 16PL107 Locus 1 within the MBSD Project Construction Footprint in 2022 (Kirk et al. 2022). Each overarching question has a number of sub questions, in many cases examining the above listed themes from multiple perspectives. These questions are:

1. *What was the organization of that portion of the MBSD Project Construction Footprint 16PL107 Locus 1 settlement at St. Rosalie from the mid-nineteenth century to the mid-twentieth century?*
    a. *Were all the buildings tenant houses, or were there just a few tenant houses and some outbuildings?*
    b. *Are there similarities in these structures that speak to a shared social identity?*
    c. *Do differences in structures speak to social hierarchy within the site?*
    d. *Was the community centered on a communal space or a church that has yet to be identified?*
    e. *What was the relationship between the people living there and the sugar house identified in Locus 2 (outside of the MBSD Project Construction Footprint) by ELOS in their 2020 investigations?*
2. *What was the purpose of the prepared pavement seen in MBSD Project Construction Footprint 16PL107 Locus 1 Area South (ST-B-01) and how does it relate to Locus 1's* **configuration***?*
    a. *Do the faunal remains and metal artifacts suggest a kitchen, a butcher shop, or a communal meeting place like a plaza?*
    b. *Was it a roadway, and if so, why was more not identified in ST-H or ST-E?*
    c. *Could it be the floor to a church?*
3. *Is there other evidence for African-American folklore,* **cosmology***, and/or belief systems seen in MBSD Construction Footprint 16PL107 Locus 1?*
    a. *Were there more conjure bottles laid out in the foundations of other structures?*
    b. *Were there other spiritual elements in Locus 1 within the MBSD Project Construction Footprint which have yet to be unearthed?*
    c. *Was one of the structures the home to a spiritual leader, or would they have to have visited one from outside the community?*
    d. *Are there features related to burial practices which speak to cosmologic beliefs that have yet to be explored?*
4. *What does the faunal assemblage seen at MBSD Project Construction Footprint*

16PL107 Locus 1 say about the **subsistence** *patterns and living conditions of the people there?*

a. *Were the people at 16PL107 Locus 1 eating a wide array of local wild species because they were impoverished and had to or because these resources were abundant?*

b. *Were they consuming more bird and reptile then what the data collected from features suggest?*

c. *Was there a temporal component to the faunal assemblage that the current project lacked (i.e., people increasing their diet breadth immediately after the Civil War and during the Great Depression)?*

d. *Do dietary practices relate to social identity?*

e. *Do differences in diet across this portion of the site (i.e., Locus 1) have meaning in regards to social status within the community?*

Archaeological Data Recovery Plan and Methods

The following tasks and subtasks will be undertaken during the data recovery investigations at Site 16PL107 Locus 1 within the MBSD Project Construction Footprint:

1) *Utility calls and additional archival research;*

2) *Site visit to establish current conditions and complete site mapping with a total station;*

3) *Monitoring of site clearing (bush hogging) of recent undergrowth, removal of backdirt from the eastern portion of Locus 1, the boundary of which was not identified during previous investigations in this portion of the site, and mechanized stripping of MBSD Project Construction Footprint 16PL107 Locus 1 to the level of the feature plane;*

4) *Deployment of LASARDOGS (Human remains detection dogs) and ground penetrating radar to identify possible cemetery locations within that portion of 16PL107 Locus 1 situated in the MBSD Project Construction Footprint;*

5) *Data analyses;*

6) *Draft report;*

7) *Final report; and,*

8) *Curation.*

Upon completion of Tasks 1 through 7 and with the acceptance of the final report – the final report, all records, photographs, field notes, and artifacts will be curated with the State of Louisiana, Department of Culture, Recreation & Tourism, Office of Cultural Development, Division of Archaeology and housed in the curation facility located at 1835 North River Road, Baton Rouge, Louisiana, 70802. RCG&A, through Royal, will direct all public inquiries regarding field investigations conducted at 16PL107 Locus 1 within the MBSD Project Construction Footprint to CPRA.

The data recovery field investigations will be carried out at 16PL107 Locus 1 within the MBSD Project Construction Footprint utilizing site mapping (e.g., total station) and non-invasive methods (i.e., LASARDOGS and ground penetrating radar) to detect the presence of possible cemetery areas, mechanical stripping, feature recordation of above ground features that have been cleaned off, and test unit excavation in and around features.

To spatially define newly discovered features at 16PL107 Locus 1 within the MBSD Project Construction Footprint, previous excavations and features will need to be relocated by use of mechanical stripping. These areas and features can then be mapped using a total station in order to create a high-quality, digital site map reflective of multiple layers of data. Because many of

the research questions will require a high level of spatial accuracy to answer, a grid will be established across the site using a total station from which measurements and locational data may be recorded. For ease of mapping new features, roughly eight datums (or one datum and seven control points depending on terminology) will be established across 16PL107 Locus 1 within the MBSD Project Construction Footprint so that the total station can be moved for unobstructed views. These datums will also provide reference points which will snap into place within a digital GIS environment and allow for points taken using Trimble GPS units to be corrected with a higher degree of accuracy. A vertical datum will also be established so that measurements can be taken from the same height (in meters above sea level) across the site to better understand the relationship between features.

Task I: Utility Calls and Additional Archival Research

RCG&A will make the initial utility calls prior to beginning fieldwork. These utility calls will be updated as needed.

Detailed research into St. Rosalie Plantation was completed under previous investigations (see Bilgri et al. 2018; Cropley et al. 2017; Gray and Bundy 2012; Healey et al. 2020; Kirk et al. 2022; Vandagriff and Keen 2014). Yet, in each succeeding study, further archival research has yielded more in-depth information on the establishment of St. Rosalie Plantation, its land use history, and its ownership. Particular focus has been paid to Andrew Durnford (see [Cropley et al. 2017] and [Healey et al. 2020]), an educated, free person of color who bought St. Rosalie a piece at a time starting in the late 1820s. Although he was a man of color, Andrew Durnford was also a slaveholder, owning up to 70 enslaved people by 1850 (Geostat 1998-2004; U.S. Bureau of the Census 2017; Whitten 1971:204-208, 1981:16, 31-37), and making him a person of interest for modern day historians. However, much of the material culture recovered from St. Rosalie Plantation is from the period following the Civil War, either at the end of or after the tenureship of the Durnford estate.

While much is known about the ownership of St. Rosalie Plantation in the Post-War and Industrial periods, comparatively less is known about the people living there and their day-to-day activities. Therefore, archival research for this study will focus largely on the late eighteenth and nineteenth centuries, the period when the African-American community was established in the vicinity of the sugar house. For this task, federal census population schedules and relevant tax records will be checked for all available years. Attempts will be made to flesh out research which began during RCG&A's Phase II investigations in 2022 (Kirk et al. 2022) and which focused on the free African-American people known to live there following Emancipation. In particular, efforts will focus on: 1) identifying if any records pertaining to the sugar house at this time exist, and if workers can be traced to residences at the plantation itself (many of the occupations identified on census records already simply say "odd jobs" and the community of Ironton was founded after the Civil War by the emancipated St. Rosalie Plantation enslaved population who purchased land within the bounds of the former Ironton Plantation), and 2) further attempts to identify two cemeteries depicted on a historic USGS quadrangle map and located to the west of the Cropley et al. (2017) project area. Pedestrian survey of the general locations of the possible cemetery locations was not fruitful: one potential cemetery location was overgrown with vegetation, while the other potential cemetery location was inundated with water and contained wetland species vegetation. One possible explanation for the sole inclusion of the cemeteries or grave sites on St. Rosalie property in 1948 could have been the discovery of burials during levee construction or repair that would have required removal and reburial. Alternatively, the depicted cemetery locations may have been temporary burial locations, or simply cartographic errors. Further research will be required to resolve this issue, including considerable research in government records (e.g., surveys held by the U.S. Army Corps of Engineers and the Louisiana Department of Public Works).

Task II: Site visit to establish current conditions and complete site mapping

Given that it has been over six months since RCG&A Phase II excavations took place at Site 16PL107 Locus 1 within the MBSD Project Construction Footprint, the potential for regrowth of the understory is high. RCG&A will revisit the site to determine the extent of the regrowth, and create a site clearing plan should it be necessary.

Task III: Site Clearing, Mechanized Stripping, Feature Recordation and Associated Unit Excavation

If it is determined, following the site visit, that site clearing, which may involve ground disturbance is required, RCG&A will map the site using a total station. Prior to beginning fieldwork at 16PL107 Locus 1 within the MBSD Project Construction Footprint, the work area will be cleared of vegetation through mechanical means. Given that most of 16PL107 Locus 1 within the MBSD Project Construction Footprint was cleared (with the exception of large trees) during RCG&A's Phase II excavations in 2022, it is anticipated the clearing can be undertaken by using a bush hog. Since archaeological data recovery investigations will occur simultaneously with construction activities, orange safety fencing will be placed to visibly demarcate the 16PL107 Locus 1 work area from the remainder of the MBSD Project Construction Footprint where construction activities will take place.

During RCG&A's Phase II investigations in 2022, the eastern portion of 16PL107 Locus 1 within the MBSD Project Construction Footprint was not examined due to the presence of a large backdirt pile, probably placed there as a result of earlier excavations completed by others. RCG&A intends to remove the backdirt pile by mechanical means and excavate approximately 98 shovel tests at 5-m (16.4-ft) intervals to delineate that portion of the eastern boundary of 16PL107 Locus 1 within the MBSD Project Construction Footprint.

Following shovel testing, field investigations at 16PL107 Locus 1 within the MBSD Project Construction Footprint will continue by mechanically stripping up to 4,000 m^2 (43,056 ft^2) (0.40 ha; 0.99 ac) of upper strata and disturbed soil. This will allow for the collection of horizontal data related to settlement organization and the site's configuration by exposing features across large parts of 16PL107 Locus 1 within the MBSD Project Construction Footprint. In order to minimize disturbance to site soils, stripping will be completed using either a rubber-tired backhoe equipped with a clean-out blade, or with a Grade-All. Areas selected for mechanical stripping will be selected based on past research, exploring areas where artifact concentrations have been identified, and where past features were found. This strategy will apply, in part, to the relocation of features found and identified by ELOS within 16PL107 Locus 1 in the MBSD Project Construction Footprint between 2019 and 2020 (Healey et al. 2020), better articulating them with those identified by RCG&A during Phase II investigations within 16PL107 Locus 1 in the MBSD Project Construction Footprint in 2022 (Kirk et al. 2022).

Each stripping area will be given a unique designation and carefully mapped using a total station as well as a Trimble GPS Unit. Standard documentation procedures will be followed for fill within each stripping area. This will include the recordation of soil descriptions using standard nomenclature and the Munsell (1993 revised) Soil Color Chart as well as a description of organic and anthropogenic materials found in each stripping area. Floors and walls for these excavations will be carefully hand-cleaned in order to identify any cultural features that may be exposed. If no cultural features are present and stripping area stratigraphy is consistent with that found in other portions of the site, only a sample of stripping area walls will be drawn and photo documented. The presence of cultural features will be further investigated as described below.

If cultural features are identified, stripping areas will be expanded into wider blocks to encompass the extent of each feature complex. Efforts will be made to identify the size and shape of all buildings uncovered at 16PL107 Locus 1 within the MBSD Project Construction Footprint, with complementary test units excavated by hand in an attempt to determine structure function. As 16PL107 Locus 1 within the MBSD Project Construction Footprint has been associ-

ated with a relatively tight chronology, material culture from general stripping areas will not be collected. Only those materials directly associated with test units and features will be recovered and subsequently curated.

All features encountered within 16PL107 Locus 1 in the MBSD Project Construction Footprint will be carefully cleaned, delineated, and recorded. Suspected pit features will be sampled in cross section to determine if their origins were anthropogenic. All features that represent intact cultural deposits will be carefully mapped using a total station as well as a Trimble GPS unit. They will be fully excavated/exposed. Feature planviews, cross-sections, and profiles will be both hand-drawn and digitally photographed. If feasible, a minimum of two liters of feature fill will be retained for flotation during laboratory analyses; the remaining feature fill will be screened through 0.625 cm (0.25 in) hardware cloth. Standard documentation procedures will be used for each feature. Documentation will include plan and profile drawings, digital photographs, and detailed written description of feature attributes. All recordation will follow LDOA guidelines. It is anticipated that no more than 60 features in total will be encountered.

Up to 30 excavation units, each placed solely within 16PL107 Locus 1 MBSD Project Construction Footprint, will be dug by hand in areas of artifact concentrations, such as suspected middens or privies, and where structures have been found so that their function may be determined. These units will typically measure 1 x 1 m (3.3 x 3.3 ft), but may be expanded into excavation blocks measuring either 2.0 by 2.0 m (6.6 by 6.6 ft) or 3.0 by 3.0 m (9.8 by 9.8 ft) to further expose any identified features. The southwest corner for each unit will be carefully mapped using a total station as well as a Trimble GPS Unit.

All units will be hand-excavated to a minimum depth of 10 cm (4 in) and extend into culturally sterile subsoil except where soil conditions or the influx of water prevent full excavation. Soil will be removed in 10 cm (4 in) arbitrary levels within natural/cultural stratigraphic horizons and screened through 0.635 cm (0.25 in) hardware cloth. Munsell (1993 revised) Soil Color Chart and standard soil nomenclature will be used to describe the feature matrix and surrounding soils; minimal pedologic attributes recorded will be color and texture.

Recovered cultural materials will be placed in bags labeled with horizontal and vertical provenience data. Standard records, artifact inventories and catalogues will follow LDOA guidelines. Wall profiles will be hand drawn and digitally photodocumented for each of the unit's walls. Planviews will be hand-drawn and digitally photodocumented at the beginning of each level when cultural features are present; drawings will not be made if the resulting image will be a blank square. Levels devoid of cultural material will only be digitally photodocumented. All levels will have detailed descriptions of any cultural material encountered within them.

Task IV: Deployment of LASARDOGS and Ground Penetrating Radar

To ensure that burials are not present in within that portion of 16PL107 Locus 1 within the MBSD Project Construction Footprint, two non-invasive detection methods will be utilized. RCG&A will work with members of the Louisiana Search and Rescue Dog Team, LASAR Dogs, whose dogs have been specially trained to work in archaeological contexts, to investigate the portion of 16PL107 Locus 1 within the MBSD Project Construction Footprint. This task will take a total of two days and will occur on a weekend. If LASAR Dogs indicate the possible presence of human remains, RCG&A will utilize a ground penetrating radar unit to verify the findings.
If human remains are found, either through intentional means or accidently during later construction related tasks, RCG&A will follow the unanticipated discovery procedures in Stipulation IX of the Programmatic Agreement for the MBSD Project (Appendix A) executed by CEMVN, the ACHP, SHPO, CPRA, and Tribal Nations.

Task V: Data Analyses

For the geospatial analyses, in order to produce the high-quality site map described above, data taken from the total station will be downloaded into a digital GIS environment. Field maps and feature sketches will be georectified and digitized, tied to points taken using the total

station. Following this, architectural features will be analyzed and grouped into structures based on orientation, construction materials/methods, and elevation. This will allow artifacts from the same structure to be analyzed as part of an arbitrary unit based on structural association and allow for the likely function (i.e., domestic, storage, cooking, etc.) of structures to be discerned. Results will not only lead to a detailed site map featuring archaeological features, but also a map of structures where likely function is defined, leading to an understanding of different activity areas across the site. Domestic artifacts associated with different domestic structures can also help discern if social differentiation (i.e., hierarchy) can be seen across the site as well.

Artifacts recovered during excavations of 16PL107 Locus 1 within the MBSD Project Construction Footprint will be bagged and labeled according to provenience, and will be transported to RCG&A's archaeological laboratory at regular (minimally bi-weekly) intervals for processing and analysis. All artifacts will be cleaned as necessary, and a coded catalog will be prepared within a Microsoft Access database. The information recorded for each artifact will include distinguished attributes, counts, comments, and manufacture dates where applicable. These data will be recorded in a format that permits further analysis and interpretation of individual data sets. All documentation, processing and analysis will be conducted in accordance with Louisiana guidelines, and all artifacts will be prepared for eventual curation at the LDOA curation facility in Baton Rouge.

Additional analyses specific to ceramics, faunal materials, and archaeobotanical remains (see below) will be conducted as warranted. The specifics of each analysis will be dependent on the recovered material and its ability to help address research questions.

Ceramics

Several coherent and well-developed classificatory systems have been developed for eighteenth and nineteenth century ceramics based on technological and stylistic variables. For instance, Ivor Noël Hume (1979) developed a concise taxonomy of English and Northern European ceramic types, and similar taxonomies exist for other regions as well (see, for example, Goggin 1968). To standardize recorded data, RCG&A employs a system that combines analysis of paste, glaze, and decorative attributes. Within this system, vessel form is classified into groups based on their functional intent (e.g., food, non-food, and unidentified [Worthy 1982]). These methods facilitate the handling of ambiguous and transitional ceramic types, and provide information needed to interpret chronological and social stratification within the 16PL107 Locus 1 MBSD Project Construction Footprint.

Chronology for materials recovered will use Stanley South's (1977) mean ceramic date formula to establish developmental sequences for St. Rosalie. Where possible, form and function of ceramic vessels will help elucidate living conditions, economic changes, and potentially differences in social roles and status for the inhabitants of the plantation. For eighteenth and nineteenth century deposits, the judicious application of such analytical procedures as ceramic price scaling; the comparison of vessel forms; and the comparison of ceramic ware types and frequencies can provide data concerning the socioeconomic status of site inhabitants (Miller 1980, 1988).

Finally, ceramic artifacts will be used along with other artifact types in functional classificatory schemes. Adapted from South's (1977:95-96) classification defining the Carolina Artifact Pattern, this type of classification is primarily undertaken to discern activity areas within the site. Functional classification also will be used in conjunction with assessments of site chronology, in order to mark the occurrence of historical events or practices. Functional classification also will be utilized for delineating areas of human activity, both spatially and temporally.

A reanalysis of ceramics recovered from 16PL107 Locus 1 within the MBSD Project Construction Footprint during the ELOS Phase II investigation (Healey et al. 2020) has recently been completed. This reanalysis was undertaken by Alexandra Cavignac as partial fulfilment of the requirements for her Master of Arts program at the University of New Orleans. Her results will be incorporated into the data recovery report where applicable.

Faunal Analysis

All faunal material recovered from 16PL107 Locus 1 within the MBSD Project Construction Footprint will be weighed and identified to size class (i.e., small mammal, medium mammal, etc.). A representative sample of fauna recovered from securely datable archaeological contexts, such as discrete cultural features, will be examined using standard zooarchaeological methods following guidelines established by Angela von den Dreisch (1976) and coded into the database according to methods adapted from Johnathan Driver (2005). This will include such things as the identification of portion recovered, notation of modifications (such as butchering marks), and degree of fusion. Specimens will be identified to species, when possible, or a more general taxa (e.g. order *artiodactyla* for fragmented portions of certain sheep, goat, and deer bones) when exact species is not identifiable. Number of Identified Specimens (NISP) will be provided and used to interpret dietary practices. While the Minimum Number of Individuals (MNI), an estimation based on paired elements, portion, symmetry, and fusion, is sometimes used in similar studies, recent scholarship (e.g. Lyman 2019; Marshall and Pilgram 1993) has suggested that NISP is often preferable, especially with highly fragmented assemblages as is common with archaeological assemblages. Biomass will be estimated based on weight of bone in each class.

Archaeobotanical Analysis

All soils retained for flotation will be processed using standard flotation procedures. This will permit the recovery of small faunal and macrobotanical remains. The great majority of plant remains deposited at a site decompose quickly, leaving a limited and biased sample of the original vegetative material. This bias is due to the cultural factors involved in deposition, and the physical factors governing the differential preservation of plants deposited. Only those vegetative remains subjected to charring, drying, or anaerobic conditions (e.g., in privy features) may be preserved.

Water flotation is a recovery technique that utilizes the differences in density of organic and inorganic materials to achieve the isolation of organic remains from the soil matrix. Careful flotation processing permits the recovery of all sizes and classes of botanical material preserved in a soil sample, allowing for a thorough analysis of vegetative remains. Analysis of plant macrofossils, in addition to study of faunal remains, can help to establish a qualitative and quantitative picture of dietary resources utilized by historic populations.

Plant remains recovered through water flotation will be separated into two size fractions (<2 mm and >2mm) for analysis. From the larger size fraction (>2 mm), all categories of vegetative material (i.e., wood, nuts, seed, pits etc.) will be isolated, counted, and weighed. From the < 2 mm size fraction, all seeds and the remains of cultivated plant parts will be removed for analysis. Species identification will be attempted on 10 per cent sample of botanical material recovered from the site. Identifications will be based on comparative collections as well as on various keys and manuals (e.g., Harlow 1959; Hillman and Martin and Barkley 1961; Montgomery 1977; Panshin and De Zeeuw 1980; Schopenmeyer 1974).

Task VI: Draft Report

Following the completion of the tasks listed above, RCG&A will complete and submit an updated archaeological site inventory form for 16PL107 to the LDOA with a copy of the form submitted to CPRA. Concurrently with the submission of the updated archeological site inventory form, RCG&A will initiate preparation of a draft report incorporating the results of all field investigations and analyses completed at Site 16PL107 Locus 1 within the MBSD Project Construction Footprint. The draft report will be submitted to CPRA through Royal for review. Once all comments from Royal and CPRA have been addressed and accepted by CPRA, RCG&A will provide up to ten (10) printed and/or pdf electronic copies of the draft report to Royal who will submit the draft report copies to CPRA. The number of print and/or digital copies RCG&A will submit to Royal will be determined by CPRA.

The draft report will be a complete document, supported with all figures, tables, and pertinent sections. The draft report will be prepared in accordance with the "Report Guidelines for Cultural Resources Investigation" dated October

2021 for Terrestrial Archaeological Site Phase III Data Recovery Reports. CPRA will provide the draft report (hard copies and electronic copies in PDF format on CD) to CEMVN for distribution to SHPO and consulting parties for review. CPRA will provide received comments to Royal to provide to RCG&A to address in a final report.

Task VII: Final Report

Following receipt of comments on the draft report from Royal, a preliminary final report will be prepared that addresses all provided comments. The final report will be a single spaced, high-quality product. The final report will comply with the standards of American Antiquity, the Department of the Interior's "Format Standards for Final Reports of Data Recovery Programs" (42 FR 5377-79, January 28, 1977), and the LDOA guidelines. One electronic copy in PDF format on CD of the preliminary final report will be prepared and submitted to CPRA through Royal for review. When the preliminary final report is accepted by CPRA, the final report will be prepared. Five (5) hard copies and up to five (5) digital copies will be provided to CPRA via Royal within 30 days after the preliminary final report is accepted. A reproducible master (both hard-copy and electronic), as well as associated geospatial data loaded on a CD, will accompany the final report.

Task VIII: Curation

All materials produced as a part of the Phase III data recovery for mitigation of construction impacts to 16PL107 Locus 1 within the MBSD Project Construction Footprint will be prepared for curation in accordance with the LDOA collections and conservation standards and with 36 CFR 79. Following the completion and acceptance of the final report, all artifacts, records, photographs, and field notes will be curated with the State of Louisiana, Department of Culture, Recreation, & Tourism, Office of Cultural Development, Division of Archaeology.

Conservation treatment for artifacts brought back to the RCG&A lab will follow the LDOA Curation Policies and Procedures. Basic cleaning and stabilization of small artifacts will be undertaken in-house, and will include documentation, individual assessment, and measurement. Permanent stabilization must be both reversible and non-destructive; even cleaning may be destructive in uncontrolled settings. Unusual, rare, valuable, or extremely fragile specimens will be treated by a trained specialist.

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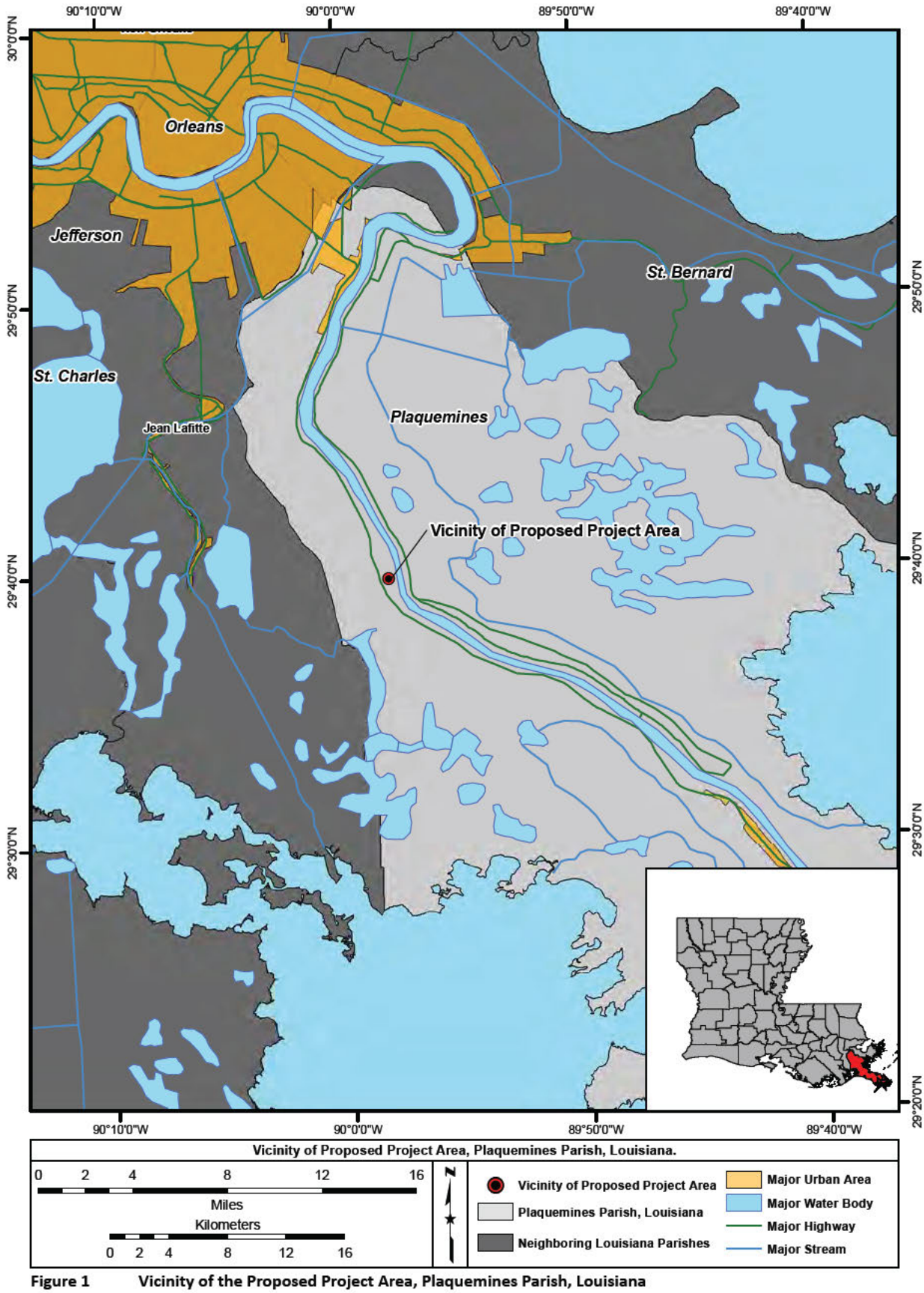


Figure 1 **Vicinity of the Proposed Project Area, Plaquemines Parish, Louisiana**

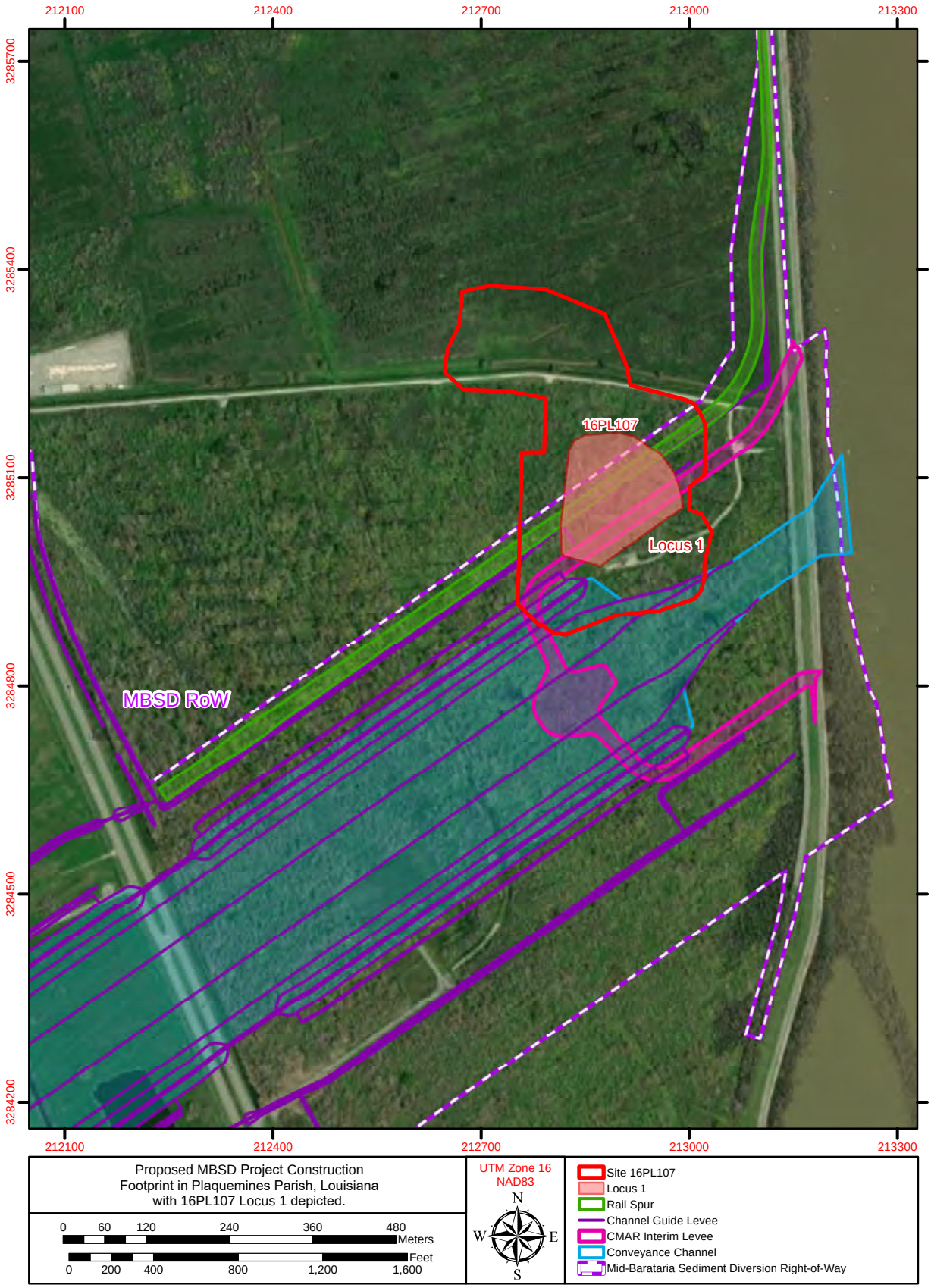
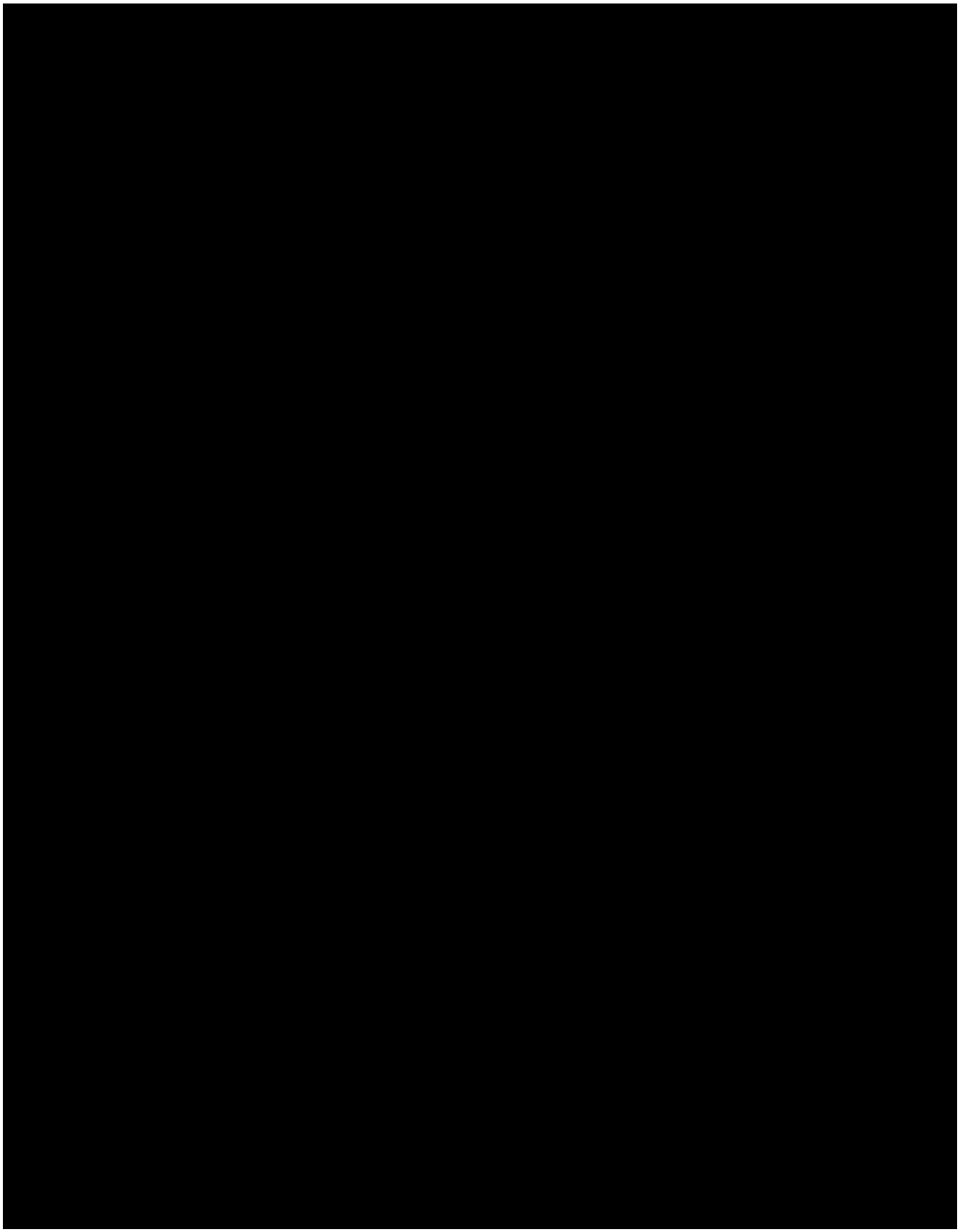


Figure 2 **Proposed MBSD Project Construction Footprint in Plaquemines Parish, Louisiana with 16PL107 Locus 1 depicted**



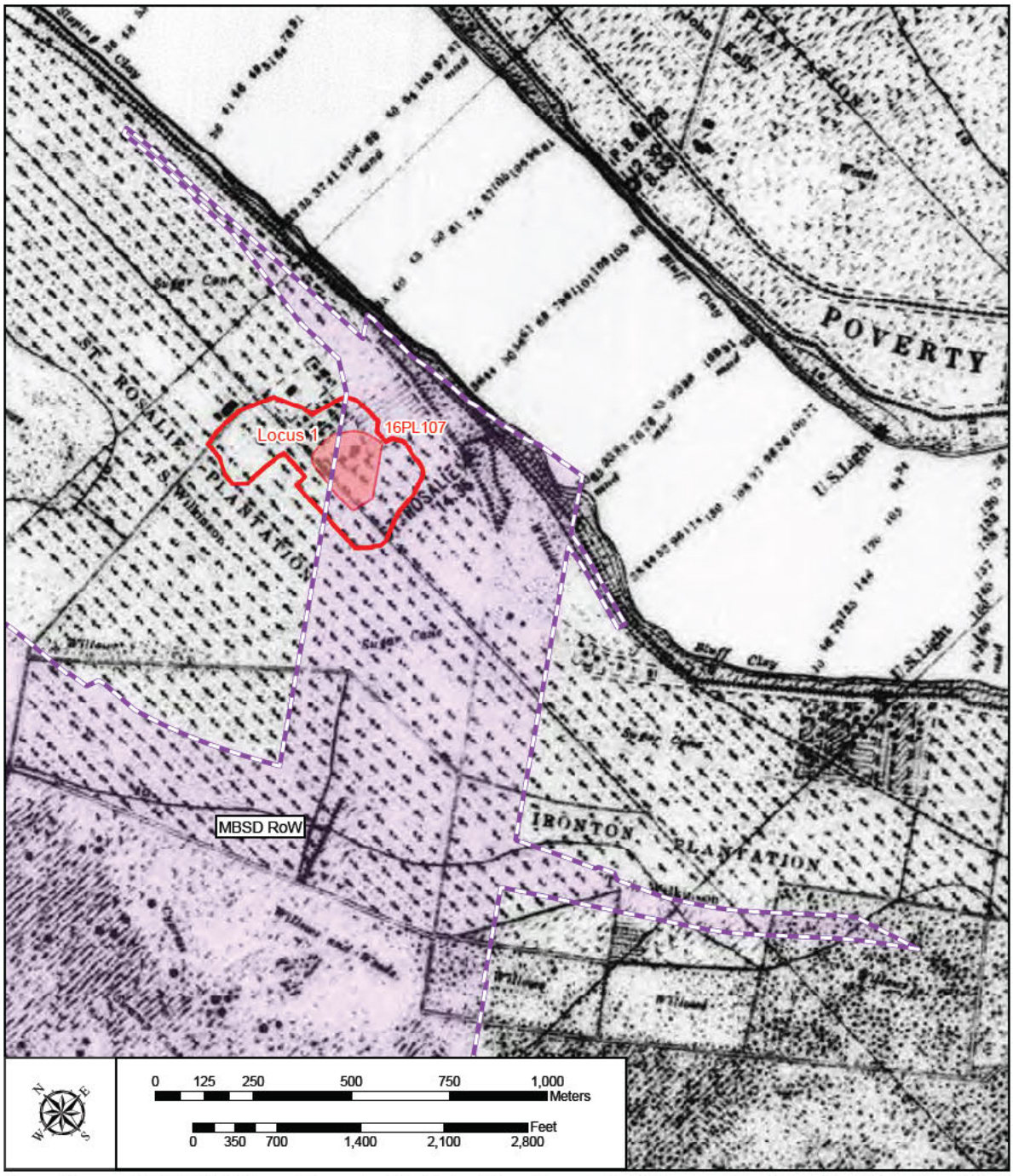


Figure 4 **[1883 (1893)] Excerpt from the Mississippi River Commission's Survey of the Mississippi River, Chart No. 79**

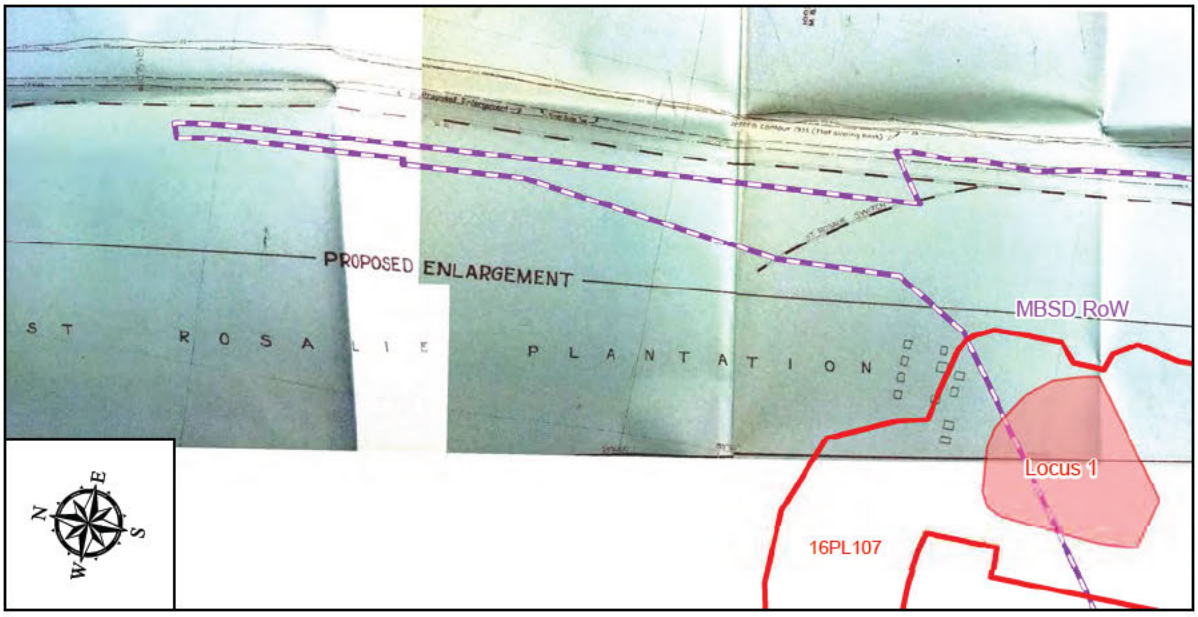


Figure 5 **[1935] Excerpt from U.S. Army Corps of Engineers' Item R1009 Proposed Levee Work for 1935-36, Mississippi River**

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION
1400 WALNUT STREET
VICKSBURG MS 39180-3262

DEC 19 2022

Mr. Bren Haase
Executive Director
Coastal Protection and Restoration Authority of Louisiana
150 Terrance Avenue
Baton Rouge, LA 70802

SUBJECT: Approval of Request for Permission under Section 408 for Mid-Barataria Sediment Diversion

Dear Mr. Haase:

This is my approval of the Coastal Protection and Restoration Authority of Louisiana (CPRA) request for permission under Section 14 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 408 (Section 408), for the Mid-Barataria Sediment Diversion (MBSD) Project. This request for permission was made on January 17, 2017 (the Request) and subsequently revised as necessary.

The MBSD Project is intended to transport sediment, freshwater, and nutrients into the Mid-Barataria Basin to reestablish the deltaic processes between the Mississippi River and the mid-Barataria Basin. It will consist of three primary components: a river intake; a conveyance channel; and, an outfall transition. The Request asked to alter the following three federal projects: the Mississippi River Ship Channel (MSRC), Baton Rouge to the Gulf; the Mississippi River Levee (MRL) feature of the Mississippi River and Tributaries (MR&T) Project; and a future segment of New Orleans to Venice (NOV) Project.

In approving the Request, I have considered the information provided by CPRA and the information gathered through the Section 10/404 permitting process and the Section 408 process. Additional information that is part of this Approval is in the Summary of Findings and Record of Decision dated December 19, 2022. My Approval is subject to the Standard and Special Terms and Conditions below:

STANDARD TERMS AND CONDITIONS

LIMITS OF THE AUTHORIZATION

1. This permission only authorizes you, the Requester, to undertake the activity described herein under the authority provided in Section 14 of the Rivers and Harbors Act of 1899, as amended (33 USC 408). This permission does not obviate the need to obtain other federal, state, or local authorizations required by law. This permission does not grant any property rights or exclusive privileges, and you must have appropriate real estate instruments in place prior to construction and/or installation.
2. The time limit for completing the work authorized ends on 31 December 2032. If you find that you need more time to complete the authorized activity, submit your request for a time

extension to this office for consideration at least one month before the above date is reached.

3. Without prior written approval of the USACE, you must neither transfer nor assign this permission nor sublet the premises or any part thereof, nor grant any interest, privilege or license whatsoever in connection with this permission. Failure to comply with this condition will constitute noncompliance for which the permission may be revoked immediately by USACE.
4. The Requester understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration of the work herein authorized, or if, in the opinion of the Secretary of the Army or an authorized representative, said work will cause unreasonable conditions and/or obstruction of USACE project authorized design, the Requester will be required upon due notice from the USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim can be made against the United States on account of any such removal or alteration.

INDEMNIFICATION AND HOLD HARMLESS

5. The United States will in no case be liable for: a. any damage or injury to the structures or work authorized by this permission that may be caused or result from future operations undertaken by the United States, and no claim or right to compensation will accrue from any damage; or b. damage claims associated with any future modification, suspension, or revocation of this permission.
6. The United States will not be responsible for damages or injuries which may arise from or be incident to the construction, maintenance, and use of the project requested by you, nor for damages to the property or injuries to your officers, agents, servants, or employees, or others who may be on your premises or project work areas or the federal project(s) rights-of-way. By accepting this permission, you hereby agree to fully defend, indemnify, and hold harmless the United States and USACE from any and all such claims, subject to any limitations in law.
7. Any damage to the water resources development project or other portions of any federal project(s) resulting from your activities must be repaired at your expense.

REEVALUATION OF PERMISSION

8. The determination that the activity authorized by this permission would not impair the usefulness of the federal project and would not be injurious to the public interest was made in reliance on the information you provided.
9. This office, at its sole discretion, may reevaluate its decision to issue this permission at any time circumstances warrant, which may result in a determination that it is appropriate or necessary to modify or revoke this permission. Circumstances that could require a reevaluation include, but are not limited to, the following:
    a. you fail to comply with the terms and conditions of this permission;
    b. the information provided in support of your application for permission proves to have been inaccurate or incomplete; or

c. significant new information surfaces which this office did not consider in reaching the original decision that the activity would not impair the usefulness of the water resources development project and would not be injurious to the public interest.

CONDUCT OF WORK UNDER THIS PERMISSION

10. You are responsible for implementing any requirements for mitigation, reasonable and prudent alternatives, or other conditions or requirements imposed as a result of environmental compliance.
11. Work/usage allowed under this permission must proceed in a manner that avoids interference with the inspection, operation, and maintenance of the federal project.
12. In the event of any deficiency in the design or construction of the requested activity, you are solely responsible for taking remedial action to correct the deficiency.
13. The right is reserved to the USACE to enter upon the premises at any time and for any purpose necessary or convenient in connection with government purposes, to make inspections, to operate and/or to make any other use of the lands as may be necessary in connection with government purposes, and you will have no claim for damages on account thereof against the United States or any officer, agent or employee thereof.
14. You must provide copies of pertinent design, construction, and/or usage submittals/documents. USACE may request that survey and photographic documentation of the alteration work and the impacted project area be provided before, during, and after construction and/or installation.
15. You may be required to perform an inspection of the federal project with the USACE, prior to your use of the structure, to document existing conditions.
16. USACE shall not be responsible for the technical sufficiency of the alteration design nor for the construction and/or installation work.
17. Once permission is granted, you must notify the New Orleans District at least 180 calendar days before work/usage is started so that post-permission oversight can be performed by USACE.
18. You must schedule a final inspection with the USACE within 30 calendar days after completion of the work but before usage.
19. You must submit a copy of "as-built" drawings within 180 calendar days of completion of work showing the new work as it relates to identifiable features of the federal project to the New Orleans District.

SPECIAL TERMS AND CONDITIONS

The Requester is responsible for all costs associated with complying and implementing these Special Terms and Conditions at no cost to the USACE.

NAVIGATION

1. The Requester will develop navigational safety measures to be implemented during both the construction and operation of the MBSD Project. The measures must be coordinated with the U.S. Coast Guard Sector New Orleans and Greater New Orleans Port Safety Council, Harbor Safety Committee's Subcommittee for Navigation and Waterway

Utilization. The Requester shall comply with any U.S. Coast Guard requests or recommendations.

2. The Requester will be responsible for identifying and remediating shoals/shoaling caused by the MBSD Project. Remedial measures include dredging. The Requester will develop and carry out a work plan to conduct hydrographic surveys and identify shoals/shoaling caused by the MBSD Project along the Mississippi River and Barataria Bay Waterway within the Federal navigation channel and USCG-authorized anchorage areas associated with these navigation channels. The Requester must submit the work plan to USACE for review and approval prior to operations. The Requester will not be allowed to operate the MBSD Project without an USACE-approved work plan. The work plan will be updated by the Requester as necessary to capture current conditions and updates will be approved by USACE.
3. The Requester is responsible for ensuring that pipelines and other utilities are not negatively impacted by the Requester's dredging operations. All infrastructure and utility improvements and relocations will ensure there is continuous service with no disruptions. All infrastructure and utility improvements will be designed and constructed using pipeline and utility owner criteria and guidelines. By accepting this permission, you hereby agree to fully defend, indemnify, and hold harmless the United States and USACE from any and all such claims, subject to any limitations in law.

FLOOD RISK MANAGEMENT:

4. All interim flood risk reduction measures constructed by the Requester shall provide the same Level of Risk Reduction (LORR) as the USACE project being altered.
5. The Requester shall conduct bathymetric surveys of the Barataria Basin in the vicinity of the diversion outfall channel. These surveys will be conducted 1 year prior to and 1 year after operation starts, and every 5 years thereafter in order to determine land accretion and sediment deposition due to the operation of the MBSD Project. The Requester shall conduct storm surge modeling to compute updated Annual Exceedance Probability (AEP) for federal flood risk management projects using model and methods approved by USACE. This modeling will be performed every 5 years, or other frequency determined by USACE. If the AEP for any federal flood risk management project increases due to the MBSD Project, the USACE will review the model results and, as necessary, establish revised flood risk management project elevations. The Requester will then be responsible for performing remedial measures USACE determines are necessary, including levee raises and structure modifications to maintain the authorized LORR.
6. The Requester is responsible for Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) of all features of the MBSD Project. OMRR&R of those portions of the MBSD Project that are determined by USACE to be integral parts of the Mississippi River Levees (MRL) feature of the MR&T Project and New Orleans to Venice (NOV) Project will be in accordance with USACE Policy and Procedures. The Requester will work with the New Orleans District to provide sufficient information to update the MRL and NOV OMRR&R Manuals related to the alteration.
7. In consultation with USACE the following high water measures shall be executed by the requester: (a) three days prior to anticipated landfall of a tropical event along the Louisiana

or Mississippi coast, the MBSD Project gates shall be fully closed on diversion channel and drainage structures. (b) During high river events, while the stage of the Mississippi River is above elevation +11 feet on the Carrollton gage, at New Orleans, Louisiana, the Requester is responsible for conducting flood fight inspections for the portions of the MBSD Project that are integral to the USACE projects at the same frequency USACE inspects the Federal Projects. Inspection reports shall be provided by the Requester to MVN Emergency Operations Center. (c) During construction a USACE approved emergency action plan shall be executed to ensure project resiliency during high river stages or tropical events.

8. The Requester shall monitor the NOV levees when operating the MBSD Project results in inundation of any portion of the NOV levee embankment.
9. The portions of the MBSD Project that are integral to the Federal Projects shall be inspected and assessed as part of USACE Structure Periodic Inspection and Levee Safety Programs. The Requester is responsible for providing USACE with all required funding for inspections, risk assessments, and reporting expenses and efforts.
10. The Requester shall submit a complete and detailed Water Control Plan developed per USACE Guidelines and Policy for a non-federal water control structures that influence an existing federal project. USACE guidance is currently in ER 1110-2-240 Water Control Management; ER 1110-2-1400 Reservoir/Water Control Management; EM 1110-2-8156 Engineering and Design Preparation of Water Control Manuals; and DIVR 1110-2-204 Engineering Design Water Control Management. The Water Control Plan, and any future updates, must be reviewed and approved in writing by USACE.

REAL ESTATE:

11. The Requester must acquire all real property interests required to construct the MBSD Project and must provide the USACE Real Estate Division with copies of the acquisition deeds for verification prior to initiating construction of the MBSD Project.
12. The Requester must comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 C.F.R. Part 24, in acquiring lands, easements, and rights-of-way required for construction and subsequent operation and maintenance of the MBSD Project, and must inform all affected persons of applicable benefits, policies, and procedures in connection with this Act.
13. The Requester will acquire necessary land in fee.

ENVIRONMENTAL COMPLIANCE:

14. The Requester shall comply with the Programmatic Agreement executed on 20 October 2022 or as revised (Programmatic Agreement among United States Army Corps of Engineers, Chitimacha Tribe of Louisiana, Choctaw Nation of Oklahoma, The Advisory Council on Historic Preservation and The Louisiana Coastal Protection and Restoration Authority Regarding the Mid-Barataria Sediment Diversion River Mile 60.7-R, Plaquemines Parish, Louisiana).
15. USACE retains the right to regulate the base flow of the MBSD Project to ensure that the MBSD Project does not operate when the Mississippi River flows are below 300,000 cfs.

USACE also retains the right to require the closure of the MBSD Project Intake Structure if conditions indicate a risk of saltwater intrusion. The Requester will be required to mitigate for saltwater intrusion impacts caused by the MBSD Project.

OTHER SPECIAL CONDITIONS:

16. The Requester shall be required to enter any necessary Project Partnership Agreements with the Department of the Army for those portions of the MBSD Project that are integral to the MRL and NOV Projects prior to the commencement of any activities.
17. The Requester shall construct and operate the MBSD Project as described in the Section 408 Request dated 13 January 2017, the final Plans and Specifications, and the final OMRR&R Plan. The Plans and Specifications and the OMRR&R Plan must be submitted to USACE for review, comment, and approval prior to construction and operation of the MBSD Project. Any amendments to the OMRR&R Plan or the final Plans and Specifications must be submitted to the USACE for review, comment, and approval. Any new, unapproved alterations of Federal projects will require approval under Section 408.
18. The Requester shall comply with the Mitigation and Stewardship Plan, the Monitoring and Adaptive Management Plan, the Marine Mammal Protection Plan, and any other commitments it made as contained in Appendix R of the Final Environmental Impact Statement (FEIS), along with any associated revisions or updates that are required in the future. Failure to comply with these Plans and obligations shall constitute noncompliance for which the permission may be revoked immediately by USACE.

Sincerely,

[redacted]

Diana M. Holland
Major General, U.S. Army
Commander