

# TERREBONNE BAY SHORELINE DEMONSTRATION – FEATURES REMOVAL (TE-0045)

# **TERREBONNE PARISH, LOUISIANA**



# STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

ANNIHI R III ARED B. MO License No. 32202 PROFESSIONAL ENGINEER NGINEE minin 12-11-1

**DECEMBER 2019** 

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## **ADVERTISEMENT FOR BIDS**

Sealed bids will be received for the State of Louisiana by the Coastal Protection and Restoration Authority, 150 Terrace Avenue, 4<sup>th</sup> Floor Conference Center, Baton Rouge, Louisiana 70802 until <u>2:00 P.M., Tuesday, March 17, 2020.</u>

ANY PERSON REQUIRING SPECIAL ACCOMMODATIONS SHALL NOTIFY THE COASTAL PROTECTION AND RESTORATION AUTHORITY OF THE TYPE(S) OF ACCOMMODATION REQUIRED NOT LESS THAN SEVEN (7) DAYS BEFORE THE BID OPENING.

# FOR: Terrebonne Bay Shoreline Demonstration – Features Removal Project Terrebonne Parish, Louisiana

## PROJECT NUMBER: TE-0045

Complete Bid Documents for this project are available in electronic form. They may be obtained without charge and without deposit from <u>http://coastal.la.gov/resources/rfps-rsiqs-contracts/bids/</u>. Printed copies can also be obtained from:

COASTAL PROTECTION AND RESTORATION AUTHORITY (CPRA) 150 Terrace Avenue, Baton Rouge, LA 70802 Attn: Allison Richard E-mail: <u>cpra.bidding@la.gov</u> Phone: (225) 342-5453 Fax: (225) 800-5599

All bids shall be accompanied by bid security in an amount of five percent (5.0%) of the sum of the base bid and all alternates. The form of this security shall be as stated in the Instructions to Bidders included in the Bid Documents for this project.

The successful Bidder shall be required to furnish a Performance and Payment Bond written as described in the Instructions to Bidders included in the Bid Documents for this project.

## A <u>MANDATORY</u> PRE-BID CONFERENCE WILL BE HELD at <u>10:00 AM on Tuesday, March 3, 2020</u> at <u>CPRA Thibodaux Regional Office, 1440 Tiger Drive, Thibodaux, LA 70301</u>

Contact Brian Babin at (985) 447-0956 if directions are needed to the Mandatory Pre-Bid Conference.

Bids shall be accepted only from those bidders who attend the Mandatory Pre-Bid Conference in its entirety. It is the responsibility of all potential bidders to visit the job site to assess the location, logistics, and site conditions prior to bidding.

Bids shall be accepted from Contractors who are licensed under LA. R.S. 37:2150-2192 for the classification of <u>Heavy</u> <u>Construction, Class III: Shoreline Protection Removal</u>. In accordance with LA. R.S. 37:2163(D), anyone objecting to the classification must send a certified letter to both the Louisiana State Licensing Board for Contractors and the CPRA at the address listed above. The letter must be received no later than ten (10) working days prior to the day on which bids are to be opened.

Bidder is required to comply with provisions and requirements of LA R.S.38:2212(B)(5). No bid may be withdrawn for a period of forty-five (45) calendar days after receipt of bids, except under the provisions of LA. R.S. 38:2214.

The Owner reserves the right to reject any and all bids for just cause. In accordance with La. R.S. 38:2212(B)(1), the provisions and requirements of this Section; and those stated in the bidding documents shall not be waived by any entity.

When this project is financed either partially or entirely with State Bonds or financed in whole or in part by federal or other funds which are not readily available at the time bids are received, the award of this Contract is contingent upon the granting of lines of credit, or the sale of bonds by the Bond Commission or the availability of federal or other funds. The State shall incur no obligation to the Contractor until the Contract between Owner and Contractor is fully executed.

Coastal Protection and Restoration Authority is a participant in the Small Entrepreneurship (SE) Program (the Hudson Initiative) and the Veteran-Owned and Service-Connected Disabled Veteran-Owned (LaVet) Small Entrepreneurships Program. Bidders are encouraged to consider participation. Information is available from Coastal Protection and Restoration Authority or on its website at <a href="http://www.coastal.la.gov/">http://www.coastal.la.gov/</a>.

STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY LAWRENCE B. HAASE, EXECUTIVE DIRECTOR

## **INSTRUCTIONS TO BIDDERS**

#### **COMPLETION TIME:**

The Bidder shall agree to fully complete the contract within **One Hundred and Twenty (120)** consecutive calendar days for the Base Bid, subject to such extensions as may be granted under Section GP-44 of the General Provisions and acknowledges that this construction time will start on or before the date specified in the written "Notice to Proceed" from the Owner.

### LIQUIDATED DAMAGES:

The Bidder shall agree to pay as Liquidated Damages the amount of One Thousand Five Hundred Dollars (\$1,500.00) for each consecutive calendar day for which the work is not complete, beginning with the first day beyond the contract completion date stated on the "Notice to Proceed" or as amended by change order.

### **ARTICLE 1**

### DEFINITIONS

1.1 The Bid Documents include the following:

Advertisement for Bids Instructions to Bidders Bid Form Bid Bond **General Provisions Special Provisions Technical Specifications Construction Drawings** Contract Between Owner and Contractor and Performance and Payment Bond Affidavit User Agency Documents (if applicable) Change Order Form Recommendation of Acceptance Other Documents (if applicable) Addenda issued during the bid period and acknowledged in the Bid Form

1.2 All definitions set forth in the General Provisions and the Special Provisions are applicable to the Bid Documents, unless otherwise specifically stated or written.

1.3 Addenda are written and/or graphic instruments issued by the Engineer prior to the opening of bids

which modify or interpret the Bid Documents by additions, deletions, clarifications, corrections and prior approvals.

1.4 A bid is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein supported by data called for by the Bid Documents.

1.5 Base bid is the sum stated in the bid for which the Bidder offers to perform the work described as the base, to which work may be added, or deleted for sums stated in alternate bids.

1.6 An alternate bid (or alternate) is an amount stated in the bid to be added to the amount of the base bid if the corresponding change in project scope or materials or methods of construction described in the Bid Documents is accepted.

1.7 A Bidder is one who submits a bid for a prime Contract with the Owner for the work described in the Bid Documents.

1.8 A Sub-bidder is one who submits a bid to a Bidder for materials and/or labor for a portion of the work.

1.9 Where the word "Engineer" is used in any of the documents, it shall refer to the Prime Designer of the project, regardless of discipline.

#### ARTICLE 2

#### PRE-BID CONFERENCE

2.1 A Pre-Bid Conference may be held at the time

and location described in the Advertisement for Bids. The purpose of the Pre-Bid Conference is to familiarize Bidders with the requirements of the Project and the intent of the Bid Documents, and to receive comments and information from interested Bidders. If the Pre-Bid Conference and/or Job Site Visit is stated in the Advertisement for Bids to be a Mandatory Pre-Bid Conference and/or Mandatory Job Site Visit, bids shall be accepted only from those bidders who attend the Pre-Bid Conference and/or Job Site Visit. Contractors who are not in attendance for the entire Pre-Bid Conference and/or Job Site Visit will be considered to have not attended.

2.2 Any revision of the Bid Documents made as a result of the Pre-Bid Conference shall not be valid unless included in an addendum.

## ARTICLE 3

### BIDDER'S REPRESENTATION

3.1 Each Bidder by making his bid represents that:

3.1.1 He has read and understands the Bid Documents and his bid is made in accordance therewith.

3.1.2 He has visited the site and has familiarized himself with the local conditions under which the work is to be performed.

3.1.3 His bid is based solely upon the materials, systems and equipment described in the Bid Documents as advertised and as modified by addenda.

3.1.4 His bid is not based on any verbal instructions contrary to the Bid Documents and addenda.

3.1.5 He is familiar with the Code of Governmental Ethics requirement that prohibits public servants and/or their immediate family members from bidding on or entering into contracts; he is aware that the Designer and its principal owners are considered Public Servants under the Code of Governmental Ethics for the limited purposes and scope of the Design Contract with the State on this Project (see Ethics Board Advisory Opinion, No. 2009-378 and 2010-128); and neither he nor any principal of the Bidder with a controlling interest therein has an immediate family relationship with the Designer or any principal within the Designer's firm. (see La. R.S. 42:1113). Any Bidder submitting a bid in violation of this clause shall be disqualified and any contract entered into in violation of this clause shall be null and void.

3.2 The Bidder must be fully qualified under any State or local licensing law for Contractors in effect at the time and at the location of the work before submitting his bid. In the State of Louisiana, Revised Statutes 37:2150, et seq. will be considered, if applicable.

The Contractor shall be responsible for determining that all of his Sub-bidders or prospective Subcontractors are duly licensed in accordance with law.

### ARTICLE 4

#### BID DOCUMENTS

4.1 Copies

4.1.1 Bid Documents may be obtained from the Coastal Protection and Restoration Authority as stated in the Advertisement for Bids.

4.1.1.2 In addition to the availability of printed Bid Documents, the Coastal Protection and Restoration Authority will provide the Bid Documents in electronic format. They may be obtained without charge and without deposit as stated in the Advertisement for Bids.

4.1.1.2.2 Where electronic distribution is provided, all other plan holders are responsible for their own reproduction costs.

4.1.2 Complete sets of Bid Documents shall be used in preparing bids; neither the Owner nor the Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.

4.1.3 The Owner or Engineer in making copies

of the Bid Documents available on the above terms, do so only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

4.2 Interpretation or Correction of Bid Documents

4.2.1 Bidders shall promptly notify the Coastal Protection and Restoration Authority contact person listed in the Advertisement for Bids of any ambiguity, inconsistency or error which they may discover upon examination of the Bid Documents or of the site and local conditions.

4.2.2 Bidders requiring clarification or interpretation of the Bid Documents shall make a written request to the Coastal Protection and Restoration Authority contact person listed in the Advertisement for Bids, to reach him/her at least seven days prior to the date for receipt of bids.

4.2.3 Any interpretation, correction or change of the Bid Documents will be made by addendum. Interpretations, corrections or changes of the Bid Documents made in any other manner will not be binding and Bidders shall not rely upon such interpretations, corrections and changes.

4.3 Substitutions

4.3.1 The materials, products and equipment described in the Bid Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. No substitutions shall be allowed after bids are received.

4.3.2 No substitution will be considered unless written request for approval has been submitted by the Proposer and has been received by the Engineer at least seven (7) working days prior to the opening of bids. (La. R.S. 38:2295(C)) Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including model numbers, drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or work that incorporation of the substitute would require shall

be included. It shall be the responsibility of the proposer to include in his proposal all changes required of the Bid Documents if the proposed product is used. Prior approval is given contingent upon supplier being responsible for any costs which may be necessary to modify the space or facilities needed to accommodate the materials and equipment approved.

4.3.3 If the Engineer approves any proposed substitution, such approval will be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner.

4.4 Addenda

4.4.1 Addenda will be mailed or delivered to all who are known by the Coastal Protection and Restoration Authority to have received a complete set of Bid Documents.

4.4.2 Copies of addenda will be made available for inspection wherever Bid Documents are on file for that purpose.

4.4.3 Except as described herein, addenda shall not be issued within a period of seventy-two (72) hours prior to the advertised time for the opening of bids, excluding Saturdays, Sundays, and any other legal holidays. If the necessity arises of issuing an addendum modifying the Bid Documents within the seventy-two (72) hour period prior to the advertised time for the opening of bids, then the opening of bids shall be extended at least seven but no more than twenty-one (21) working days, without the requirement of re-advertising. The revised time and date for the opening of bids shall be stated in the addendum.

4.4.4 Each Bidder shall ascertain from the Coastal Protection and Restoration Authority prior to submitting his bid that he has received all addenda issued, and he shall acknowledge their receipt on the Bid Form.

4.4.5 The Owner shall have the right to extend the bid date by up to (30) thirty days without the requirement of re-advertising. Any such extension shall be made by addendum issued by the Coastal Protection and Restoration Authority.

## **ARTICLE 5**

## BID PROCEDURE

5.1 Form and Style of Bids

5.1.1 Bids shall be submitted on the Louisiana Uniform Public Work Bid Form provided by the Engineer.

5.1.2 The Bidder shall ensure that all applicable blanks on the Bid Form are completely and accurately filled in.

5.1.3 Bid sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written words shall govern.

5.1.4 Any interlineation, alteration or erasure must be initialed by the signer of the bid or his authorized representative.

5.1.5 Bidders are cautioned to complete all alternates should such be required in the Bid Form. Failure to submit alternate prices will render the bid non responsive and shall cause its rejection.

5.1.6 Bidders are cautioned to complete all unit prices should such be required in the Bid Form. Unit prices represent a price proposal to do a specified quantity and quality of work. Unit prices are incorporated into the base bid or alternates, as indicated on the Unit Price Form, but are not the sole components thereof.

5.1.7 Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.

5.1.8 Written evidence of the authority of the person signing the bid for the public work shall be submitted in accordance with La. R.S. 38:2212(B)(5).

5.1.10 On any bid in excess of fifty thousand dollars (\$50,000.00), the Contractor shall certify

that he is licensed under R.S. 37: 2150-2173 and show his license number on the bid above his signature or his duly authorized representative.

5.2 Bid Security

5.2.1 No bid shall be considered or accepted unless the bid is accompanied by bid security in an amount of five percent (5.0%) of the base bid and all alternates.

The bid security shall be in the form of a certified check or cashier's check drawn on a bank insured by the Federal Deposit Insurance Corporation, or a Bid Bond written by a surety company licensed to do business in Louisiana and signed by the surety's agent or attorney-in-fact. The Bid Bond shall be written on the Coastal Protection and Restoration Authority Bid Bond Form, and the surety for the bond must meet the qualifications stated thereon. The Bid Bond shall include the legal name of the bidder be in favor of the State of Louisiana, Coastal Protection and Restoration Authority, and shall be accompanied by appropriate power of attorney. The Bid Bond must be signed by both the bidder/principal and the surety in the space provided on the Coastal Protection and Restoration Authority Bid Bond Form. Failure by the bidder/principal or the surety to sign the bid bond shall result in the rejection of the bid.

Bid security furnished by the Contractor shall guarantee that the Contractor will, if awarded the work according to the terms of his proposal, enter into the Contract and furnish Performance and Payment Bonds as required by these Bid Documents, within fifteen (15) days after written notice that the instrument is ready for his signature.

Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as penalty.

5.2.2 The Owner will have the right to retain the bid security of Bidders until either (a) the Contract has been executed and bonds have been furnished, or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

5.3 Submission of Bids

5.3.1 The Bid shall be sealed in an opaque envelope. The bid envelope shall be identified on the outside with the name of the project, and the name, address, <u>and license number</u> of the Bidder.

The envelope shall not contain multiple bid forms, and will be received until the time specified and at the place specified in the Advertisement for Bids. It shall be the specific responsibility of the Bidder to deliver his sealed bid to the Coastal Protection and Restoration Authority at the appointed place and prior to the announced time for the opening of bids. Late delivery of a bid for any reason, including late delivery by United States Mail, or express delivery, shall disqualify the bid.

If the bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "Bid Enclosed" on the face thereof. Such bids shall be sent by Registered or Certified Mail, Return Receipt Requested, addressed to:

Coastal Protection and Restoration Authority P. 0. Box 44027 Baton Rouge, Louisiana, 70804-4027.

Bids sent by express delivery shall be delivered to: Coastal Protection and Restoration Authority 150 Terrace Avenue Suite 100 Baton Rouge, Louisiana 70802

5.3.2 Bids shall be deposited at the designated location prior to the time on the date for receipt of bids indicated in the Advertisement for Bids, or any extension thereof made by addendum. Bids received after the time and date for receipt of bids will be returned unopened.

5.3.3 Bidder shall assume full responsibility for timely delivery at location designated for receipt of bids.

5.3.4 Oral, telephonic or telegraphic bids are invalid and shall not receive consideration. Owner shall not consider notations written on outside of bid envelope which have the effect of amending the

bid. Written modifications enclosed in the bid envelope, and signed or initialed by the Contractor or his representative, shall be accepted.

5.4 Modification or Withdrawal of Bid

5.4.1 A bid may not be modified, withdrawn or canceled by the Bidder during the time stipulated in the Advertisement for Bids, for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with R.S. 38:2214 which states, in part, "Bids containing patently obvious, unintentional, and substantial mechanical, clerical or mathematical errors, or errors of unintentional omission of a substantial quantity of work, labor, material, or services made directly in the compilation of the bid, may be withdrawn by the Contractor if clear and convincing sworn. written evidence of such errors is furnished to the public entity within forty eight hours of the Bid Opening excluding Saturdays, Sundays and legal holidays".

5.4.2 Prior to the time and date designated for receipt of bids, bids submitted early may be modified or withdrawn only by notice to the party receiving bids at the place and prior to the time designated for receipt of bids.

5.4.3 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.

5.4.4 Bid Security shall be in an amount sufficient for the bid as modified or resubmitted.

5.5 Prohibition of Discriminatory Boycotts of Israel

By submitting its bid, the bidder certifies and agrees that the following information is correct:

In preparing its bid, the bidder has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israel-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The bidder has also not retaliated against any person or other entity for termination, reporting such refusal, or commercially limiting actions. The state reserves the right to reject any bids if this certification is subsequently determined to be false and to terminate any contract awarded based on such a false response.

## ARTICLE 6

#### CONSIDERATION OF BIDS

6.1 Opening of Bids

6.1.1 The properly identified Bids received on time will be opened publicly and will be read aloud, and a tabulation abstract of the amounts of the base bids and alternates, if any, will be made available to Bidders.

6.2 Rejection of Bids

6.2.1 The Owner shall have the right to reject any or all bids and in particular to reject a bid not accompanied by any required bid security or data required by the Bid Documents or a bid in any way incomplete or irregular.

6.3 Acceptance of Bid

6.3.2 It is the intent of the Owner, if he accepts any alternates, to accept them in the order in which they are listed in the Bid Form. Determination of the Low Bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Owner shall reserve the right to accept alternates in any order which does not affect determination of the Low Bidder.

#### ARTICLE 7

### POST-BID INFORMATION

7.1 Submissions

7.1.1 The Contractor shall submit a Work Plan and Progress Schedule prior to the Pre-Construction Conference in conformance with applicable sections of the General and Special Provisions.

It is the preference of the Owner that, to the greatest extent possible or practical, the Contractor utilize Louisiana Subcontractors, manufacturers, suppliers and labor.

7.1.2 The General Contractor shall be responsible for actions or inactions of Subcontractors and/or material suppliers.

The General Contractor is totally responsible for any lost time or extra expense incurred due to a Subcontractor's/or Material Supplier's failure to perform. Failure to perform includes, but is not limited to, a Subcontractor's financial failure, abandonment of the project, failure to make prompt delivery, or failure to do work up to standard. Under no circumstances shall the Owner mitigate the General Contractor's losses or reimburse the General Contractor for losses caused by these events.

#### 7.1.3

In accordance with La. R.S. 38:2227 [references La. R.S. 38:2212(A)(3)(c)(ii), which has since been renumbered as La. R.S. 38:2212(B)(3)], La. R.S. 38:2212.10 and La. R.S. 23:1726(B) the apparent low bidder on this project shall submit the completed Attestations Affidavit (Past Criminal Convictions of Bidders, Verification of Employees and Certification Regarding Unpaid Workers Compensation Insurance) form found within this bid package to the Coastal Protection and Restoration Authority contact person listed in the Advertisement For Bids within 10 days <u>after</u> the opening of bids.

#### ARTICLE 8

#### PERFORMANCE AND PAYMENT BOND

8.1 Bond Required

8.1.1 The Contractor shall furnish and pay for a

Performance and Payment Bond written by a company licensed to do business in Louisiana, which shall be signed by the surety's agent or attorney-in-fact, in an amount equal to 100% of the Contract amount. Surety must be listed currently on the U. S. Department of Treasury Financial Management Service List (Treasury List) as approved for an amount equal to or greater than the contract amount, or must be an insurance company domiciled in Louisiana or owned by Louisiana residents. If surety is qualified other than by listing on the Treasury list, the contract amount may not exceed fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance and may not exceed the amount of \$500,000. However, a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A. M. Best's Key Rating Guide shall not be subject to the \$500,000 limitation, provided that the contract amount does not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide nor fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance. The Bond shall be signed by the surety's agent or attorney-infact. The Bond shall be in favor of the Coastal Protection and Restoration Authority.

8.2 Time of Delivery and Form of Bond

8.2.1 The Bidder shall deliver the required bond to the Owner simultaneous with the execution of the Contract.

8.2.2 Bond shall be in the form furnished by the Coastal Protection and Restoration Authority, entitled CONTRACT BETWEEN OWNER AND CONTRACTOR AND PERFORMANCE AND PAYMENT BOND, a copy of which is included in the Bid Documents.

8.2.3 The Bidder shall require the Attorney-in-Fact who executes the required bond on behalf of the surety to affix thereto a certified and current copy of his power of Attorney.

## ARTICLE 9

# FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

9.1 Form to be Used

9.1.1 Form of the Contract to be used shall be furnished by the Coastal Protection and Restoration Authority, an example of which is bound in the Bid Documents.

9.2 Award

9.2.1 After award of the Contract, the successful Bidder, if a corporation, shall furnish to the Owner the most current copy of a Disclosure of Ownership Affidavit on file with the Secretary of State.

9.2.2 In accordance with Louisiana Law, when the Contract is awarded, the successful Bidder shall, at the time of the signing of the Contract, execute the Non-Collusion Affidavit included in the Contract Documents.

9.2.3 When this project is financed either partially or entirely with State Bonds, the award of this Contract is contingent upon the sale of bonds by the State Bond Commission. The State shall incur no obligation to the Contractor until the Contract between Owner and Contractor is duly executed.

## LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: Coastal Protection and Restoration Authority 150 Terrace Avenue

BID FOR: **Terrebonne Bay Shoreline Demonstration** Features Removal Project (TE-0045)

Suite 100 Baton Rouge, LA 70802 (Owner to provide name and address of owner)

(Owner to provide name of project and other identifying information)

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Hartman Engineering, Inc. and dated: December 2019

(Owner to provide name of entity preparing bidding documents.)

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

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" \* but not alternates) the sum of:

Dollars (\$ )

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

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

|  | Dollars (\$                       | Not Applicable | ) |
|--|-----------------------------------|----------------|---|
| Alternate No. 2 (Owner to provide description of alternate and state whether add or de | <i>duct)</i> for the lump sum of: |                |   |
|  | Dollars (\$                       | Not Applicable | ) |
| Alternate No. 3 (Owner to provide description of alternate and state whether add or de | <i>duct)</i> for the lump sum of: |                |   |
|  | Dollars (\$                       | Not Applicable | ) |
| NAME OF BIDDER:  |                                   |                |   |
| ADDRESS OF BIDDER:   |                                   |                |   |
| LOUISIANA CONTRACTOR'S LICENSE NUMBER:   |                                   |                |   |
| NAME OF AUTHORIZED SIGNATORY OF BIDDER:  |                                   |                |   |
| TITLE OF AUTHORIZED SIGNATORY OF BIDDER:   |                                   |                |   |
| SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **:  |                                   |                |   |
| DATE:  |                                   |                |   |

## THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA **UNIFORM PUBLIC WORK BID FORM:**

\* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

\*\* A CORPORATE RESOLUTION OR WRITTEN EVIDENCE of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

## LOUISIANA UNIFORM PUBLIC WORK BID FORM **UNIT PRICE FORM**

TO: Coastal Protection and Restoration Authority

150 Terrace Avenue

Terrebonne Bay Shoreline Demonstration Features Removal Project (TE-0045) BID FOR

Suite 100

Baton Rouge, LA 70802 (Owner to provide name and address of owner)

(Owner to provide name of project and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

| DESCRIPTION:  | ⊠ Base Bid or □ Alt.#MOBILIZATION AND DEMOB |                  |                                       |  |  |  |  |
|---|---|------------------|---------------------------------------|--|--|--|--|
| REF. NO.  | QUANTITY:                                   | UNIT OF MEASURE: | UNIT PRICE                            | UNIT PRICE EXTENSION (Quantity times Unit Price) |  |  |  |
| 01  | 1   | LUMP SUM         |                                       |  |  |  |  |
| DESCRIPTION:  | 🖾 Base Bid or 🕻                             | Alt # SURVEY AND | D PROJECT LAYOUT                      |  |  |  |  |
| REF. NO.  | QUANTITY:                                   | UNIT OF MEASURE: | UNIT PRICE                            | UNIT PRICE EXTENSION (Quantity times Unit Price) |  |  |  |
| 02  | 1   | LUMP AUM         |                                       |  |  |  |  |
|   |   |                  |                                       |  |  |  |  |
| DESCRIPTION:  | 🗵 Base Bid or 🕻                             |                  | MOUR UNITS REMOVAL                    |  |  |  |  |
| REF. NO.  | QUANTITY:                                   | UNIT OF MEASURE: | UNIT PRICE                            | UNIT PRICE EXTENSION (Quantity times Unit Price) |  |  |  |
| 03  | 900   | LINEAR FOOT      |                                       |  |  |  |  |
| DESCRIPTION:  | Base Bid or                                 | Alt.# GABION MA  | T UNITS REMOVAL                       |  |  |  |  |
| REF. NO.  | QUANTITY:                                   | UNIT OF MEASURE: | UNIT PRICE                            | UNIT PRICE EXTENSION (Quantity times Unit Price) |  |  |  |
| 04  | 900   | LINEAR FOOT      |                                       |  |  |  |  |
| DESCRIPTION:  | ⊠ Base Bid or □                             | Alt.# FORESHORE  | E TRIANGULAR (REEF BLOCKS) UNITS REMO | VAL  |  |  |  |
| REF. NO.  | QUANTITY:                                   | UNIT OF MEASURE: | UNIT PRICE                            | UNIT PRICE EXTENSION (Quantity times Unit Price) |  |  |  |
| 05  | 900   | LINEAR FOOT      |                                       |  |  |  |  |
| DESCRIPTION:  | 🗵 Base Bid or 🕻                             | Alt.# REMOVAL O  | DF TIE-DOWN ANCHOR                    |  |  |  |  |
| REF. NO.  | QUANTITY:                                   | UNIT OF MEASURE: | UNIT PRICE                            | UNIT PRICE EXTENSION (Quantity times Unit Price) |  |  |  |
| 06  | 189   | EACH             |                                       |  |  |  |  |
| DESCRIPTION:  | 🗵 Base Bid or 🕻                             | Alt.# REMOVAL O  | DF TIE-IN UNIT                        |  |  |  |  |
| REF. NO.  | QUANTITY:                                   | UNIT OF MEASURE: | UNIT PRICE                            | UNIT PRICE EXTENSION (Quantity times Unit Price) |  |  |  |
| 07  | 790   | LINEAR FOOT      |                                       |  |  |  |  |
| DESCRIPTION: Description: Alt.# PERMANENT WARNING SIGNS REMOVAL |   |                  |                                       |  |  |  |  |
| DESCRIPTION:  |   |                  |                                       |  |  |  |  |
| REF. NO.  | QUANTITY:                                   | UNIT OF MEASURE: | UNIT PRICE                            | UNIT PRICE EXTENSION (Quantity times Unit Price) |  |  |  |

Wording for "DESCRIPTION" is to be provided by the Owner.

All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

## **BID BOND**

## FOR COASTAL PROTECTION AND RESTORATION AUTHORITY PROJECTS

#### KNOW ALL MEN BY THESE PRESENTS:

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater that the amount for which it obligates itself in this instrument or that it is a Louisiana domiciled insurance company with at least an A - rating in the latest printing of the A. M. Best's Key Rating Guide. If surety qualifies by virtue of its Best's listing, the Bond amount may not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Obligee on a Contract for:

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

PRINCIPAL (BIDDER)

SURETY

 BY:

AGENT OR ATTORNEY-IN-FACT(SEAL)

Date:

## **TERREBONNE BAY SHORELINE DEMONSTRAITON FEATURES REMOVAL PROJECT Name of Project**

TE-0045 **Project No.** 

STATE OF \_\_\_\_\_\_

PARISH OF \_\_\_\_\_

## **ATTESTATIONS AFFIDAVIT**

**Before me**, the undersigned notary public, duly commissioned and qualified in and for the parish and state aforesaid, personally came and appeared Affiant, who after being duly sworn, attested as follows:

## LA. R.S. 38:2227 PAST CRIMINAL CONVICTIONS OF BIDDERS

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

(a) Public bribery (R.S. 14:118)(b) Corrupt influencing (R.S. 14:120)

(c) Extortion (R.S. 14:66)(d) Money laundering (R.S. 14:230)

- B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:
  - (a) Theft (R.S. 14:67)
    (b) Identity Theft (R.S. 14:67.16)
    (c) False accounting (R.S. 14:70)
    (d) Issuing worthless checks (R.S. 14:71)
- (e) Bank fraud (R.S. 14:71.1)
- (f) Forgery (R.S. 14:72)
- (g) Contractors; misapplication of payments (R.S. 14:202)
- (h) Malfeasance in office (R.S. 14:134)

## LA. R.S. 38:2212.10 Verification of Employees

- A. At the time of bidding, Appearer is registered and participates in a status verification system to verify that all new employees in the state of Louisiana are legal citizens of the United States or are legal aliens.
- B. If awarded the contract, Appearer shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.
- C. If awarded the contract, Appearer shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

## <u>TERREBONNE BAY SHORELINE</u> DEMONSTRAITON <u>FEATURES REMOVAL PROJECT</u> Name of Project

TE-0045 Project No.

## LA. R.S. 23:1726(B) Certification Regarding Unpaid Workers Compensation Insurance

- A. R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.
- B. By signing this bid /proposal, Affiant certifies that no such assessment is in effect against the bidding / proposing entity.

NAME OF BIDDER

NAME OF AUTHORIZED SIGNATORY OF BIDDER

DATE

TITLE OF AUTHORIZED SIGNATORY OF BIDDER

## SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER/AFFIANT

Sworn to and subscribed before me by Affiant on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Notary Public

## FOR INFORMATION ONLY

This document will be prepared by the Coastal Protection and Restoration Authority in the form appropriate for the project.

### CONTRACT BETWEEN OWNER AND CONTRACTOR AND PERFORMANCE AND PAYMENT BOND

This agreement entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2020, by (CONTRACTOR NAME) hereinafter called the "Contractor", whose business address is \_\_\_\_\_\_, and the State of Louisiana Coastal Protection and Restoration Authority, herein represented by its Executive Director executing this contract, and hereinafter called the "Owner".

Witnesseth that the Contractor and the Owner, in consideration of premises and the mutual covenants; consideration and agreement herein contained, agree as follows:

<u>Statement of Work</u>: The contractor shall furnish all labor and materials and perform all of the work required to build, construct and complete in a thorough and workmanlike manner:

Project No. \_\_\_\_\_ Site Code \_\_\_\_\_

in strict accordance with Contract Documents prepared by Owner.

It is recognized by the parties herein that said Contract Documents, including by way of example and not of limitation, the Plans, Specifications (including General Provisions, Special Provisions, and Technical Specifications), Any Addenda thereto, Instructions To Bidders, this Contract, Advertisement For Bids, Affidavit, Bid Form, Bonds (Bid, Performance, and Payment), any Submitted Post-Bid Documentation, Notice of Award, Notice to Proceed, Change Orders, and Claims, if any, impose duties and obligations upon the parties herein, and said parties thereby agree that they shall be bound by said duties and obligations. For these purposes, all of the provisions contained in the aforementioned Contract Documents are incorporated herein by reference with the same force and effect as though said Contract Documents were herein set out in full.

<u>Time for Completion</u>: The work shall be commenced on a date to be specified in a written order of the Owner and shall be completed within \_\_\_\_\_ consecutive calendar days from and after the said date.

<u>Liquidated Damages</u>: Contractor shall be assessed Liquidated Damages in the amount of <u>per day for each consecutive calendar day which work is not complete beginning with the first day beyond the completion time.</u>

<u>Compensation to be paid to the Contractor</u>: The Owner will pay and the Contractor will accept in full consideration for the performance of the contract the sum of <u>Dollars (\$)</u> which sum represents the Contract Price.

<u>Performance and Payment Bond</u>: To these presents personally came and intervened

\_\_\_\_\_\_\_, herein acting for \_\_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_\_, and duly authorized to transact business in the State of Louisiana, as surety, who declared that having taken cognizance of this contract and of the Construction Documents mentioned herein, he hereby in his capacity as its Attorney in Fact obligates his said company, as Surety for the said Contractor, unto the said Owner, up to the sum of **Dollars (\$)**. By issuance of this bond, the surety acknowledges they are in compliance with R.S. 38:2219.

The condition of this performance and payment bond shall be that should the Contractor herein not perform the contract in accordance with the terms and conditions hereof, or should said Contractor not fully indemnify and save harmless the Owner, from all cost and damages which he may suffer by said Contractor's non-performance or should said Contractor not pay all persons who have and fulfill obligations to perform labor and/or furnish materials in the prosecution of the work provided for herein, including by way of example workmen, laborers, mechanics, and furnishers of materials, machinery, equipment and fixtures, then said Surety agrees and is bound to so perform the contract and make said payment(s).

Provided, that any alterations which may be made in the terms of the contract or in the work to be done under it, or the giving by the Owner of any extensions of time for the performance of the contract, or any other forbearance on the part of either the Owner or the Contractor to the other shall not in any way release the Contractor or the Surety from their liability hereunder, notice to the Surety of any such alterations, extensions or other forbearance being hereby waived.

The Contractor agrees to abide by the requirements of the following as applicable: Title VI and VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veteran's Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, the Age Act of 1972, and contractor agrees to abide by the requirements of the Americans with Disabilities Act of 1990.

Contractor agrees not to discriminate in its employment practices, and will render services under this contract without regard to race, color, sex, religion, national origin, genetic information, age or disabilities. Any act of discrimination committed by Contractor or failure to comply with these statutory obligations when applicable shall be grounds for termination of this contract.

In Witness whereof, the parties hereto on the day and year first above written have executed this agreement in <u>seven (7)</u> counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

## STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

| <br>BY:                               |
|---------------------------------------|
| Lawrence B. Haase, Executive Director |
|                                       |
| <br>BY:                               |
|                                       |
|                                       |
| SURETY:                               |
| BY:<br>ATTORNEY IN FACT               |
| <br>                                  |
|                                       |
| ADDRESS                               |

WITNESSES:

TELEPHONE NUMBER

| PROJECT NO. |  |
|-------------|--|
| NAME        |  |
| LOCATION:   |  |

## A F F I D A V I T

Before me, the undersigned authority, duly commissioned and qualified within and for the State and Parish aforesaid, personally came and appeared \_\_\_\_\_\_ representing who, being by me first duly sworn deposed and said that he has read this affidavit and does hereby agree under oath to comply with all provisions herein as follows:

## PART I.

Section 2224 of Part II of Chapter 10 of Title 38 of the Louisiana Revised Statutes, as

amended.

(1) That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and

(2) That no part of the Contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the Contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

#### PART II.

Section 2190 of Part I of Chapter 10 of Title 38 of the Louisiana Revised Statutes, as amended.

That affiant, if an architect or engineer, or representative thereof, does not own a substantial financial interest, either directly or indirectly, in any corporation, firm, partnership, or other organization which supplies materials for the construction of a public work when the architect or engineer has performed architectural or engineering services, either directly or indirectly, in connection with the public work for which the materials are being supplied.

For the purposes of this Section, a "substantial financial interest" shall exclude any interest in stock being traded on the American Stock Exchange or the New York Stock Exchange.

That affiant, if subject to the provisions of this section, does hereby agree to be subject to the penalties involved for the violation of this section.

AFFIANT

SWORN TO AND SUBSCRIBED BEFORE ME THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2020.

NOTARY

## PART I <u>GENERAL PROVISIONS</u>

## GP-1 DEFINITION OF TERMS

Whenever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to the singular or plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs and the titles of other documents or forms.

Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

- a. <u>Acceptance</u>: A written approval from the Engineer which certifies that specific items of work in the Contract have been completed and/or obligations have been fulfilled by the Contractor.
- b. <u>Addenda</u>: Those written or graphic documents which are issued prior to opening of Bids in accordance with the Bidding Requirements and clarify or change the bidding requirements or the proposed Contract Documents.
- c. <u>Application of Payment</u>: That form which is used by the Contractor to request partial and final payment and is deemed acceptable to the Owner. It shall be accompanied by any supporting documentation required by the Contract Documents.
- d. <u>A.S.T.M.</u>: American Society for Testing and Materials.
- e. <u>Bid</u>: An offer or proposal submitted on the prescribed form setting forth the prices for the Work.
- f. <u>Bidder</u>: The person, association of persons, firm, or corporation submitting a proposal for the Work.
- g. <u>Bidding Requirements</u>: The Advertisement for Bids, Instructions to Bidders, Form of Bid Security, if any, and Bid Form with any supplements.
- h. <u>Change Order</u>: A written order which is submitted to the Contractor, signed by the Owner, and authorizes an addition, deletion, or revision in the Work, or an adjustment in the contract price or the contract time issued after the effective date of the Contract.
- i. <u>Claim</u>: A written demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both or other relief with respect to the terms of the Contract.
- j. <u>Contract</u>: The written agreement between the Owner and the Contractor which defines the work to be completed and shall be understood to also include all Contract Documents.
- k. <u>Contract Documents</u>: The Contract, all addenda which pertains to the Contract Documents, Bid Documents and specified Attachments accompanying the Bid and any

post-bid documentation submitted prior to the Notice of Award, Contractor's Bid when attached as an exhibit to the Agreement, the Bonds (Bid and Performance/Payment), General Provisions, Special Provisions, Technical Specifications, Plans, and all Field or Change Orders issued after the execution of the Agreement. Shop Drawings and other submittals by the Contractor are not Contract Documents.

- 1. <u>Contract Price</u>: The moneys payable by the Owner to the Contractor for the Work in accordance with the Contract Documents as stated in the Contract.
- m. <u>Contract Time</u>: The number of calendar days specified in the Contract for completion of the Work, together with any extensions authorized through change orders.
- n. <u>Contractor</u>: The person, association of persons, firm, or corporation entering into the duly awarded Contract.
- o. <u>Contracting Agency</u>: The State of Louisiana, Coastal Protection and Restoration Authority (CPRA).
- p. <u>Day</u>: When any period of time is referred to in the Contract Documents using days, it will be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday, Sunday, or a legal holiday, that day will be omitted from the computation. A calendar day is measured as twenty-four (24) hour period starting at midnight and ending the following midnight.
- q. <u>Design Report</u>: A written report by the Engineer which provides the design methodology for the Work.
- r. <u>Effective Date of the Contract</u>: The date indicated in the Contract on which it becomes effective.
- s. <u>Engineer</u>: The State of Louisiana, Coastal Protection and Restoration Authority, or its designee.
- t. <u>Equipment</u>: All machinery, implements, and power-tools, in conjunction with the necessary supplies for the operation, upkeep, maintenance, and all other tools and apparatuses necessary for the proper construction and acceptable completion of the Work.
- u. <u>Extension of Contract</u>: Any extension of time for completion of Work beyond the Contract Time which is granted by the Owner, recommended by the Engineer and approved by the Coastal Protection and Restoration Authority in the form of a Change Order.
- v. <u>Federal Sponsor</u>: The federal agency which has been tasked, if applicable, to manage the implementation of the project.
- w. <u>Field Order</u>: A written order issued by the Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or Contract Time.
- x. <u>Laboratory</u>: The firm, company, or corporation which is used to test materials and is approved for use by the Engineer.

- y. <u>Laws and Regulations: Laws or Regulations</u>: Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
- z. <u>Materials</u>: Any substance used in the Work to build structures, but does not include material used in false work or other temporary structures not incorporated in the Work.
- aa. <u>Milestone</u>: A principal event specified in the Contract Documents relating to an intermediated completion date or time prior to the Contract Times.
- bb. <u>Notice of Award</u>: A written notice to the successful Bidder stating that the Bid has been accepted by the Owner and that the successful Bidder is required to execute the Contract and furnish the Payment and Performance Bond and Non-Collusion Affidavit.
- cc. <u>Notice to Proceed</u>: The written notice to the Contractor by the Owner which provides the starting date for the Contract Time.
- dd. <u>Owner</u>: The Owner is the State of Louisiana (State) which acts through the Contracting Agency.
- ee. <u>Performance and Payment Bond</u>: The approved form of security furnished by the Contractor and Surety for the faithful performance of the Work, and the payment for all labor, materials, and/or obligations incurred by the Contractor in the prosecution thereof.
- ff. <u>Plans</u>: That part of the Contract Documents prepared or approved by the Engineer which graphically shows the scope, intent, and character of the Work to be completed by the Contractor.
- gg. <u>Project Site</u>: The location where the Work is to be performed as stated in the Contract Documents.
- hh. <u>Resident Project Representative</u>: An authorized representative of the Engineer who is responsible to inspect the Work and materials furnished by the Contractor.
- ii. <u>Right-of-way</u>: That entire area reserved for constructing, maintaining, and protecting the proposed improvement, structures, and appurtenances of the Work.
- jj. <u>Samples</u>: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portions of the Work will be judged.
- kk. <u>Shop Drawings</u>: All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the Work to be performed.
- 11. <u>Specifications</u>: That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the work to be performed and certain administrative details applicable thereto.
- mm. <u>State</u>: The State of Louisiana.

- nn. <u>Structures</u>: Bridges, plugs, weirs, bulkheads, berms, dams, levees, and other miscellaneous construction encountered during the Work and not otherwise classified herein.
- oo. <u>Subcontractor</u>: Any person, association of persons, firm, or corporation who contracts with the Contractor to perform any part of the project covered by the Contract.
- pp. <u>Submittals</u>: Certificates, samples, shop drawings, and all other project data which are submitted to the Engineer in order to verify that the correct products will be installed on the project.
- qq. <u>Successful Bidder</u>: The lowest responsive and responsible Bidder whom the Owner makes an award.
- rr. <u>Special Provisions</u>: That part of the Contract Documents which amends or supplements these General Provisions.
- ss. <u>Surety</u>: The corporate body, licensed to do business in Louisiana, bound with and for the Contractor's primary liability, and engages to be responsible for payment of all obligations pertaining to acceptable performance of the Work contracted.
- tt. <u>Temporary Structures</u>: Any non-permanent structure required while engaged in the prosecution of the Contract.
- uu. <u>Work</u>: All work specified herein or indicated on the Plans.
- vv. <u>Work Plan</u>: A written plan by the Contractor that details how the Work will be provided including layout drawings, projected schedule (Initial Progress Schedule), and a list of labor hours, materials, and equipment.

## GP-2 BID REQUIREMENTS

The Contract and Bonds which govern the Work shall be performed in accordance with the Plans, Specifications, and the Louisiana Standard Specifications for Roads and Bridges, 2016 edition. The Bidder understands that all quantities for performing the Work have been estimated by the Engineer, and that the Bid shall be the sum of the quantities multiplied by their respective unit rates. The Contract shall be awarded by the Owner through a comparison of all bids. It is the responsibility of each Bidder before submitting a Bid to:

- 2.1. Examine the Bidding Documents including the Plans and Specifications and any Addenda or related data identified in the Bidding Documents;
- 2.2. Visit the Project Site to become familiar with the local conditions if they are believed to affect cost, progress, or the completion of the Work;
- 2.3. Become familiar and satisfied with all federal, state, and local Laws and Regulations that may affect cost, progress, or the completion of the Work;
- 2.4. Study and correlate all information known to the Bidder including observations obtained from Bidder's visits, if any, to the Project Site, with the Bidding Documents;

- 2.5. Submit a written notice to the Engineer within three (3) days regarding any conflicts, errors, ambiguities, or discrepancies discovered in the Bidding Documents and confirm that the written resolution thereof by the Engineer is acceptable to the Bidder; and
- 2.6. Determine that the Bidding Documents are generally sufficient to convey an understanding of all terms and conditions for completing the required Work.

The submission of a Bid will constitute an incontrovertible representation that the Bidder has complied with every requirement of these Specifications. The Bidder shall comply with all other requirements specified in the Advertisement For Bids and the Instruction To Bidders.

## GP-3 AVAILABILITY OF PLANS AND SPECIFICATIONS

One (1) set of Plans and Specifications shall be furnished to each Bidder. Three (3) sets of the Plans and Specifications shall be furnished to the Contractor upon award of the Contract. Additional sets may be furnished to the Contractor upon request from the Coastal Protection and Restoration Authority, 150 Terrace Avenue, Suite 100, Baton Rouge, Louisiana 70802.

### GP-4 LAWS, REGULATIONS, STANDARDS, SPECIFICATIONS, AND CODES

Bidders are required to become familiar and remain in compliance with all Federal, State, and local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority which may affect those employed for the execution of the Work or which may affect the conduct of the Work. The Contractor shall indemnify the Owner and its representatives against any claim or liability arising from all violations of any laws, bylaws, ordinances, codes, regulations, orders, or decrees, whether by the Contractor or by the Contractor's employees. The filing of a bid will be presumptive evidence that the Bidder has complied with this requirement. The Owner will not be responsible for any inaccurate interpretations or conclusions drawn by the Contractor from information and documentation provided by the Owner.

References to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws and Regulations, whether such reference be specific or by implication, may not be in effect at the time of opening the Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents. No provision of any such standard, specification, manual, or code, or any instruction of a supplier shall be effective to change the duties or responsibilities of the Owner or Engineer, or any of their Subcontractors, consultants, agents, or employees from those set forth in the Bid Documents. No such provision shall be effective to assign to the Owner or Engineer, or any of their consultants, agents, or employees any duty or authority to supervise or direct the performance of the Contractor's obligations or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

The obligations imposed by these specifications are in addition to and are not to be construed in any way as a limitation of any rights available to the Engineer or Owner which are otherwise imposed by any laws or regulations or other provisions within the Contract Documents.

The Contractor shall abide by laws set forth in the Davis-Bacon Act of 1931 which states that all laborers and mechanics employed by recipients, the recipient's contractors, or

subcontractors on this project shall be paid wages at rates no less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with Subchapter IV of Chapter 31 of Title 40 United States Code. Additionally, with respect to the labor standards specified in this section, the Secretary of Labor shall have the authority and functions set forth in Reorganization Plan Number 14 of 1950 (64 Stat. 1267; 5 U.S.C. App.) and The Copeland Act of Title 40 (40 U.S.C. § 3145). Prevailing Wage Determination Schedules, as determined by the United States Department of Labor, are provided in the Appendix. Prevailing Wage Determination Schedules are subject to modification by the United States Department of Labor. The Contractor is responsible for utilizing the most current Prevailing Wage Determination Schedule. These documents can be downloaded from the following link: <u>http://www.wdol.gov/dba.aspx#3</u>. Modifications to Prevailing Wage Determination Schedules shall be effective if received (or posted) no less than 10 days prior to bid opening.

### GP-5 PRE-BID CONFERENCE AND SITE VISIT

A Pre-Bid Conference and/or Job Site Visit may be held at the location and on the date provided in the Advertisement For Bids. If the Pre-Bid Conference and/or Job Site Visit is stated in the Advertisement for Bids to be a MANDATORY Pre-Bid Conference and/or MANDATORY Job Site Visit, bids shall be accepted only from those bidders who attend the Pre-Bid Conference and/or Job Site Visit in its entirety. Failure to attend a mandatory Pre-Bid Conference and/or mandatory Job Site Visit in its entirety will result in a null or void Bid.

All questions shall be in writing and faxed or emailed to the Coastal Protection and Restoration Authority contact person listed in the Advertisement For Bids after the Pre-Bid Conference and by the due date announced at the Pre-Bid conference. In order to ensure adequate response time, all questions and/or requests for clarification or interpretation of the Bid Documents should be received by the Coastal Protection and Restoration Authority at least seven days prior to the date for receipt of bids. Oral statements will not be binding or legally effective. The Coastal Protection and Restoration Authority will issue addenda in response to all questions arising at the Pre-Bid Conference and site visit to all prospective Bidders on record. All prospective Bidders on record may contact the Coastal Protection and Restoration Authority contact person for any additional information.

#### GP-6 NOTICE OF AWARD

The Owner, or its designated bidding agent, shall provide written notice to the Successful Bidder stating that the Owner will sign and deliver the Contract upon compliance with the conditions enumerated therein and within the time specified.

## GP-7 NOTICE TO PROCEED AND CONTRACT TIME

The Contractor shall start the Work and begin the Contract Time on the dates provided in the Notice to Proceed. The Work shall be conducted using sufficient labor, materials, and equipment as necessary to ensure completion within the Contract Time. The Contract Time for completion of the Base Bid for the Work is provided in the Instructions To Bidders, unless an extension is granted to the Contract Time as specified in GP-44. If the Bid contains an Alternate Bid(s), and the Alternate Bid(s) is awarded and included in the Contract, the Contract Time associated with the Alternate Bid(s) will be as provided in the Instructions To Bidders.

Unless otherwise noted in the Contract Documents, Contract Time will be on a calendar day basis. Contract Time shall consist of the number of calendar days stated in the Instructions To Bidders and the Contract beginning with the date noted in the written Notice to Proceed, including Saturdays, Sundays, holidays and non-work days.

The following table defines the monthly anticipated adverse weather days that are expected to occur during the Contract Time and will constitute the baseline monthly weather time for evaluations. The schedule is based upon National Oceanic and Atmospheric Administration (NOAA) or similar data for the regional geographic area.

|      | Monthly Anticipated Adverse Weather Calendar Days          |   |   |   |   |   |   |   |   |   |   |
|------|--|---|---|---|---|---|---|---|---|---|---|
| Jan. | Jan. Feb. Mar. Apr. May Jun. Jul. Aug. Sep. Oct. Nov. Dec. |   |   |   |   |   |   |   |   |   |   |
| 5    | 5  | 4 | 4 | 4 | 5 | 7 | 7 | 5 | 3 | 3 | 4 |

Adverse weather days must prevent Work for fifty percent (50%) or more of the work day and delay work critical to the timely completion of the project. The number of actual adverse weather days shall be calculated chronologically from the first to the last day of each month.

If adverse weather conditions are the basis for a claim for additional time, the Contractor shall document that weather conditions had an adverse effect on the scheduled construction. An increase in Contract Time due to weather due to weather shall not be cause for an increase in the contract sum.

## GP-8 WORK PLAN

The Contractor shall develop a written Work Plan which accounts for all of the construction activities required by the Contract Documents. The Work Plan shall include a list of the individual construction tasks to be completed and the estimated dates for beginning and completing the tasks. It shall also include all other items which are applicable to completing the Work such as, but not limited to, the following:

- a. Typical report form for the Bi-Weekly Progress Meeting;
- b. Typical form for Daily Progress Report;
- c. Hurricane and Severe Storm Plan;
- d. Site-specific Health and Safety Plan;
- e. The delivery method and source(s) of all construction materials (company or producer name, mailing and physical address, phone number, and name of contact person).
- f. The personnel, material, subcontractors, fabricators, suppliers, types of equipment, and equipment staging areas the Contractor proposes to use for construction;
- g. Shop drawings, test results, and sample submittals;
- h. Survey layout and stakeout;

i. All supplemental items specified in the Special Provisions.

The Work Plan shall be submitted to the Engineer prior to the Pre-Construction Conference by the date provided in the Special Provisions. The Engineer shall review the Work Plan and have the Contractor make any necessary revisions prior to acceptance of the plan. No payment for mobilization will be made until the Work Plan has been accepted by the Engineer.

#### GP-9 PROGRESS SCHEDULE

The Contractor shall develop a written Progress Schedule which provides for an orderly progression of the Work, submittals, tests, and deliveries in order to complete the Work within the specified Milestones and Contract Time. All of the items listed in the Work Plan shall be integrated into the Progress Schedule. The format of the schedule shall be composed using Microsoft Project<sup>®</sup>, or any other software deemed acceptable by the Engineer. It shall be updated weekly by the Contractor, at a minimum. The Progress Schedule shall also include, but not be limited to the following:

- a. All of the elements in the Work Plan, including updates;
- b. A work order issued from Louisiana One Call ordering all their subscribers in the project area to mark their utilities;
- c. A telephone log verifying that all property owners and utilities have been contacted. This log should list the time, date, and names of the personnel representing the property owners, utilities, and Contractor;

The Progress schedule must reflect the anticipated adverse weather delays described in GP-7 on all weather dependent activities.

The Progress Schedule shall be submitted to the Engineer prior to the Pre-Construction Conference by the date provided in the Special Provisions. The Engineer shall perform a review and have the Contractor make any necessary revisions prior to acceptance of the schedule. Acceptance will not impose responsibility on the Owner or Engineer for the sequencing, scheduling, or progression of the Work. The Contractor is fully responsible for progression of the Work in order to maintain compliance with the Progress Schedule and Contract Time.

## GP-10 DAILY PROGRESS REPORTS

The Contractor shall record the following daily information on Daily Progress Reports:

- a. Date and signature of the author of the report;
- b. Dollar amount of all bid items that are fabricated, installed, backfilled, pumped, constructed, damaged, replaced, etc. The amount of material shall be expressed in the units stated in the bid;
- c. Field notes of all surveys;
- d. Notes on all inspections;

- e. Details of Health and Safety meetings;
- f. A brief description of any Change Orders, Field Orders, Claims, Clarifications, or Amendments;
- g. Condition of all navigation aids (i.e., warning signs, lighted marker buoys) and any repairs performed on them;
- h. Weather conditions (adverse weather day, wind speed and direction, temperature, wave height, precipitation, etc.);
- i. The amount of time lost to severe weather or personnel injury, etc.;
- j. Notes regarding compliance with the Progress Schedule;
- k. Visitor log (Instructions for format will be furnished by the Field Engineer).

The daily progress reports shall be submitted to the Engineer at the Bi-Weekly Progress Meetings specified in GP-13 in both hard copy and digital format (Adobe Acrobat® Format, or approved equal). The typical form for Daily Progress Reports shall be developed by the Contractor and incorporated into the Work Plan.

## GP-11 HURRICANE AND SEVERE STORM PLAN

The Contractor shall develop and maintain a written Hurricane and Severe Storm Plan. The Plan shall include, but not be limited to, the following:

- a. What type of actions will be taken before storm strikes at the Project Site. The plan should specify what weather conditions or wave heights will require shutdown of the Work and removal of equipment, personnel, etc.
- b. Notes from continuous monitoring of NOAA marine weather broadcasts and other local commercial weather forecasts.
- c. Equipment list with details on their ability to handle adverse weather and wave conditions.
- d. List of safe harbors or ports and the distance and travel time required to transfer equipment from the Project Site.
- e. Hard copies of any written approvals or operations schedules associated with the use of the safe harbors or ports.
- f. Method of securing equipment at the safe harbors or ports.
- g. List of tug boats and work boats and their respective length, horsepower, etc. which will adequately transfer the equipment to safe harbor or port under adverse weather conditions.

- h. Methods which will be used to secure equipment left onsite during adverse weather conditions.
- i. Evacuation or immediate reaction plans to be taken by personnel for sudden storm occurrences.
- j. Operations procedures which will be used to secure critical dredging equipment such as spuds, swing wires, anchor wires, or tugs during adverse weather conditions.
- k. Communications protocol with local law enforcement and fire and rescue agencies.

The Contractor shall incorporate the Hurricane and Severe Storm Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

### GP-12 HEALTH AND SAFETY PLAN AND INSPECTIONS

The Contractor shall develop and maintain a written Health and Safety Plan which allows the Work to be performed in compliance with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the safety of personnel or property. This includes maintaining compliance with the Code of Federal Regulations, Title 29, Occupational Safety and Health Administration (OSHA) and all applicable Health and Safety Provisions of the State of Louisiana.

The Contractor shall institute a daily inspection program to assure that the requirements of the Health and Safety Plan are being fulfilled. Inspections shall include the nature of deficiencies observed, corrective action taken or to be taken, location of inspection, date, and signature of the person responsible for its contents. The results of the inspections shall be recorded on Daily Progress Reports and kept at the Project Site during the Work.

The Contractor shall incorporate the Health and Safety Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

## **GP-13 PROGRESS MEETINGS AND REPORTS**

The Engineer shall schedule meetings to review the progress of the Work, coordinate future efforts, discuss compliance with the Progress Schedule and resolve miscellaneous problems. The Engineer or Resident Project Representative, Contractor, and all Subcontractors actively working at the Project Site shall attend each meeting. Representatives of suppliers, manufacturers, and other Subcontractors may also attend at the discretion of the Contractor. The Contractor shall record the details of each meeting in a Progress Report. The format of this report shall be developed by the Contractor, approved by the Engineer, and included in the Work Plan. The progress meetings and reports shall be scheduled according to the Special Provisions.

## **GP-14 PRE-CONSTRUCTION CONFERENCE**

A Pre-Construction Conference shall be held by the Contractor, Owner, Engineer, local stakeholders, and other appropriate personnel prior to starting construction on the date specified in the Special Provisions. This conference shall serve to establish a mutual understanding of

the Work to be performed, the elements of the Progress Schedule and Work Plan, expectations for bi-weekly progress meetings, the Plans and Specifications, processing Applications for Payment, and any other items of concern. If any subcontractors are not present, another pre-construction conference will be required.

## **GP-15 CONTRACT INTENT**

The Bid Documents are complementary; what is called for by one is as binding as if called for by all. Clarifications and interpretations or notifications of minor variations and deviations of the Contract Documents will be issued by Engineer as provided in these Specifications. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Bid Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided at no additional cost to the Owner.

## GP-16 ENGINEER AND AUTHORITY OF ENGINEER

The Engineer will be the designated representative of the Owner, the initial interpreter of the Contract Documents and the judge over acceptability of all the Work. Claims, disputes, and other matters relating to the acceptability of the Work, performance by the Contractor or the interpretation of the requirements of the Contract Documents must be submitted to the Engineer in writing. Upon written request from the Contractor, the Engineer shall issue written clarifications or interpretations which are consistent with the overall intent of the Contract Documents. Such written clarifications and interpretations will be binding on the Owner and the Contractor. Either the Owner or the Contractor may make a Claim if a written clarification or interpretation justifies an adjustment in the Contract Price or Contract Times.

The Engineer has the authority to suspend the Work in whole or in part due to failure of the Contractor to correct conditions unsafe for workmen or the general public, carry out provisions of the Contract, perform conformance work, or to carry out orders. The Engineer shall submit a written order to the Contractor for work which must be suspended or resumed. Nothing in this provision shall be construed as establishing responsibility on the part of the Engineer for safety which is the responsibility of the Contractor.

The Engineer or Resident Project Representative shall keep a daily record of weather and flood conditions and may suspend the Work as deemed necessary due to periods of unsuitable weather, conditions considered unsuitable for execution of the Work, or for any other condition or reason deemed to be in the public interest.

## GP-17 CONFORMITY WITH PLANS AND SPECIFICATIONS

All work and materials involved with the Work shall conform with the lines, grades, cross sections, dimensions, and other requirements shown on the Plans or indicated in these Specifications unless otherwise approved by the Engineer.

## **GP-18 CLARIFICATIONS AND AMENDMENTS TO CONTRACT DOCUMENTS**

The Contract Documents may be clarified or amended by the Engineer to account for additions, deletions, and revisions to the Work after the Effective Date of the Contract. The clarifications

and amendments shall be addressed by either a Change Order or a written clarification by the Engineer. The Contractor shall not proceed with the Work until the Change Order or clarification has been issued by the Engineer. The Contractor shall not be liable to the Owner or Engineer for failure to report any such discrepancy unless the Contractor had reasonable knowledge.

The Contractor may request a clarification or amendment for the following:

- a. Any conflict, error, ambiguity, or discrepancy within the Contract Documents; or
- b. Any conflict, error, ambiguity, or discrepancy between the Bid Documents and the provision of any Law or Regulation applicable to the performance of the Bid; or
- c. Any standard, specification, manual, or code (whether or not specifically incorporated by reference in the Bid Documents); or
- d. Instructions by a supplier.

The official form for a written clarification is provided in the appendices of the Contract Documents. This form shall be filled out appropriately by the Contractor and submitted to the Engineer. The Engineer shall clarify the issue in writing on either the clarification form, Field Order or a Change Order and submit it to the Contractor.

## GP-19 SUBCONTRACTS

The Contractor shall provide the names of all Subcontractors to the Engineer in writing before awarding any Subcontracts. The Contractor shall be responsible for the coordination of the trades and Subcontractors engaged in the Work. The Contractor is fully responsible to the Owner for the acts and omissions of all the Subcontractors. The Owner and Engineer will not settle any differences between the Contractor and Subcontractors or between Subcontractors. The Contractor shall have appropriate provisions in all Subcontracts to bind Subcontractors to the Contractor by the terms of the General Provisions and other Contract Documents, as applicable to the Work of Subcontractors. The provisions should provide the Contractor the same power regarding termination of Subcontracts that the Owner may exercise over the Contractor under any provisions of the Contract Documents.

## GP-20 WORKERS, METHODS, AND EQUIPMENT

The Contractor shall provide competent, qualified, and trained personnel to perform the Work. The Contractor shall not employ any person found objectionable by the Engineer. Any person employed by the Contractor or any Subcontractor who, in the opinion of the Engineer, does not perform the Work in a proper, skillful, and orderly manner shall be immediately removed upon receiving a written order by the Engineer. The Engineer may also suspend the Work until the Contractor removes the employee or provides a suitable replacement. Such an employee shall not be re-employed in any portion of the Work without written approval from the Engineer.

The on-site superintendent for the Contractor shall be competent, English-speaking, and qualified to receive orders, supervise, and coordinate all Work for the Contractor and any Subcontractors. The qualifications of the superintendent must be established and approved by

the Engineer prior to commencement of the Work. The superintendent shall be furnished by the Contractor regardless of how much Work may be sublet. In the performance of the Work under this Contract, the Contractor shall conduct operations to avoid interference with any other Contractors.

All equipment, products, and material incorporated into the Work shall be as specified, or if not specified, shall be new, of good quality, and protected, assembled, used, connected, applied, cleaned, and conditioned in accordance with the manufacturer's instructions, except as otherwise may be provided in the Bid Documents. All equipment shall be of sufficient size and mechanical condition to meet the requirements of the Work and produce a satisfactory quality of work. Equipment shall not damage adjacent property throughout the performance of the Work. The Plant and Equipment Schedule should be completed by the Contractor.

The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures used to complete the Work in conformance with the Contract Documents.

The Contractor shall obtain permission from the Engineer if a method or type of equipment other than specified in the Contract is desired. The request shall be in writing and shall include a full description of the methods, equipment proposed, and reasons for the modification. A proposed item of material or equipment may be considered by the Engineer to be functionally equal to an item specified in the Contract if:

- a. It is at least equal in quality, durability, appearance, strength, and design characteristics;
- b. There is no increase in any cost including capital, installation, or operating to the Owner;
- c. The proposed item will conform substantially, even with deviations, to the detailed requirements of the item named in the Bid Documents.

If, after trial use of the substituted methods or equipment, the Engineer determines that the Work produced does not meet Contract requirements, the Contractor shall discontinue use of the substituted methods or equipment and shall complete the Work with the specified methods and equipment. The Contractor shall remove the deficient Work and replace it with Work of specified quality or take other corrective action as directed. No change will be made in basis of payment for construction items involved or in Contract Time as a result of authorizing a change in methods or equipment.

## GP-21 ACCIDENT PREVENTION, INVESTIGATIONS, AND REPORTING

The Contractor shall be responsible to develop and maintain all safeguards and safety precautions necessary to prevent damage, injury, or loss throughout the performance of the Work. All accidents at the Project Site shall be investigated by the immediate supervisor of employee(s) involved and reported to the Engineer or Resident Project Representative within one (1) working day. A complete and accurate written report of the accident including estimated lost time days shall be submitted to the Engineer within four (4) calendar days. A follow-up report shall be submitted to the Engineer if the estimated lost time days differ from the actual lost time days.

# GP-22 PRESERVATION AND RESTORATION OF PROPERTY, MONUMENTS, ETC.

The Contractor shall comply with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the preservation and protection of public and private property. The Contractor shall install and maintain suitable safeguards and safety precautions during the Work as necessary to prevent damage, injury, or loss to property. This responsibility shall remain with the Contractor until the Work has been completed and accepted. Any damage, injury, or loss to property which is caused by the Contractor or Subcontractors shall be repaired or replaced at the expense of the Contractor.

The Contractor shall protect all land monuments, State and United States bench marks, geodetic and geological survey monuments, and property markers from disturbance or damage until an authorized agent has witnessed or otherwise referenced their location. The Contractor shall also provide protection for all public and private property including trees, utilities, pipes, conduits, structures, etc. These items shall not be removed unless directed by the Engineer.

The Contractor shall be responsible to completely repair all damages to public or private property due to any act, omission, neglect, or misconduct in the execution of the Work unless it is due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, public enemies, or governmental authorities. The damage must be repaired at the expense of the Contractor before final acceptance of the Work can be granted by the Engineer. If the Contractor fails to repair the damage within forty-eight (48) hours, the Owner may independently proceed with the repairs at the expense of the Contractor by deducting the cost from the Contract. If the Contractor cannot provide for the cost of repairs, the Surety of the Contractor shall be held until all damages, suits, or claims have been settled.

# GP-23 PROTECTION OF THE WORK, MATERIALS, AND EQUIPMENT

It shall be the responsibility of the Contractor to protect the Work, materials, and equipment from damages or delays due to inflows, tidal rise, and storm water runoff which may occur at the Project Site. The Owner shall not be held liable or responsible for these types of delays or damages.

# GP-24 LAND RIGHTS

The Owner has been granted all of the temporary easements, servitudes, and right-of-way agreements from public and private landowners in order to perform the Work. A land rights memorandum which lists all known responsible contacts and required stipulations is provided in the appendices of the Contract Documents. The Contractor is responsible to notify all of the contacts and abide by stipulations listed in that memorandum.

# **GP-25 UTILITIES**

The Owner has been granted all of the temporary easements, servitudes, and right-of-way agreements from known public and private utilities in order to perform the Work. The utilities include, but are not limited to telephone, telegraph, power poles or lines, water or fire hydrants,

water or gas mains and pipelines, sewers, conduits, and other accessories or appurtenances of a similar nature which are fixed or controlled by a city, public utility company or corporation.

The Contractor shall conduct the Work in such a manner as to cooperate and minimize inconveniences with utilities. Prior to commencement of the Work, the Contractor is responsible to notify all of the utilities and abide by stipulations required by the utility company(s). The Contractor shall also call Louisiana One Call at 811 or (800) 272-3020 a minimum of 5 working days prior to construction to locate existing utilities at the Project Site.

Any damage to utilities that is caused by the Contractor within the Project Site shall be repaired at the expense of the Contractor. The Owner will not be responsible for any delay or damage incurred by the Contractor due to working around or joining the Work to utilities left in place or for making adjustments.

Any unidentified pipes or structures which may be discovered within the limits of the Project Site shall not be disturbed and shall be reported to the Engineer as soon as possible. Construction or excavation shall not be performed around unidentified utilities without prior approval from the Engineer.

# GP-26 PERMITS

Federal and State permits that are required to perform the Work, such as the Department of the Army Permit, Coastal Use Permit, LDEQ Clean Water Permit, LDWF Fill Material License, and LADOTD highway crossing permit have been secured by the Owner. Permit conditions affecting the construction processes have been included in these Specifications. Copies of these permits will be provided to the Contractor at the pre-construction conference. These permits will not relieve the responsibility of the Contractor from obtaining any additional permits which may be needed to complete the Work. Copies of any special permits that are obtained by the Contractor must be submitted to the Owner. The Contractor shall conform to the requirements therein and display copies of the permits in a public setting at the Project Site at all times.

# GP-27 PROJECT SITE CLEAN-UP

The Contractor shall keep the Project Site free from accumulations of waste material or trash at all times. All trash and waste materials shall be removed by the Contractor and disposed off-site in an approved waste disposal facility. In addition, all equipment, tools, and nonconforming work shall also be removed prior to the Work being accepted. No materials shall be placed outside of the Project Site.

#### **GP-28 OWNER INSPECTION**

The Owner, Resident Project Representative, and Federal Sponsor shall have the right to perform reasonable inspections and testing of the Work at the Project Site. Access shall be granted to the entire Project Site including all materials intended for use in the Work. The Contractor shall allow reasonable time for these inspections and tests to be performed. The inspections shall not relieve the Contractor from any obligation in accordance with the requirements of the Contract.

The Owner shall notify the Contractor prior to all tests, inspections, and approvals of the Work which are to be conducted at the Project Site. The Owner shall also provide the Contractor with the written results of all inspections and tests. Inspections, tests, or Payments made by the Owner shall not constitute acceptance of non-conforming Work of prejudice the Owner's rights under the Contract.

## GP-29 DUTIES OF RESIDENT PROJECT REPRESENTATIVE

A Resident Project Representative may be assigned by the Engineer to the Project Site to observe the Contractor and monitor the progress and manner in which the Work is being performed. The Resident Project Representative will also report to the Engineer and Contractor whenever materials or Work fail to comply with the Contract. The Resident Project Representative is authorized to reject any materials or suspend work which does not comply with the Contract until the issue is resolved by the Engineer.

However, the Resident Project Representative is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, or to approve or accept any portion of the Work, or to issue instructions contrary to the Plans and Specifications. The Resident Project Representative shall not manage or perform duties for the Contractor.

## GP-30 CONSTRUCTION STAKES, LINES, AND GRADES

The Engineer shall direct the Contractor to all control points necessary for setting stakes and establishing lines and grades as shown on the Plans. The Contractor shall be responsible for laying out all of the Work. All layouts shall be witnessed and verified by the Engineer or Resident Project Representative prior to beginning the Work. The Contractor shall be responsible for proper execution of the Work according to the layouts after receiving verification from the Engineer.

The Contractor shall be responsible for furnishing and maintaining stakes such that the Work can be verified for acceptance. The Engineer may suspend the Work at any time if it cannot be adequately verified due to the number, quality, or condition of the stakes.

# GP-31 CONTRACTOR'S RESPONSIBILITY FOR WORK

The Contractor shall execute all items covered by the Contract, and shall furnish, unless otherwise definitely provided in the Contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to complete the Work. The Contractor shall pay constant attention to the progress of the Work and shall cooperate with the Engineer in every way possible. The Contractor shall maintain a complete copy of the Contract at all times, including the Plans, Specifications, and any authorized modifications.

# **GP-32 ENVIRONMENTAL PROTECTION**

The Contractor shall comply with and abide by all federal, state, and local laws and regulations controlling pollution of the environment, including air, water, and noise. The Contractor shall take precautions to prevent pollution of waters and wetlands with fuels, oils, bituminous materials, chemicals, sewage, or other harmful materials and contaminants, and to prevent

pollution of the atmosphere from particulate and gaseous matter, in accordance with all terms and conditions of federal, state, and local air and water pollution control laws and programs and their rules and regulations, including the federal Clean Air Act and the federal Clean Water Act.

The Contractor shall adhere to the provisions which require compliance with all standards, orders, or requirements contained under Section 306 of the Clean Air Act and Section 508 of the Clean Water Act, which prohibit the use under non-exempt Federal contracts, grants, or loans, of facilities included on the Environmental Protection Agency (EPA) list of Violating Facilities.

Construction operations in rivers, streams, lakes, tidal or coastal waters, reservoirs, canals, wetlands, and any other impoundments shall be restricted to areas where it is necessary to accomplish the Work and performed in accordance with any applicable federal, state, and local laws, regulations, permit requirements, and guidelines, and the Contractor shall conduct the Work in a manner that will not cause damaging concentrations of silt or pollution to water.

Contractor shall maintain and operate equipment to minimize noise, dust, and vibration near noise, dust and vibration-sensitive areas such as churches, hospitals, schools, and residential areas, and assure that any activities conducted near such areas are not unduly disruptive. Contractor shall maintain all equipment with properly functioning mufflers.

The Contractor shall be responsible for determining and utilizing any erosion and pollution control features or methods that may be necessary to comply with all federal, state, and local laws and regulations.

# **GP-33 SANITARY PROVISION**

The Contractor shall provide and maintain sanitary accommodations for use by all employees and Subcontractors. Facilities shall comply with the requirements of the Louisiana State Board of Health and Hospitals and other authorities having jurisdiction. Committing public nuisance on the Project Site is prohibited.

# GP-34 PAYMENT OF TAXES

The Contractor shall be responsible for all taxes and duties that maybe levied under existing State, Federal, and local laws during the completion of the Work. The Owner will presume that the amount of such taxes is included in the unit prices bid by the Contractor and will not provide additional reimbursement.

# GP-35 RADIO AND TELEPHONES

The Contractor shall furnish and maintain radio and telephone equipment throughout the Contract Time which will allow communication between the Contractor and the Engineer or Resident Project Representative.

# **GP-36 NAVIGATION**

All marine vessels shall comply with the following Federal Laws and Regulations:

- a. The International Navigational Rules Act of 1977 (Public Law 95-75, 91 Stat. 308, or 33 U.S.C. 1601-1608); and
- b. The Inland Navigation Rules Act of 1980 (Public Law 96-591, 94 Stat. 3415, 33 U.S.C. 2001-2038).

These rules can be found on the Internet at: http://www.navcen.uscg.gov/?pageName=navRulesContent.

All marine vessels shall display the lights and day shapes required by Part C- Lights and Shapes of the Inland Navigation Rules. The location, type, color, and size of the lights and day shape shall be in accordance with Annex I - Positioning and Technical Details of Lights and Shapes. Any vessel engaged in dredging is considered a "Vessel restricted in her ability to maneuver" and shall display all the lights and shapes required in Rule 27, "Vessel Not Under Control."

# **GP-37 OBSTRUCTION TO NAVIGATION**

The Contractor shall minimize all obstructions to navigation in compliance with pertinent US Coast Guard regulations while conducting the Work. The Contractor shall promptly move any floating equipment or marine vessels which obstruct safe passage of other marine vessels. Upon completion of the Work, the Contractor shall remove all marine vessels and other floating equipment such as temporary ranges, buoys, piles, and other marks or objects that are not permanent features of the Work.

# GP-38 MARINE VESSELS AND MARINE ACTIVITIES

All marine vessels regulated by the USCG shall have the required USCG documentation that is current before being placed in service. A copy of any USCG Form 835 issued to the vessel in the preceding year shall be made available to the Owner and Engineer and a copy shall be on board the vessel. All officers and crew shall possess valid USCG licenses as required by USCG regulations. These certificates, classifications, and licenses shall be posted in a public area on board each vessel.

All dredges and quarter boats not subject to USCG inspection and certification or not having a current ABS classification shall be inspected in the working mode annually by a marine surveyor accredited by the National Association of Marine Surveyors (NAMS) or the Society of Accredited Marine Surveyors (SAMS) and having at least 5 years' experience in commercial marine plant and equipment. The inspection certificate shall be posted in a public area on board each dredge and/or quarter boat.

All other plant and support vessels shall be inspected before being placed in service and at least annually by a qualified person. The inspection certificate shall be posted in a public area on board each plant and/or vessel.

## **GP-39 RECORD KEEPING**

The Contractor shall maintain orderly records of the Progress Schedule, Daily Progress Reports, Progress Meetings, correspondence, submittals, reproductions of original Contract Documents, Change Orders, Field Orders, certificates, additional drawings issued subsequent to the executed Contract, clarifications and interpretations of the Contract Documents by the Engineer, and other related documents at the Project Site until all of the Work is accepted by the Engineer.

## **GP-40 CERTIFICATES OF COMPLIANCE**

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in three (3) copies. Each certificate shall be certified by an authorized agent of the supplying company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date of shipment. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the testing date. The Contractor shall also certify that all materials and test reports conform to the requirements of the Contract. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material if the material is tested and determined to be in nonconformance.

## GP-41 SUBMITTALS

The Contractor shall review all Submittals for compliance with the requirements of the Contract prior to delivery to the Engineer. Each Submittal shall contain a signed statement by the Contractor that it complies with the Contract requirements with any exceptions explicitly listed. The Contractor shall comply with these requirements for Submittals from Subcontractors, manufacturers, and suppliers.

All Submittals shall include sufficient data to demonstrate that the requirements of the Contract are met or exceeded. All submittals shall be legible and marked with the project title and clearly identify the item submitted. Each submittal package shall include an itemized list of the items submitted.

All Submittals will be reviewed within fourteen (14) days after being received by the Engineer. The Contractor shall allow the Engineer sufficient time for review, corrections, and resubmission of all Submittals prior to beginning the associated Work. The Contract Time shall not be extended based on incorrect or incomplete Submittals.

# GP-42 CLAIMS FOR EXTRA COST

The Contractor is expected to complete the Work according to the Contract Price specified in the Bid Documents. If the Contractor deems additional compensation is due for work, materials, delays or other additional costs/or expenses not covered in the Contract or not ordered as extra work, the Contractor shall give the Engineer written notice thereof within fourteen (14) calendar days after the receipt of such instructions and, in any event, before commencing the procedure. The Contractor shall justify the claim for extra cost by providing supporting data and calculations. The Engineer shall determine whether the Contractor is entitled to be compensated for such extra cost and shall make any required adjustments of the Contract in accordance with GP-43. If no written claim is made within this fourteen (14) calendar-day period, the Contractor will be deemed to have waived any claim for extra cost for such work.

Claim for damages or delays of the Work shall not be made by the Contractor for a relocation of the construction operation or portions thereof to other locations within the geographical scope of the project, when in the opinion of the Engineer, such relocation is necessary for the most effective prosecution of the Work and may be accomplished without undue hardship.

## GP-43 ALTERATION OF THE CONTRACT AND COMPENSATION

Using Change Orders, Field Orders, or Written Amendments, the Owner may order extra work or make changes by altering the details of construction, add to or deduct from the Work. The requirements and stipulations of these documents shall be binding on the Owner and Contractor throughout the remainder of the Contract. Any claim for an extension of Contract Time caused thereby shall be adjusted at the time of ordering such change.

The value of any such extra work or change shall be determined in one or more of the following ways and in the following priority:

- a. By application of the unit prices in the Contract to the quantities of the items involved or subsequently agreed upon; or
- b. By mutual acceptance between the Owner and Contractor of a lump sum.

If none of the above methods is agreed upon, the Contractor, provided he is so ordered by the Owner in writing, shall proceed with the Work on a "force account" basis. In such a case, the Contractor shall keep and preserve in such form as the Engineer may direct, a correct itemized account of the direct cost of labor, materials, equipment, together with vouchers bearing written certification by the Contractor. In any case, the Engineer shall certify to the amount, including an allowance of fifteen percent (15%) for jobsite and home office overhead indirect expenses and profit due to the Contractor. Where such change involves a subcontractor, an allowance of fifteen percent (15%) for overhead and profit shall be due the subcontractor and an allowance of ten percent (10%) shall be due the Contractor. Pending final determination of value, payments on account of changes shall be made on the Engineer's estimate and as approved in an executed Change Order.

If the Contractor is prevented from completing the Work according to the Contract Price due to the Owner, the Contractor may be entitled to any reasonable and necessary addition of cost as determined by the Engineer. Neither the Owner nor the Contractor shall be entitled to any damages arising from events or occurrences which are beyond their control, including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, acts of war, and other like matters. The provisions of this section exclude recovery for damages caused by the Contractor and compensation for additional professional services by either party.

# GP-44 EXTENSION OF CONTRACT TIME

The Contractor is expected to complete the Work within the Contract Time specified in the Bid Documents. A legitimate increase of the Contract time may be requested by the Contractor throughout the course of the Work. This Claim must be submitted to the Engineer in writing within fourteen (14) days of the event which caused the time delay to the Contractor. If an extension of Contract Time involves an increase in Contract Price, both claims shall be submitted together. The Contractor shall justify the increase of the Contract Time in the Claim using supporting data and calculations. The Engineer may deny the claim if there is insufficient information to make a determination. If the Claim is approved, the Engineer shall issue a Change Order within thirty (30) days of the Claim. The Contract Time shall be increased on a basis that is commensurate with the amount of additional or remaining Work. For example, the Contract Time can be increased where the number of actual adverse weather days exceeds the number of days estimated in the Contract.

# GP-45 OWNER'S RIGHT TO TERMINATE CONTRACT FOR CAUSE OR CONVENIENCE

#### 45.1 TERMINATION FOR CAUSE

The Owner shall submit a written notice to the Contractor and Surety which justifies placement of the Contractor in default if:

- a. The Work is not begun within the time specified in the Notice to Proceed; or
- b. The Work is performed with insufficient workmen, equipment, or materials to assure prompt completion; or
- c. The Contractor performs unsuitable, neglected or rejected work, refuses to remove materials; or
- d. The Work is discontinued; or
- e. The Work is not completed within the Contract Time or time extension; or
- f. Work is not resumed within a reasonable time after receiving a notice to continue; or
- g. The Contractor becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency; or
- h. The Contractor allows any final judgment to stand unsatisfied for a period of ten (10) days; or
- i. The Contractor makes an assignment for the benefit of creditors; or
- j. The Work is not performed in an acceptable manner.

If the Contractor or Surety does not remedy all conditions cited in the written notice within ten (10) days after receiving such a notice, the Contractor will be in default and the Owner shall remove the Contractor from the Work. If the Contractor is placed into default, the Owner may

obtain the necessary labor, materials, and equipment or enter into a new Contract in order to complete the Work. All costs incurred by the Owner for completing the Work under the new Contract will be deducted from the payment due the Contractor. If the expense exceeds the sum payable under the Contract, the Contractor and Surety shall be liable to pay the Owner the difference.

## 45.2 TERMINATION FOR CONVENIENCE

Owner may, at any time, terminate this Contract or any portion thereof, for Owner's convenience, upon providing written notice to the Contractor. In such case, Contractor shall be paid for all work completed through the date notice was provided (less payments already received) and reasonable demobilization and restocking charges incurred and reasonable overhead and profit based upon industry standards on the work performed. In no event shall the Contractor be entitled to payment of overhead and profit on work not performed. In the event it is determined that the Contractor was wrongfully terminated for cause, pursuant to Section GP 45.1 above, such termination shall be automatically converted to a termination for convenience under and payment made as provided under this Section.

# GP-46 TEMPORARY SUSPENSION OF WORK

The Engineer shall have the authority to temporarily suspend the Work in whole or in part. A Field Order shall be issued to the Contractor for any of the Work that is suspended for periods exceeding one (1) calendar day. The Field Order shall include the specific reasons and details for the suspension. The Contract Time shall not be extended if the Work is suspended due to failure by the Contractor to comply with a Field Order or with the Plans and Specifications. If the Work is suspended in the interest of the Owner, the Contractor shall make due allowances for the lost time.

# GP-47 NON-CONFORMING AND UNAUTHORIZED WORK

Work not conforming to the Plans, Specifications, Field Orders, or Change Orders shall not be accepted for payment. Unacceptable or unauthorized work shall be removed and replaced in an acceptable manner at the expense of the Contractor in order to obtain final acceptance of the Work.

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the Owner after seven (7) calendar days written notice to the Contractor, may correct such deficiencies itself or by use of other contractors without prejudice to any other remedy it may have, and may deduct the cost thereof from the payment then or thereafter due to the Contractor.

#### GP-48 CONTRACTOR'S RIGHT TO TERMINATE CONTRACT

The Contractor may terminate the Contract or Work and recover payment from the Owner for labor and materials if the Work is stopped through no act or fault of the Contractor for more than three (3) months. For example, such an occurrence could be caused by a court order or other public authority. In any case, the Contractor shall submit a written notice to the Engineer

at the beginning of the occurrence, and a written Claim to the Owner at the end of the occurrence.

# GP-49 BREACH OF CONTRACT

The Owner shall submit a written Claim to the Contractor regarding any breach of the Contract. The Contractor must provide a written response to the Owner regarding the breach of Contract within ten (10) days after the Claim. This response must provide either an admission to the Claim or a detailed denial based on relevant data and calculations. The failure of the Contractor to provide a proper response within ten (10) days shall result in justification of the Claim by default.

# GP-50 NO WAIVER OF LEGAL RIGHTS

The Owner shall not be prevented from recovering costs from the Contractor, Surety, or both due to failure of the Contractor to fulfill all of the obligations under the Contract. If a waiver is provided to the Contractor for a breach of Contract by the Owner, it shall not apply to any other breach of Contract. Final acceptance of the Work shall not prevent the Owner from correcting any measurement, estimate, or certificate. The Contractor shall be liable to the Owner without prejudice to the terms of the Contract or any warranty for latent defects, fraud, or gross negligence.

# GP-51 LIABILITY FOR DAMAGES AND INJURIES

To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner, Engineer, and their officers, employees, representatives, and/or agents from all suits, actions, claims, costs, losses, demands, and judgments (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) brought because of injuries or damage sustained by an person or property due to the operations of Contractor; due to negligence in safeguarding the Work, or use of unacceptable materials in constructing the Work; or any negligent act, omission, or misconduct of the Contractor; or claims or amounts recovered under the Workmen's Compensation Act or other law, ordinance, order, or decree; any money due the Contractor as considered necessary by the Owner for such purpose may be retained for use of the State or in case no money is due, the performance and payment bond may be held until such suits, actions, claims for injuries or damages have been settled and suitable evidence to that effect furnished to the Owner; except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that adequate Workman's Compensation, Public Liability, and Property Damage Insurance are in effect.

The indemnification obligations of the Contractor shall not extend to the liability of the Owner, Engineer, and their affiliates arising out of the preparation or approval of the Plans, Specifications, maps, opinions, reports, surveys, or Change Orders, or for providing directions or instructions which are the primary cause of the injury or damage.

Should the Owner or Contractor suffer from any injury or damage due to an error, omission, or act of the other party or their legally liable affiliates, a written Claim shall be submitted to the other party within ten (10) days. The Claim shall provide all details regarding the injury or

damage, the results of any investigations, and the action to be taken to prevent any reoccurrence.

# GP-52 LIABILITY FOR LOSSES BY ACTS OF THE GOVERNMENT

The Owner shall not be liable for any loss or damage suffered by the Contractor arising out of a cessation of Work under this Contract due to any act or order of any local, state, or federal government agency. If this cessation occurs, the Contractor may request an extension of the Contract Time according to the provisions in GP-44.

## GP-53 FINAL INSPECTION AND ACCEPTANCE

Whenever the work provided for, or contemplated by the contract, have been satisfactorily completed, all punch list items completed and the final cleaning up is performed, the Engineer shall be notified in writing that said work is completed and ready for final inspection. The Engineer shall, unless otherwise provided, make the final inspection within a reasonable length of time after the receipt of such notification.

If all construction provided for in the contract is found completed to the Engineer's satisfaction, the inspection shall constitute the final inspection and the Engineer will make recommendation to the Owner for final acceptance and notify the Contractor in writing of this recommendation of acceptance.

The Contractor shall record the Notice of Acceptance with the Clerk of Court in the Parish(s) in which the Work has been performed. The Contractor shall obtain a Certificate of Recordation from the Clerk of Court and forward this Certificate to the Coastal Protection and Restoration Authority contact person listed in the Advertisement for Bids.

#### GP-54 AS-BUILT DRAWINGS

The Contractor shall submit all originals and copies of the As-Built Drawings to the Engineer for review and acceptance in accordance with the Special Provisions. The As-Built Drawings shall provide complete data for quantities, dimensions, specified performance and design criteria, and similar items which clearly represent the services, materials, and equipment the Contractor has provided. All revision sheets shall be clearly stamped with the words "As-Built".

#### GP-55 COMPLETION OF CONTRACT

Notwithstanding any other provision of this Contract and all applicable and necessary time delays under Louisiana law, completion of the Contract requires all of the Work to be complete, inspected by the Engineer, accepted by the Owner as recommended by the Engineer, and after final payment is made. After the Contract is complete, the Contractor will then be released from further obligation except as set forth in the Contract Bond and Contractor's Guarantee.

# GP-56 CONTRACTOR'S GUARANTEE

The Contractor is obligated to provide a written guarantee to the Owner that all of the Work conforms to the Contract Documents. The Work shall be guaranteed to survive for a minimum period of 1 year after final acceptance, unless otherwise specified in the Technical Specifications.

- a. The guarantee shall include:
  - 1. A written warranty by the manufacturer for each piece of installed project equipment or apparatus furnished under the Contract.
  - 2. Any necessary repair of replacement of the warranted equipment during the guarantee period at no cost to the Owner.
  - 3. Satisfactory operation of installed equipment including, but not limited to, any mechanical and electrical systems furnished and constructed under the Contract during the guarantee period. The Contractor shall repair all equipment which fails due to defective materials or faulty workmanship during the guarantee period. The Contractor shall also be liable for all other ancillary expenses incurred by the Owner due to the failure.
- b. The guarantee shall exclude defects or damage caused by:
  - 1. Abuse or improper modification, maintenance, or operation by anyone other than the Contractor; or
  - 2. Wear and tear under normal usage.
- c. This obligation by the Contractor shall be absolute. The following actions will not constitute acceptance of non-conformance Work or release the Contractor from obligation to furnish the Work in accordance with the Contract Documents:
  - 1. Observations by the Owner or Engineer; or
  - 2. Recommendations by the Engineer or payment by the Owner; or
  - 3. Use of the Work by the Owner; or
  - 4. Issuance of a notice of acceptance by the Owner pursuant to the provisions of GP-53, or failure to do so; or
  - 5. Any inspection, test, or approval by others; or
  - 6. Any correction to non-conforming work by the Owner.

# **GP-57** DISPUTE RESOLUTION

The parties shall use their best efforts to resolve all disputes in an amicable fashion. Prior to filing suit by either party with respect to any claims, or disputes arising between the parties, the disputes shall be submitted first to non-binding mediation. The mediation shall be conducted in accordance with the Construction Industry Mediation Rules of the American Arbitration Association. If the parties cannot agree to a private mediator, then the mediator shall be selected by the American Arbitration Association, upon the filing of a demand for mediation.

If the dispute is not resolved by mediation within 60 days from the request for mediation, then either party may institute legal proceedings. Any litigation involving the Owner and arising under or related to the Contract or the bidding or award thereof shall be instituted exclusively in the 19<sup>th</sup> Judicial District Court in and for the Parish of East Baton Rouge, State of Louisiana.

# **GP-58 PAYMENT**

The Owner hereby agrees to pay to the Contractor as full compensation for all work performed under the contract, and/or supplemental agreements thereto, the monetary value of the actual quantities in the completed work according to the schedule of unit prices and/or lump sum

prices set forth in attached bid proposal and/or duly authorized supplements thereto, and made a part of the Contract.

Partial payments under the Contract shall be made at the request of the Contractor not more than once each month, based upon partial estimates agreed to by the Contractor and Engineer and shall be furnished to the Engineer and approved by the Engineer prior to transmittal to the Owner for approval and payment.

A Subcontractor Report (included in the appendices of the Contract Documents) should be submitted by the Contractor with each request for partial payment, to be used for informational purposes only by CPRA.

The partial estimates will be approximately stated, and all partial estimates and payments shall be subject to corrections in the estimate rendered following the discovery of any error in any previous estimates.

The payment of the partial estimate shall be taken as verification that the work has been performed and that its quality is satisfactory, however it will in no way serve as a release to the Contractor for the responsibility of any portions thereof. The work and any particulars relating thereto shall be subject to revision and adjustment by the Engineer and/or the Owner at any time prior to final payment, regardless of any previous action taken.

There shall be reserved from the payments provided for the Contract ten percent (10%) for contracts less than \$500,000 or five percent (5%) for contracts of \$500,000 or more, of the estimates submitted, said sum to constitute a trust fund for the protection of and payment to any person or persons, mechanic, subcontractor or materialmen who shall perform any labor upon such contract, or the doing of said work, and all persons who shall supply such person or persons or subcontractors with provisions and supplies for the carrying on of such work, and shall be withheld for a minimum of forty-five (45) calendar days after final acceptance of the

completed contract and filing of the Notice of Acceptance as described in GP-53.

After the expiration of the forty-five (45) calendar day period, the reserve in excess of a sum sufficient to discharge the claims of materialmen and laborers who have filed their claims, together with a sum sufficient to defray the cost of such action and to pay attorneys' fees, shall be paid to the Contractor.

The Contractor shall be responsible for obtaining and furnishing a clear lien and privilege certificate to the Owner at the expiration of the retainage period, and prior to payment of any reserve withheld.

# GP-59 PAYMENTS WITHHELD

In addition to the percentage provided for in Section GP-58 of these General Provisions and in accordance with any other provision of this Contract, the Owner may withhold such amounts from any payment as may be necessary to protect himself from loss on account of:

- a) Defective work not remedied;
- b) Claims filed or reasonable evidence indicating probable filing of claims;
- c) Failure of the Contractor to make payments properly to subcontractors or for material or labor;
- d) Reasonable evidence that the Work will not be completed within the Contract time and that the unpaid balance would not be adequate to cover damages for the anticipated delay;
- e) A reasonable doubt that the contract can be completed within the time period remaining under the contract;
- f) Damage to another contractor;
- g) Failure to submit required reports; or
- h) Modifications of the contract which necessitate the execution of change orders prior to payment of funds.

Furthermore, nothing contained in this Section shall be deemed to limit the right of the Owner to withhold liquidated damages, as stated in the Instructions to Bidders, from any amounts which may be due and owed the Contractor for work performed under the contract.

## **GP-60 LIENS**

Neither the final payment nor any part of the retained percentage shall come due until the Contractor shall deliver to the Owner a complete release of all liens arising out of this contract, or receipts in full in lieu thereof, and, if required by the Owner, an affidavit that so far as he has knowledge or information, the releases and receipts include all labor and material for which a lien could be filed; but if any subcontractor refuses to furnish a release or receipt in full, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against any

lien, construction cost, or attorney's fees.

## GP-61 EQUAL EMPLOYMENT OPPORTUNITY

The State of Louisiana is an equal opportunity employer, and looks to its Contractor, subcontractors, vendors and suppliers to take affirmative action to effect this commitment in its operations.

By submitting the bid proposal and executing the Contract, the Contractor agrees to abide by the requirements of the following as applicable: Title VI and VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veterans Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, and the Age Act of 1975, and the Contractor agrees to abide by the requirements of the Americans with Disabilities Act of 1990.

The Contractor agrees not to discriminate in its employment practices, and will render services the Contract, without regard to their race, age, color, religion, sex, national origin, veteran status, political affiliation or disabilities. Any act of discrimination committed by the Contractor, or failure to comply with these statutory obligations when applicable, shall be grounds for termination of the Contract.

## GP-62 ANTI-KICKBACK CLAUSE

The Contractor agrees to adhere to the mandate dictated by the Copeland "Anti-Kickback" Act which provides that each contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the completion of the work, to give up any part of the compensation to which he is otherwise entitled.

#### GP-63 SUSPENSION/DEBARMENT

Contractor certifies, by signing and submitting any bid, that their company, any subcontractors, or principals are not suspended or debarred by the General Services Administration (GSA) in accordance with the requirements in OMB Circular A-133. A list of parties who have been suspended or debarred can be viewed via the internet at <u>www.epls.gov</u>.

Contractor agrees to secure from any contractor(s) and subcontractor(s) for the captioned project, certification that such contractor(s) and subcontractor(s) are not suspended, debarred or declared ineligible from entering into contracts with any department or agency of the Federal Government or of the State of Louisiana, or in receipt of a notice of proposed debarment or suspension.

Contractor shall provide immediate notice to Owner in the event of it or its contractor(s) or any subcontractor(s) being suspended, debarred or declared ineligible by any department or agency of the Federal Government or of the State of Louisiana, or upon receipt of a notice of a proposed debarment or suspension, either prior to or after execution of this Contract.

Upon receipt of notice of suspension, debarment, or declaration that Contractor or its contractor(s) or any subcontractor(s) is/are ineligible to enter into contracts with any

department or agency of the Federal Government or of the State of Louisiana, either prior to or after execution of this Contract, Owner reserves the right to review cause for said debarment, suspension, or declaration of ineligibility, and to terminate this Contract pursuant to the terms of GP-45 OWNER'S RIGHT TO TERMINATE CONTRACT FOR CAUSE OR CONVENIENCE, or take such other action it deems appropriate under this Contract.

# GP-64 LOUISIANA FIRST HIRING ACT

Contractor shall comply with the Louisiana First Hiring Act (La. R.S. 39:2201-2204), which requires that within ten (10) days of executing the Contract, Contractor shall submit the following information to the Louisiana Workforce Commission:

- 1. The number and types of jobs anticipated for the Work.
- 2. The skill level of the jobs anticipated for the Work.
- 3. The wage or salary range for each job anticipated for the Work.
- 4. Methods, if any, that the Contractor will use to recruit unemployed persons or person employed in low wage jobs to fill job openings for the Work.

# **END OF PART I - GENERAL PROVISIONS**

## PART II SPECIAL PROVISIONS

#### SP-1 LOCATION OF WORK

The Work to be performed is located in Terrebonne Parish, Louisiana. The work to be conducted is located approximately 21 miles southeast of the city of Houma in Terrebonne Parish, Louisiana. The project is located north of Terrebonne Bay and east of Bayou Terrebonne along the shoreline of Lake Barre, southeast of Chauvin, Louisiana. The approximate coordinates of the location of work are Latitude 90°36'56"W, Longitude 29°16'51"N.

The site is accessible only by boat. The nearest boat launches are located near the end of Highway 55, south of Montegut and south of the Boudreaux Canal Bridge on Highway 56, south of Chauvin. Both Marinas are privately owned. CONTRACTOR must verify any equipment access limitations prior to construction.

The Work Site is located on ConocoPhillips, Inc. property and on Apache Minerals property. Contractor must give a 48 hour advanced written and verbal permission request to access the project site. Permission shall be obtained from Mr. Francis Fields with Apache Minerals, Inc. at (985) 879-3528 Ext. 8730, and Mr. Buddy Smith with ConocoPhillips, Inc. at (985) 853-3018.

#### SP-2 WORK TO BE DONE

The Contractor shall provide all labor, materials, and equipment necessary to perform the Work. The Work shall include, but not be limited to, Mobilization and Demobilization to the project site, and removal of existing demonstration project features in accordance with these Specifications and in conformity to lines, grades, and elevations shown on the Plans or as directed by Engineer. Quantity calculations, layouts, shop drawings, and construction sequencing of these items shall be provided in the Work Plan. The major tasks associated with the Work are described as follows:

- 2.1 <u>Site Examination</u>: Bidders are encouraged to examine the Project Site. Investigation of the Project Site may show that sand bars, mudflats, rock, logs, stumps, snags, debris and other obstructions may be encountered. No payment for removal or disposal of these obstructions shall be made.
- 2.1.1 The Contractor shall become familiar with the location and conditions of the Project Site. The Contractor shall be aware of shallow waters, stumps, logs, sand bars, mudflats, and any obstructions near the site. Marine maps showing the location of nearby structures, channels, sandbars, and other pertinent information may be obtained from the U.S. Coast Guard;
- 2.1.2 The Contractor is advised to visit the Project Site and determine the best loading, unloading and staging locations. The Contractor shall be responsible for securing all such locations. The Contractor shall use maps and information for the Project Site area, but must always judge site conditions because of changing conditions of tides and currents. No additional compensation shall be allowed for difficult access due to adverse weather and low tides. All barge equipment and other work vessels on site shall be floating at all times. The Contractor shall verify the types of equipment necessary for accessing the Project Site and completing the Work as specified.

- 2.2 <u>Mobilization and Demobilization:</u> Mobilization consists of preparatory work and operations, including those necessary for movement of personnel, equipment, supplies and incidentals to the project site; the establishment of offices, buildings and other facilities necessary for work on the project; the cost of bonds and any required insurance; and other preconstruction expenses necessary for start of the Work, excluding the cost of construction materials.
- 2.3 <u>Demonstration Project and Features Removal Description:</u> The Terrebonne Shoreline Demonstration Project (TE-45) was an eight (8) year demonstration project to evaluate and document the effectiveness of three (3) shoreline/foreshore protection techniques designed to reduce shoreline erosion and promote oyster reef building at the head of a bay or coastal lake. Three (3) reaches (Reach A, B and E) were selected to demonstrate the shoreline protection techniques. Each reach was approximately 1,500 linear feet in length. Reach A and B are located on ConocoPhillips, Inc. property, and Reach E is located on Apache Minerals property. Three different types of shoreline treatments were constructed along each of the three (3) reaches. The treatments included the following:
- 2.3.1 <u>Triton Gabion Mats Filled with Rock:</u> Gabion mats are pre-fabricated with geotextile grid materials formed into baskets and interconnected to form a mat. The mats are filled with rock. Mats are installed alongside each other on the bank to form the shoreline protection feature.
- 2.3.2 <u>A-Jacks:</u> A-Jacks are individual, pre-fabricated, concrete barrier units that have the shape of toy jacks. Each unit measures 24 inches and weighs 78 pounds. The individual units are tied together in groups with galvanized steel cable. The units are installed in an interlocking double row in shallow water adjacent to the eroding shoreline bank and are placed on a base comprised of a geotextile layer and 6 inches of crushed stone. The units are anchored every 10 feet with galvanized steel cable and 20' galvanized steel rod with anchor.
- 2.3.3 <u>ReefBlocks</u>: ReefBlocks are pre-fabricated, double-frame, steel, triangular units that hold mesh bags filled with oyster shells. They are designed to emulate and create new artificial oyster reef. Each unit has a 5-foot triangular base and measures 2 feet high. Each unit is welded to another unit at a corner to form 10-foot wide unit pairs. The units are installed on a base comprised of a geotextile layer and 6 inches of crushed stone. The units are installed in shallow water adjacent to the eroding shoreline bank. The units are anchored every 10 feet with galvanized steel cable and 20' galvanized steel rod with anchor.
- 2.3.4 <u>Features Removal:</u> The demonstration period for the Terrebonne Shoreline Demonstration (TE-45) project ended in 2015. All features are to be removed along Reaches A, B, and E, and include Reef Blocks, A-Jacks, and Gabion Mats.

The Work Site is located on ConocoPhillips, Inc. property and on Apache Minerals property. Contractor must give a 48 hour advanced written and verbal permission request to access the project site. Permission shall be obtained from Mr. Francis Fields with Apache Minerals, Inc. at (985) 879-3528 Ext. 8730, and Mr. Buddy Smith with ConocoPhillips, Inc. at (985) 853-3018.

2.4 <u>Existing Infrastructure:</u> The Contractor shall be responsible for investigating, locating and protecting all existing facilities, structures, services, and pipelines on, above, or

under the surface of the Project Site. The Owner will not be held responsible for damage to the Contractor's equipment, employees, subcontractors, adjacent property owners, or anyone else connected with this project due to encountering objects above and below the water line.

Existing infrastructure, where indicated on the Plans, is shown only to the extent such information was made available to or discovered by the Engineer during preparation of the Plans. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness is expressly disclaimed. If the Contractor fails to discover an underground installation and damages the same, the contractor shall be responsible for the cost of the repair.

The Contractor shall call Louisiana One Call at 1-800-272-3020 at least five (5) working days prior to mobilization to locate any unknown utility lines in the area. The equipment used for the Work shall be operated within the boundaries of the Project Construction Limits and away from existing vegetated wetlands or any other sensitive areas. The Contractor shall be responsible for returning all disturbed wetlands to existing, pre-construction conditions at no expense to the Owner.

*The use of Flotation Channels on this project is prohibited.* Construction operations shall be performed during daylight hours only unless approved by the Engineer. Work hours will be restricted to weekdays during daylight hours unless otherwise authorized by the engineer.

| Milestone                                | Location or Recipient                                       | Date Due   | Specification             |
|--|---|--|---------------------------|
| Advertisement For Bids                   | Publications  | As advertised  | N/A                       |
| Mandatory Pre-Bid<br>Conference          | Provided in<br>Advertisement for Bids                       | As advertised  | Advertisement<br>for Bids |
| Questions on Bid<br>Documents            | Deliver to CPRA   | As Announced at Pre-Bid<br>Conference  | GP-5                      |
| Effective Date of<br>Contract            | Contractor and Owner  | Stated in Contract   | Contract                  |
| Start of Contract Time                   | Contractor and Owner  | As stated in Notice to Proceed   | GP-7                      |
| List of Subcontractors                   | Submit to Engineer  | Prior to awarding subcontracts   | GP-19                     |
| Work Plan                                | Submit to Engineer  | At least 14 days prior to Pre-<br>Construction Conference  | GP-8                      |
| Progress Schedule                        | Submit to Engineer  | At least 14 days prior to starting construction, bi-weekly thereafter                                  | GP-9                      |
| Daily Progress Report                    | Submit to Engineer  | 12:00 PM each day from mobilization to demobilization  | GP-10                     |
| Pre-Construction<br>Conference           | Contractor and<br>Engineer                                  | As determined by the Engineer after Notice to Proceed is issued  | GP-14                     |
| Progress Meetings and<br>Reports         | At Project Site   | Daily or as determined at the Pre-<br>Construction Conference  | GP-13, GP-39              |
| Date(s) the Equipment<br>are on Premises | Submit to Engineer  | 30 days after receipt of Notice to<br>Proceed  | SP-4                      |
| Pre-Construction Survey                  | Submit to Engineer  | 14 working days prior to anticipated start of Construction   | N/A                       |
| Start of Work                            | Submit to Engineer  | 2 weeks after equipment has arrived on site  | SP-4                      |
| Process Surveys                          | Submit to Engineer  | 5 working days after notification<br>that field data collection for each<br>process survey is complete |                           |
| Delivery Slips                           | Submit to Engineer or<br>Resident Project<br>Representative | Upon arrival to Project Site   | SP-4                      |
| Final Inspection and<br>Acceptance       | Submit to Engineer  | Upon completion of Work  | GP-53                     |
| As-Built Drawings                        | Deliver to Engineer   | Prior to Final Inspection as scheduled by the Engineer   | GP-54                     |
| Written Notice of<br>Completion of Work  | Deliver to Engineer   | Upon completion of Work  | GP-53                     |
| End of Contract Time                     | At Project Site   | As stated in Contract  | Contract                  |

# SP-3 BID ITEMS, CONTRACT DATES, AND DELIVERABLES

#### SP-4 DELIVERABLES

- 4.1 <u>Prior to Construction:</u> The contractor shall submit the following documents to the engineer prior to the Pre-Construction Conference specified in GP-14:
- 4.1.1 Work Plan as specified in GP-8;
- 4.1.2 Progress Schedule as specified in GP-9;
- 4.1.3 Copy of typical Daily Progress Report as specified in GP-10.
- 4.1.4 Hurricane and Severe Storm Plan as specified in GP-11;
- 4.1.5 Sample Invoice;
- 4.1.6 Health and Safety Plan as specified in GP-12;
- 4.1.7 Records of communication between the Contractor and private property owners, pipeline operators, government agencies, etc.
- 4.1.8 The estimated duration of operations;
- 4.1.9 The anticipated date(s) for site layout and staking;
- 4.1.10 The anticipated initiation of equipment at the work location;

The Contractor shall provide the following information to the Engineer <u>at the Pre-</u> <u>Construction Conference specified in GP-14</u>:

- 4.1.11 Revised Work Plan incorporating CPRA comments as specified in GP-8;
- 4.1.12 <u>During Construction</u>: The Contractor shall provide the following information to the Engineer during construction:
- 4.1.13 Daily Progress Reports as specified in GP-10. Details shall include a daily record of work performed, for example: quantity of project features removed, number of signs removed, surveys conducted, duration of activities, Field or Change Orders, compliance with the approved Work Schedule, weather conditions (wind speed and direction, temperature, seas, sky conditions, and precipitation), and non-working days, which shall be included with the weekly reports of progress. The daily reports shall be submitted to the Engineer at the weekly progress meeting, unless otherwise instructed by the Engineer;
- 4.1.14 The results of all surveys and calculations as specified in TS-3;
- 4.1.15 Progress Scheduled as specified in GP-9;
- 4.1.16 Copies of all inspection and monitoring reports;

- 4.1.17 All Change Orders, Field Orders, Claims, Clarifications, and Amendments;
- 4.1.18 The Contractor shall contact the Engineer a minimum of five (5) working days prior to the anticipated completion of the Work in order to schedule the final inspection.

If the Contractor fails to comply with any of the stipulations as stated in GP-8, the Engineer shall consider the Contractor negligent in his duties and reserves the right to issue a Stop Work Order until all stipulations are complied with at the Contractor's expense.

4.3 Post Construction

The Contractor shall contact the Engineer by phone or email, a minimum of five (5) working days prior to the anticipated completion of the Work in order to schedule the final inspection and gain Acceptance by the Engineer. The following documents shall also be submitted to the Engineer:

- 4.3.1 Copy of the Contract Documents at the site in proper order and marked to show all Field and Change Orders made by the Owner;
- 4.3.2 Construction survey drawings as indicated in the General Provisions and Technical Specifications showing location of project features. Any lines, points, polygons, or other shapes used to specify locations must be accompanied by GPS data. As-built information shall be red-lined on project plans. The markups can be electronically submitted on the original plans provided.

#### SP-5 CONTACT INFORMATION

Prior to Bid opening date, the Contractor shall send all questions and requests for clarification or interpretation of the Bid Documents in writing to the attention of Allison Richard of the Coastal Protection and Restoration Authority. The address and contact information is as follows:

150 Terrace Avenue Baton Rouge, La. 70802 P.O. Box 44027 Baton Rouge, La. 70804-4027 225-342-5453 (Phone) 225-800-5599 (Fax) Email: cpra.bidding@la.gov

After execution of the contract between Owner and Contractor, the successful Contractor shall contact the Engineer concerning bid documentation or questions. The addresses and contact information for the Engineers are listed as follows:

<u>CPRA Project Engineer</u> Brian Babin, P.E., Engineering Supervisor Thibodaux Regional Office 1440 Tiger Drive, Suite B Thibodaux, Louisiana 70301 Phone: 985-447-0956 E-mail: brian.babin@la.gov The Owner and Engineer shall deliver all written Claims, Notices, Submittals, Plans, and other documents to the Contractor at the address indicated on the Bid.

## SP-6 LANDOWNER REQUIREMENTS

The Owner has obtained temporary easement, servitude, and right-of-way agreements required for construction of the Project. The agreements executed with landowners for the Work at the site contain special requirements pertaining to insurance and any potential access routes. The Contractor shall abide by stipulations set forth by the respective landowners (Grantors). The Contractor shall work cooperatively with the Owner to address the notification and coordination requirements with the landowners. The contractor must contact the landowner prior to accessing the project site.

## SP-7 PROTECTION OF WORK

The area may be subject to tidal flows of water and tidal fluctuation during work. It shall be the responsibility of the Contractor to protect his work and equipment from damages due to tidal flows and water level variations in adjacent water bodies, site access routes, canals, and ground water. The Owner shall not be held liable or responsible for delays or damages to the Contractor's work or equipment resulting from inflows of surface or ground water or other conditions.

## SP-8 WORK PLAN SUPPLEMENTAL

The following items shall be included in the Work Plan in addition to those required by GP-8:

- 8.1 The types of equipment the Contractor proposes to use for delivering equipment and transporting materials, personnel, etc.
- 8.2 The estimated Work Schedule that shows the planned schedule of dates and time lines for the major elements of work required to complete the Work described in these Specifications, including but not limited to the anticipated dates of the following:

The anticipated dates equipment is to be delivered to project site

8.2.1 The anticipated date(s) for the site layout and staking;

8.2.2 The anticipated initiation of mag surveying, pre-construction bathymetric /topographic, surveying, barricade removal, sign removal, rock degrading, and As-Built surveying; i.e. the schedule of major tasks within this scope.

8.2.3 The estimated duration of construction operation.

The Work Plan shall be submitted to the Engineer prior to the Pre-Construction Conference by the date provided in Special Provisions. The Engineer shall review the Work Plan and have the Contractor make any necessary revisions prior to acceptance of the plan.

# SP-9 FAILURE TO COMPLETE ON TIME

For each day the Work remains incomplete beyond the Contract Time, as specified in SP-3, or Extension of Contract Time, as specified in GP-44, the sum of <u>Fifteen Hundred dollars</u> (\$1,500) per calendar day will be deducted from any money due to the Contractor as liquidated damages. The Contractor and Surety shall be liable for any liquidated damages that are in excess of the amount due the Contractor.

## SP-10 COMMENCEMENT, EXECUTION AND COMPLETION

The Contractor shall be required to attend a pre-construction conference under the Contract immediately following the Notice to Proceed from the Owner and before the work begins. Work shall be conducted in such a manner and with sufficient materials, equipment and labor as is considered necessary to insure its completion within the time limit specified.

## SP-11 TIME EXTENTIONS FOR UNUSUALLY SEVERE WEATHER

This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with GP-9 and GP-44. In order for the Owner to award a time extension under this clause, the following conditions must be satisfied:

- 11.1 The weather experienced at the Project Site during the Contract Time must be found to be unusually severe; that is, more severe than the adverse weather anticipation for the Project Site during any given month as listed in GP-9;
- 11.2 The unusually severe weather must actually cause a delay to the completion of the Project. The delay must be beyond the control and without the fault or negligence of the Contractor. Throughout the Contract, the Contractor will record on the Daily Progress Report, the actual occurrence of adverse weather and resultant impact to normal scheduled work. Actual adverse weather delay days must prevent work on critical activities for fifty percent (50%) or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month) be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of anticipated days, the Engineer may grant an extension of Contract Time, giving full consideration for equivalent fair-weather work days, in accordance with GP-44.

# SP-12 TRANSPORTATION

The Contractor shall provide a safe and reasonable means of transportation to and from the dock work area for his employees, the Engineer, the Federal Sponsor, and the Resident Project Representative throughout the Work.

From Layout until Final Inspection and Acceptance, the Contractor shall provide transportation to and from the dock, staging area and work areas for a maximum of five (5) personnel, seven (7) days per week. The schedule for dates, times, and pickup location for transportation shall be arranged by the Engineer with the Contractor prior to mobilization.

The Contractor shall also provide daily transportation for the Resident Project Representative to and from the dock, staging area, and work areas.

## SP-13 SITE ACCESS

The project is only accessible by boat; the nearest launch and work site location are provided in SP-1.

The Contractor shall visit the Project Site and determine the best loading, unloading and staging locations. Transportation from these locations to the work areas may be limited to specific access corridors approved and by the Engineer and the Contractor during construction. The Contractor shall verify the types of equipment necessary for accessing the site and completing the Work as specified.

The Contractor shall abide by all rules, regulations, traffic regulations, site restrictions and any other rules and stipulations and shall be responsible for any damage or repairs to access routes, roads, boat launches, and staging areas and all private facilities and properties as outlined in GP-22 and GP-51.

The Project Site access routes, rights of way, road, boat launch, and staging areas shall be kept free from accumulation of debris, trash or other incidentals and shall be clean prior to Final Acceptance and Inspection by the Engineer and demobilization.

# SP-14 OYSTER LEASE RESTRICTIONS

There are no known existing oyster leases near or within the boundaries of the Project Site. No oyster restrictions are provided for performing the Work within the boundaries of the Project Site.

# SP-15 INSURANCE AND BONDS

The Contractor shall purchase and maintain without interruption for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, employees or subcontractors. The duration of the contract shall be from the inception of the contract until the date of final payment.

- 15.1 Minimum Scope and Limits of Insurance
- 15.1.1 Worker's Compensation

Worker's Compensation insurance shall be in compliance with the Worker's Compensation law of the State of Louisiana. Employers Liability is included with a minimum limit of \$500,000 per accident/per disease/per employee. If Work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act or other maritime law coverage shall be included and the Employers Liability limit increased to a minimum of \$1,000,000. A.M. Best's insurance company rating requirement may be waived for Worker's compensation coverage only.

15.1.2 Commercial General Liability

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations Liability, shall have a minimum limit per occurrence based on the project value. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claimsmade form is unacceptable.

The aggregate loss limit must apply to <u>each project</u>. ISO form CG 25 03 (current form approved for use in Louisiana), or equivalent, shall also be submitted. The State project number, including part number, and project name shall be included on this endorsement.

# COMBINED SINGLE LIMIT (CSL) PER OCCURRENCE

The required minimum combined single limit amount of insurance shall be as provided below:

| <u>Initial Contract Amount</u>  | <u>Minimum Insurance</u> |  |
|---------------------------------|--------------------------|--|
| Up to \$1,000,000               | \$1,000,000              |  |
| From \$1,000,001 to \$2,000,000 | \$2,000,000              |  |
| Over \$2,000,000                | \$5,000,000              |  |

### 15.1.3 Automobile and Watercraft Liability

Automobile Liability Insurance and Watercraft Liability Insurance shall have a minimum combined single limit per occurrence of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles and/or watercraft. If any non-licensed motor vehicles and/or watercraft are engaged in operations within the terms of the contract on the site of the work to be performed thereunder, such insurance shall cover the use of any such vehicles.

NOTE: If the Contractor does not own automobiles and/or watercraft, and such vehicles are utilized in the execution of the contract, then hired and non-owned coverage is acceptable. If automobiles and/or watercraft are not utilized in the execution of the contract, then automobile and/or watercraft coverage is not required.

15.1.4 Excess Umbrella

Excess Umbrella Insurance may be used to meet the minimum requirements for General Liability, Automobile Liability, and Watercraft Liability only.

15.1.5 Pollution Liability (required when asbestos or other hazardous material abatement is included in the contract)

Pollution Liability insurance, including gradual release as well as sudden and accidental shall have a minimum limit of not less than \$1,000,000 per claim. A claims-made form will be acceptable. A policy period inception date of no later than the first day of anticipated Work under this contract and an expiration date of no

earlier than 30 days after anticipated completion of all Work under the contract shall be provided. There shall be an extended reporting period of at least 24 months, with full reinstatement of limits, from the expiration date of the policy. The policy shall not be cancelled for any reason, except non-payment of premium.

15.1.6 Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and accepted by the Owner. The Contractor shall be responsible for all deductibles and self-insured retentions.

15.2 Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

15.2.1 Worker's Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Owner, its officers, agents, employees and volunteers for losses arising from Work performed by the Contractor for the Owner.

15.2.2 General Liability Coverage

The Owner, its officers, agents, employees and volunteers are to be added as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor, premises owned, occupied or used by the Contractor. ISO Form CG 20 10 (current form approved for use in Louisiana), or equivalent, is to be used;

The Contractor's insurance shall be primary as respects the Owner, its officers, agents, employees and volunteers. The coverage shall contain no special limitations on the scope of protection afforded to the Owner, its officers, officials, employees or volunteers. Any insurance or self-insurance maintained by the Owner shall be excess and non-contributory of the Contractor's insurance;

The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the policy limits.

15.2.3 All Coverages

Coverage shall not be canceled, suspended, or voided by either party (the Contractor or the insurer) or reduced in coverage or in limits except after 30 days written notice has been given to the Owner. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy;

Neither the acceptance of the completed Work nor the payment thereof shall release the Contractor from the obligations of the insurance requirements or indemnification agreement; The insurance companies issuing the policies shall have no recourse against the Owner for payment of premiums or for assessments under any form of the policies;

Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Owner, its officers, agents, employees and volunteers.

15.2.4 Acceptability of Insurers

All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-:VI or higher**. This rating requirement may be waived for Worker's compensation coverage only.

If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another certificate of insurance as required in the contract.

#### 15.2.5 Verification of Coverage

Contractor shall furnish the Owner with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Owner before Work commences and upon any contract renewal thereafter. The Certificate Holder must be listed as follows and as listed in SP-15, Sub-Part 15.4:

State of Louisiana Coastal Protection and Restoration Authority 150 Terrace Avenue Baton Rouge, La. 70802 Attn: Project #

In addition to the Certificates, Contractor shall submit the declarations page and the cancellation provision endorsement for each insurance policy. The Owner reserves the right to request complete certified copies of all required insurance policies at any time.

Upon failure of the Contractor to furnish, deliver and maintain such insurance as above provided, this contract, at the election of the Owner, may be suspended, discontinued or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

If the Contractor does not meet the insurance requirements at policy renewal, at the option of the Owner, payment to the Contractor may be withheld until the requirements have been met, OR the Owner may pay the renewal premium and withhold such payment from any monies due the Contractor, OR the contract may be suspended or terminated for cause.

#### 15.2.6 Subcontractors

Contractor shall include all subcontractors as insureds under its policies <u>OR</u> shall be responsible for verifying and maintaining the certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Owner reserves the right to request copies of subcontractor's certificates at any time.

If Contractor does not verify subcontractors' insurance as described above, Owner has the right to withhold payments to the Contractor until the requirements have been met.

#### 15.2.7 Worker's Compensation Indemnity

In the event Contractor is not required to provide or elects not to provide Worker's compensation coverage, the parties hereby agree the Contractor, its Owners, agents and employees will have no cause of action against, and will not assert a claim against, the State of Louisiana, its departments, agencies, agents and employees as an employer, whether pursuant to the Louisiana Worker's Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its Owners, agents and employees. The parties further agree that Contractor is a wholly independent Contractor and is exclusively responsible for its employees, Owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

#### 15.2.8 Indemnification/Hold Harmless Agreement

Contractor agrees to protect, defend, indemnify, save, and hold harmless, the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents, servants, employees and volunteers, from and against any and all claims, damages, expenses and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers. Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent.

15.3 Performance and Payment Bond

## **Recordation of Contract and Bond [38:2241A(2)]**

The Contractor shall record within thirty (30) days the Contract Between Owner and Contractor and Performance and Payment Bond with the Clerk of Court in the Parish(s) in which the Work is to be performed. The Contractor shall obtain a Certificate of Recordation from the Clerk of Court and forward this Certificate immediately to the Coastal Protection and Restoration Authority contact person listed in the Advertisement for Bids. No requests for payment will be processed until receipt of the Certificate of Recordation.

15.4 Additional Named Co-insured

Apache Louisiana Minerals, Inc. P.O. Box 206 Houma, LA 70361

Burlington Resources, Inc. P.O. Box 7097 Houma, LA 70361

## SP-16 EMPLOYEE WHISTLEBLOWER PROTECTION

This Contract and employees working on this Contract will be subject to the whistleblower rights and remedies in the pilot program on Contractor employee whistleblower protections established at 41 U.S.C. 4712 by Section 828 of the National Defense Authorization Act for Fiscal Year 2013 (Pub. L. 112-239) and Federal Acquisition Regulation (F.A.R.) 3.908.

The Contractor shall inform its employees in writing, in the predominant language of the workforce, of employee whistleblower rights and protections under 41 U.S.C. 4712, as described in section 3.908 of the F.A.R.

The Contractor shall insert the substance of this clause, including this paragraph, in all subcontracts over the simplified acquisition threshold.

# SP-17 PROHIBITION OF DISCRIMINATORY BOYCOTTS OF ISRAEL IN STATE PROCURMENT

By submitting a response to this solicitation, the bidder or proposer certifies and agrees that the following information is correct:

In preparing its response, the bidder or proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The bidder also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. The state reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.

# **END OF PART II – SPECIAL PROVISIONS**

# PART III <u>TECHNICAL SPECIFICATIONS</u>

## TS-1 GENERAL REQUIREMENTS

- 1.1 <u>Scope</u>. The work covered by these specifications consists of furnishing all equipment, materials, and labor, and performing all operations required for removal of the on-shore and foreshore structures described in the Plans and Specifications. Major tasks associated with this work include, but not limited to, the following:
  - Mobilization and Demobilization.
  - Staging, light loading, and unloading materials and use of shallow draft equipment. The CONTRACTORS's movement in the project area shall be limited to the immediate vicinity of construction for each project component.
  - Clearing and Grubbing.
  - Surveying.
  - Project layout.
  - Removal of existing structures.

The construction of flotation channels or wheel washing will not be permitted. CONTRACTOR must use shallow draft equipment conductive to the environment for placement the structures. The CONTRACTOR is advised that tidal fluctuations in this area will vary due to weather and daily tides. Historical tide data can be obtained from the U.S. Army Corp of Engineers or the U.S. Geological Survey. The CONTRACTOR is responsible for taking the appropriate measures to ensure that tidal fluctuations do not interfere with the prosecution of the contract.

- 1.2 <u>Permits</u>. The CONTRACTOR will be furnished with a copy of each permit issued and shall be responsible for compliance with all provisions and conditions. These permits do not relieve the responsibility of the CONTRACTOR from obtaining additional permits that may be needed to complete the work.
- 1.3 <u>Special Permits</u>. Copies of any special permits obtained by the CONTRACTOR to complete work must be submitted to Owner.
- 1.4 <u>Removal of Trash</u>. The CONTRACTOR shall remove all non-perishable debris, trash, and garbage from the site of work prior to final acceptance.
- 1.5 <u>Use of Equipment</u>. Any tracked vehicles used on the project site shall be kept away from existing vegetated wetlands or any other sensitive areas. The CONTRACTOR will be responsible for returning any disturbed wetlands or beach to pre-project conditions at his expense.
- 1.6 <u>Navigation</u>. All operations in connection with the work shall be in accordance with the rules and regulations of the U.S. Coast Guard, and any deviations there from shall be by special permission which is the responsibility of the CONTRACTOR. Failure of the CONTRACTOR to familiarize himself with all terms, conditions and provisions of the rules and regulations applicable to the work shall not relieve him of his responsibility under the Contract.

1.7 <u>Existing Features</u>. The CONTRACTOR shall be responsible for investigating, locating and protecting all existing facilities, structures, services, and pipelines on, above, or under the surface of the area where construction operations are to be performed. The CONTRACTOR shall call Louisiana One Call prior to beginning work at 1-800-272-3020 to locate all utility lines in the area.

Pipeline(s) exist in the project vicinity as shown on Sheet 3 of the Plans. The CONTRACTOR shall call the operators of the pipeline company a minimum of 14 days prior to accessing the site to have these pipelines properly marked prior to mobilization. CONTRACTOR shall not anchor, spud, or excavate within 100 feet of any pipeline.

# TS-2 MOBILIZATION AND DEMOBILIZATION

- 2.1 <u>Description</u>: Mobilization consists of preparatory work and operations, including those necessary for movement of personnel, equipment, supplies and incidentals to the Project Site; the establishment of offices, buildings and other facilities necessary for Work on the project; the cost of bonds and any required insurance; and other preconstruction expenses necessary for start of the Work, excluding the cost of construction materials. Such costs include, but are not limited to, the following:
  - A. Mobilization and Demobilization
  - B. Staging, light loading, and unloading materials and use of shallow draft equipment. The Contractor's movement in the project area shall be limited to the immediate vicinity of construction for each project component
  - C. Clearing and Grubbing
  - D. Surveying
  - E. Project Layout
- 2.2 <u>Arbitrary Mobilization by Contractor</u>: No compensation will be made for any remobilization that may be required because of inclement weather, or any other circumstance. Should the Contractor elect to demobilize prior to completing the project, such demobilization and subsequent remobilization shall be at no cost to the Owner.
- 2.3 <u>Ratio of Mobilization and Demobilization Effort</u>: Sixty percent (60%) of the mobilization/demobilization lump sum price will be paid to the Contractor upon completion of his mobilization at the Work site and the remaining forty percent (40%) will be paid to the Contractor upon completion of demobilization.
- 2.4 <u>Justification of Mobilization Costs</u>: In the event that the Engineer considers the amount in this item an unreasonable relation to the cost of the Work in this contract, the Engineer may require the Contractor to produce cost data to justify this portion of the bid. Failure to justify such price to the satisfaction of the Engineer will result in payment of actual mobilization costs, as determined by the Engineer at the completion of mobilization, and actual demobilization costs at the completion of demobilization, and payment of the remainder of this item in the final payment under this contract. The determination of the Engineer is not subject to appeal.

2.5 <u>Measurement and Payment</u>: All costs connected with mobilization and demobilization of the entire Contractor's equipment, personnel, and those of his subcontractor and other such costs as may be denoted in the Contract Documents shall be paid at the Contract unit price per lump sum for **Bid Item No. 1 - Mobilization and Demobilization**.

# TS-3 STAGING AREAS AND EQUIPMENT DRAFT REQUIREMENTS

- 3.1 S<u>cope</u>. Due to the environmentally sensitive features in the project area, particularly oyster leases, the CONTRACTOR will be limited to working within the immediate vicinity of construction as shown on the Plans. Access outside of these areas is not allowed.
- 3.2 <u>Method</u>. No dredging or prop washing will be allowed to access the work areas. The CONTRACTOR shall use any environmentally acceptable methods that will complete the work as shown on the Plans. The CONTRACTOR shall submit to the ENGINEER the method and equipment intended to be used to access the work areas.
- 3.3 <u>Navigation</u>. The CONTRACTOR shall mark the access route with buoys and lights in accordance with the rules and regulations of the U.S. Coast Guard and the U.S. Army Corps of Engineers.
- 3.4 <u>Measurement and Payment</u>. There shall be no separate payment for access route layout, staging, and light loading or unloading or specialized shallow draft equipment requirements.

# TS-4 CLEARING AND GRUBBING

- 4.1 <u>Scope</u>. Clearing and grubbing will be accomplished, as needed, with the objective of removing only those items that will interfere with the removal of the project features as shown on the project Plans. Any existing vegetation will be left in-place.
- 4.2 <u>Purpose</u>. Clearing and grubbing shall consist of furnishing all plant, labor, equipment, and materials required for cutting and removing trees, logs, brush, stumps, debris and other objectionable material as designated in the field by the ENGINEER. Clearing shall be done only within the limits of the footprints of the structures to be removed. Obstructions, designated by ENGINEER, shall be cleared; however, roots, cut vegetation, existing and dead vegetation and non-- perishable solid objects that are small enough that they will not interfere with removal of the project features will be permitted to remain.
- 4.3 <u>Debris Disposal</u>. Cut vegetation and perishable debris shall be removed from the construction limits as designated by the ENGINEER. Any items requiring removal will be disposed of in approved areas as directed by the Engineer. Burning of materials will not be permitted. The Contractor, at his expense, shall make arrangements with property owners for obtaining suitable disposal locations. Copies of agreements with property owners shall be furnished to the Owner.

- 4.4 <u>Other Disposals</u>. The methods, locations and disposal of nonperishable materials, wastes, effluents, trash, oil, grease, chemicals, etc. shall be such that harmful debris **will** not enter the lake, marshland, groundwater, or waterways thus presenting a hazard to wildlife. Disposal methods shall be in accordance with applicable federal, state, and local regulations.
- 4.5 <u>Measurement and Payment</u>. All costs connected with clearing and grubbing of the project and all of the CONTRACTOR's equipment, personnel, and those of subcontractors and such others denoted in the contract documents shall be paid for as part of the contract lump sum price for **Bid Item No. 1 Mobilization and Demobilization**.

# TS-5 SURVEYING AND PROJECT LAYOUT

- 5.1 <u>Scope</u>. The Contractor shall furnish all of the materials, labor, and equipment necessary to perform preconstruction and As-Built Surveys for the feature removal as shown in the Plans. All surveys shall be performed by personnel who are approved by the Engineer and under the direct supervision of a professional surveyor licensed in the state of Louisiana. Survey data shall reference the North American Datum of 1983, Louisiana South Zone, U.S. Survey Feet, and the North American Vertical Datum of 1988, U.S. Survey Feet. Horizontal and vertical control shall be established by using the LDNR secondary monument specified in **Appendix G**.
- 5.2 <u>Pre-Construction Survey</u>. A pre-construction survey should be conducted after the Pre-Construction Conference and prior to construction. This survey shall be used to verify alignment and existing placement of project features, feature removal limits, and make modifications or adjustments as deemed necessary by the Engineer.
- 5.2.1 <u>Staking</u>. Surveying and staking shall be completed to aid in feature removal. Stakes shall be spaced at intervals, as needed, along the extent of each treatment type in Reaches A, B, and E. The coordinates shown on the Reach Layout maps in the Plans may serve as guidelines on placement of the stakes. Stakes shall be untreated wood of adequate length to be embedded into the soil and still be clearly visible.
- 5.2.2 <u>Magnetometer Survey</u>. A magnetometer and bathymetric survey shall be performed along the centerline of the access route(s) to the Project Site and in the vicinity of any know well heads, pipelines, or other known obstacles. Additional track lines shall be run perpendicular to the access route(s) where possible. All survey data shall reference NAVD 88 in U.S. feet.

Magnetometer data shall be collected on a minimum of three circular routes around all known well heads within 150 feet of the access route(s). All pipelines within 150 feet of the access route(s) shall be probed and marked throughout construction.

Magnetometer and bathyrnetric survey drawings shall be submitted to the Engineer for approval prior to construction. The magnetometer drawing shall show all track lines, coordinates, amplitudes, signature types, and signature width of all hits. The results of pipeline probing, including coordinates, top of pipe elevations, and cover over the pipe shall also be represented.

- 5.3 <u>As-Builts</u>. The Onshore Gabion Mat Units, Onshore Armor Units, and Foreshore Triangular Unit features removal areas shall be surveyed after removal construction is completed to ensure proper removal of all units as specified and as shown on the Plans. The Engineer shall be afforded a minimum of five (5) working days from the Date of receipt to review and either grant or deny Acceptance of the survey. The survey drawings and date shall be delivered to the designated CPRA representative. Final payment will not be approved until the As-Built Survey has been accepted by the Engineer.
- 5.3.1 <u>Gabion Mat Units</u>. All Gabion Mat features shall be removed along Reach A, Reach B, and Reach E. Surveys shall be taken along the Gabion Mat Units removal area of Reaches A, B, and E every 50 feet to verify proper removal.
- 5.3.2 <u>A-Jacks Armor Units</u>. **A-Jacks Armor Units shall be removed along Reach A, Reach B, and Reach E.** Surveys shall be taken along the A-Jacks Armor Units removal areas of Reaches A, B, and E every 50 feet to verify proper removal.
- 5.3.3 <u>Foreshore Triangular (Reef Blocks) Units</u>. Foreshore Triangular (Reef Blocks) Units shall be removed along Reach A, Reach B, and Reach E. Surveys shall be taken along the Foreshore Triangular Units removal areas of Reaches A, B, and E every 50 feet to verify proper removal.
- 5.4 <u>Measurement and Payment</u>. Forty (40) percent of the contract cost for this bid item will be paid to the Contractor upon Acceptance of the Pre-Construction Survey, Twenty (20) percent will be paid upon acceptance of process surveys, and the remaining Forty (40) percent will be paid to the Contractor upon Acceptance of the As-Built Survey. The Contractor shall submit Applications for payment after gaining Acceptance. Payment will be made at the Contract Lump Sum Price for **Bid Item No. 2 Surveying and Project Layout**. Payment shall constitute full compensation for furnishing the material, labor, equipment and other incidentals related to this item of Work.

# TS-6 A-JACKS ARMOR UNITS REMOVAL

6.1 <u>Scope</u>. A-Jacks Armor Units (On-Shore Armor Units) shall be removed along Reach A, Reach B, and Reach E. Unit removal will include steel cables. The Contractor shall remove unit anchors (anchor rods) in accordance with TS-9. Any geogrid or geotextile exposed or uncovered during the removal operations or found in such condition are to be removed by the Contractor as part of the A-Jacks Armor Units removal. All geotextile fabric encountered and removed shall be disposed of by the Contractor offsite. The Contractor shall furnish all labor, materials, equipment, and incidentals required to perform all operations in connection with the removal the A-Jacks Armor Units (On-Shore Armor Units) in accordance with the lines, grades, design and dimensions shown on the Plans and as specified herein. 6.2 <u>Materials</u>. The original project specification for Armor Units included the following: Cementitious Materials - Materials shall conform to the following applicable ASTM specifications: The units were to be constructed in halves of Portland Cement Concrete, with, adhesive used to join the two halves.

The A-Jacks -Shore Armor Units were constructed to the physical dimensions and requirements as shown in the Plans with the following nominal characteristics:

| Total Length:  | 24.0 in               |
|----------------|-----------------------|
| Arm Length:    | 3.68 in               |
| Fillet Length: | 1.84 in               |
| Arm Width:     | 3.68 in               |
| Volume:        | 0.56 ft. <sup>3</sup> |
| Weight:        | 78 lbs.               |

- 6.3 <u>Original Installation</u>. A-Jacks Armor Units were placed in the manner and at the locations shown on the Plans. The Units were anchor every 10 feet with galvanized steel cable and 20-foot galvanized steel rods.
- 6.4 <u>Measurement and Payment</u>. Complete removal and disposal of A-Jacks Armor Units with steel cable and rods with anchors will be measured on a linear foot basis, under the supervision of the ENGINEER or inspector. No separate payment will be made for any cable, rod, geotextile, or geogrid removal and disposal. Payment for A-Jacks Armor Units and related materials will be made at the unit price per linear foot for **Bid Item No. 3 Removal of A-Jacks Armor Units**.

#### TS-7 GABION MAT UNITS REMOVAL

- 7.1 <u>Scope</u>. All Gabion Mats features and stone fill shall be removed along Reach A, Reach B, and Reach E. The Contractor shall furnish all labor, materials, equipment, and incidentals required to perform all operations in connection with the removal of the Gabion Mat Units in accordance with the lines, grades, design and dimensions shown on the Plans and as specified herein.
- 7.2 Materials.
- 7.2.1 <u>Gabion Stone</u>. The original project specification for Gabon Stone included the following: The Gabon Mat Units were constructed of crushed, angular stone, consisting of 100% stone that would not disintegrate upon exposure to the elements or be easily broken from handling, and be reasonably free from earth and other foreign materials.
- 7.2.2 <u>Unit Weight</u>. The solid weight of stone was to be at least one hundred and fifty (150) pounds per cubic foot (based on bulk specific gravity) and the absorption shall not exceed two percent (2%). The least dimension of an individual stone was to be at least one third (1/3) its maximum dimension and shipments of stone were to be reasonably well graded within the specific limits. Gabion stone was to be a Class #1 stone as specified by ASTM.

- 7.2.3 <u>Structural Geogrid</u>. The structural geogrid used for the gabion mat units for the original project were:
  - a. Type 1 for internal diaphragms of the units.
  - b. Type 2 for the top, bottom and sides of the units.

The structural geogrid was to be produced from virgin resin and classified as high density polyethylene (HDPE) and or polypropylene (PP) and possess complete continuity of all properties throughout the structure. In the original project, the structural geogrid was specified to have positive mechanical interlock (i.e. direct mechanical keying) with:

- a. Compacted soil or construction fill materials,
- b. Contiguous sections of itself when overlapped and embedded in compacted soil or construction fill materials, and
- c. Rigid mechanical connection elements such as bodkins, pinsor hooks.

In the original project, the Gabion Mat Units were 20' long x 5' wide x 12" thick.

7.3 <u>Measurement and Payment</u>. Complete removal and disposal of Gabion Mat Units and stone fill will be measured on a linear foot basis, under the supervision of the ENGINEER or inspector. Payment will be made at the unit price per linear foot for **Bid Item No. 4 - Removal of Gabion Mat Units and Stone Fill**.

#### TS-8 FORESHORE TRIANGULAR (REEF BLOCKS) UNITS REMOVAL

- 8.1 <u>Scope</u>. Foreshore Triangular (Reef Blocks) Units shall be removed along Reach A, Reach B, and Reach E. Unit removal will include oyster shells, and steel cables. The Contractor shall remove unit anchors (anchor rods) in accordance with TS-9. Any geogrid or geotextile exposed or uncovered during the removal operations or found in such condition are to be removed by the Contractor as part of the Triangular (Reef Blocks) Units removal. All geotextile fabric encountered and removed shall be disposed of by the Contractor offsite. The Contractor shall furnish all labor, materials, equipment, and incidentals required to perform all operations in connection with the removal of the Foreshore Triangular Units in accordance with the lines, grades, design and dimensions shown on the Plans and as specified herein.
- 8.2 <u>Materials</u>. The original project specifications for Triangular (Reef Blocks) Units included the following materials: Structural Steel-All ASTM A-706, weldable No. 4 (1/2-inch) rebar; and plastic mesh bags of heavy gauge 2-inch bags, model HDBE-5700 as manufactured by ADPI Enterprises or an approved equal, attached to the steel frame using stainless steel hog rings; and oyster shells densely packed into the plastic mesh bags.

The Triangular (Reef Blocks) Units have three legs at 5' long x 2.0' high - Type Reef Blocks. The Foreshore Triangular Units filled with shell were placed in the manner and at the locations described in the Plans.

8.3 <u>Measurement and Payment</u>. Complete removal and disposal Foreshore Triangular (Reef Blocks) Units with shell fill, steel cable, and rods with anchors will be measured on a linear foot basis, under the supervision of the ENGINEER or inspector. No separate payment will be made for any cable, rod, geotextile, or geogrid removal and disposal. Payment for Triangular (Reef Blocks) Units will be made at the unit price per linear foot for **Bid Item No. 5 - Foreshore Triangular Units**.

#### TS-9 TIE-DOWN ANCHOR REMOVAL

- 9.1 <u>Scope</u>. **Tie-Down Anchor features along Reach A, Reach B, and Reach E shall be removed.** The Contractor shall furnish all labor, materials, labor, and equipment necessary to perform all operations in connection with the removal of the Tie-Down Anchor features (anchor rods) in accordance with the Plans and these Specifications.
- 9.2 <u>Materials</u>. The original project specifications for Tie-Down Anchors included the following: Number Rod Size 3/4" Galv. Rod and Holding Capacity 10,000 lbs.
- 9.3 <u>Measurement and Payment</u>. Anchors properly removed will be measured per each as removed by the Contractor, under the supervision of the Engineer or Inspector. Payment will be made at the unit price for **Bid Item No. 6 Removal of Tie-Down Anchor**.

#### TS-10 TIE-IN UNITS REMOVAL

10.1 <u>Scope</u>. All Tie-In Unit features along Reach A, Reach B, and Reach E shall be removed. Tie-In Units consist of the On-Shore Armor Units (A-Jacks Armor Units). The Contractor shall remove unit anchors (anchor rods) in accordance with TS-9. Any geogrid or geotextile exposed or uncovered during the removal operations or found in such condition are to be removed by the Contractor as part of the Tie-In Units removal. All geotextile fabric encountered and removed shall be disposed of by the Contractor offsite. The Contractor shall furnish all labor, materials, equipment, and incidentals required to perform all operations in connection with the removal the Tie-In Units in accordance with the lines, grades, design and dimensions shown on the Plans and as specified herein. The CONTRACTOR shall furnish all labor, materials, equipment, and incidentals required and perform all operations in connection with the removal of the Tie-In Units in accordance with the Plans and as specified herein.

In the original project construction, the Tie-In Units connected the on-shore structures with the foreshore structures. The minimum top elevation of all Tie-In Units was to be+ 1.0 feet NAVD and all Tie-In Units were to be anchored in accordance with the Plans.

10.2 <u>Materials</u>. In the original project construction, Tie-In Unit materials were to be in accordance with that used for On-Shore Armor Units (A-Jacks Armor Units), Technical Specification TS-6. Anchor System materials were to be in accordance

with Technical Specifications TS-9.

- 10.3 <u>Original Installation.</u> The Tie-In Units were to be placed in the manner and at the locations shown on the Plans. Tie-In Units meeting Onshore Gabion Mat treatments were to be placed as close as possible to the Gabion Mat and anchored and tied at the junction of the two treatments at the existing shoreline. For Tie-In Units meeting either Onshore Armor Units or Foreshore Triangular Units, an anchor was to be placed at the junction and the treatments were to be tied together with steel cable ties at that anchor.
- 10.4 <u>Measurement and Payment</u>. Complete removal and disposal of Tie-In Units will be measured on a linear foot basis, under the supervision of the ENGINEER or inspector. Payment will be made at the unit price per linear foot for **Item No. 7** – **Removal of Tie-In Unit**.

#### TS-11 PERMANENT WARNING SIGNS REMOVAL

- 11.1 <u>Scope</u>. The Warning Signs and support pile shall be removed along Reach A, Reach B, and Reach E. The Contractor shall furnish all labor, materials, labor, and equipment necessary to perform all operations in connection with the removal of the permanent warning signs along Reaches A, B, and E in accordance with the Plans and these Specifications. The complete timber pile is to be removed by pulling if possible. If the pile cannot be completely pulled, it shall be broken off a minimum of three (3) feet below the water bottom. The removal shall also conform to the regulations in the United States Coast Guard (USCG).
- 11.2 <u>Materials</u>. The As-Built plans for the original project indicate that the warning signs are fabricated from 1/8 inch thick commercial grade aluminum plate that is 3 feet high and 3 feet wide. Each sign isoverlaid with white vinyl film.

The As-Built Plans show that the warnings signs are supported by treated timber piles. The As-Built Plans give the pile dimensions as 40-feet long, with 12-inch diameter butt and 7-inch diameter tip, and with 28-feet embedment. The warning signs are fastened to the pipe using galvanized steel carriage bolts, 20 inches long. The bolt threads were to be treated to prevent easy removal.

The warning signs are installed in front of the shoreline protection features.

11.3 <u>Measurement and Payment</u>. Complete removal and disposal of Warning Signs will be measured on a Per Each basis under the supervision of the ENGINEER or inspector. Payment for removal of Warning Signs will be made at the unit price per Each for **Bid Item No. 8 – Permanent Warning Signs Removal**.

#### END OF PART III – TECHNICAL SPECIFICATIONS

# APPENDIX A: SUBCONTRACTORS REPORT

CURRENT INVOICE NO. PURCHASE ORDER NO.

# **APPENDIX A, ATTACHMENT A1**

# COASTAL CONSTRUCTION AND VEGETATIVE PROJECTS

# SUBCONTRACTOR REPORT

# **PRIME CONTRACTOR**

| Name & Address of Subcontractor(s) | \$ Value Paid to Subs for this<br>Invoice Period | Cumulative \$ Value Paid to Subs<br>for this Purchase Order |
|------------------------------------|--|---|
|                                    |  |   |
|                                    |  |   |
|                                    |  |   |
|                                    |  |   |
|                                    |  |   |
|                                    |  |   |
|                                    |  |   |
|                                    |  |   |
|                                    |  |   |

# APPENDIX B: REQUEST FOR INFORMATION FORM

#### Terrebonne Bay Shoreline Demonstration – Features Removal Project Project No. TE-0045

DATE:

RFI Number:

Summary of RFI by Contractor

Signature:

Response to RFI by Engineer

Signature:

# **APPENDIX C: CHANGE ORDER FORM**

# CHANGE ORDER NO. \_\_\_

| OWNER:<br>CONTRACTOR                       | State of Louisiana, Coastal Protection & Restoration Authority                    |
|--|---|
| PROJECT:                                   | Terrebonne Bay Shoreline Demonstration –<br>Features Removal Project<br>(TE-0045) |
| PROJECT CODE:<br>COST CENTER:<br>ENGINEER: | Brian Babin, P.E.   |

The following changes are hereby proposed to be made to the Contract Documents:

•

# **Description:**

# Attachments (List Documents Supporting Change):

| Change in Co  | ontract Price | Change in Contract Time  |                 |
|---|---------------|--|-----------------|
| Original Contract Price                                   | \$0           | Original Contract Time<br>(Calendar Days)                        | 0 Calendar Days |
| Net Increase (Decrease)<br>from Previous Change<br>Orders | \$0           | Net Increase (Decrease)<br>from Previous Change<br>Orders (Days) | 0 Calendar Days |
| Contract Price prior to this Change Order                 | \$0           | Contract Time prior to this<br>Change Order (Calendar<br>Days)   | 0 Calendar Days |
| Net Increase (Decrease)<br>of this Change Orders          | \$0           | Net Increase (Decrease) of this Change Order (Days)              | 0 Calendar Days |
| Contract Price with this<br>Change Order                  | \$0           | Contract Time with this<br>Change Order (Calendar<br>Days)       | 0 Calendar Days |

#### **RECOMMENDED:**

#### **RECOMMENDED:**

## ACCEPTED:

Contractor

| By:      | By:                       |
|----------|---------------------------|
| Engineer | CPRA Construction Manager |
| Date:    | Date:                     |

.

Date:\_\_\_\_\_

By:\_\_\_\_\_

## Terrebonne Bay Shoreline Demonstration -Features Removal Project (TE-45)

### PURCHASE ORDER NO: \_\_\_\_\_

# SUMMARY OF CHANGE ORDER NO. \_\_\_\_\_

| Item<br>No.                                  | Description | Unit | Original<br>Quantity | Adjusted<br>Quantity | Unit<br>Price | Amount<br>Overrun | Amount<br>Underrun |
|--|-------------|------|----------------------|----------------------|---------------|-------------------|--------------------|
|  |             |      | 0                    | 0                    | \$            | \$                |                    |
|  |             |      | 0                    | 0                    | \$            | \$                |                    |
|  |             |      | 0                    | 0                    | \$            | \$                |                    |
|  |             |      | 0                    | 0                    | \$            | \$                |                    |
|  |             |      | 0                    | 0                    | \$            | \$                |                    |
| Total Amount Overrun:                        |             |      |                      |                      |               | \$                |                    |
| Total Amount Underrun:                       |             |      |                      |                      | 0.00          |                   |                    |
| Net Increase (Decrease) of this Change Order |             |      |                      |                      | \$            |                   |                    |

**JUSTIFICATION:** 

# APPENDIX D: RECOMMENDATION OF ACCEPTANCE FORM

#### $\clubsuit$ NOT FOR RECORDATION PURPOSES $\diamondsuit$

# **RECOMMENDATION OF ACCEPTANCE**

| TO:   | Coastal Protection and<br>1440 Tiger Drive Suite<br>Thibodaux, LA 70301 | 5 | FROM: _<br>-<br>- | Design Firm Name an   |                   |
|-------|---|---|-------------------|-----------------------|-------------------|
|       | :<br>ECT NAME & NUMBER  |   | ine Demonstrati   | on – Features Removal | Project (TE-0045) |
|       | CODE:<br>RACTOR:  |   |                   |                       |                   |
|       | NAL CONTRACT AMO<br>. CONTRACT AMOUNT                                   | · |                   |                       |                   |
|       | OF ACCEPTANCE:<br>RACT DATE OF COMP                                     |   |                   |                       |                   |
|       | BER OF DAYS (OVERR)   |   |                   |                       |                   |
|       | DATED DAMAGES PEI   |   |                   |                       |                   |
| VALU  | E OF PUNCH LIST   |   |                   | \$                    |                   |
| punch | list)   |   |                   |                       |                   |

Signed: \_\_\_\_\_\_ DESIGNER

FOR USE OF PROJECT MANAGER:

Signed:\_\_\_\_\_ PROJECT MANAGER

#### **\*** NOT FOR RECORDATION PURPOSES **\***

# APPENDIX E: STANDARD MANATEE CONDITIONS FOR IN-WATER ACTIVITIES

#### STANDARD MANATEE CONDITIONS FOR IN-WATER ACTIVITIES

During in-water work in areas that potentially support manatees all personnel associated with the project shall be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with an injury to manatees. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel shall be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video are acceptable.

All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). To minimize potential impacts to manatees in areas of their potential presence, the permittee shall insure the following are adhered to:

- All work, equipment, and vessel operation shall 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).
- If a manatee(s) is sighted in or near the project area, all vessels associated with the project shall 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 shall follow routes of deep water whenever possible.
- If used, siltation or turbidity barriers shall be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.
- Temporary signs concerning manatees shall be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities shall 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 CONSTRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT". A second temporary sign measuring 8½ " X 11" shall be posted at a location prominently visible to all personnel engaged in water-related activities and shall read language similar to the following: "CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION".
- Collisions with, injury to, or sightings of manatees shall 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 (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

# APPENDIX F: PERMITS OBTAINED BY OWNER

#### DEPARTMENT OF NATURAL RESOURCES OFFICE OF COASTAL MANAGEMENT P.O. BOX 44487

BATON ROUGE, LOUISIANA 70804-4487

(225) 342-7591 1-800-267-4019

#### COASTAL USE AUTHORIZATION/CONSISTENCY DETERMINATION

C.U.P No.: P20190219 (Amended)

## NAME : LA. COASTAL PROTECTION AND RESTORATION AUTHORITY (CPRA) HARTMAN ENGINEERING, INC.

527 WEST ESPLANADE AVE. SUITE 300 KENNER, LA 70065

Attn: Rolland A. Mura

# LOCATION: Terrebonne Parish, LA Lat. 29° 17' 23.00"N / Long. -90° 37' 13.00"W (see plats for specific project coordinates); Sections 32 & 33, T20S-R18E; Section 118, T20S-R11E; Terrebonne Bay; LA.

- **DESCRIPTION:** Proposed removal of all shoreline protection demonstration features along Reach E and removal of Reef Blocks and A-Jacks features along Reaches A and B. The Gabion mats along Reaches A and B will remain in place. All anchors will be pulled or cut a minimum of 10' below the mudline.
- AMENDMENT 1: Proposed removal of all shoreline protection demonstration features along Reaches A, B and E. Features to be removed include Reef Blocks, A-Jacks, and Gabion Mats. Warning signs will be removed and all anchors will be pulled or cut a minimum of 10 feet below the mud line.

### This amended determination supersedes the original determination issued on May 24, 2019.

Pursuant to the Louisiana Administrative Code, Title 43, Part 1, Chapter 7, §723.B.8.b, it has been determined that the proposed activity has no direct and significant impact on coastal waters and a Coastal Use Permit will not be required.

This amended determination is valid for two (2) years from the date of the signature of the Secretary or his designee on the original determination which was May 24, 2019. If the proposed activity is not initiated within this two year period, this amended determination will expire and the applicant will be required to submit a new application. The applicant will notify the Office of Coastal Management of the date on which initiation of the proposed activity began by entering a commencement date through the online system, or by mailing said information to OCM.

This amended determination has been made based on the information provided in your application showing that either no dredging or limited dredging would be necessary to access to the work site. Dredging beyond that described in your application, including prop washing, wheel washing, or otherwise displacing water bottom material is not authorized by this determination. If site conditions are such that dredging beyond that authorized is necessary, a revised determination including agency or public notice if applicable, will be required.

This amended determination has been made on the basis of information provided by your application. If it is later established that you furnished erroneous data, you may be directed to alter or modify your plans, to remove structures you have installed, and/or to restore the work area to pre-project conditions at your own expense. If it is established that you knowingly furnished erroneous data, you could also be subject to legal action.

P20190219 (Amended) LA. COASTAL PROTECTION AND RESTORATION AUTHORITY (CPRA) 11/01/2019 Page 2 of 3

This determination does not eliminate the need to obtain a permit from the United States Army, Corps of Engineers or any other Federal, state or local approval that may be required by law. The drawings submitted with your referenced application are attached hereto and made a part of the record. If you have any questions regarding this authorization, please contact our office (225) 342-7591 or (800) 267-4019.

\*\*\*\*\*\*\* End of Determination \*\*\*\*\*\*

By accepting this amended determination the applicant agrees to its terms and conditions.

I affix my signature and issue this amended determination this 1st day of November, 2019.

DEPARTMENT OF NATURAL RESOURCES

Karl L May

Karl L. Morgan, Administrator Office of Coastal Management

This agreement becomes binding when signed by the Administrator of the Office of Coastal Management Permits/Mitigation Division, Department of Natural Resources.

Attachments

P20190219 (Amended) LA. COASTAL PROTECTION AND RESTORATION AUTHORITY (CPRA) 11/01/2019 Page 3 of 3

#### **Final Plats:**

- 1) P20190219 Final Plats 09/27/2019
- cc: Martin Mayer, COE w/attachments Dave Butler, LDWF w/attachments Jordan Cobbs, OCM w/attachments Rod Pierce, OCM/FI w/attachments Terrebonne Parish w/attachments

# LA. COASTAL PROTECTION AND RESTORATION AUTHORITY (CPRA) w/attachments





#### DEPARTMENT OF THE ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT 7400 LEAKE AVE NEW ORLEANS LA 70118-3651

December 9, 2019

Operations Division Surveillance and Enforcement Section

Mr. Rolland A. Mura Hartman Engineering, Inc. 527 West Esplanade Avenue #300 Kenner, Louisiana 70065

Dear Mr. Mura:

Reference is made to your application, on behalf of the Louisiana Coastal Protection and Restoration Authority (CPRA), for a Department of the Army (DA) permit to shoreline protection demonstration features on property located in Section 32 and 33, Township 20 South, Range 18 East, Terrebonne Parish, Louisiana.

We have reviewed your project, as proposed, and determined that additional DA permits under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act will not be required, provided all work is confined to the footprint of the previously authorized project. Therefore, we are returning your application. Any changes or modifications to the proposed project will require a revised determination.

Please be advised that this determination only applies to DA permitting requirements and does not alleviate your responsibility to obtain proper authorization from other federal, state, or local agencies that may be required.

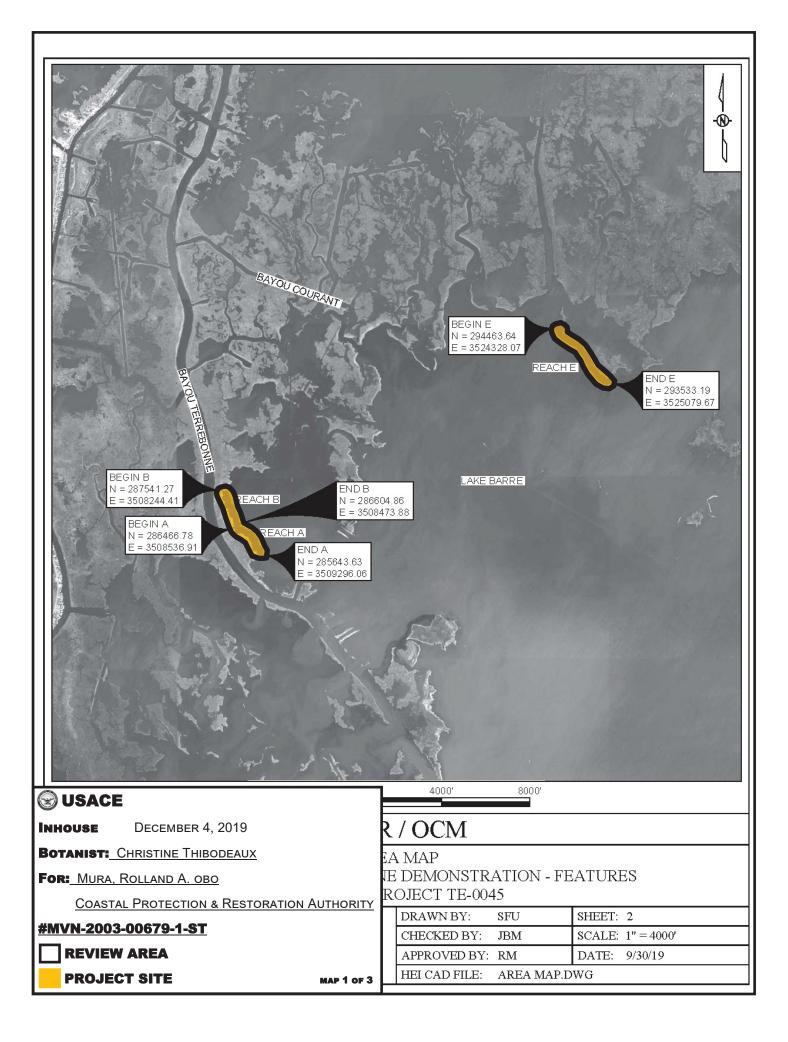
Furthermore, please be advised that this property is in the Louisiana Coastal Zone and a Coastal Use Permit may be required prior to initiation of any activities on this site. For additional information, contact Ms. Christine Charrier, Office of Coastal Management, Louisiana Department of Natural Resources at (225) 342-7953.

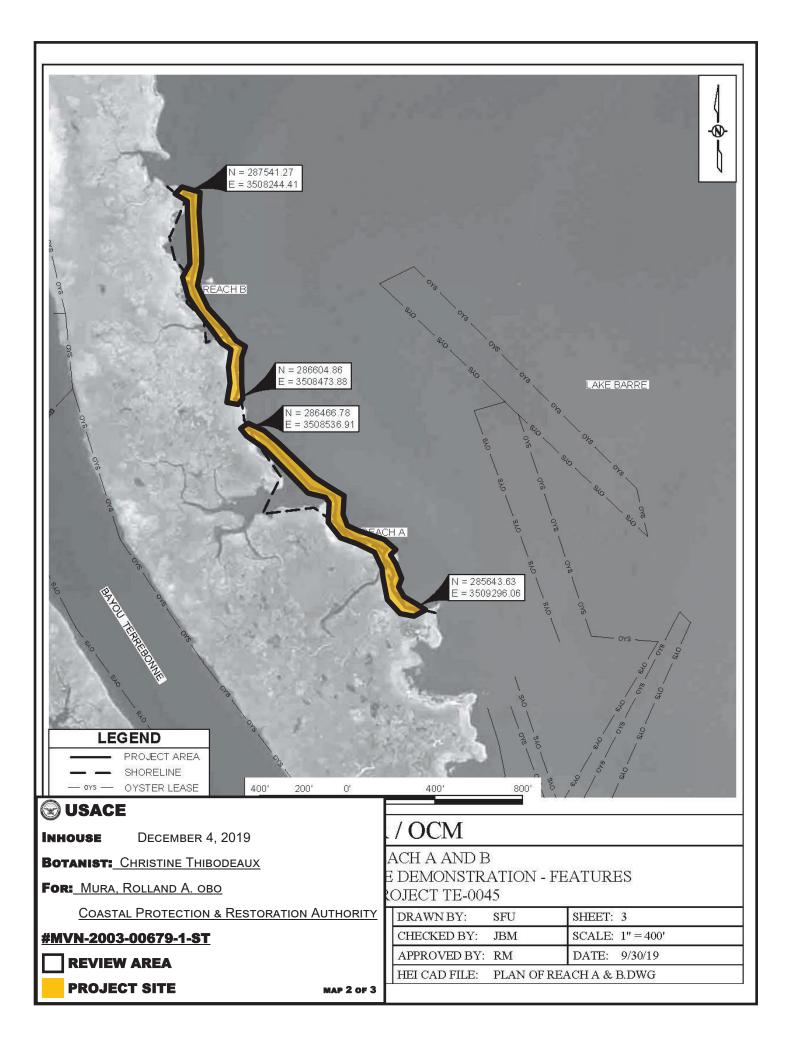
You and your client are advised that this jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

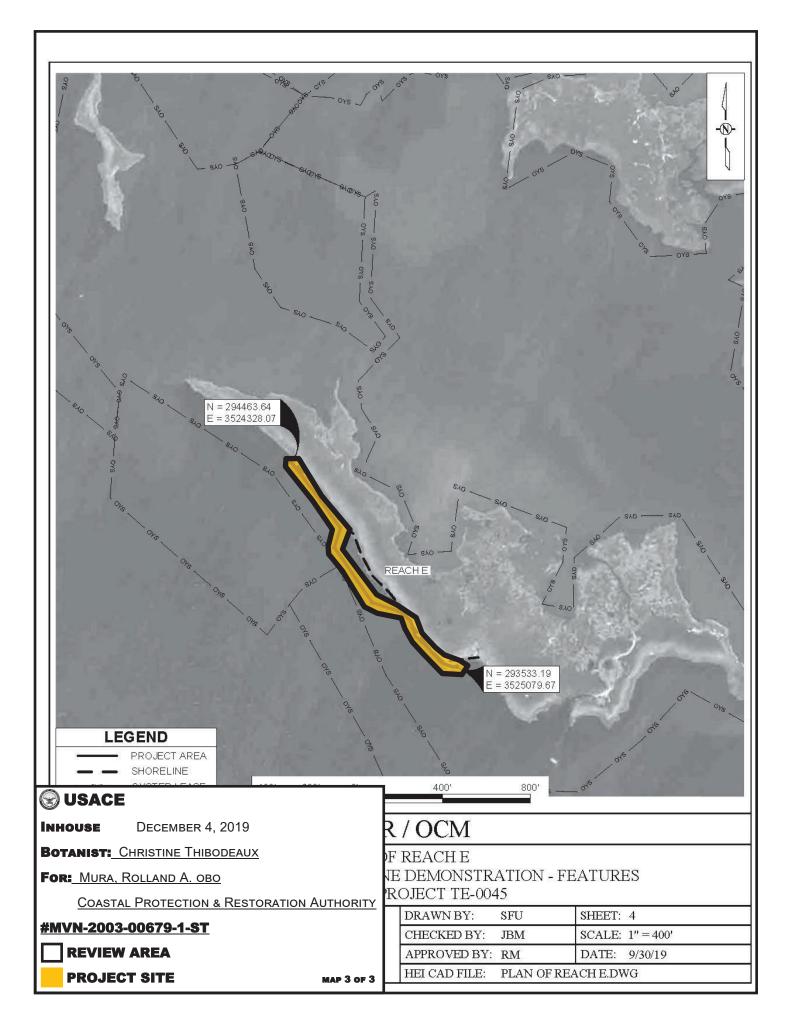
Should there be any questions concerning these matters, please contact Ms. Christine Thibodeaux at (504) 862-2278 and reference our Account No. MVN-2003-00679-1-ST.

Sincerely, OBERLIES.BRIAN.MC INNIS.1230779739 for Martin S. Mayer Chief, Regulatory Branch

Enclosures









Permit Number: P20190219 Date Received: 09/27/2019

# Step 1 of 15 - Applicant Information

| Applicant/Company<br>Name: | La. Coastal Protection and Restoration<br>Authority (CPRA) | Applicant Type: GOVERNMENT AGENCY |
|----------------------------|--|-----------------------------------|
| Mailing Address:           | 1440 Tiger Drive<br>Suite B<br>Thibodaux , LA 70301        |                                   |
| Contact Information:       | Brian Babin, P.E.  |                                   |
| Daytime:                   | 985 447 0956 <b>Fax:</b> 985 447 0997                      | Contact Email:                    |

# Step 2 of 15 - Agent Information

| Company<br>Name:        | Hartman Engineering, Inc.   |
|-------------------------|---|
| Mailing Address:        | 527 West Esplanade Avenue<br>#300<br>Kenner , LA 70065                        |
| Contact<br>Information: | Rolland A. Mura, P.E.   |
| Daytime:                | 504 466 5667 <i>Fax:</i> 504 466 6166 <i>Contact Email:</i> RMURA@HARTENG.COM |

# Step 3 of 15 - Permit Type

| 🛛 Coastal Use Permit (CUP) | □ Solicitation of Views (SOV) | □ Request for Determination (RFD) |
|----------------------------|-------------------------------|-----------------------------------|
|                            |                               |                                   |

# Step 4 of 15 - Pre-Application Activity

http://sonlite.dnr.state.la.us/sundown/cart\_prod/cart\_crm\_application?pcup\_num=P201902... 10/2/2019



#### DEPARTMENT OF THE ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT 7400 LEAKE AVE NEW ORLEANS LA 70118-3651

June 5, 2019

Operations Division Central Evaluation Section

Subject: MVN 2003-00679-CF

Louisiana Coastal Protection and Restoration Authority 1440 Tiger Drive, Suite B Thibodaux, LA 70301

Gentlemen:

The proposed work, to remove 2,890 linear feet of shoreline protection features along Reach E and selected features along Reach A and B of the Terrebonne Shoreline Demonstration Project, located in Lake Barre, approximately 3.86 miles northeast of Cocodrie, Louisiana, Latitude 29.289727° N, Longitude -90.620277° W, within Terrebonne Parish, as shown on the enclosed drawings, is <u>authorized</u> under **Category II** of the **Programmatic General Permit** provided that all conditions of the permit are met. This authorization supersedes authorization MVN-2003-00679-CY which was granted by letter dated May 1, 2003.

This authorization has a blanket water quality certification from the Louisiana Department of Environmental Quality (DEQ); therefore, no additional authorization from DEQ is required.

However, prior to commencing work on your project, you must obtain approvals from state and local agencies as required by law and by terms of this permit. These approvals include, but are not limited to, a permit, consistency determination or determination of "no direct or significant impact (NDSI) on coastal waters" from the Louisiana Department of Natural Resources, Office of Coastal Management.

In addition to the attached standard PGP conditions dated 16 May 2017, the following special conditions are being made a part of this authorization:

- The permittee shall limit construction activities to areas essential to the project. The remainder of the property shall be left in its natural state. If the authorized project requires any additional work not expressly permitted herein, or impacts any wetlands (or "other waters of the US") other than the areas indicated on the attached drawings, the permittee must apply for an amendment to this authorization prior to commencement of work.
- 2. Permittee shall obtain all local, state and parish approvals prior to the commencement of work at the project site. Any changes in the project

configuration as a result of local approvals must be documented and appropriate drawings provided to this District office for incorporation into the permit file.

- 3. The permittee shall ensure that a copy of this Department of the Army permit is supplied to all contractors, foremen, and/or any workers associated with the implementation of the authorized activities and are equally aware of the conditions and restrictions associated with this approval.
- 4. The permittee shall adhere to the enclosed Standard Manatee Conditions for In-Water Activities as per the Standard Local Operating Procedure for Endangered Species in Louisiana (SLOPES), dated October 22, 2014, between the U.S. Army Corps of Engineers, New Orleans and U.S. Fish and Wildlife Service, Ecological Services Office.

This approval to perform work is valid for **5 years** from the date of this letter.

Permittee is aware that this office may reevaluate its decision on this permit at any time the circumstances warrant.

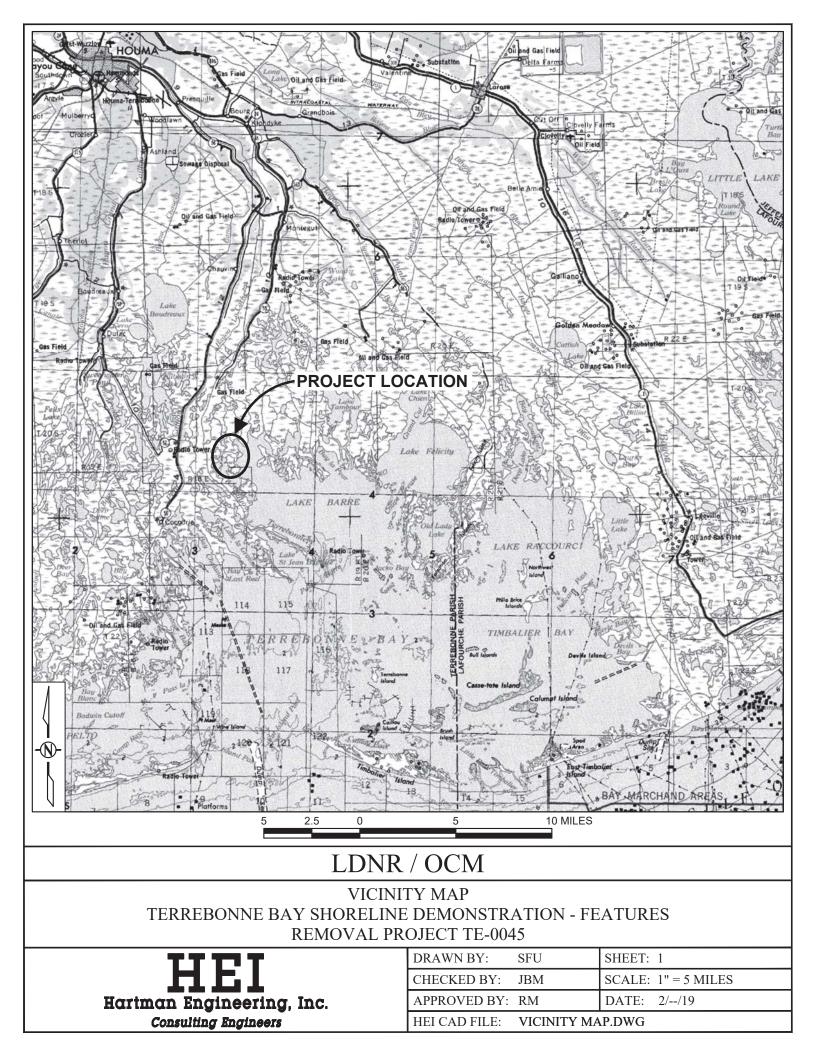
Should you have any further questions concerning this matter, please contact Zach Steinkoenig at (504) 862-1288 or zachary.j.steinkoenig@usace.army.mil.

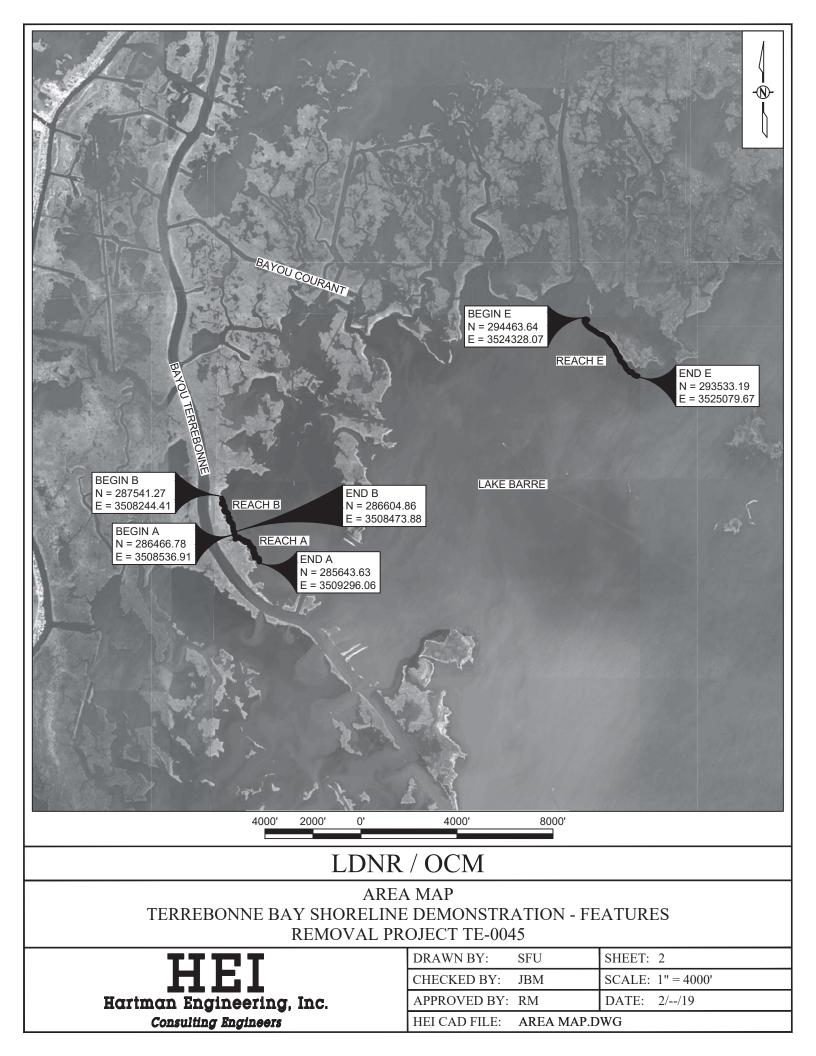
Sincerely,

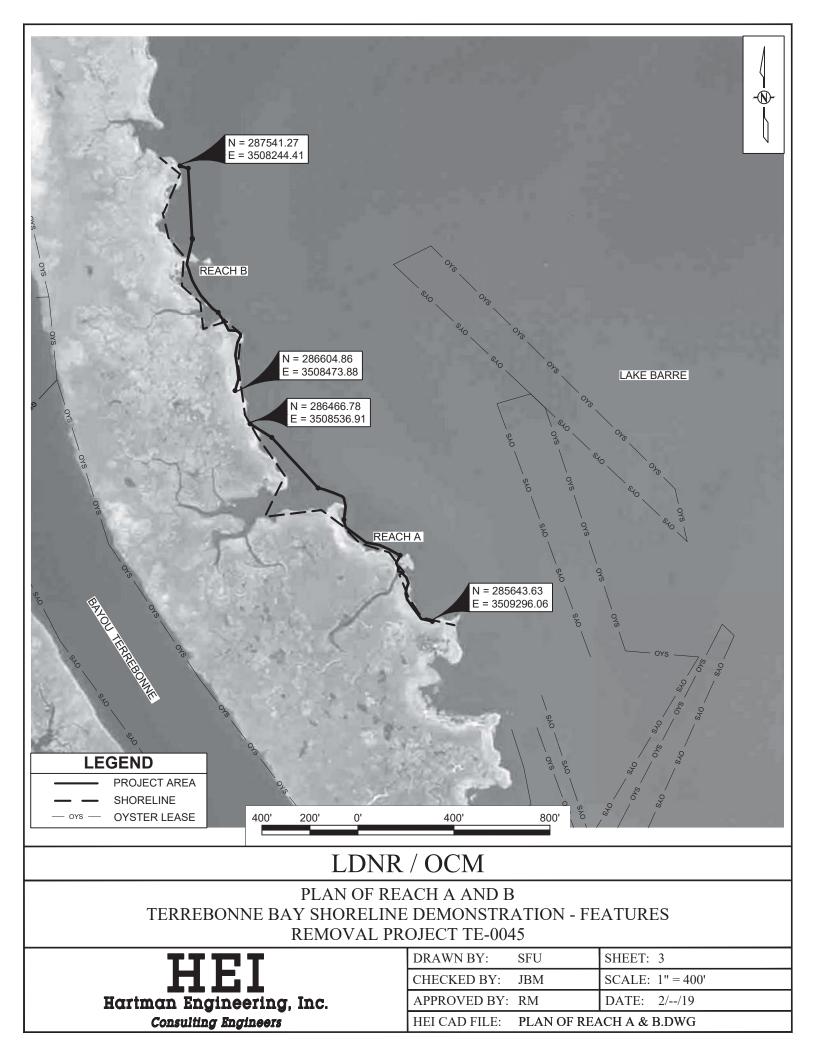
HERMAN.JOHN.MA TTHEW.111933428 0
Digitally signed by HERMAN.JOHN.MATTHEW.11193 34280 Date: 2019.06.05 15:13:41 -05'00'

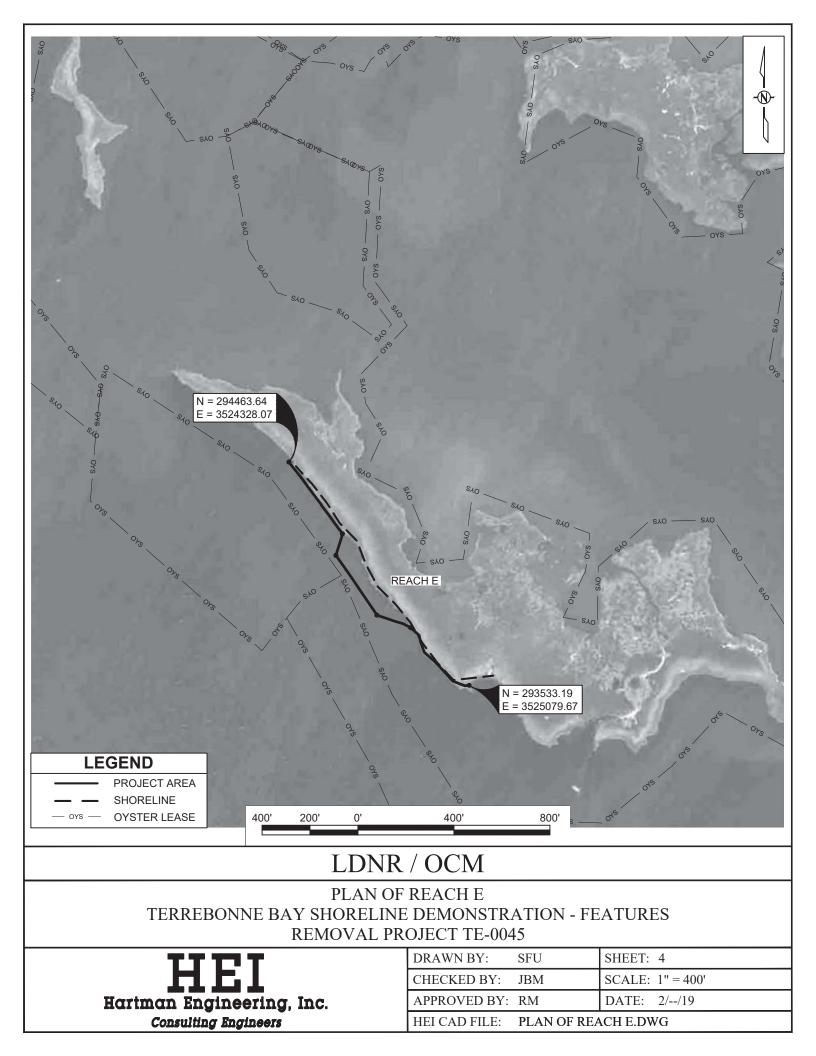
for Martin S. Mayer Chief, Regulatory Branch

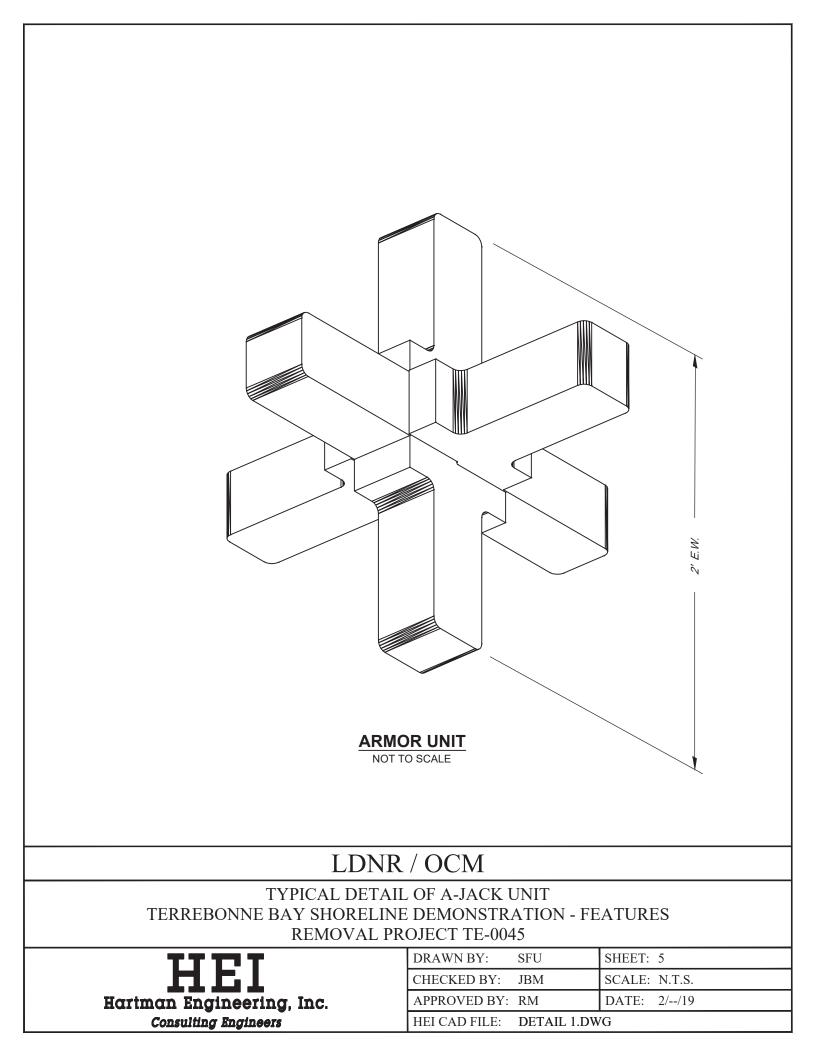
Enclosure

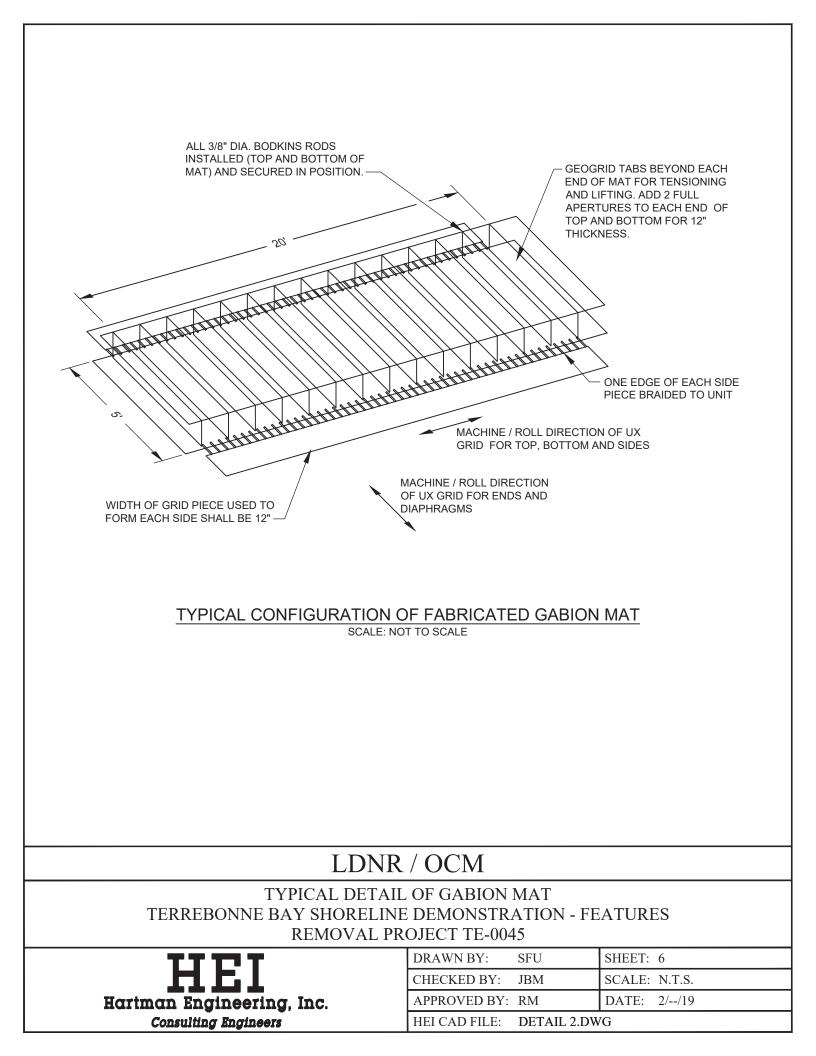


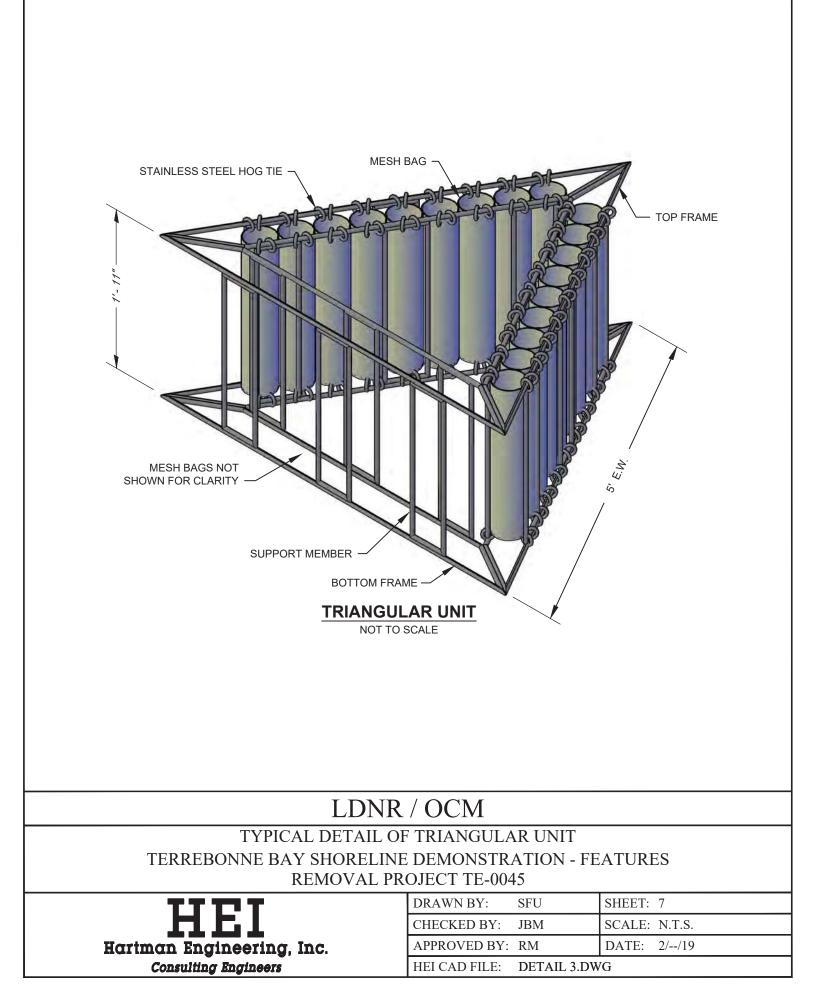


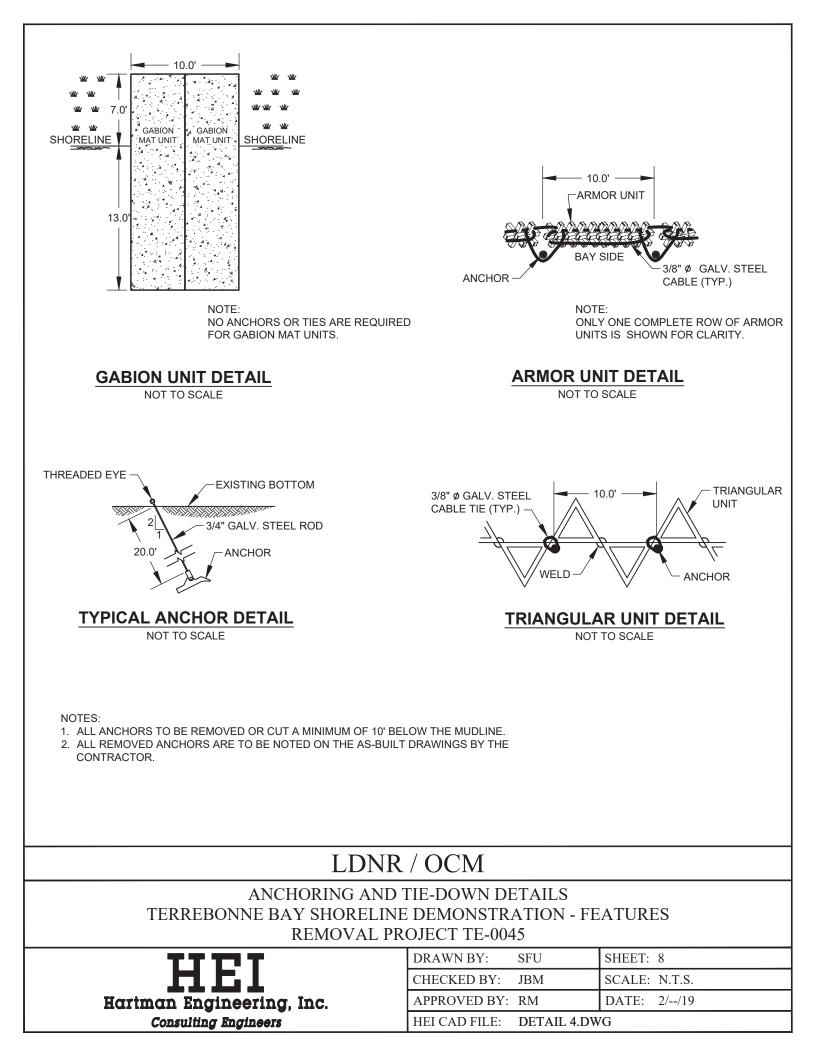












#### **NDSI Notes**

In order to ensure the safety of all parties, the permittee 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.

#### **Oyster Lease Conditions**

Applicant may, at the request of LDWF and prior written approval of OCM, be required to modify the project if the proposed location unnecessarily impacts oyster reefs.

Applicant shall not discharge any drilling and/or workover effluent except for flocculated filtered water.

Applicant shall not discharge any human waste which does not meet or exceed the requirements of the Department of Health and Hospitals.

Applicant shall not discharge any produced waters.

Applicant is subject to all applicable state laws related to damages which are demonstrated to have been caused by this proposed action.

Applicant shall use any dredged material beneficially to create/restore emergent wetlands or place the material in open water in such a manner not to decrease the water depth greater than six inches.

Applicant shall provide to the LDWF a water bottom assessment (unless waived by LDWF) that meets LDWF protocol prior to commencement of the activity. A waiver request must be submitted to LDWF in writing and must state the justification for the request.

#### No Waterbottom Disturbance

The specifications state that the contractor is prohibited from construction of floatation, dredging, and wheel washing on this project. The contractor is required to provide shallow draft equipment conducive to the environment for removal of structures.

1. Activities authorized under this general permit shall not be used for piecemeal work and shall be applied to single and complete projects. All components of a single and complete project shall be treated together as constituting one single and complete project. All planned phases of multi-phased projects shall be treated together as constituting one single and complete project. This general permit shall not be used for any activity that is part of an overall project for which an individual permit is required.

2. No activity is authorized under this general permit which may adversely affect significant cultural resources listed or eligible for listing in the National Register of Historic Places until the requirements for Section 106 of the National Historic Preservation Act are met. Upon discovery of the presence of previously unknown historic and/or prehistoric cultural resources, all work must cease and the permittee must notify the State Historic Preservation Office and the Corps of Engineers. The authorization is suspended until it is determined whether or not the activity will have an adverse effect on cultural resources. The authorization may be reactivated or modified through specific conditions if necessary, if it is determined that the activity will have no adverse effect on cultural resources. The PGP authorization will be revoked if it is determined that cultural resources would be adversely affected, and an individual permit may be necessary.

3. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein. The permittee will, at his or her expense, install and maintain any safety lights, signals, and signs prescribed by the United States Coast Guard, through regulations or otherwise, on authorized facilities or on equipment used in performing work under the authorization.

4. No activity may substantially disrupt the movement of those species of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the activity's primary purpose is to block or impound water.

5. If the **authorized** activity involves the installation of aerial transmission lines, submerged cable, or submerged pipelines across navigable waters of the United States the following is applicable:

The National Ocean Service (NOS) has been notified of this authorization. You must notify NOS and this office in writing, at least two weeks before you begin work and upon completion of the activity authorized by this permit. Your notification of completion must include a drawing which certifies the location and configuration of the completed activity (a certified permit drawing may be used). Notification to NOS will be sent to the following address: National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Spring, Maryland 20910-3282.

6. For pipelines under an anchorage or a designated fairway in the Gulf of Mexico the following is applicable: The NOS has been notified of this authorization. You must notify NOS and this office in writing, at least two weeks before you begin work and upon completion of the activity authorized by this permit. Within 30 days of completion of the pipeline, 'as built' drawings certified by a professional engineer registered in Louisiana or by a registered surveyor shall be furnished to this office, the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, and to the Director, National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Spring, Maryland 20910-3282. The plans must include the location, configuration and actual burial depth of the completed pipeline project.

7. 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, you are advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be prepared. Notification with a copy of your permit approval and drawings should be mailed to the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, about 1 month before you plan to start work. Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2107.

8. All activities authorized herein shall, if they involve, during their construction or operation, any discharge of pollutants into waters if the United States, be at all times consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, pretreatment standards and management practices established pursuant to the Clean Water Act (PL 92-500:86 Stat 816), or pursuant to applicable state and local laws.

9. Substantive changes to the Louisiana Coastal Resources Program may require immediate suspension and revocation of this permit in accordance with 33 CFR 325.7.

10. Irrespective of whether a project meets the other conditions of this permit, the Corps of Engineers retains discretionary authority to require an individual Department of the Army permit when circumstances of the proposal warrant this requirement.

11. Any individual authorization granted under this permit may be modified, suspended, or revoked in whole or in part if the Secretary of the Army or his authorized representative determines that there has been a violation of any of the terms or conditions of this permit or that such action would otherwise be in the public interest.

12. The Corps of Engineers may suspend, modify, or revoke this general permit if it is found in the public interest to do so.

13. Activities proposed for authorization under the PGP must comply with all other necessary federal, state, and/or local permits, licenses, or approvals. Failure to do so would result in a violation of the terms and conditions of PGP.

14. The permittee shall permit the District Commander or his authorized representative(s) or designee(s) to make periodic inspections of the project site(s) and disposal site(s) if different from the project site(s) at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.

15. This general permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and it does not authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations nor does it obviate the requirements to obtain state or local assent required by law for the activity authorized herein.

16. In issuing authorizations under this permit, the federal government will rely upon information and data supplied by the applicant. If, subsequent to the issuance of an authorization, such information and data prove to be false, incomplete, or inaccurate, the authorization may be modified, suspended, or revoked, in whole or in part.

17. For activities resulting in sewage generation at the project site, such sewage shall be processed through a municipal sewage treatment system or, in areas where tie-in to a municipal system is not practical, the on-site sewerage system must be approved by the local parish sanitarian before construction.

18. Any modification, suspension, or revocation of the PGP, or any individual authorization granted under this permit, will not be the basis for any claim for damages against the United States.

19. Additional conditions deemed necessary to protect the public interest may be added to the general permit by the District Commander at any time. If additional conditions are added, the public will be advised by public notice. Individual authorizations under the PGP may include special conditions deemed necessary to ensure minimal impact and compliance with the PGP.

20. The PGP is subject to periodic formal review by MVN and OCM in coordination with the Environmental Protection Agency, US Fish and Wildlife Service, the National Marine Fisheries Service, and the Louisiana Department of Wildlife and Fisheries. Comments from reviewing agencies will be considered in determination as to whether modifications to the general permit are needed. Should the District Commander make a determination not to incorporate a change proposed by a reviewing agency, after normal negotiations between the respective agencies, the District Commander will explain in writing to the reviewing agency the basis and rationale for his decision.

21. CEMVN retains discretion to review the PGP, its terms, conditions, and processing procedures, and decide whether to modify, reissue, or revoke the permit. If the PGP is not modified or reissued within 5 years of its effective date, it automatically expires and becomes null and void.

22. 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 the Corps of Engineers, 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.

23. 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 as described in Special Condition 25 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.

24. 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.

25. If you sell the property associated with this permit, you must provide this office with a copy of the permit and a letter noting your agreement to transfer the permit to the new owner and the new owner's agreement to accept the permit and abide by all conditions of the permit. This letter must be signed by both parties.

26. 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. Your project involves dredging and/or placement of fill; therefore, you must contact the local municipal and/or parish governing body regarding potential impacts to floodplains and compliance of your proposed activities with local floodplain ordinances, regulations or permits.

27. In issuing authorizations under this permit, the federal government does not assume any liability for: damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; 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; damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit, and; design or construction deficiencies associated with the permitted work.

# **STANDARD MANATEE CONDITIONS FOR IN-WATER ACTIVITIES**

During in-water work in areas that potentially support manatees, all personnel associated with the project shall be instructed and aware of the potential presence of manatees, manatee speed zones, and the need to avoid collisions with, and injury to, manatee. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel shall be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable.

All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). We recommend the following to minimize potential impacts to manatees in areas of their potential presence:

- All work, equipment, and vessel operation shall 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).
- If a manatee(s) is sighted in or near the project area, all vessels associated with the project shall 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 shall follow routes of deep water whenever possible.
- If used, siltation or turbidity barriers shall be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.
- Temporary signs concerning manatees shall be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities shall 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 CONSTRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT". A second temporary sign measuring 8½ " X 11" shall be posted at a location prominently visible to all personnel engaged in water-related activities and shall read language similar to the following: "CAUTION: MANATEE AREA/EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION".
- Collisions with, injury to, or sightings of manatees shall be immediately reported to the U.S. Fish and Wildlife 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 (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.





# TERREBONNE PARISH CONSOLIDATED GOVERNMENT

P. O. BOX 6097 HOUMA, LOUISIANA 70361 (9<del>85) 868-5050</del> P. O. BOX 2768 HOUMA, LOUISIANA 70361 (985) 868 3000

Office of Coastal Restoration/Preservation

# COASTAL IMPACT CERTIFICATE NO. 1649

May 28, 2019

Brian Babin CPRA 1440 Tiger Drive, Suite B Thibodaux, LA 70301

## Re: CPRA

Proposed Terrebonne Bay Shoreline Demonstration - Features Removal (TE-0045) Sections 32 & 33, T20S-R18E & Sections 30 & 118, T20S-R11E P20190219 / TP190309

Dear Mr. Babin:

This correspondence serves as an official **Coastal Impact Certificate** from Terrebonne Parish Consolidated Government to perform the referenced project as provided by Chapter 12, Article III, Sections 12-66; 12-71; 12-72, 12-73 and 12-74 of the Terrebonne Parish Code. This certificate is valid for two (2) years from the date of issuance.

This certificate does not eliminate the need for the applicant to obtain a permit from the Louisiana Coastal Resources Program's Coastal Management Division, the United States Army Corps of Engineers, including any required mitigation, as well as any other approvals or permits required by Terrebonne Parish, or any other local authority or agency, or by any state or federal agency as may be required by law for said activity or the construction of the referenced project.

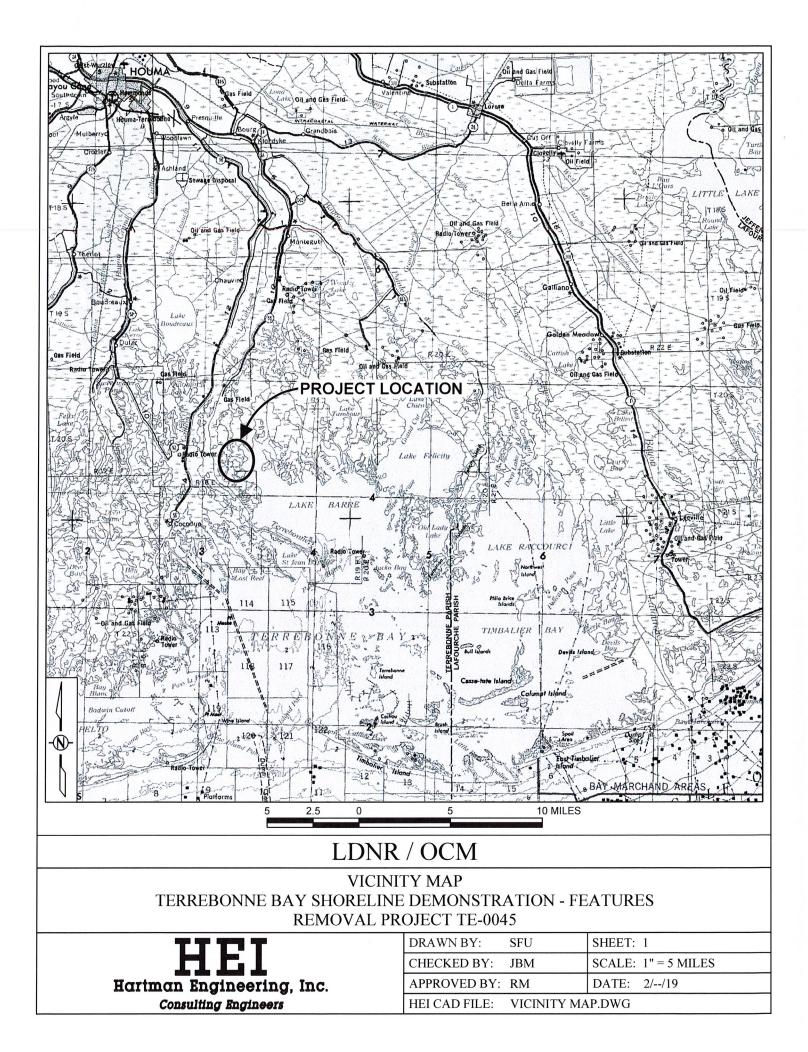
Please feel free to contact me at 985-873-6889 should you have any questions or require additional information.

Sincerely,

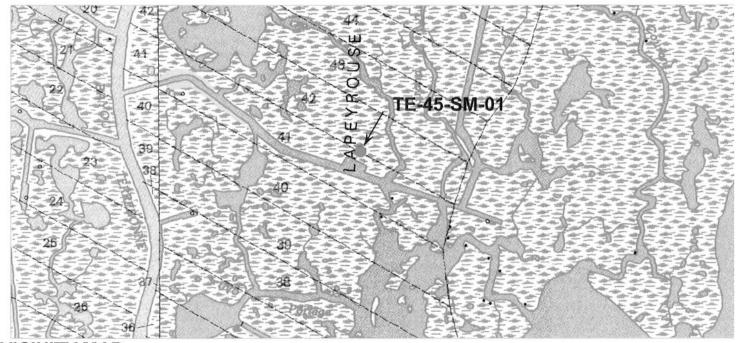
Mart J. Black, AICP, Director Coastal Restoration and Preservation

CC:

John Herman, USACE Jon Truxillo, LA DNR Council Reading File Correspondence File



# APPENDIX G: SURVEY MONUMENT DATA



VICINITY MAP Scale: 1" = 2000' Reproduced from USC&GS "Lake Quitman & Lake Tambour, LA" Quadrangles

# Station Name: "TE-45-SM-01"

**Location:** In Section 41 T20S-R18E Terrebonne Parish (boat access only). To reach the monument travel south approximately 7 miles on highway 56 from the Saint Joseph Church in Chauvin to a boat launch on Bayou Little Cailliou at it's intersection with Bush Canal. Travel southeast in the Bush Canal to its intersection with Terrebonne Bayou. Travel southerly in Bayou Terrebonne for approximately 4.5 miles to an oilfield canal on the left. Turn left and travel easterly for approximately 5800' to the monument on the left. 25' North of the water's edge of the oilfield canal.

**Monument Description**: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 120 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, 2 feet above natural ground.

Stamping: TE-45-SM-01

Installation Date: 6/25/02 Date of Survey: July 2002

Monument Established By: Morris P. Hebert, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position Lat. 29°18' 57.965733" N Long. 90°36' 41.574785" W

### Adjusted NAD 83 Datum LSZ (1702) Feet

N= 297,516.412 E= 3,510,866.264

Adjusted NAVD88 Height Elevation = 4.01 feet (1.221 mtrs)

Geoid99 Height = -24.716 mtrs. Ellipsoid Height = -23.495 mtrs.







# **APPENDIX H: LANDOWNERS CONTACT INFORMATION**

The State of Louisiana owns the water bottom around the project features. All landowner inquiries should be made to Les Rosso at the State Land Office. His phone number is (225) 342-4600. His email address is Les.Rosso@LA.GOV

The Work Site is located on ConocoPhillips, Inc. property and on Apache Minerals property. Permission to access the project site shall be obtained from Mr. Francis Fields with Apache Minerals, Inc. at (985) 879-3528 Ext. 8730, and Mr. Buddy Smith with ConocoPhillips, Inc. at (985) 853-3018.

APPENDIX I: SOIL BORING LOGS (2002), TE-45 PROJECT, FEBRUARY 2007



# EUSTIS ENGINEERING COMPANY, INC.

3011 28TH STREET METAIRIE, LOUISIANA 70002-6019 PN 504-834-0157 / FN 504-834-0354 EMAIL: INFO@EUSTISENG.COM / SITE: WWW.EUSTISENG.COM

2 August 2002

Morris P. Hebert, Inc. Post Office Box 3106 Houma, Louisiana 70361

Attention Mr. Brian Kendrick, P.E. Email: <u>bkendrick@mphinc.com</u>

Gentlemen:

Geotechnical Investigation State of Louisiana Terrebonne Bay Shore Protection Demonstration Project Terrebonne Parish, Louisiana Eustis Engineering Project No. 17474

Transmitted are two bound copies of our engineering report covering a geotechnical investigation for the subject project. An email copy was also sent to Mr. Matt Sevier.

Thank you for asking us to perform these services.

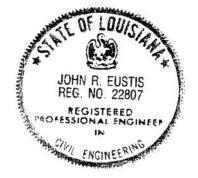
Yours very truly,

EUSTIS ENGINEERING COMPANY, INC.

John R. Eusto

JOHN R. EUSTIS, P.E.

ANL:ejg/ken



GEOTECHNICAL INVESTIGATION

# STATE OF LOUISIANA

# TERREBONNE BAY

# SHORE PROTECTION DEMONSTRATION PROJECT

# TERREBONNE PARISH, LOUISIANA

# EUSTIS ENGINEERING PROJECT NO. 17474

FOR MORRIS P. HEBERT, INC. HOUMA, LOUISIANA

By Eustis Engineering Company, Inc. Metairie, Louisiana

2 AUGUST 2002

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FIGURES 1 THROUGH 11

APPENDIX

# GEOTECHNICAL INVESTIGATION STATE OF LOUISIANA TERREBONNE BAY SHORE PROTECTION DEMONSTRATION PROJECT TERREBONNE PARISH, LOUISIANA EUSTIS ENGINEERING PROJECT NO. 17474

### INTRODUCTION

- 1. This report contains the results of a geotechnical investigation performed for the State of Louisiana's proposed Terrebonne Bay Shore Protection Demonstration Project in Terrebonne Parish, Louisiana. The geotechnical investigation was performed in accordance with Eustis Engineering Company, Inc.'s proposal dated 26 March 2002. Notice to proceed was received on 24 May 2002 from Mr. Brian Kendrick, P.E., representing Morris P. Hebert, Inc., Houma, Louisiana. This project is being administered by the State of Louisiana, Department of Natural Resources, Coastal Restoration Division.
- 2. This report has been prepared in accordance with generally accepted geotechnical engineering practice for the exclusive use of Morris P. Hebert and their designated representatives for specific application to the subject site. In the event of any changes in the nature, design, or location of the proposed structures, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report are modified and verified in writing. Should these data be used by anyone other than Morris P. Hebert and their designated representatives, they should contact Eustis Engineering for interpretation of data and to secure other information that may be pertinent to this project.

- 1 -

- 3. The recommendations and conclusions contained in this report are to some degree subjective and are intended for the use of the design engineer. These recommendations and conclusions are based, in part, on data obtained from soil borings made at discrete locations. The nature and extent of variations in subsurface conditions between and away from these locations may not become evident until construction. If variations then appear, it will be necessary to reevaluate the recommendations contained in this report.
- 4. Furthermore, the specific methods and sequences of construction cannot be fully predicted in this report. For these reasons, this report, in its entirety, should not be included in contract plans and specifications. However, the results of the soil borings and laboratory tests contained in the Appendix of this report may be included in the contract plans and specifications. The construction contractor is then obliged to make an independent evaluation of the subsurface conditions at the site as they will affect the contractor's proposed construction plan. The contractor should then make allowances in the bid package which are consistent with this independent interpretation of site conditions.

### <u>SCOPE</u>

5. The investigation included the drilling of soil test borings to determine subsurface conditions and to obtain samples of the various substrata encountered. Soil mechanics laboratory tests performed on samples obtained from the borings were used to evaluate the physical properties of the subsoils. Engineering analyses, based on the boring logs and laboratory test results, were performed to determine recommendations regarding allowable soil bearing values, allowable helical anchor tensile capacities, and estimated settlement.

### SOIL BORINGS

- A total of 15 borings, each 15 feet in depth below the mudline, were made on 5 and 18 June 2002. Three borings were made at each of the five reaches. The borings were located in the field by Morris P. Hebert. Approximate boring locations are shown on Figure 1.
- 7. The borings were made using a drill rig mounted on a "go-devil" barge. Spuds were used on the barge to anchor at the specific boring locations. Each boring was drilled in at least 1 foot of water. The water depth at the time of boring operations varied from 1 to 5.5 feet and is listed at the bottom of each boring log. Subsoil profiles have also been provided as Figures 2 through 6. It should be noted that the depths shown on the boring logs are depths below the existing mudline and the depths shown on the subsoil profiles are depths below the water surface. Detailed descriptive logs of the borings are shown in both tabular and graphical form in the Appendix.
- 8. Sampling Methods. Undisturbed samples of cohesive or semi-cohesive subsoils were obtained at close intervals or changes in strata using a 3-in. diameter thinwall Shelby tube sampler. The samples were immediately extruded from the sampler, inspected, and visually classified by Eustis Engineering's soil technician. Pocket penetrometer tests were performed on the soil samples to give a general indication of their shear strength or consistency. The results of these tests are shown on the boring logs under the column heading "PP." Representative samples were placed in moisture proof containers and sealed for preservation of their natural moisture content.

### LABORATORY TESTS

- 9. A series of soil mechanics laboratory tests was performed on the samples obtained from the borings. These laboratory tests consisted of determinations of the natural water content, unit weight, unconfined compression shear (UC), and one-point unconsolidated undrained triaxial compression shear (OB). In addition, Atterberg liquid and plastic limit tests were performed on selected representative samples to aid in classification of the subsoils and to give an indication of their relative compressibility.
- 10. In addition, grain size analyses were performed on selected samples of cohesionless soil to determine their particle distribution (PD) curves. The results of these tests are shown on separate sheets in the Appendix following the boring logs.

### DESCRIPTION OF SUBSOIL CONDITIONS

- 11. <u>Reach A (Borings 1 through 3).</u> The logs of Borings 1 through 3 show water depths varied from 1 to 1.5 feet. In Borings 1 and 3, extremely soft to very soft brown humus exists from the mudline to depths ranging from 3 to 3.5 feet below the mudline. Beneath these materials in Borings 1 and 3 and from the mudline in Boring 2, extremely soft to soft brown and gray clay and silty clay extend to depths of 8.5 to 15 feet below the mudline. Boring 2 terminates at the 15-ft depth in these materials. Beneath these deposits in Borings 1 and 3, loose gray silty sand and clayey sand continue to the final boring depths of 15 feet below the mudline (approximately 16 feet below the water surface).
- 12. <u>Reach B (Borings 4 through 6)</u>. Reference to the logs of Borings 4 through 6 indicate the borings were located in water depths ranging from 2 to 3 feet. Beginning at the mudline, extremely soft to very soft brown and gray humus and

organic clay extend to depths of 8 to 12 feet. Following these deposits, loose gray silty sand and clayey sand and medium compact gray sandy silt continue to the terminal boring depths of 15 feet below the mudline (approximately 17 to 18 feet below the water surface).

- 13. <u>Reach C (Borings 7 though 9).</u> The logs of Borings 7 through 9 show they were drilled in 1.5 to 3 feet of water. From the mudline to depths of 5 to 11.5 feet, extremely soft to very soft gray and brown humus and organic clay exist. Beneath these deposits, very soft gray and brown clay and silty clay extend to the 8-ft depth in Boring 9 and to the final boring depths of 15 feet below the mudline in Borings 7 and 8. In Boring 9, medium compact gray clayey silt occurs between the 8 and 12.5-ft depths, followed by loose gray fine sand, to the final boring depth of 15 feet below the mudline.
- 14. <u>Reach D (Borings 10 through 12).</u> Reference to the logs of Borings 10 through 12 indicates water depths ranging from 2.5 to 5 feet. Extremely soft to very soft brown and black humus extends from the mudline to depths of 2.5 to 7 feet, followed by extremely soft to very soft gray clay to depths ranging from 8 to 12.5 feet. Loose to medium dense gray fine sand and silty sand and loose to medium compact gray clayey silt continue to the borings' terminal depths at 15 feet below the mudline (approximately 17.5 to 20 feet below the water surface).
- 15. <u>Reach E (Borings 13 through 15).</u> The logs of Borings 13 through 15 illustrate the borings were made in 1.5 to 5.5 feet of water. Extremely soft to very soft brown and black humus and organic clay extend from the mudline to depths of 5 to 10 feet below the mudline, followed by extremely soft to soft gray clay, silty clay, and sandy clay, which continues to depths varying from 12 to 15 feet. Borings 13 and 15 terminate in these materials at 15 feet below the mudline. Boring 14 terminates in loose gray silty sand at 15 feet below the mudline.

16. <u>Ground Water.</u> Standing water depths varied from 1 to 5.5 feet at the boring locations. These areas were located in a marsh subject to tidal action. Ground water levels should be anticipated to fluctuate at the site.

### FOUNDATION ANALYSES

### Furnished Information

17. Furnished drawings and information indicate a shoreline stabilization project will be constructed at five sites. Each site is approximately 3,000 feet long and the structures will be placed in continuous lengths of 300 feet. The structures currently being considered are tabulated below.

| PROPOSED<br>STRUCTURE | WIDTH<br>IN FEET | WEIGHT<br>IN POUNDS  | ESTIMATED SEDIMEN<br>ACCUMULATION<br>IN INCHES |
|-----------------------|------------------|----------------------|--|
| Tetrapod              | 2                | 280                  | 6  |
| A-Jack                | 2                | 78                   | 6  |
|                       | 4                | 629                  | 6  |
| Reef Blocks           | 5                | Not Available        | 6  |
| Reef Balls            | 2                | 70 to 100            | 6  |
| Metal Grating<br>Reef | 4                | Not Available        | 0 to 6   |
| Concrete Mat          | 10               | 3,500<br>(submerged) | 6 to 12  |

18. The construction will be restricted to shallow draft vessels/equipment and no flotation channels will be allowed. The project is located in Terrebonne Parish, south of Chauvin and Bush Canal, north of Sportsmans Paradise Marina, and east of Bayou Terrebonne. In addition, helical pier tensile load capacities were

requested to ensure the immobilization of the proposed structures. We understand stability analyses of the proposed structures are not required for this report.

### Foundation Recommendations

 The proposed structures may be supported at the existing mudline provided the bearing values and settlements presented in this report can be tolerated. Additionally, the proposed structures may also be anchored with helical piers.

## Soil Bearing Values

20. Analyses have been made to estimate the ultimate soil bearing values for the proposed structures at each reach. These soil bearing values contain an estimated factor of safety of approximately 1.0 against a soil shear failure. We recommend a factor of safety of at least 1.5 be applied to these values. Assuming a long term dead load pressure intensity equal to an allowable soil bearing value, with a factor of safety of 1.5, we have also estimated settlement for the proposed structures. We assumed the structures would be placed in 300-ft lengths. The results of our analyses are tabulated below.

| LOCATION | WIDTH OF<br>PROPOSED<br>STRUCTURES<br>IN FEET | ESTIMATED ULTIMATE<br>SOIL BEARING VALUE<br>IN PSF (FACTOR OF<br>SAFETY ≈1) | ESTIMATED SETTLEMENT<br>IN INCHES DUE TO<br>ALLOWABLE SOIL<br>BEARING VALUE<br>(FACTOR OF<br>SAFETY ≈1.5) |
|----------|---|---|---|
| Reach A  | 1 to 5  | 280   | 2½ to 3¾  |
|          | 5 to 10                                       | 360   | 4 to 6  |
| Reach B  | 1 to 5  | 140   | 2¼ to 3¼  |
|          | 5 to 10                                       | 140   | 3 to 4½   |

| LOCATION | WIDTH OF<br>PROPOSED<br>STRUCTURES<br>IN FEET | ESTIMATED ULTIMATE<br>SOIL BEARING VALUE<br>IN PSF (FACTOR OF<br>SAFETY ≈1) | ESTIMATED SETTLEMENT<br>IN INCHES DUE TO<br>ALLOWABLE SOIL<br>BEARING VALUE<br>(FACTOR OF<br>SAFETY ≈1.5) |
|----------|---|---|---|
| Reach C  | 1 to 5  | 110   | 3¼ to 4¾  |
|          | 5 to 10                                       | 120   | 4¾ to 7¼  |
| Reach D  | 1 to 5  | 165   | 2 to 31⁄4   |
|          | 5 to 10                                       | 170   | 3¼ to 5   |
| Reach E  | 1 to 5  | 220   | 3½ to 5¼  |
|          | 5 to 10                                       | 180   | 4 to 6  |

Estimated Settlement of Proposed Structures. Estimated long term settlement for 21. proposed structures is tabulated above. However, deformation of near surface sediments in order to obtain sufficient bearing resistence will occur as the proposed structures are placed in the water. We have determined estimates of how much the submerged proposed structures will sink into the surface of sediment to develop sufficient bearing resistances and have determined that only the A-jack and tetrapod structures will experience any sinkage in order to develop sufficient bearing resistances. A-jack and tetrapod structures are especially susceptible to sinkage because they are supported on small legs, distributing the weight of the structures over a smaller area than the other proposed structures. The results of our analyses are tabulated below. The A-jack and tetrapod structures may experience deeper sinkage and the other proposed structures may experience sinkage if the structures are dropped, as opposed to placed, in position. Placing the structures on a geogrid will reduce long term settlement. However, this reduction cannot be established with any degree of accuracy. The results of our analyses are tabulated below.

| PROPOSED<br>STRUCTURE | LOCATION | PLACEMENT           | ESTIMATED SINKAGE<br>IN INCHES |
|-----------------------|----------|---------------------|--------------------------------|
|                       | Reach A  | Partially Submerged | 1/4 to 3/4                     |
|                       |          | Unsubmerged         | 1¼ to 2                        |
|                       | Reach B  | Partially Submerged | 4¼ to 6¼                       |
|                       |          | Unsubmerged         | 6 to 9                         |
|                       |          | Partially Submerged | 6¼ to 9¼                       |
| 24-In. A-Jack         | Reach C  | Unsubmerged         | 8½ to 13                       |
| ľ                     |          | Partially Submerged | 2 ¾ to 4¼                      |
|                       | Reach D  | Unsubmerged         | 4½ to 6½                       |
| ľ                     |          | Partially Submerged | 1¼ to 2                        |
|                       | Reach E  | Unsubmerged         | 21/2 to 33/4                   |
|                       | Reach A  | Partially Submerged | 7½ to 11½                      |
|                       |          | Unsubmerged         | 11½ to 17                      |
| ľ                     | Reach B  | Partially Submerged | 221/2 to 331/2                 |
|                       |          | Unsubmerged         | 30½ to 46                      |
|                       | Reach C  | Partially Submerged | 30½ to 46                      |
| 48-In. A-Jack         |          | Unsubmerged         | 41 to 611⁄2                    |
|                       | Reach D  | Partially Submerged | 171⁄2 to 26                    |
|                       |          | Unsubmerged         | 24 to 36                       |
|                       | Reach E  | Partially Submerged | 11 to 161/2                    |
|                       |          | Unsubmerged         | 16 to 24                       |
|                       |          | Partially Submerged | 1/4 to 1/2                     |
| 24-In. Tetrapod       | Reach A  | Unsubmerged         | 4¾ to 7                        |
|                       | Reach B  | Partially Submerged | 6 to 9                         |
|                       |          | Unsubmerged         | 15 to 23                       |
|                       |          | Partially Submerged | 9 to 131⁄2                     |
|                       | Reach C  | Unsubmerged         | 21 to 311⁄2                    |
|                       | Reach D  | Partially Submerged | 4 to 6                         |
|                       |          | Unsubmerged         | 11½ to 17½                     |

| PROPOSED<br>STRUCTURE | LOCATION | PLACEMENT           | ESTIMATED SINKAGE<br>IN INCHES |  |
|-----------------------|----------|---------------------|--------------------------------|--|
|                       |          | Partially Submerged | 11/2 to 21/2                   |  |
|                       | Reach E  | Unsubmerged         | 7 to 11                        |  |

22. The materials trapped behind and within the structures will affect primary consolidation of the underlying soft compressible soils. This will provide for additional sedimentation and, in turn, additional settlement. We have not estimated settlement for this situation.

### Helical Pier Foundations

- 23. <u>Allowable Load Capacities for Helical Piers.</u> Analyses were performed to estimate the allowable tensile capacities for various plate diameters and combinations of helical plates. All helical steel piers should be firmly embedded at the specified depths. If installed in sand strata, piers should be firmly embedded at least 1 to 2 feet. Our analyses include a factor of safety of approximately 2 and assume the piers are installed vertically to a torque indicative of their estimated capacity. Capacities for helical plates should *not* be considered additive. Helical steel piers should be installed by qualified personnel experienced in this type of foundation. A tensile load test should be performed at each site to verify or modify the estimated capacities in this report prior to beginning large scale pier installation. The results of our analyses for each reach are shown on Figures 7 through 11.
- 24. <u>Structural Capacity.</u> These allowable pier load capacities contain an estimated factor of safety of approximately 2 against failure of a single pier through the soil. The analyses for pile capacities are based on a soil-pier relationship only. The structural capacity of the individual pier to transmit these loads and any connections between the pier and the proposed structures should be determined by the

structural engineer. Helical piers selected for construction should be capable of resisting the design tensile loads and the anticipated torque during installation.

- 25. Estimated Settlement. If helical steel piers are installed with a torque indicative of their capacity, it is estimated settlement due to structural loads may vary from ¼ to ¾ inch. This estimate of settlement is based on the assumption that the foundation design will utilize single rows of piers on relatively wide spacings of 8 to 10 feet or small isolated pier groups not exceeding two to three piers per group. When foundation plans are finalized, this information should be transmitted to Eustis Engineering to verify the plans are in conformance with the recommendations contained in this report.
- 26. Our estimates of settlement are for piers used individually or in small groups and are based on the following assumptions:
  - the largest group dimension will be no greater than 20% of the pier length,
  - the center to center spacing between groups will be no closer than twice the largest group dimension, and
  - the center to center spacing between rows of single piers will be no closer than 8 feet.

In the event any of our assumptions are not met, Eustis Engineering should be contacted to evaluate the potential settlement of pile foundations.

27. Installation. The uppermost plate of the helical steel pier should be installed to the selected depth from Figures 7 through 11 for each respective reach. Vertical spacing of plates along the central steel shaft should be no closer than three plate diameters using the largest plate diameter. Piers should be installed by an experienced contractor using the recommendations and specifications provided by

the manufacturer. Eustis Engineering should be retained to review pier selection and installation procedures.

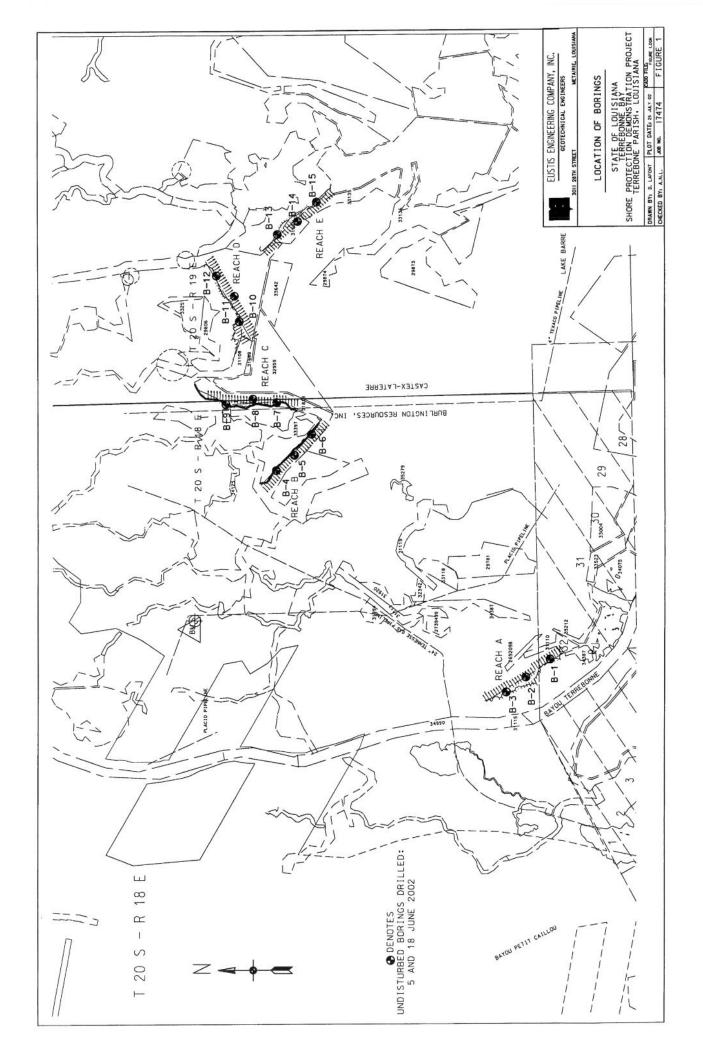
- 28. <u>Test Piers and Load Tests.</u> Methods to evaluate tensile capacities of helical anchors can result in estimates that vary significantly (above and below) actual capacities. Therefore, Eustis Engineering recommends a test pier program to evaluate capacity and if necessary provide empirical data to estimate capacities in similar soils at future project sites.
- 29. At least one test pier should be installed in each reach adjacent to the proposed structures, requiring a total of five test piers. The test piers should be load tested in tension to confirm or modify estimated capacities and installation techniques. The test pier should be installed using the same equipment and installation procedures that will be used to install the job piers. Load tests should be performed in accordance with ASTM D 1143. Embedments selected in individual reaches may require alteration if torque requirements are not met or if early refusal is encountered. Eustis Engineering should be contacted to review the results of the load test.

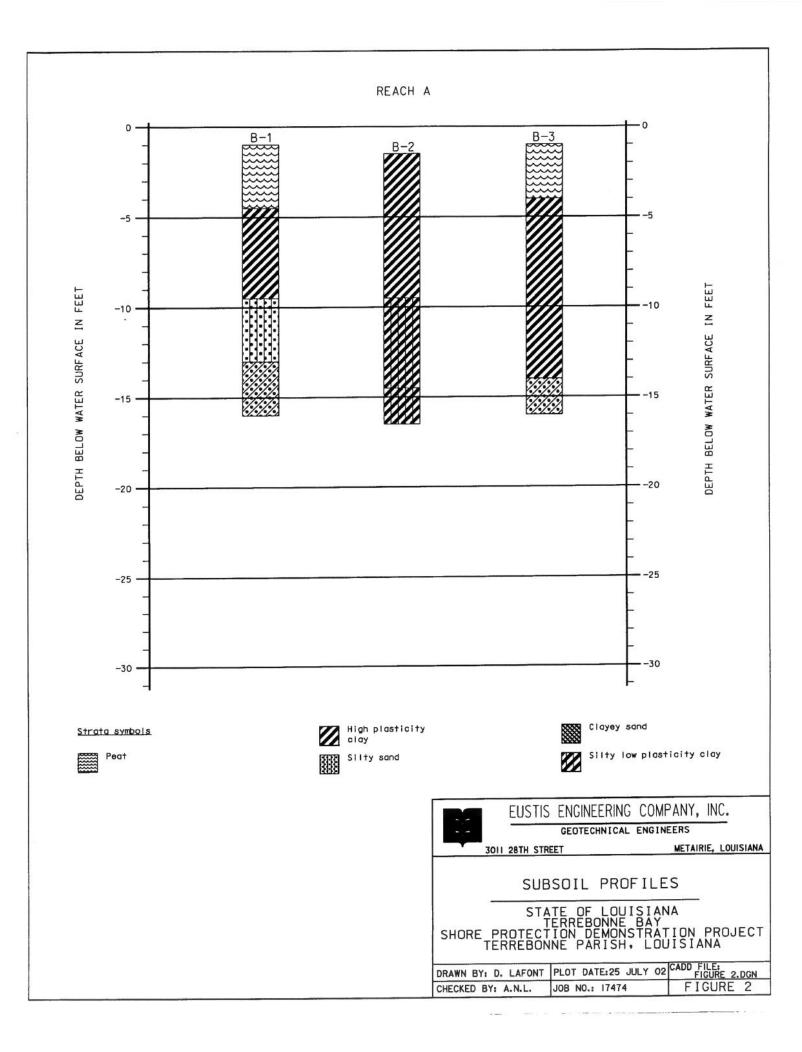
## ADDITIONAL GEOTECHNICAL SERVICES

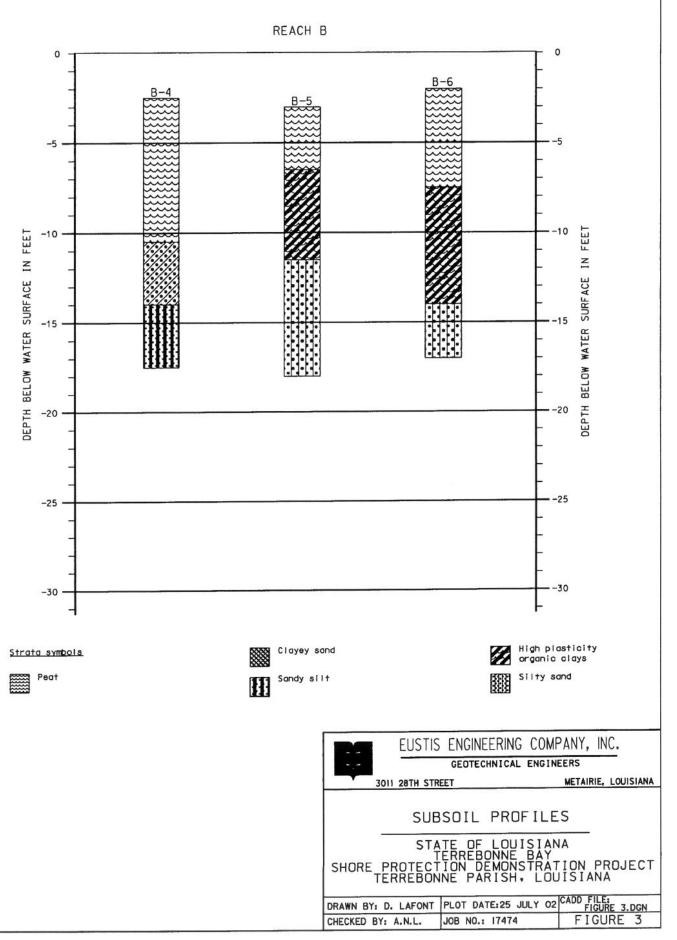
- 30. To provide continuity between the investigation, design, and construction phases, Eustis Engineering should be retained to provide additional services. These services may include performance and evaluation of a pier load test and any other soils or materials testing services which will provide quality control during construction and conformance to design specifications.
- 31. In summary, Eustis Engineering should be retained to monitor all geotechnical related work performed by the contractor. This permits the geotechnical engineer

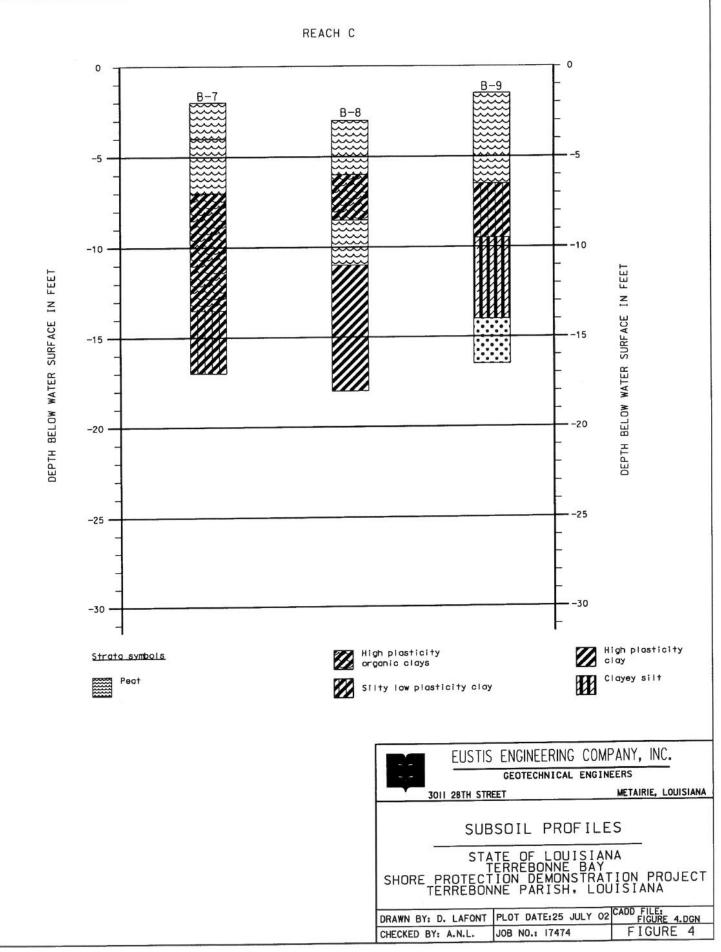
to be available quickly, evaluate unanticipated conditions, conduct additional tests if required, and formulate alternative solutions to problems when necessary. This is recommended to avoid construction cost overruns or disputes on the project.

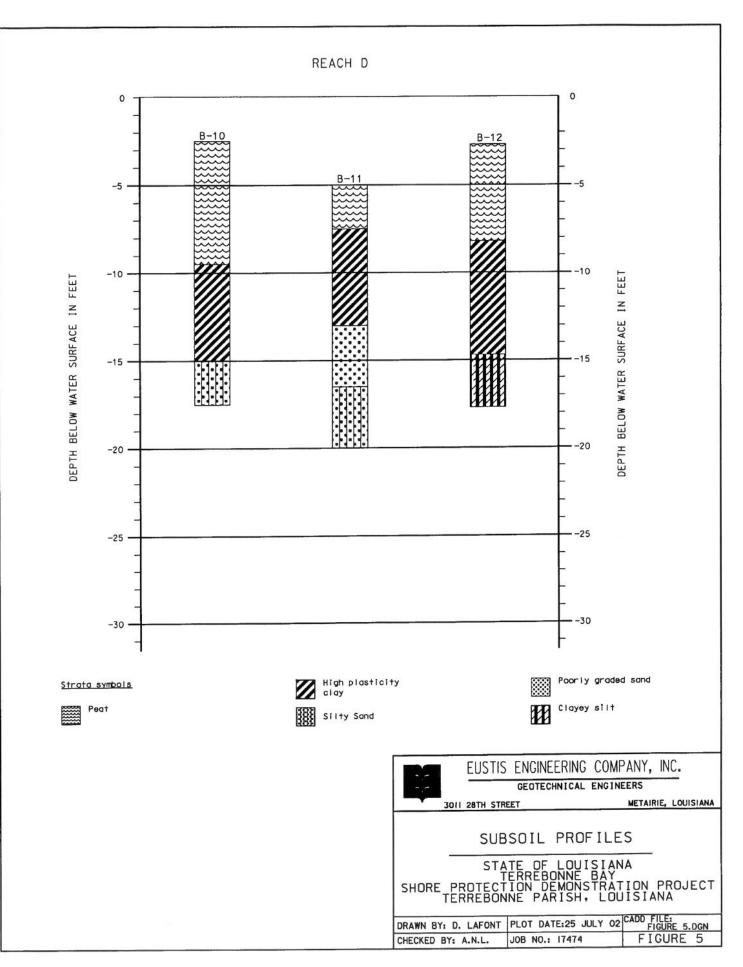
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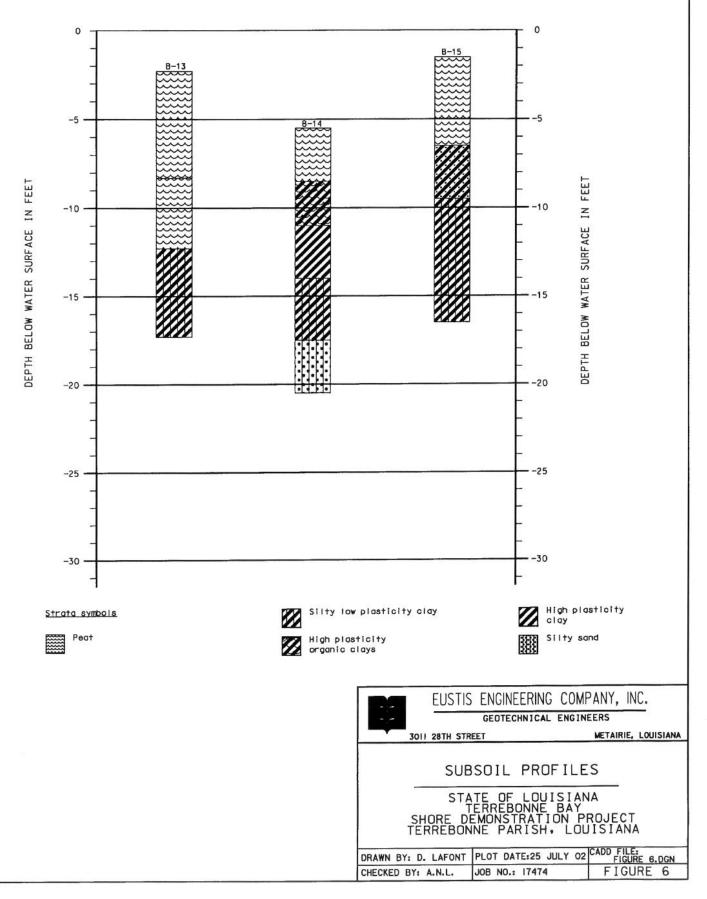








REACH E



#### STATE OF LOUISIANA TERREBONNE BAY SHORE PROTECTION DEMONSTRATION PROJECT TERREBONNE PARISH, LOUISIANA

### HELICAL STEEL PIERS PILE LOAD CAPACITIES

#### REACH A

| DEPTH BELOW WATER SURFACE<br>AT WHICH STEEL PIERS SHOULD<br>BE FIRMLY EMBEDDED IN FEET | HELICAL PLATE<br>DIAMETER IN INCHES | ALLOWABLE TENSILE LOAD<br>IN POUNDS<br>FACTOR OF SAFETY ≈ 2 |
|--|-------------------------------------|---|
|  | 6                                   | 55  |
|  | 6 & 8                               | 150   |
|  | 8                                   | 95  |
|  | 8 & 10                              | 245   |
|  | 6, 8, & 10                          | 300   |
| 19 m   | 10                                  | 150   |
| 10   | 10 & 12                             | 360   |
|  | 8, 10, & 12                         | 455   |
|  | 12                                  | 210   |
|  | 12 & 14                             | 500   |
|  | 10, 12, & 14                        | 650   |
|  | 14                                  | 290   |
|  | 6                                   | 200   |
|  | 6 & 8                               | 545   |
|  | 8                                   | 345   |
|  | 8 & 10                              | 890   |
|  | 6, 8, & 10                          | 1,090   |
| 15   | 10                                  | 545   |
| 10   | 10 & 12                             | 1,315   |
|  | 8, 10, & 12                         | 1,665   |
|  | 12                                  | 770   |
|  | 12 & 14                             | 1,830   |
|  | 10, 12, & 14                        | 2,375   |
|  | 14                                  | 1,060   |

Note: Capacities for helical plates should *not* be considered additive.

EUSTIS ENGINEERING COMPANY, INC.

FIGURE 7

#### STATE OF LOUISIANA TERREBONNE BAY SHORE PROTECTION DEMONSTRATION PROJECT TERREBONNE PARISH, LOUISIANA

### HELICAL STEEL PIERS PILE LOAD CAPACITIES

### REACH B

| DEPTH BELOW WATER SURFACE<br>AT WHICH STEEL PIERS SHOULD<br>BE FIRMLY EMBEDDED IN FEET | HELICAL PLATE<br>DIAMETER IN INCHES | ALLOWABLE TENSILE LOAD<br>IN POUNDS<br>FACTOR OF SAFETY ≈ 2 |
|--|-------------------------------------|---|
|  | 6                                   | 25  |
|  | 6 & 8                               | 60  |
|  | 8                                   | 40  |
|  | 8 & 10                              | 100   |
|  | 6, 8, & 10                          | 125   |
|  | 10                                  | 60  |
| 10   | 10 & 12                             | 150   |
|  | 8, 10, & 12                         | 190   |
|  | 12                                  | 90  |
|  | 12 & 14                             | 210   |
|  | 10, 12, & 14                        | 270   |
|  | 14                                  | 120   |
|  | 6                                   | 185   |
|  | 6 & 8                               | 495   |
|  | 8                                   | 325   |
|  | 8 & 10                              | 800   |
|  | 6, 8, & 10                          | 970   |
| 15   | 10                                  | 510   |
| 10   | 10 & 12                             | 1,170   |
|  | 8, 10, & 12                         | 1,460   |
|  | 12                                  | 725   |
|  | 12 & 14                             | 1,625   |
|  | 10, 12, & 14                        | 2,070   |
|  | 14                                  | 995   |

Note: 1) Helical piers installed to the 15-ft depth should be firmly embedded at least 1 to 2 feet in loose silty sand and medium compact sandy silt.

2) Capacities for helical plates should not be considered additive.

EUSTIS ENGINEERING COMPANY, INC.

FIGURE 8

#### STATE OF LOUISIANA TERREBONNE BAY SHORE PROTECTION DEMONSTRATION PROJECT TERREBONNE PARISH, LOUISIANA

### HELICAL STEEL PIERS PILE LOAD CAPACITIES

#### REACH C

| DEPTH BELOW WATER SURFACE<br>AT WHICH STEEL PIERS SHOULD<br>BE FIRMLY EMBEDDED IN FEET | HELICAL PLATE<br>DIAMETER IN INCHES | ALLOWABLE TENSILE LOAD<br>IN POUNDS<br>FACTOR OF SAFETY ≈ 2 |
|--|-------------------------------------|---|
|  | 6                                   | 25  |
|  | 6 & 8                               | 75  |
|  | 8                                   | 45  |
|  | 8 & 10                              | 120   |
|  | 6, 8, & 10                          | 150   |
| - 31420  | 10                                  | 75  |
| 10   | 10 & 12                             | 180   |
|  | 8, 10, & 12                         | 225   |
|  | 12                                  | 105   |
|  | 12 & 14                             | 250   |
|  | 10, 12, & 14                        | 325   |
|  | 14                                  | 145   |
|  | 6                                   | 55  |
|  | 6 & 8                               | 150   |
|  | 8                                   | 95  |
|  | 8 & 10                              | 245   |
|  | 6, 8, & 10                          | 300   |
| 15   | 10                                  | 150   |
|  | 10 & 12                             | 360   |
|  | 8, 10, & 12                         | 455   |
|  | 12                                  | 210   |
|  | 12 & 14                             | 500   |
|  | 10, 12, & 14                        | 650   |
|  | 14                                  | 290   |

Note: Capacities for helical plates should *not* be considered additive.

EUSTIS ENGINEERING COMPANY, INC.

FIGURE 9

### STATE OF LOUISIANA TERREBONNE BAY SHORE PROTECTION DEMONSTRATION PROJECT TERREBONNE PARISH, LOUISIANA

#### HELICAL STEEL PIERS PILE LOAD CAPACITIES

## REACH D

| DEPTH BELOW WATER SURFACE<br>AT WHICH STEEL PIERS SHOULD<br>BE FIRMLY EMBEDDED IN FEET | HELICAL PLATE<br>DIAMETER IN INCHES | ALLOWABLE TENSILE LOAD<br>IN POUNDS<br>FACTOR OF SAFETY ≈ 2 |
|--|-------------------------------------|---|
|  | 6                                   | 40  |
|  | 6 & 8                               | 110   |
|  | 8                                   | 70  |
|  | 8 & 10                              | 180   |
|  | 6, 8, & 10                          | 225   |
|  | 10                                  | 110   |
| 10   | 10 & 12                             | 270   |
|  | 8, 10, & 12                         | 340   |
|  | 12                                  | 160   |
|  | 12 & 14                             | 375   |
|  | 10, 12, & 14                        | 485   |
|  | 14                                  | 215   |
|  | 6                                   | 215   |
|  | 6 & 8                               | 565   |
|  | 8                                   | 370   |
|  | 8 & 10                              | 920   |
|  | 6, 8, & 10                          | 1,115   |
|  | 10                                  | 585   |
| 16   | 10 & 12                             | 1,340   |
|  | 8, 10, & 12                         | 1,675   |
|  | 12                                  | 830   |
|  | 12 & 14                             | 1,860   |
|  | 10, 12, & 14                        | 2,370   |
|  | 14                                  | 1,135   |

Note: 1) Helical piers installed to the 16-ft depth should be firmly embedded at least 1 to 2 feet in loose to medium dense sand and silty sand or loose to medium compact clayey silt.

2) Capacities for helical plates should not be considered additive.

EUSTIS ENGINEERING COMPANY, INC.

FIGURE 10

#### STATE OF LOUISIANA TERREBONNE BAY SHORE PROTECTION DEMONSTRATION PROJECT TERREBONNE PARISH, LOUISIANA

#### HELICAL STEEL PIERS PILE LOAD CAPACITIES

### REACH E

| DEPTH BELOW WATER SURFACE<br>AT WHICH STEEL PIERS SHOULD<br>BE FIRMLY EMBEDDED IN FEET | HELICAL PLATE<br>DIAMETER IN INCHES | ALLOWABLE TENSILE LOAD<br>IN POUNDS<br>FACTOR OF SAFETY ≈ 2 |
|--|-------------------------------------|---|
|  | 6                                   | 35  |
|  | 6 & 8                               | 100   |
|  | 8                                   | 65  |
|  | 8 & 10                              | 160   |
|  | 6, 8, & 10                          | 200   |
|  | 10                                  | 100   |
| 10   | 10 & 12                             | 240   |
|  | 8, 10, & 12                         | 300   |
|  | 12                                  | 140   |
|  | 12 & 14                             | 335   |
|  | 10, 12, & 14                        | 430   |
|  | 14                                  | 195   |
|  | 6                                   | 55  |
|  | 6 & 8                               | 150   |
|  | 8                                   | 95  |
|  | 8 & 10                              | 245   |
|  | 6, 8, & 10                          | 300   |
| 15   | 10                                  | 150   |
| 10   | 10 & 12                             | 360   |
|  | 8, 10, & 12                         | 455   |
|  | 12                                  | 210   |
|  | 12 & 14                             | 500   |
|  | 10, 12, & 14                        | 650   |
|  | 14                                  | 290   |
|  | 6                                   | 275   |
| 18.5   | 6 & 8                               | 730   |

EUSTIS ENGINEERING COMPANY, INC.

FIGURE 11, PAGE 1 OF 2

| DEPTH BELOW WATER SURFACE<br>AT WHICH STEEL PIERS SHOULD<br>BE FIRMLY EMBEDDED IN FEET | HELICAL PLATE<br>DIAMETER IN INCHES | ALLOWABLE TENSILE LOAD<br>IN POUNDS<br>FACTOR OF SAFETY ≈ 2 |
|--|-------------------------------------|---|
|  | 8                                   | 480   |
|  | 8 & 10                              | 1,185   |
|  | 6, 8, & 10                          | 1,435   |
|  | 10                                  | 755   |
|  | 10 & 12                             | 1,725   |
| 18.5   | 8, 10, & 12                         | 2,155   |
|  | 12                                  | 1,070   |
|  | 12 & 14                             | 2,395   |
|  | 10, 12, & 14                        | 3,055   |
|  | 14                                  | 1,465   |

Note: 1) Helical piers installed to the 18.5-ft depth should be firmly embedded at least 1 to 2 feet in loose silty sand.

2) Capacities for helical plates should not be considered additive.

EUSTIS ENGINEERING COMPANY, INC.

FIGURE 11, PAGE 2 OF 2

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APPENDIX



## LEGEND AND NOTES FOR LOG OF BORING AND TEST RESULTS

- PP Pocket penetrometer resistance in tons per square foot
- TV Torvane shear strength in tons per square foot
- SPT Standard Penetration Test. Number of blows of a 140-lb. hammer dropped 30 inches required to drive 2-in O.D., 1.4-in. I.D. sampler a distance of one foot into the soil, after first seating it 6 inches

| SPLR    | Type of   | Samplin                | g                         | Shelby                 | SPT                                 | Auger                          | No Sample |
|---------|-----------|------------------------|---------------------------|------------------------|-------------------------------------|--------------------------------|-----------|
| SYMBOL  | Clay      | Silt                   | Sand                      | Humus                  | Predominant t<br>Modifying type     | ype shown hea<br>e shown light | vy;       |
| DENSITY | ′ Unit we | eight in po            | ounds                     | per cubic fo           | ot                                  |                                |           |
| USC     | Unified   | Soil Clas              | sificat                   | tion                   |                                     |                                |           |
| TYPE    | UC<br>OB  | Unco<br>shear<br>overb | nsolid<br>on on<br>ourden | e specimen<br>pressure | ined triaxial<br>confined at the    | approximate                    |           |
|         |           | Conso                  |                           | d undrained            | ed triaxial comp<br>triaxial compre |                                |           |

- DS Direct shear
- CON Consolidation
- PD Particle size distribution
- k Coefficient of permeability in centimeters per second
- SP Swelling pressure in pounds per square foot
- Angle of internal friction in degrees
- c Cohesion in pounds per square foot

Other laboratory test results reported on separate figure

Ground Water Measurements Thitial Thitial

### **GENERAL NOTES**

- (1) At the time the borings were made, ground water levels were measured below existing ground surface. These observations are shown on the boring logs. However, ground water levels may vary due to seasonal and other factors. If important to construction, the depth to ground water should be determined by those persons responsible for construction, immediately prior to beginning work.
- (2) While the individual logs of borings are considered to be representative of subsurface conditions at their respective locations on the dates shown, it is not warranted that they are representative of subsurface conditions at other locations and times.

| $\mapsto$  |   | Refer to "Legends & Notes" | Other                 | Tests   |   |  |      |   | Q                      |    |    |        |                             |
|--|---|----------------------------|-----------------------|---------|---|--|------|---|------------------------|----|----|--------|-----------------------------|
| (Sheet 1 of 1)   | 1   | Refer to "Lec              |                       |         |   |  |      |   |                        |    |    |        |                             |
| (St  |   |                            | imits                 | Ē       |   |  | 105  |   |                        |    |    |        |                             |
|  |   |                            | Atterberg Limits      | Ч       |   |  | 26   |   |                        |    |    |        |                             |
|  | Ţ   |                            | Atte                  | E       |   |  | 131  |   | 1.1.4.4.4              |    |    | <br>   |                             |
|  |   | Boring:                    | sts                   | v       |   | 100  |      | 470   |                        |    |    |        |                             |
|  |   |                            | Shear Tests           | 0       |   | 1  |      | 1   |                        |    |    |        |                             |
| TS   |   |                            | ş                     | Type    |   | Ы  |      | OB  |                        |    |    |        |                             |
| SUL:   | ROJECT  | 10/07                      | Density               | Wet     |   | 92   |      | 121   |                        |    |    |        |                             |
| ST RE  | TION PF   | o :Dalli                   | 2011/2011             | Dry     |   | 49   |      | 8   |                        |    |    |        |                             |
|  | NSTRA<br>SH, LOU  | Date Drilled: 0/ 10/02     | Water                 | Percent | 672   | 88   | 32   | 28  |                        |    |    |        |                             |
| OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY | PROTECTION DEMONSTRATION PF<br>TERREBONNE PARISH, LOUISIANA |                            | Depth                 | In Feet | 1-2   | 4-5  | 6-7  | 9-10  | 13-14                  |    |    |        |                             |
| STATE<br>STATE<br>TERF   | ECTION  | JOD NO.: 1/4/4             | Sample                | Number  | ٢   | N  | e    | 4   | ى<br>ئ                 |    |    |        |                             |
| BO   | TERR  | 5                          | USU                   |         | ъ   | ы  |      | SM  | Sc                     |    |    |        |                             |
| EUSTIS ENGINEERING COMPANY, INC. LOG OF                            | SHORE   | Gr. water Deptn:           | Visual Classification |         | Very soft brown humus                       | Extremely soft to soft gray clay<br>w/organic matter |      | Loose gray silty sand w/clay lenses & concretions | Loose gray clayey sand |    |    |        |                             |
| col  |   |                            |                       |         | ><br>{{};};;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;; | u 3  |      |   |                        | 8  |    | <br>   | 1.0'                        |
| SING   |   | Datum:                     | P Symbol              | R       |   |  |      |   |                        |    |    |        | epth:                       |
| SINEER   |   |                            | SPT                   |         |   |  |      |   |                        |    |    |        | Water D                     |
| IS ENG   |   | Ground Elev.               | đ                     | -       |   | 0.50   | 0.50 | 0.50  | 1                      | -  |    |        | Comments: Water Depth: 1.0' |
| EUST   |   | eround                     | Scale                 | Feet    | 0   | ۍ<br>۲   | 1 1  | 10  |                        | 15 | 50 | <br>25 | Com                         |

| $\mapsto$  | ļ                | s & Notes"                 | Other                 | Tests   |   |      |   |   |   |          |    |  |
|--|------------------|----------------------------|-----------------------|---------|---|------|---|---|---|----------|----|--|
| (Sheet 1 of 1)   |                  | Refer to "Legends & Notes" |                       |         |   |      |   |   |   |          |    |  |
| чs)  |                  |                            | imits                 | ٩       | 18  |      |   |   |   |          |    | 1  |
|  |                  |                            | Atterberg Limits      | Ч       | 32  |      |   |   |   |          |    |  |
|  | ¢                | 2                          | Atte                  | н       | 113                                       |      |   |   |   |          |    |  |
|  | •                | Boring:                    | sts                   | U       | 80  | 70   | 45  | 220   |   |          |    |  |
|  |                  | "                          | Shear Tests           | Ø       | Ē   | 1    | I   | ı   |   |          |    |  |
| TS   |                  |                            | ß                     | Type    | S   | 9    | S   | nc  |   |          |    |  |
| SUL  | ROJECT           | 118/02                     | Density               | Wet     | 93  | 82   | 98  | 115   |   |          |    |  |
| IT RE  | ISIANA           | illed: 6                   | 0804                  | Dry     | 20  | 34   | 60  | 85  |   |          |    |  |
| D TES  | NSTRAT<br>H, LOU | Date Drilled: 6/18/02      | Water                 | Percent | 88  | 138  | 65  | 36  | 5   |          |    |  |
| OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY | ×κ               | - 1                        | Depth                 | In Feet | 1-2                                       | 4-5  | 6-7   | 9-10  | 13-14                                       |          |    |  |
| STATE<br>STATE<br>TERF   | ECTION           | Job No.: 1/4/4             | Sample                | Number  | -   | N    | ю   | 4   | Q   |          |    |  |
| F BO   | TERR             | e<br>P                     | USU                   | }       | 5   |      |   | ರ   | ರ   | 5.       |    |  |
| EUSTIS ENGINEERING COMPANY, INC. LOG O                             |                  | Gr. Water Depth:           | Visual Classification |         | Extremely soft gray clay w/organic matter |      | w/silt lenses & pockets<br>& organic matter | Very soft gray silty clay w/silty sand<br>layers & organic matter | Soft gray silty clay w/sandy clay<br>layers |          |    |  |
| Ŭ<br>IJ  |                  | Datum:                     | Symbol                |         |   |      |   |   |   |          |    | h. 1<br>2                                    |
| VEERIN   | ć                | Dat                        | SPT PS                | ЧK      |   |      |   |   |   |          |    | ater Dent                                    |
| S ENGI   | ī                | Elev.:                     | đ                     |         | 0.25                                      | 0.25 | 0.25  | 0.25  |   |          |    | <br>25 I IIII<br>Comments: Water Denth: 1 5' |
| EUSTIS   |                  | Ground Elev.:              | Scale                 | Feet    | 0   | 2    |   | 10  | · · · · ·                                   | <u> </u> | 20 | Comm   |

Comments: Water Depth: 1.5'

| Ind Elev:     Datum:     Gr. Water Deptit:     Job No:     17414     Date Drilloc:     6/18/02     Boring:       P     SPT     Paymol     Vasal Classification     USC     Number     Use     Near     Density     Stream       H     Spr     Paymol     Vasal Classification     USC     Number     Near     Density     Stream     Stream       H     H     H     H     H     H     H     H     H     H       H     H     H     H     H     H     H     H     H       H     H     H     H     H     H     H     H     H       H     H     H     H     H     H     H     H     H       H     H     H     H     H     H     H     H     H       H     H     H     H     H     H     H     H     H       H     H     H     H     H     H     H     H     H       H     H     H     H     H     H     H     H     H       H     H     H     H     H     H     H     H     H       H     H     H <th>ITSU</th> <th>S ENG</th> <th>INEEF</th> <th>RING C</th> <th>OG OF<br/>SHORE</th> <th>FROT<br/>TERR</th> <th>RINC<br/>STATE<br/>TERF<br/>ECTION<br/>EBONN</th> <th>BORING AND TEST RE<br/>STATE OF LOUISIANA<br/>TERREBONNE BAY<br/>PROTECTION DEMONSTRATION PF<br/>TERREBONNE PARISH, LOUISIANA</th> <th><b>D TES</b><br/>UISIANA<br/>IE BAY<br/>NSTRAT<br/>N, LOUI</th> <th>TION PF</th> <th>SUL</th> <th>IS</th> <th></th> <th></th> <th></th> <th>Ű</th> <th>(Sheet 1 of 1)</th> <th>÷</th> <th></th> | ITSU                                  | S ENG  | INEEF | RING C      | OG OF<br>SHORE  | FROT<br>TERR | RINC<br>STATE<br>TERF<br>ECTION<br>EBONN | BORING AND TEST RE<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>PROTECTION DEMONSTRATION PF<br>TERREBONNE PARISH, LOUISIANA | <b>D TES</b><br>UISIANA<br>IE BAY<br>NSTRAT<br>N, LOUI | TION PF  | SUL      | IS   |          |       |         | Ű       | (Sheet 1 of 1) | ÷          |        |
|--|---------------------------------------|--------|-------|-------------|---|--------------|--|---|--|----------|----------|--|----------|-------|---------|---------|----------------|------------|--------|
| PP     Strat     P     Synta     Charaktication     Usc     Strat     Attendend it       P     P     Munder     Munde  |                                       | Elev.: |       | Datum:      | Gr. Water Depth:                                      | qor          | No.: 1                                   |   | Date Dri   | illed: 6 | \$/18/02 |  | ñ        | ring: | 8       |         | Refer to       | "Legends & | Notes" |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  | ale                                   | dd     |       | P<br>Svmbol |   | usc          | Sample                                   | Depth   | Water<br>Content                                       |          | nsity    | чs   | ear Test |       | Atterbe | g Limit |                | Other      | ler    |
| $\frac{1}{1000}$   | et                                    |        |       | R           |   |              | Number                                   | In Feet   | Percent  |          | Wet      | Type   | 8        | υ     |         | -       | _              | Tes        | sts    |
| Externely soft gray clay wreace of<br>organic matter         Cutementy soft gray clay wreace of<br>organic matter         Cutementy soft gray clay wreace of<br>organic         Cutementy soft gray clay<br>wrumune layers & organic         2         4-5         82         51         93         0         7         16         7         16         7         143         31         143         32         143         33         143         34         35         143         34         35         143         34         35         143         34         34         35         143         34         35         143         34         35         143         34         35         143         35         143         34         35         143         35         143         35         143  | 0                                     |        |       |             |   | Ъ            | -  | 1-2   | 266  | 19       | 71       | Ŋ  | I        | 25    |         |         |                |            |        |
| whrmune isyees & organic         3         6-7         142         34         82         UC         -         60           025         1         142         38         85         UC         -         60           1         1         38         85         UC         -         35         146         31           1         1         3         5C         5         13-14         33         33         146         31           1         1         3         5C         5         13-14         33         -         32         146         31           1         1         3         5C         5         13-14         33         -         35         146         31           1         1         3         5         13-14         33         -         35         146         31           1         1         3         3         13-14         33         -         35         146         31           1         1         1         1         3         -         145         146         146         146         146         146         146         146         146  | 2                                     |        |       |             | Extremely soft gray clay w/trace of<br>organic matter | сн           | 7  | 4-5   | 82   | 51       | 93       | Я  | 1        | 85    |         |         |                |            |        |
| 0.25<br>0.26<br>0.26<br>0.21 38 85 0.0 1 21 38 85 0.0 1 21 38 85 0.0 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1   | 1 1                                   |        |       |             | w/humus layers & organic<br>matter                    |              | ę  | 6-7   | 142  | 34       | 82       | P  | 1        | 60    |         |         |                |            |        |
| 13-14  |                                       | 0.25   |       |             |   |              | 4  | 9-10  | 121  | 38       | 85       | S  | ı        | 35    |         |         | 2              |            |        |
|  |                                       |        |       |             | Loose gray clayey sand w/siit layers                  | sc           | ى<br>ت                                   | 13-14   | 33   |          |          |  |          |       |         |         |                |            |        |
|  | , , , , , , , , , , , , , , , , , , , | 6      |       |             |   |              |  |   |  |          |          |  |          |       |         |         |                |            |        |
|  |                                       |        |       |             |   |              |  |   |  |          |          | and and a second se |          |       |         |         |                |            |        |
|  | 25                                    |        |       |             |   |              |  |   |  |          |          |  |          |       |         |         |                |            |        |

Comments: Water Depth: 1.0'

| OG OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>SHORE PROTECTION DEMONSTRATION PROJECT | TERREBONNE PARISH, LOUISIANA<br>Job No.: 17474 Date Drilled: 6/18/02 Boring: 4 Refer to "Legends & Notes" | C Sample Depth Water Density Shear Tests Atterberg Limits Other | Number In Feet Percent Dry Wet Type ø C LL PL PI | t 1 1-2 308 17 69 UC - 45 251 63 188 | 2 4-5 450 11 62 UC - 20 | 3 6-7 278 19 70 UC - 20 | P<br>4<br>4                          |  | 5 13-14 28  |   |                |    |      |
|---|---|---|--|--------------------------------------|-------------------------|-------------------------|--------------------------------------|--|-------------|---|----------------|----|------|
| Ś   |   | She   | Type   | PC                                   | 2                       | S                       |                                      |  |             |   |                |    |      |
| SULT  | 18/02   | sity  |  | 69                                   | 62                      | 20                      |                                      |  |             |   |                |    |      |
| T RE  | ISIANA<br>Iled: 6/  | 2008  |  | 17                                   | ŧ                       | 6                       |                                      |  |             |   |                |    |      |
| D TES<br>JISIANA<br>E BAY<br>NISTRA   | th, LOU   | Water   | Percent  | 308                                  | 450                     | 278                     |                                      |  | 28          |   |                |    | <br> |
| OF LOU  | E PARIS   | Depth   | In Feet  | 1-2                                  | 4-5                     | 6-7                     | 9-10                                 |  | 13-14       |   |                |    |      |
| RING<br>STATE<br>TERR   | EBONN   | Sample  | Number   | 1                                    | 2                       | ю                       | 4                                    |  | ъ           |   |                |    |      |
| BO :  | Job   | USU   | 200  | Ъ                                    |                         |                         | sc                                   | ML   |             |   |                |    |      |
| EUSTIS ENGINEERING COMPANY, INC. LOG OF   | Gr. Water Depth:  | Vienal Classification   |  | Extremely soft brown humus           | w/organic clay layers   | w/clay lenses           | Loose gray clayey sand w/clay lenses | Medium compact gray sandy silt w/clay lenses |             |   |                |    |      |
| NG CC   | Datum:  | Cumbol  | odilito  |                                      |                         |                         |                                      |  |             |   |                |    |      |
| NEERI   | Da  | S<br>P  | <u> ч к</u>                                      |                                      |                         |                         |                                      |  |             |   |                |    | _    |
| S ENGI  | Ground Elev.:   | 8   | Ŀ  |                                      |                         |                         |                                      |  |             |   |                |    |      |
| Ë   | pur   | ale   | Feet   | 0                                    | ۍ<br>۲                  |                         | 10 1                                 |  | ц <u>тт</u> | 2 | - <u>1</u> -1- | 20 | 25   |

Comments: Water Depth: 2.5'

| -+  | otes"                      |                       |          |                       |     |  |                            |     |                                     |      | <br> |        |      |      |   |    |      | <br> | ] |
|---|----------------------------|-----------------------|----------|-----------------------|-----|--|----------------------------|-----|-------------------------------------|------|------|--------|------|------|---|----|------|------|---|
|   | jends & N                  | Other                 | Tests    |                       |     |  |                            |     |                                     |      |      |        |      |      |   |    |      |      |   |
| (Sheet 1 of 1)  | Refer to "Legends & Notes" |                       |          |                       |     |  |                            |     |                                     |      |      |        |      | <br> |   |    |      |      |   |
| чs)   | ſ                          | Limits                | Ы        |                       |     | 136  |                            |     |                                     |      |      |        |      |      |   |    |      |      |   |
|   |                            | Atterberg Limits      | LL PL    |                       |     | 178 42   |                            |     |                                     |      |      |        |      |      |   |    |      |      |   |
|   | c :Boring: 5               |                       | C L      |                       |     | 25 11  | 1                          |     |                                     |      | <br> |        |      | <br> |   |    |      | <br> | 1 |
|   | 2<br>2                     | Shear Tests           | 8        |                       |     | 1  |                            | 1   |                                     |      |      |        |      |      |   |    |      |      |   |
| ទ   |                            | She                   | Type     |                       |     | nc   |                            | 9   |                                     |      |      |        |      |      |   |    |      |      |   |
| SUL7  | 20/81/                     | sity                  | Wet      |                       |     | 76   | 1                          | 8   |                                     |      |      |        |      |      |   |    |      |      |   |
| T RE  | Date Urilled: 6/18/02      | Density               | Dry      |                       |     | 28   |                            | 37  |                                     |      |      |        |      |      |   |    |      | <br> |   |
| D TES<br>JISIANA<br>JISIANA<br>E BAY<br>VISTRAT<br>VISTRAT  | Date Dr                    | Water                 | Percent  |                       | 406 | <br>174  |                            | 123 | ł                                   | 52   |      | 27     |      |      |   |    |      |      |   |
| E BORING AND TEST RE<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>PROTECTION DEMONSTRATION PF<br>TERREBONNE PARISH, LOUISIANA   | - 1                        | Depth                 | In Feet  |                       | 1-2 | 4-5  |                            | 6-7 |                                     | 9-10 |      | 13-14  |      |      |   |    |      |      |   |
| RING<br>STATE<br>TERR<br>ECTION   | JOD NO.: 1/4/4             | Sample                | Number   |                       | -   | 7  | 8                          | en  |                                     | 4    |      | S      |      |      |   |    |      |      |   |
| FROTI<br>TTERRI   |                            | USI                   |          | đ                     |     | <br>Б  |                            |     | SM                                  |      |      |        |      |      |   |    |      |      |   |
| EUSTIS ENGINEERING COMPANY, INC. LOG OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>SHORE PROTECTION DEMONSTRATION PROJECT<br>TERREBONNE PARISH, LOUISIANA | Gr. water Depth:           | Visual Classification |          | Very soft brown humus |     | <br>Extremely soft brown organic clay<br>w/clay layers | w/wood & silty clav lavers |     | Loose gray silty sand w/clay lenses |      |      | poom/m |      |      |   |    |      |      |   |
| NG CC   | Datum:                     | Svmhol                | - Annual |                       |     |  |                            |     |                                     |      |      |        |      |      |   |    |      |      |   |
| INEERII   | Da                         | SPT                   | 78       |                       |     |  |                            |     |                                     |      |      |        |      |      |   |    |      |      |   |
| IS ENG  | I Elev.:                   | đđ                    | =        |                       |     |  |                            |     |                                     |      |      |        |      |      |   |    |      |      |   |
| EUSTI   | Ground Elev.:              | Scale                 | Feet     | 0                     |     | 2  | ,                          |     |                                     | 10   | 1    | 1 1    | 15 — | 1 1  | 1 | 20 | 1 -1 | ų    | 3 |

Comments: Water Depth: 3.0'

|   | otes"  | <u> </u>         |                       |   |  |   |                      |                                     |       |          |   |      |      |                             |
|---|--|------------------|-----------------------|---|--|---|----------------------|-------------------------------------|-------|----------|---|------|------|-----------------------------|
|   | gends & N  | Other            | Tests                 |   |  |   |                      |                                     |       |          |   |      |      |                             |
| 1 of 1)   | Refer to "Legends & Notes"                                     |                  |                       |   |  |   |                      |                                     |       |          |   |      |      |                             |
| (Sheet 1 of 1)  | Ř  | its              | Б                     |   |  | 114   |                      |                                     |       |          |   |      | <br> |                             |
|   |  | Atterberg Limits | Ч                     |   |  | 45  |                      |                                     |       |          |   |      |      |                             |
|   | 9:6  | Attert           | Е                     |   |  | 159   | Alexandra -          |                                     |       |          |   |      |      |                             |
|   | Boring:  | ests             | υ                     |   |  |   | 30                   |                                     |       |          |   |      |      |                             |
|   | _  | Shear Tests      | 90 Ø                  |   |  |   | 1                    |                                     |       |          |   |      |      |                             |
| ILTS  | 5  | _                | t Type                |   |  | 8   | <u>د</u>             |                                     |       |          |   |      | <br> |                             |
| ESU<br>ROJE   | A<br>6/18/0  | Density          | Wet                   |   |  |   | 100                  |                                     |       |          |   |      |      |                             |
| T R   | ISIAN  |                  | Dry                   |   |  |   | 28                   |                                     |       |          |   |      |      |                             |
| D TES<br>IISIANA<br>E BAY<br>VISTRAT  | SH, LOUISIANA<br>Date Drilled: 6/18/02                         | Water            | Percent               | 263                                     | 529                                    | 143   | 89                   | 11. <b>19</b> 50 - 16 marke         | 25    |          |   |      |      |                             |
| OG OF BORING AND TEST RESULT<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>SHORF PROTECTION DEMONSTRATION PROJECT                                    | TERREBONNE PARISH, LOUISIANA<br>Job No.: 17474 Date Drilled: 6 | Depth            | In Feet               | 1-2                                     | 4-5                                    | 6-7   | 9-10                 |                                     | 13-14 |          |   |      |      |                             |
| RING<br>STATE<br>TERR<br>FCTION   | ERREBONNE PAI<br>Job No.: 17474                                | Sample           | Number                | -                                       | 2                                      | е   | 4                    |                                     | Q     |          |   |      |      |                             |
| E BO  | Job  | <u> </u>         | DSD<br>D              | ٤                                       |  | НО  |                      | SM                                  |       |          |   |      |      |                             |
| EUSTIS ENGINEERING COMPANY, INC. LOG OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>SHORF PROTECTION DEMONSTRATION PROJECT | Gr. Water Depth:   |                  | Visual Classification | Very soft brown humus                   | w/organic clay layers                  | Extremely soft to soft gray & brown<br>organic clay w/sandy silt layers | w/clayey silt layers | Loose gray silty sand w/clay layers |       |          |   |      |      |                             |
| G CO  | ü  |                  | Symbol                |   |  |   |                      |                                     |       |          |   |      |      | h: 2.0'                     |
| VEERIN  | Datum:   | S P              | SPI LS                | K { { { { { { { { { { { { { { { { { { { | <<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< | sulli   |                      |                                     |       |          |   |      |      | Comments: Water Depth: 2.0' |
| S ENGI  | Elev.:   | -                |                       |   |  |   |                      |                                     |       |          |   |      |      | nents: W                    |
| EUST  | Ground Elev.:  | Scale            | Feet                  | 0                                       | 1                                      | , i   | 10                   | 1                                   | 1 1   | <u>6</u> | 1 | 20 - | 25   | Comn                        |

the second second

| $\rightarrow \rightarrow \rightarrow$   | Refer to "Legends & Notes" | Other                 | Tests          |                       |                            |         |   |     |                     |   |                  |      |     |   |    |   |        |  |
|---|----------------------------|-----------------------|----------------|-----------------------|----------------------------|---------|---|-----|---------------------|---|------------------|------|-----|---|----|---|--------|--|
| (Sheet 1 of 1)  | Refer to "Leg              |                       |                |                       |                            |         |   |     |                     |   |                  |      |     |   |    |   |        |  |
| hS)   |                            | Limits                | Ы              |                       |                            | 9 403   |   |     |                     |   |                  |      |     |   |    |   |        |  |
| ,   | -                          | Atterberg Limits      | LL PL          |                       |                            | 562 159 |   |     |                     |   |                  |      |     |   |    |   |        |  |
|   | Boring: /                  |                       | v              |                       |                            | 50      |   | 35  | 35                  |   |                  |      | ù   |   |    |   |        |  |
|   | ß                          | Shear Tests           | 0              |                       |                            | ı       |   | ı   | ı                   |   |                  |      |     |   |    |   |        |  |
| TS ⊤  |                            | ĸ                     | Type           |                       |                            | 3       |   | 9   | S                   |   |                  |      |     |   |    |   |        |  |
| SUL   | 18/02                      | sity                  | Wet            |                       |                            | 99      |   | \$  | 103                 |   |                  |      |     |   |    |   |        |  |
|   | led: 6/                    | Density               | Dry            |                       |                            | £       |   | 40  | 63                  |   |                  |      |     |   |    |   |        |  |
| OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>RE PROTECTION DEMONSTRATION PROJECT<br>TERREBONNE PARISH, LOUISIANA | Date Drilled: 6/18/02      | Water                 | Percent        | 282                   |                            | 527     |   | 110 | 63                  | 1                                       | 5                |      |     |   |    | ð |        |  |
| <b>RING AND TE</b><br>TATE OF LOUISIAN<br>TERREBONNE BAY<br>STION DEMONSTRA<br>SONNE PARISH, LOU  | - 1                        | Depth                 | 100            | 1-2                   |                            | 4-5     |   | 6-7 | 9-10                |   | 13-14            |      |     |   |    |   |        |  |
| RING<br>STATE<br>TERRI<br>ECTION  | Job No.: 17474             | Sample                | Number         | -                     |                            | 2       |   | ę   | 4                   |   | S                |      |     |   |    |   |        |  |
| FROTE   | dor                        | JSI                   |                | £                     | ٤                          |         | но  |     |                     | പ                                       |                  |      |     |   |    |   |        |  |
| OG (  | Gr. Water Depth:           | Vieual Classification |                | Very soft brown humus | Extremely soft brown humus | -       | Extremely soft gray & brown organic<br>clay w/sitty sand layers |     | w/sandy slit layers | Very soft gray silty clay w/sand layers | & organic matter |      |     |   |    |   |        |  |
| 0   | Datum:                     | Cumbral               | L ayrinou<br>R |                       |                            |         |   |     |                     |   |                  |      |     |   |    |   |        |  |
| INEERII   | Da                         | S<br>P                |                |                       |                            |         |   |     |                     |   |                  |      |     | - |    |   |        |  |
| S ENGI  | Elev.:                     | 8                     | t              |                       |                            |         |   |     |                     |   |                  |      |     |   |    |   |        |  |
| EUSTI   | Ground Elev.:              | Scale                 | Feet           | 0                     | 1. 1                       |         | ۍ ا<br>ا  | 1   | 10                  | 1 1                                     | - 1              | 15 - | 1 1 |   | 50 |   | ۔<br>۲ |  |

Comments: Water Depth: 2.0'

|  |   | es"                        | _                     |            |  |   |   |                                    |   |                 |             |               | 1                           |
|--|---|----------------------------|-----------------------|------------|--|---|---|------------------------------------|---|-----------------|-------------|---------------|-----------------------------|
| $\rightarrow$  |   | Refer to "Legends & Notes" | Other                 | Tests      |  |   |   |                                    |   |                 |             |               |                             |
| f 1)   |   | o "Leger                   |                       |            |  | <br>  |   |                                    |   |                 |             |               |                             |
| (Sheet 1 of 1)                                       |   | Refer t                    |                       |            |  |   |   |                                    |   |                 |             |               |                             |
| (She   |   |                            | Limits                | Ā          | 217  |   | 11110000000000                              |                                    |   |                 |             |               |                             |
|  |   | _                          | Atterberg Limits      | LPL        | 311 94   |   |   |                                    |   |                 |             |               |                             |
|  |   | Boring: 8                  |                       | C IL       | 31   | <br>40  | 20  |                                    |   |                 |             |               |                             |
|  |   | Bor                        | Shear Tests           | 8          |  | 4   | 2   |                                    |   |                 |             |               |                             |
| S  |   |                            | Shea                  | Type       |  | Ы   | S   |                                    |   |                 |             | - <i>11</i> - |                             |
| נחרו   | JECT  | 8/02                       | ~                     | Wet        |  | 86  | 75  |                                    |   |                 |             |               |                             |
| RES  | N PRO   | Date Drilled: 6/18/02      | Density               | Dry        | č.   | 58  | 25  |                                    |   |                 |             |               |                             |
| ST<br>ST<br>ST<br>ST                                 |   | Drilled                    | er.                   |            |  |   | terteren er                                 |                                    |   |                 | 2411 (      |               |                             |
|  | NSTF<br>SNSTF<br>SH, L(   | Date                       |                       | Percent    | 242  | 69  | 202   | 8                                  | 85  |                 |             |               |                             |
| AN<br>OF LO  | DEMC  | 474                        | Depth                 | In Feet    | 1-2  | 4-5   | 6-7   | 9-10<br>1                          | 13-14                                       |                 |             |               |                             |
| <b>SING</b>  | I EKKEBUNNE BAY<br>CTION DEMONSTRA<br>BONNE PARISH, LOU                                   | Job No.: 17474             | Sample                | umber      | •  | <br>5   | 6   | 4                                  | CJ  |                 |             |               |                             |
| LOG OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA | I EKKEBONNE BAY<br>SHORE PROTECTION DEMONSTRATION PROJECT<br>TERREBONNE PARISH, LOUISIANA | Job N                      | S Join                |            | ±  | НО  | ă   | ъ                                  |   |                 |             |               |                             |
| OF   | ORE P<br>T  |                            |                       | -          |  |   |   |                                    |   |                 |             |               | 1                           |
| 90   | SH  |                            |                       | _          | iic clay                                       | ganic   | clay  | S.                                 |   |                 |             |               |                             |
|  |   | Gr. Water Depth:           | Visual Classification | Silication | w/orgar  | prown or  | w sumu                                      | it pocke                           | <u>କ</u><br>ଅ                               |                 |             |               |                             |
| INC.   |   | Water                      | act) Ion              |            | u humus  | gray & t<br>ilt layers  | brown h                                     | clay w/s                           | w/silty clay layers &<br>organic matter     |                 |             |               |                             |
| ANY,   |   | G.                         | 10e                   | 212        | Very soft brown humus w/organic clay<br>layers | Extremely soft gray & brown organic<br>clay w/sandy silt layers | Extremely soft brown humus w/clay<br>layers | Very soft gray clay w/silt pockets | w/silty<br>organi                           |                 |             |               |                             |
| OMP,   |   |                            |                       |            | Very so<br>layers                              | Extren<br>clay w  | Extrem<br>layers                            | Very s                             |   |                 |             |               | 5                           |
| 0 97   |   | Datum:                     | lodan.0               | Indillike  |  |   |   |                                    |   |                 |             |               | oth: 3.(                    |
| EERI   |   | Da                         | P                     | <u> </u>   |  |   |   |                                    |   |                 |             |               | er Der                      |
| IGINE  |   | ••                         |                       |            |  | <br>  |   |                                    |   |                 |             |               | : Wat                       |
| 'IS EN   |   | d Elev                     | 6                     | E          | 10   | <br>  | 0.25  | 0.25                               | ,, <u>, , , , , , , , , , , , , , , , ,</u> |                 | <del></del> |               | Comments: Water Depth: 3.0' |
| EUSTIS ENGINEERING COMPANY, INC.                     |   | Ground Elev.:              | Scale                 | Feet       | Ð  | ່  <br>ທ  |   | 9<br>9                             | ų   | <u><u>0</u></u> | 20 -        | 55            | Com                         |

| $\mapsto$  |  | Refer to "Legends & Notes" | Other                 | Tests   |                       |     |  |   |                                     |                            |    |
|--|--|----------------------------|-----------------------|---------|-----------------------|-----|--|---|-------------------------------------|----------------------------|----|
| (Sheet 1 of 1)   |  | Refer to "Leg              |                       |         |                       |     |  | 21  |                                     | <br>                       |    |
| HS)  |  |                            | Atterberg Limits      | - PL PI |                       |     | 5 24 22  |   |                                     |                            |    |
|  |  | Boring: 9                  | _                     | с<br>с  |                       | 17  | 46   | 600   |                                     | <br>2004 I.I.              |    |
| LTS  | 5  |                            | Shear Tests           | Type ø  |                       |     |  | 80  |                                     | <br>                       |    |
| OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY | SHORE PROTECTION DEMONSTRATION PROJECT<br>TERREBONNE PARISH, LOUISIANA | Date Drilled: 6/18/02      | Density               | Dry Wet |                       |     |  | 91 119  |                                     |                            |    |
| <b>J TEST</b><br>JISIANA<br>F BAY                                  | PROTECTION DEMONSTRATION PF  | Date Drille                | Water                 |         | 403                   | 277 | 74   | 31  | 58                                  |                            |    |
| <b>SING AND TE</b><br>STATE OF LOUISIAN                            | N DEMO   |                            | Depth                 |         | 1-2                   | 4-5 | 6-7  | 9-10  | 13-14                               |                            |    |
| ORIN<br>STAT<br>TER  | DTECTIO  | Job No.: 17474             | Sample                |         | -                     | 7   | m  | 4   | cu                                  | 6                          |    |
|  | DRE PR(<br>TEF   | ř                          | JSIT                  | Ś       | đ.                    |     | تا<br>اند  | W   | <u>පි</u>                           |                            |    |
| EUSTIS ENGINEERING COMPANY, INC. LOG                               |  | Gr. Water Depth:           | Vienal Classification |         | Very soft brown humus |     | Very soft gray & brown silty clay w/organic matter | Medium compact gray clayey silt w/silty<br>sand layers & organic matter | Loose gray fine sand w/silt pockets |                            |    |
| RING CC  |  | Datum:                     | P<br>Symbol           | L Jymou |                       |     |  |   |                                     |                            |    |
| SINEEF   |  |                            | CDT                   |         |                       |     |  |   |                                     |                            |    |
| TIS ENC  |  | Ground Elev.:              | 8                     |         | 1                     |     | F  | 0.25  | <u>, , , , , </u> [                 | <br>- <del>,   , , .</del> |    |
| EUS1   |  | Groun                      | Scale                 | Feet    | Ð                     |     | ۱<br>۵   | 9<br>1  | 25<br>1                             | <br>- 20 -                 | 25 |

Comments: Water Depth: 1.5'

| $\rightarrow$  | Refer to "Legends & Notes"                                     | Other<br>Tests        |          |   |         |               |   |  |    | <br>   |    |
|--|--|-----------------------|----------|---|---------|---------------|---|--|----|--------|----|
| (Sheet 1 of 1)   | Refer to "Leç  |                       |          |   |         |               |   |  |    |        |    |
| (St  |  | Limits                | <u>-</u> |   | 1 245   |               |   |  |    |        |    |
|  | 10   | lĕ⊢                   | Ч        |   | 416 171 |               |   |  |    |        |    |
|  | Boring: 10   |                       | υ        |   | 32      | 80            | 40  | 1990   |    |        |    |
|  | ā  | ě l                   | ø        |   | ı       | I             | E,  | E  |    |        |    |
| TS.  |  | σ.                    | Type     |   | OB      | OB            | S   | OB   |    | <br>   |    |
| SUL<br>SOLEC   | \$/05/02   | Density               | Wet      |   | 73      | 81            | 92  | 12   |    |        |    |
|  | SIANA  | Ē                     | ĥ        |   | 17      | 28            | 49  | 8  |    |        |    |
| ) TES<br>IISIANA<br>E BAY<br>VSTRAT  | SH, LOUISIANA<br>Date Drilled: 6/05/02                         | Water<br>Content      | Percent  | 442                                     | 339     | 193           | 88  | 27   |    |        |    |
| OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>RE PROTECTION DEMONSTRATION PROJECT  | TERREBONNE PARISH, LOUISIANA<br>Job No.: 17474 Date Drilled: 6 | Depth<br>In Feet      |          | 1-2                                     | 4-5     | 6-7           | 9-10  | 13-14  |    |        |    |
| RING<br>STATE<br>TERRI<br>ECTION   | ERREBONNE PAI<br>Job No.: 17474                                | Sample                |          | -                                       | N       | e             | 4   | טי   |    |        |    |
| E BO   | Job  | USC                   |          | £                                       |         |               | ъ   | SM   |    |        |    |
| EUSTIS ENGINEERING COMPANY, INC. LOG OF BORING AND TEST RESULT<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>SHORE PROTECTION DEMONSTRATION PROJECT | Gr. Water Depth:   | Visual Classification |          | Extremely soft to very soft brown humus |         | w/clay layers | Extremely soft gray clay w/sandy sitt<br>layers & humus | Loose to medium dense gray silty sand<br>w/clay lenses |    |        |    |
| NG C(  | Datum:   | S<br>P<br>Symbol      | ~~~~~    |   |         |               |   |  |    |        |    |
| INEERI   | Da   | SPT P                 | R        |   |         |               |   |  |    |        |    |
| S ENG  | Elev.:   | đ                     |          |   |         |               | 0.25  | 0.25   |    |        |    |
| EUSTI  | Ground Elev.:  | Scale                 | reet     | 5                                       | 2       | 1             | 6<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1          |  | 15 | <br>20 | 25 |

Comments: Water Depth: 2.5'

| $\rightarrow$   | ids & Notes"                           | Other                 | Tests                 |                            |             |  |        |                |                      |                |   |  | Dd    |    |                  | <br> |   |       |                             |
|---|--|-----------------------|-----------------------|----------------------------|-------------|--|--------|----------------|----------------------|----------------|---|--|-------|----|------------------|------|---|-------|-----------------------------|
| (Sheet 1 of 1)  | Refer to "Legends & Notes"             |                       |                       |                            |             |  |        |                |                      |                |   |  |       |    |                  | <br> |   |       |                             |
| us)   |  | imits                 | Ē                     |                            | 189         |  |        |                |                      |                |   |  |       |    |                  |      |   |       |                             |
|   |  | Atterberg Limits      | ъ                     |                            | 223         |  |        |                |                      |                |   |  |       |    |                  |      |   |       |                             |
|   | : 11                                   | Atter                 | Е                     |                            | 412         |  |        |                |                      |                |   |  |       |    |                  | <br> |   |       |                             |
|   | Boring:                                | sts                   | v                     |                            | 15          |  | 50     |                |                      |                |   |  |       |    |                  |      |   |       |                             |
|   | 8                                      | Shear Tests           | 8                     | 1                          | ı           |  | ı      |                |                      |                |   |  |       |    |                  |      |   |       |                             |
| S   |  | ß                     | Type                  |                            | Я           |  | nc     |                |                      |                |   |  |       |    |                  |      |   |       |                             |
| SUL <sup>7</sup>  | /05/02                                 | Density               | Wet                   |                            | 61          |  | 100    |                |                      |                |   |  |       |    |                  |      |   |       |                             |
| T RE  | ISIANA<br>illed: 6                     |                       | Dry                   |                            | 10          |  | 59     | 11 4 4 4       |                      |                |   |  |       |    |                  |      | - | <br>  |                             |
| D TES<br>JISIANA<br>E BAY<br>NSTRAT   | SH, LOUISIANA<br>Date Drilled: 6/05/02 | Water                 | Percent               |                            | 538         |  | 69     | 135            |                      | 29             |   |  |       |    |                  |      |   |       |                             |
| OG OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>SHORE PROTECTION DEMONSTRATION PROJECT | Ϋ́                                     | Depth                 | In Feet               |                            | 1-2         |  | 4-5    | 6-7            |                      | 9-10           |   |  | 13-14 |    |                  |      |   |       |                             |
| RING<br>STATE<br>TERR<br>TERR   | LERREBONNE PAI<br>Job No.: 17474       | Sample                | Number                |                            | -           |  | 2      | ю              |                      | 4              |   |  | ŝ     |    | 1                |      |   |       |                             |
| F BO  | Job                                    |                       |                       | £                          |             | 5  |        |                | SP                   |                |   | SM   |       |    |                  |      |   |       |                             |
| EUSTIS ENGINEERING COMPANY, INC. LOG O<br>SHORE   | Gr. Water Depth:                       | Manual Classification | VISUAL CLASSIFICATION | Extremely soft black humus |             | Extremely soft to very soft gray clay<br>w/sitt lenses & pockets & organic | matter | w/humus layers | Loose gray fine sand |                |   | Loose gray silty sand w/silty clay<br>layers |       |    |                  |      |   |       |                             |
| 000   | Ë                                      | P Scorbol             |                       |                            |             |  |        |                |                      |                |   |  |       |    | otad — akki a di |      |   |       | n: 5.0'                     |
| RIN   | Datum:                                 | S ⊓<br>S              | 」<br>で<br>の           | 8355                       | <u>}}}}</u> |  |        |                |                      |                |   |  |       | ÷  |                  | <br> |   | <br>_ | Dept                        |
| SINEE   |  | CDT                   | 5                     |                            |             | A-1111-121-121   |        | - 449          |                      |                |   |  |       |    | <br>             |      |   |       | Water                       |
| IS ENC  | Ground Elev.:                          | 8                     | £                     |                            |             |  |        |                |                      |                |   |  |       |    | <br>             | <br> |   |       | Comments: Water Depth: 5.0' |
| EUST  | Ground                                 | Scale                 | Feet                  | o                          |             | 1  | 2      |                |                      | - <sup>1</sup> | - | ,  |       | 15 | <br>5            | 5    |   | 25    | Com                         |

| Anter Depth:       Character Depth:       Depth:       Carry Depth: <th colspa="1&lt;/th&gt;&lt;th&gt;G&lt;/th&gt;&lt;th&gt;NEER&lt;/th&gt;&lt;th&gt;SING (&lt;/th&gt;&lt;th&gt;EUSTIS ENGINEERING COMPANY, INC.&lt;/th&gt;&lt;th&gt;LOG OF&lt;/th&gt;&lt;th&gt;BO&lt;/th&gt;&lt;th&gt;STATE&lt;br&gt;TERR&lt;/th&gt;&lt;th&gt;DF BORING AND TEST RESULTS&lt;br&gt;STATE OF LOUISIANA&lt;br&gt;TERREBONNE BAY&lt;/th&gt;&lt;th&gt;E BAY&lt;/th&gt;&lt;th&gt;TRE&lt;/th&gt;&lt;th&gt;SUL'&lt;/th&gt;&lt;th&gt;IS&lt;/th&gt;&lt;th&gt;&lt;/th&gt;&lt;th&gt;&lt;/th&gt;&lt;th&gt;&lt;/th&gt;&lt;th&gt;Ŭ&lt;/th&gt;&lt;th&gt;(Sheet 1 of 1)&lt;/th&gt;&lt;th&gt;f 1)&lt;/th&gt;&lt;th&gt;&lt;math&gt;\rightarrow \rightarrow \rightarrow&lt;/math&gt;&lt;/th&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Visual Classification         Usc         Sample&lt;br&gt;frequency         Usc         Sample&lt;br&gt;frequency         Match frequency         Amter frequency&lt;/td&gt;&lt;td&gt;Datur&lt;/td&gt;&lt;td&gt;atur&lt;/td&gt;&lt;td&gt;Ë&lt;/td&gt;&lt;td&gt;500,000&lt;br&gt;1&lt;/td&gt;&lt;td&gt;1000&lt;/td&gt;&lt;td&gt;Job&lt;/td&gt;&lt;td&gt;EDONNE&lt;/td&gt;&lt;td&gt;E PARISI&lt;br&gt;474 C&lt;/td&gt;&lt;td&gt;H, LOUI&lt;/td&gt;&lt;td&gt;SIANA&lt;br&gt;SIANA&lt;br&gt;Iled: 6&lt;/td&gt;&lt;td&gt;05/02&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;ă&lt;/td&gt;&lt;td&gt;oring:&lt;/td&gt;&lt;td&gt;12&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;Refer 1&lt;/td&gt;&lt;td&gt;to " lege<="" td=""><td>nds &amp; Notes</td></th> | <td>nds &amp; Notes</td> | nds & Notes    |       |   |                  |    |        |         |         |     |      |      |         |     |         |          |    |                         |       |
|---|--------------------------|----------------|-------|---|------------------|----|--------|---------|---------|-----|------|------|---------|-----|---------|----------|----|-------------------------|-------|
| retrintent of the median       Dry       Instant median       Dry       Weit       Type       I      <  | s<br>spr                 | S d            | 44    |   |                  |    | Sample | Depth   | Water   | Den | sity | Shi  | ear Tes |     | Atterbe | rg Limit | ş  |                         | Other |
| $\begin{array}{ c c c c c c c c c c c c c c c c c c c$  |                          | <u></u>        | XIIIK |   |                  |    | Number | In Feet | Percent | Dry | Wet  | Type | 0       | υ   |         |          | -  |                         | Tests |
| 2     45     388     14     69     UC     -     20       CH     3     6-7     96     47     92     UC     -     35       Vsitiw     ML     5     72     109     UC     -     35       13-14     32     91     120     08     -     5     57       2     13-14     32     91     120     08     -     55   | *****                    | 8333333333     |       | Extremely soft to very soft brow                      | wn humus         | ۵  | -      |         | 149     |     |      |      |         |     |         |          |    |                         |       |
| CH         3         6.7         96         47         92         UC         5         35           y siti w/         ML         5         72         109         UC         1         35         37         20           y siti w/         ML         5         13-14         32         91         120         0B         1         55         37         20           y sit w/         ML         5         13-14         32         91         120         0B         1         56         57         20  | ********                 | <i>\\\\\\\</i> |       |   |                  |    | 7      | 4-5     | 388     | 14  | 69   | З    | ı       | 20  |         |          |    |                         |       |
| ML         5         72         109         UC         1         55         57         20           5         13-14         32         91         120         0B         1         55         57         20   |                          |                |       | Extremely soft gray clay w/silt l<br>& organic matter | lenses           | сн | e      | 6-7     | 8       | 47  | 92   | n    | 1       | 35  |         |          |    |                         |       |
| ML 22 91 120 08 1   |                          |                |       | w/silt pockets  |                  |    | 4      | 9-10    | 23      | 72  | 109  | S    | T       | 55  |         |          | 28 | 10 mm - 1 mm - 1 mm - 1 |       |
|   |                          |                |       | Loose to medium compact gray<br>trace of sand         | y clayey silt w/ | ML | су     | 13-14   | 32      | 6   | 120  | OB   | 1       | 655 |         |          |    |                         |       |
|   |                          |                |       |   |                  | 6  |        |         |         |     |      |      |         |     |         |          |    |                         |       |
|   |                          |                |       |   |                  |    |        |         |         |     |      |      |         |     |         |          |    |                         |       |
|   |                          |                |       |   |                  |    |        |         |         |     |      |      |         |     |         |          |    |                         |       |
|   |                          |                |       |   |                  |    |        |         |         |     |      |      |         |     |         |          |    |                         |       |

Comments: Water Depth: 2.7'

| 드 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 | EUSTIS ENGINEERING COMPANY, INC. LOG OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>SHORE PROTECTION DEMONSTRATION PROJECT<br>TERREBONNE PARISH. LOUISIANA | Gr. Water Depth: Job No.: 17474 Date Drilled: 6/05/02 Boring: 13 Refer to "Legends & Notes" | Visual Characteristics Attended Limits Other Other Density Shear Tests Attended Limits Other | Number In Feet Content Dry Wet Type ø C LL PL PI |    | 1 1-2 424 | 2 4-5 331 278 46 232 | 2 | Extremely soft brown humus w/silty clay Pt 3 6-7 192 26 74 UC – 55 layers | Soft gray silty clay w/silty sand CL 4 9-10 141 33 64 0C - 30 |       | 5 13-14 48 |      |   |         |        |       |        |
|---|---|---|--|--|----|-----------|----------------------|---|---|---|-------|------------|------|---|---------|--------|-------|--------|
|   | POG SHO   |   | Jui  |  | đ. |           |                      |   | ±   | CL  | 2     | 2<br>2     |      |   | 57 1 Tu |        |       |        |
|   | EUSTIS EI   | Ground Elev.:   | Scale<br>In DD   |  | 0  | T         |                      | 5 | , <u>,</u>  | <br>10  | · · · | 0.25       | 15 — | 1 | <br>1   | 7<br>8 | - 1 - | <br>25 |

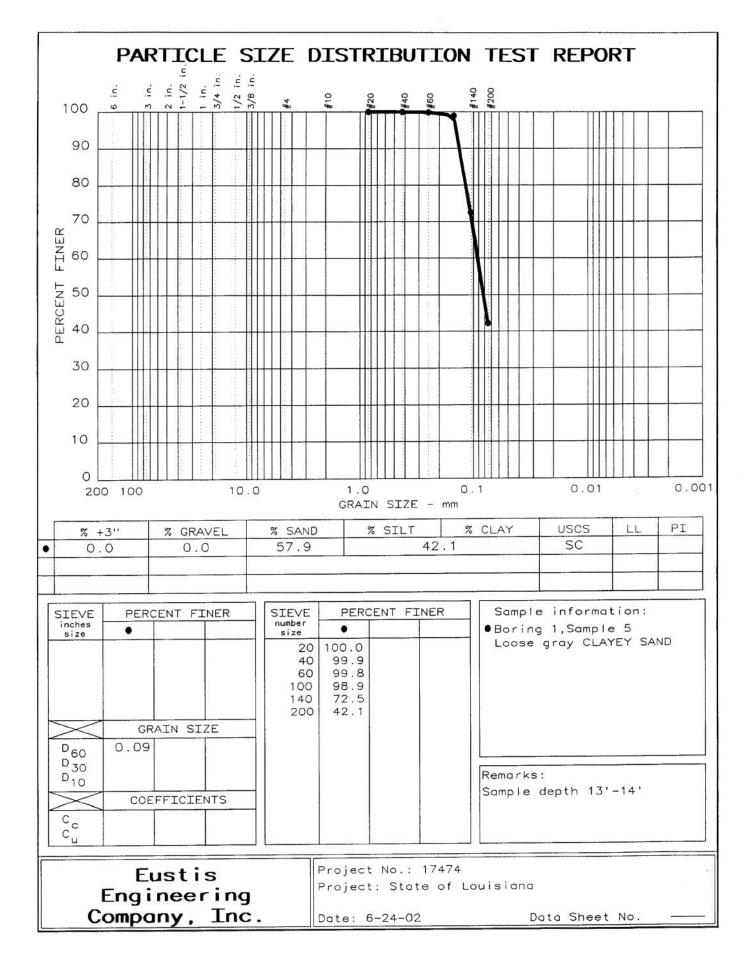
Comments: Water Depth: 2.3'

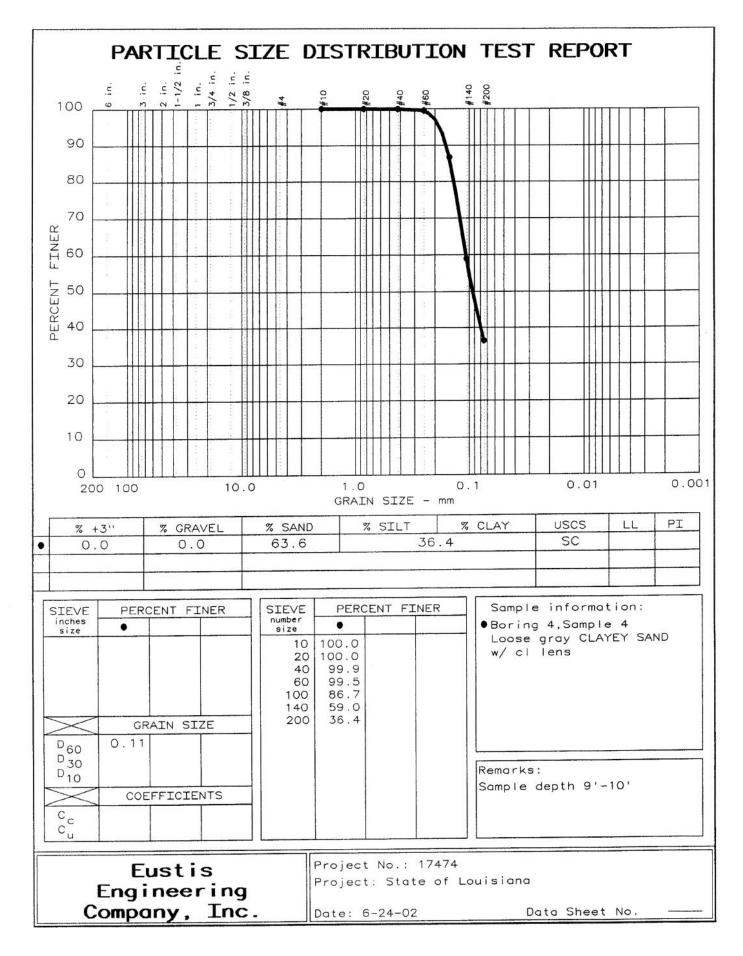
|   |  | tes"                       |                       |         |                               |     |   |     |                                       |        |   |  |          |   |                       |        |                 |         |    | <br>  |     |   |    | ]                           |
|---|--|----------------------------|-----------------------|---------|-------------------------------|-----|---|-----|---------------------------------------|--------|---|--|----------|---|-----------------------|--------|-----------------|---------|----|-------|-----|---|----|-----------------------------|
| $\mapsto$   | Ì  | nds & No                   | Other                 | Tests   |                               |     |   |     |                                       |        |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
| of 1)   |  | Refer to "Legends & Notes" |                       |         | -                             |     |   |     |                                       |        |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
| (Sheet 1 of 1)  |  | Refe                       |                       | ,       |                               |     |   |     |                                       |        |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
| S)  |  |                            | Limits                | ₫       |                               |     |   |     | 40                                    |        |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
|   |  | 4                          | Atterberg Limits      | Ч.      |                               |     |   |     | 18                                    |        |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
|   |  | Boring: 14                 | At                    | E       |                               |     |   |     | 67                                    |        |   |  |          |   |                       |        |                 |         |    | <br>  |     |   |    |                             |
|   |  | Borir                      | Tests                 | U       |                               |     |   | 30  |                                       | ຊ      |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
|   |  |                            | Shear Tests           | ø       |                               |     |   | 1   |                                       | 1      |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
| LTS   | 5  |                            |                       | Type    |                               |     |   | 3   |                                       | 2      |   | _  | 19465    | _ |                       |        |                 |         |    |       |     |   |    |                             |
| ESUI  | ROJEC  | 3/05/02                    | Density               | Wet     |                               |     |   | 80  |                                       | 100    |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
| TR  | ION PI   | lled: (                    | å                     | ργ      |                               |     |   | 31  |                                       | 21     |   |  |          |   |                       |        |                 |         |    |       |     |   |    |                             |
| ISIANA<br>ISIANA  | USTRAT<br>H, LOUI  | Date Drilled: 6/05/02      | Water                 | Percent |                               | 643 |   | 159 | 2                                     | 74     |   | 88   |          |   |                       | 27     |                 |         |    |       |     |   |    |                             |
| <b>RING AND TE</b><br>TATE OF LOUISIAN  | PROTECTION DEMONSTRATION PF<br>TERREBONNE PARISH, LOUISIANA            | 474 1                      | Depth                 | In Feet |                               | 1-2 |   | 4-5 |                                       | 6-7    |   | 9-10   |          |   |                       | 13-14  |                 |         |    |       |     |   |    |                             |
| <b>RING</b><br>STATE<br>TERR  | CTION  | Job No.: 17474             | Sample                | lumber  |                               | -   |   | 2   | 0                                     | en     |   | 4  |          |   |                       | ۍ<br>د |                 |         |    |       |     |   |    |                             |
| BOI   | PROTE  | A doL                      | S JSI                 |         | ۲,                            |     | ы   |     | <del>Р</del>                          |        | i | ರ  |          |   | WS                    |        | Τ               | 940 ( s |    |       |     |   |    |                             |
| EUSTIS ENGINEERING COMPANY, INC. LOG OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY | SHORE PROTECTION DEMONSTRATION PROJECT<br>TERREBONNE PARISH, LOUISIANA | Gr. Water Depth:           | Vieual Classification |         | Very soft brown & black humus |     | Extremely soft gray organic clay<br>w/humus & silt layers |     | Extremely soft gray clay w/silty sand | 20     | A | Very soft gray sufty clay w/sandy suft<br>layers |          |   | Loose gray silty sand |        |                 |         |    |       |     |   |    |                             |
| OMP   |  |                            |                       |         | Very                          |     | Extrer<br>w/hun   |     | Extre                                 | layers |   | very a<br>layers                                 |          |   | Foose                 |        |                 |         |    | <br>1 |     |   |    | <br>ū                       |
| NGO   |  | Datum:                     | Sumhol                | cymuc.  |                               |     |   |     |                                       |        |   |  |          |   |                       |        | - I - I - I - I |         |    |       |     |   |    | 4. H                        |
| NEERI   |  | Da                         | S<br>P                | 7 8     |                               |     |   |     |                                       |        |   |  |          |   |                       |        |                 |         |    |       |     |   |    | Comments: Water Denth: 6 6' |
| S ENGI  |  | Elev.:                     | 8                     | :       |                               |     |   |     |                                       |        |   |  |          |   |                       |        |                 |         |    |       |     |   |    | Ante: M                     |
| EUSTI   |  | Ground Elev.:              | Scale                 | Feet    | 0                             |     |   | 5   | 1                                     | 1      | 1 | 1  | 5<br>  _ | 1 | ſ                     | 1      | 15 —            | 1       | .1 | 50    | 1.5 | 1 | 25 |                             |

Comments: Water Depth: 5.5'

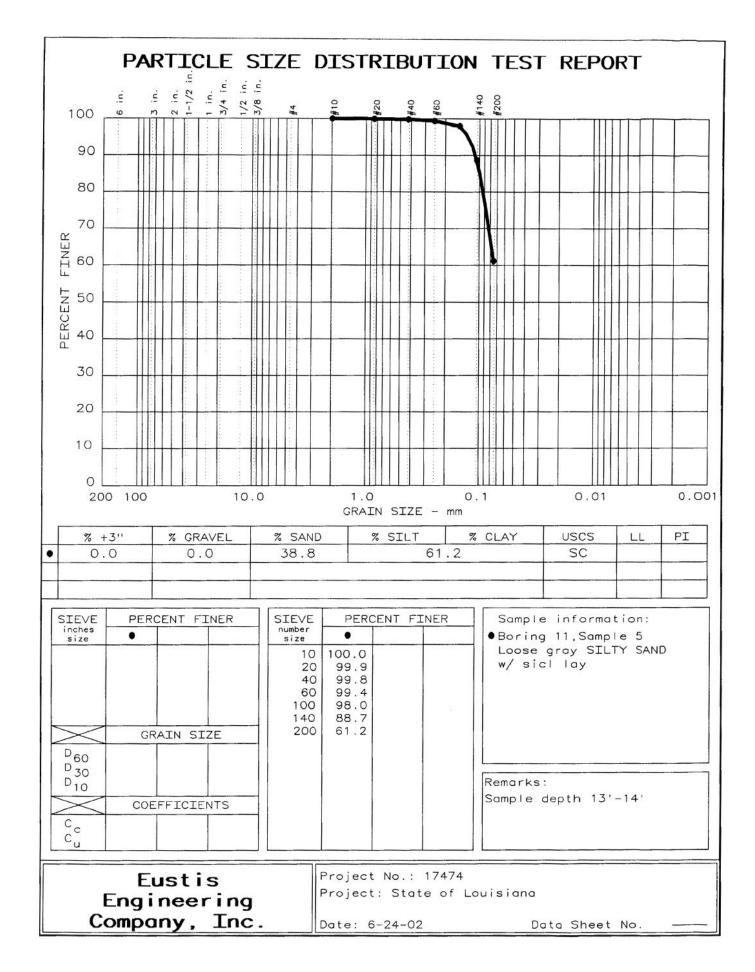
| +++   | is & Notes"                | Other                 | Tests    |                       |         |   |   |               |   |    |    |
|---|----------------------------|-----------------------|----------|-----------------------|---------|---|---|---------------|---|----|----|
| (Sheet 1 of 1)  | Refer to "Legends & Notes" |                       |          |                       |         |   |   |               |   |    |    |
| (She  | 15                         | Atterberg Limits      | IL PL PI |                       |         |   |   | 42 18 24      |   |    |    |
|   | Boring: 15                 | Shear Tests           | C<br>Ø   |                       |         |   | 99  | 8             |   |    |    |
| S   |                            | Shea                  | Type     |                       |         |   | 2   | 2             |   |    |    |
| OG OF BORING AND TEST RESULTS<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>SHORE PROTECTION DEMONSTRATION PROJECT<br>TERREBONNE PARISH. LOUISIANA | \$/05/02                   | Density               | Wet      |                       |         |   | 112   | 112           |   |    |    |
| T RE  | lled: 6                    |                       | Dry      |                       |         |   | 11  | 76            |   |    |    |
| D TES<br>IISIANA<br>E BAY<br>VSTRAT<br>VSTRAT   | Date Drilled: 6/05/02      | Water                 | Percent  | 252                   | 844     | 87  | 46  | 47            |   |    |    |
| E BORING AND TEST RE<br>STATE OF LOUISIANA<br>TERREBONNE BAY<br>PROTECTION DEMONSTRATION PF<br>TERREBONNE PARISH, LOUISIANA                     | 474                        | Depth                 | In Feet  | 1-2                   | 4-5     | 6-7   | 9-10  | 13-14         |   |    |    |
| RING<br>STATE<br>TERR<br>ECTION   | Job No.: 17474             | Sample                | Number   | -                     | 7       | ñ   | 4   | Ŷ             |   |    |    |
| F BO  | qor                        | usc                   | 2        | Ъ                     |         | ป   | ರ   |               |   |    |    |
| EUSTIS ENGINEERING COMPANY, INC. LOG O  | Gr. Water Depth:           | Visual Classification |          | Very soft brown humus | w/roots | Very soft gray sandy clay w/organic<br>matter & roots | Extremely soft gray silty clay w/trace<br>of organic matter | w/clay layers |   | ε. |    |
| ING CC  | Datum:                     | Symbol                |          |                       |         |   |   |               |   |    |    |
| INEER   | ö                          | SPT P                 | 1992     |                       |         |   |   |               |   |    |    |
| IS ENG  | I Elev.:                   | dd                    | :        |                       |         |   |   |               |   |    |    |
| EUST  | Ground Elev .:             | Scale<br>In           | Feet     | 0                     | u       | 0   | 10 -  |               | 2 | 50 | 25 |

Comments: Water Depth: 1.5'





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# APPENDIX J: PREVAILING WAGE DETERMINATION SCHEDULES

"General Decision Number: LA20190002 01/18/2019

Superseded General Decision Number: LA20180002

State: Louisiana

Construction Type: Heavy

Counties: Acadia, Ascension, Bossier, Caddo, Calcasieu, East Baton Rouge, Lafayette, Lafourche, Livingston, Ouachita, Rapides, St Landry, St Martin, Terrebonne, Webster and West Baton Rouge Counties in Louisiana.

HEAVY CONSTRUCTION PROJECTS (includes flood control, water & sewer lines, and water wells; excludes elevated storage tanks, industrial construction-chemical processing, power plants, and refineries)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth

6/14/2019

in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

| Modification | Number | Publication | Date |
|--------------|--------|-------------|------|
| 0            |        | 01/04/2019  |      |
| 1            |        | 01/18/2019  |      |

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CARP1098-004 07/01/2014
```

ASCENSION, EAST BATON ROUGE, LIVINGSTON AND WEST BATON ROUGE PARISHES

|                            | Rates     | Fringes |
|----------------------------|-----------|---------|
| CARPENTER                  |           |         |
| (formbuilding/formsetting) | .\$ 26.16 | 8.39    |
| CARP1098-014 07/01/2014    |           |         |
| CALCASIEU PARISH           |           |         |
|                            | Rates     | Fringes |
| CARPENTER                  |           |         |
| (formbuilding/formsetting) | \$ 26.16  | 6.80    |
| CARP1098-015 07/01/2014    |           |         |

ACADIA, LAFAYETTE, ST. LANDRY AND ST. MARTIN PARISHES Rates Fringes CARPENTER 5.60 (formbuilding/formsetting).....\$ 26.16 \_\_\_\_\_ CARP1098-016 07/01/2014 BOSSIER, CADDO, OUACHITA, RAPIDES AND WEBSTER PARISHES Rates Fringes CARPENTER (formbuilding/formsetting).....\$ 20.80 6.80 \_\_\_\_\_ CARP1846-008 07/01/2017 LAFOURCHE and TERREBONNE PARISHES Rates Fringes CARPENTER 9.10 (formbuilding/formsetting).....\$ 25.06 \_\_\_\_\_ ELEC0130-009 12/03/2018 LAFOURCHE AND TERREBONNE PARISHES Rates Fringes ELECTRICIAN.....\$ 30.93 11.78 \_\_\_\_\_ ELEC0194-007 09/04/2017

BOSSIER, CADDO, and WEBSTER PARISHES

|   | Rates       | Fringes             |
|---|-------------|---------------------|
| ELECTRICIAN<br>Lineman and Heavy                        |             |                     |
| Equipment Operator                                      |             | 11.35               |
| ELEC0446-007 01/01/2018                                 |             |                     |
| OUACHITA PARISH   |             |                     |
|   | Rates       | Fringes             |
| ELECTRICIAN   |             |                     |
| ELEC0576-006 09/01/2018                                 |             |                     |
| RAPIDES PARISH  |             |                     |
|   | Rates       | Fringes             |
| ELECTRICIAN   |             |                     |
| ELEC0861-006 09/01/2018                                 |             |                     |
| ACADIA, CALCASIEU, LAFAYETTE, A                         | ND ST. MART | IN PARISHES         |
|   | Rates       | Fringes             |
| ELECTRICIAN   |             | 13.25               |
| * ELEC0995-006 12/31/2018                               |             |                     |
| ASCENSION, EAST BATON ROUGE, LI<br>BATON ROUGE PARISHES | VINGSTON, S | T. LANDRY, AND WEST |

## beta.SAM.gov

|                                | Rates     | Fringes |
|--------------------------------|-----------|---------|
| ELECTRICIAN                    |           | 11.15   |
| SULA2004-006 04/29/2004        |           |         |
|                                | Rates     | Fringes |
| CARPENTER (all other work)     | .\$ 12.81 | 0.00    |
| Cement Mason/Concrete Finisher | .\$ 13.77 | 0.00    |
| Laborers                       |           |         |
| Common                         | .\$ 8.20  | 0.00    |
| Pipelayer                      | .\$ 9.45  | 0.00    |
| Power Equipment Operators      |           |         |
| Backhoe/Excavator              | .\$ 13.01 | 0.00    |
| Bulldozer                      | .\$ 13.83 | 0.00    |
| Crane                          | .\$ 16.62 | 3.28    |
| Dragline                       | .\$ 15.16 | 0.00    |
| Front End Loader               | .\$ 11.50 | 0.00    |
| Motor Grader/Blade             | .\$ 11.75 | 0.00    |
| Oiler                          | .\$ 8.59  | 2.50    |
| Trackhoe                       | .\$ 12.64 | 0.00    |
| Water Well Driller             | .\$ 11.91 | 2.44    |
| Winch                          | .\$ 11.38 | 0.00    |
| Truck Driver, Dump             | .\$ 10.25 | 0.00    |
|                                |           |         |

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave

for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

#### \_\_\_\_\_

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

Page 7 of 10

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

\_\_\_\_\_

#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

> Branch of Construction Wage Determinations Wage and Hour Division U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210 4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"