

Date: January 16, 2024
Project: Deer Island Chenier and Cell 3
Owner: Mississippi Department of Marine Resources
To: Prospective Bidders

ADDENDUM NO. 2
TO
INVITATION FOR BIDS

Sealed Bids to be received by 2:00 p.m. CST on Tuesday, January 30, 2024

This Addendum Number 1 (“Addendum”) shall be part of the Contract Documents for the above referenced-project and modifies the Invitation for Bids issued on December 21, 2023 with amendments and additions to the Invitation for Bids set forth below.

Pursuant to Section 2.18, “Acknowledgement of Addendum,” of the Invitation for Bids, bidders shall acknowledge receipt of this Addendum by identifying the addendum number and date in the space provided for this purpose on the Bid Form (Attachment D). **Failure to do so may subject the bidder to disqualification.**

Signature

ATTACHMENT D: Bid Form

Attachment D: Bid Form has been modified and replaced in its entirety with the attached Bid Form.

The Bid Form has been modified to include an optional Bid Item No. 1a: Planting. The requirements for the planting are as described in the attached document titled Planting Specifications.

SPECIFICATION SECTION 01 20 00 Measurement and Payment

Specification 01 20 00 Measurement and Payment has been replaced in its entirety with the attached specification.

SPECIFICATION SECTION 01 32 23 Surveys and Layout Data

Specification 01 32 23 Surveys and Layout Data has been replaced in its entirety with the attached specification.

**REPLACED ATTACHMENT AND
SPECIFICATIONS**

Planting Specifications

Plant approximately 7.45 acres of beach/dune habitat in *Spartina patens* (25%), *Panicum amarum* (25%) and *Uniola paniculate* (50%) as indicated in Figure 1 on the Outer Coastal Chenier. Approximately 81,000 plants will be planted in this zone.

Vegetation should include 4-inch liner cells or larger and plant spacing should be on 2-foot centers with staggered rows.

Vendor must provide a planting plan including biosecurity protocol before project initiation. Planting must not begin until after material placement to construct the Outer Coastal Chenier is completed and the material has consolidated and shall not commence until written approval is received from MDMR. All plants must be in the ground by April 30, 2024.

Biosecurity: The vendor shall take all necessary precautions and use best management practices to prevent introduction of undesired species in planting materials. The successful vendor will have a biosecurity protocol as part of their standard operating procedure. MDMR reserves the right to inspect any plants or items used for the presence of invasive species or their propagules.

Material Source: Plant materials are limited to plants propagated from seed or cuttings from the Gulf Coasts of MS, AL, or the FL panhandle. Vendor must indicate source material for plants and verification of source material is required. The nursery name(s), mailing and physical addresses, phone numbers, names of nursery contact person(s) to be utilized in performance of this work must be provided. Vendor shall not change the selected source(s) of plants without receiving prior written approval.

Access: Deer Island is only accessible by boat. Transportation of field crews and vegetation to the planting site is the sole responsibility of the contracted vendor. The successful vendor must have the ability to transport field personnel and equipment needed to the site.

Planting Methodology: The intent of this specification is to populate the site in an aggressive but natural planting scheme.

Irrigation: "Water in" (initially irrigate) all newly installed planting units for beach/dune species such that the root zone is thoroughly saturated. A water adsorbing polymer gel product (e.g., Terrasorb™, Stock-osorb®, etc.) that has been hydrated according to label directions should be placed in the hole prior to planting.

Fertilization: Place a small amount of a balanced (14-14-14) time-release fertilizer (e.g., Osmocote) beneath the root zone when planting. Follow label recommendations for the quantity of fertilizer needed for each plant. Refer to the Natural Resource Conservation Service (NRCS) guidelines established for each species to ensure their survival.

Required Survival Rate: Planting units that do not survive for a minimum of 10 days after installation will be replaced at contractor's expense.

Clean up: Excess and waste material shall be removed from the planting areas and shall be disposed offsite.

Deliverables

Plan: Vendor shall develop and submit for approval a planting plan to MDMR at least 30 days prior to mobilization including the following:

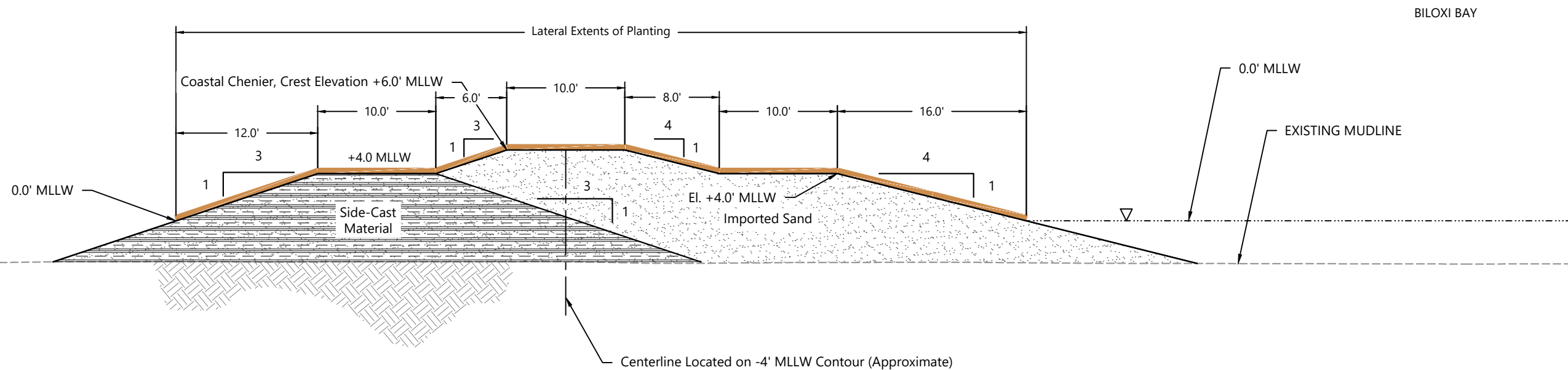
1. Identification of project team including each person's role on the project and contact information for all personnel.
2. Schedule to complete procurement of materials, preparation, mobilization to the site, all planting, demobilization and clean up, and final documentation.
3. Methodology, approach, equipment, and materials to be used to conduct the planting.
4. Description of vendor's biosecurity protocol.

Pre-Planting Report: Provide pre-planting report following initial site visit.


Project Photos: Provide a minimum of 10 digital photographs clearly showing planting activities for each day of planting.

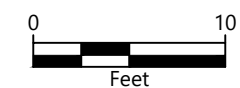
Daily Reports: Provide a daily report after each day of work by noon the following day. Include a description of all activities including, but not limited to, the following:

1. Personnel involved in the project and hours worked
2. Weather conditions
3. Number, type, and location of plants installed
4. Any issues or problems encountered



SOURCE: Survey data provided by U.S. Army Corps of Engineers LiDAR data dated November 8, 2020, supplemented by U.S. Army Corps of Engineers bathymetric survey dated February 25, 2022.
HORIZONTAL DATUM: Mississippi State Plane East Zone, NAD83, U.S. Survey Feet
VERTICAL DATUM: NAVD88

LEGEND:
 Beach/Dune Planting Zone



Publish Date: 2024/01/16 2:53 PM | User: mpratschner
 Filepath: K:\Projects\0762-Mississippi Department of Marine Resources\Deer Island 60%\Construction Plans\0762-RP 005 PLANTING SPECS.dwg Figure 1



**Attachment D
Bid Form**

MDMR – DEER ISLAND CHENIER AND CELL 3

1. BID RECIPIENT

This Bid is submitted by _____ (hereinafter called "Bidder") doing business as a _____ (insert "a corporation," "an individual" applicable; if a corporation, indicate state of incorporation; or a "joint venture") to:

**Mississippi Department of Marine Resources
Attention: Rick Kinnard
1141 Bayview Avenue
Biloxi, Mississippi 39530**

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Mississippi Department of Marine Resources (hereinafter called "MDMR") in the form(s) included in the Invitation for Bids to perform all Work as specified or indicated in the Invitation for Bids for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Invitation for Bids.

2. BIDDER'S ACKNOWLEDGEMENTS

Bidder accepts all of the terms and conditions of the Invitation for Bids, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for ninety (90) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of MDMR.

3. BIDDER'S REPRESENTATIONS

In submitting this Bid, Bidder represents that:

- A. Bidder has examined and carefully studied the Invitation for Bids and the following addenda, receipt of which is hereby acknowledged:

<u>Addendum</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

- B. Bidder has reviewed the requirements to bid this Project and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all laws and regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the work site; information and observations obtained from visits to the work site; the Invitation for Bids; and the site-related reports and drawings identified in the Invitation for Bids with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and

procedures of construction expressly required by the Contract Documents; and (3) the Bidder's safety precautions and programs.

- E. Based on the information and observations referred to above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Invitation for Bids.
- F. Bidder is aware of the general nature of work to be performed at the site that relates to the Work as indicated in the Invitation for Bids.
- G. Bidder has given MDMR written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Invitation for Bids, and the written resolution thereof by MDMR is acceptable to Bidder.
- H. The Invitation for Bids is generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4. BID FORM INSTRUCTIONS

All blank spaces for the bid prices must be filled in ink or typewritten, and this Bid Form must be fully completed and executed when submitted. Alterations and erasures of the entries made by bidder shall be initialed by the individual who signed this Bid Form. Bids shall state the legal name of bidder and be signed by the person or persons legally authorized to bind bidder to a contract. Bids submitted by a corporation shall indicate state of incorporation and bear a corporate seal. Bids submitted by an agent of a bidder shall have a current power of attorney attached that certifies the agent's authority to bind the bidder.

Measurement and payment procedures corresponding to the Bid Form can be found in Section 00 52 15 Agreement and Section 01 20 00 Measurement and Payment Procedures, and Section 01 29 00 Payment Procedures of the Contract Documents.

BID FORM:
DEER ISLAND CHENIER AND CELL 3
Schedule of Prices

Item No.	Description of Item	Unit of Measure	Estimated Quantity	Unit Price	Total
1	Mobilization and Demobilization	LS	1		
Written _____ per unit					
2	Layout and As Build Survey	LS	1		
Written _____ per unit					
3	Side-cast Chenier (Outer and Shoreline)	LF	6,400		
Written _____ per unit					
4	Imported Sand Outer Chenier	TON	50,000		
Written _____ per unit					
5	Pipeline Access Corridor	LS	1		
Written _____ per unit					
Optional Bid Item					
1a	Planting	LS	1		
Written _____ per unit					

Total Bid for Project Construction without Optional Bid Item \$ _____

Written Total Bid without Optional Bid Item

Total Bid for Project Construction including Optional Bid \$ _____

Written Total Bid including Optional Bid

Note: Bids shall include sales tax and all other applicable taxes and fees. All blanks shall be filled in. Total amount of Bid shall be the sum of the Items. Contract Award will be made according

to the Invitation for Bids. In case of discrepancy between the sum of the items and Total Amount of Bid, the sum of the items shall be considered to be the Total Amount of Bid. Award will be made to only one Bidder based upon the Base Bid as applicable from this Bid Form and determination of the lowest and best, responsive, responsible bidder according to the Invitation for Bids.

1. The Bidder agrees that the containment dike construction Work shall be completed within 120 calendar days as stipulated in the Agreement.
2. The following documents are attached to and made a condition of this Bid:
 - a. Bid Security (surety bond, cashier's check, or certified check)
 - b. Power of Attorney (For Surety Bond only)
 - c. Authority to Execute Contract (any corporate employee other than the president or vice-president)
 - d. A list of all subcontractors, surveyors and suppliers associated with this Bid that are anticipated by Bidder to contribute over \$5,000.00 worth of services or supplies to complete the work identified on this Bid Form. MDMR shall not be responsible for payment for any services or supplies provided by any such subcontractor, surveyor or supplier not identified.

The undersigned, having read and understood the Bidding Documents and examined the Project site and adjoining areas, and being familiar with the obstacles and conditions that will affect proposed Work, hereby offers and agrees to furnish all labor, equipment and materials and to perform all the Work required for the **Project**, as described in this Invitation for Bids in accordance with the Contract Documents and at the prices stated in the preceding Bid Schedule.

This Bid is submitted by:

If Bidder is:

An Individual

Name _____
(typed or printed):

By: _____
(Individual's Signature)

Doing business as: _____

State Contractor License No. _____

Contractor UEI # _____

MBE/WBE Status: Yes: No:

A Partnership

Partnership Name: _____
(typed or printed)

By: _____
(Signature of General Partner – attach evidence of authority to sign)

Name: _____
(typed or printed)

State Contractor License No. _____

Contractor UEI # _____

MBE/WBE Status: Yes: No:

A Corporation

Corporation Name: _____
(Seal)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature, attach evidence of authority to sign)

Name: _____
(typed or printed)

Title: _____
(Corporate Seal)

Attest: _____

Date of Qualification to do business in Mississippi is ___/___/___.

State Contractor License No. _____

Contractor UEI # _____

MBE/WBE Status: Yes: No:

A Joint Venture

Name of Joint Venture: _____

First Joint Venture Name: _____
(Seal)

By: _____
(Signature of first Joint Venture Partner, attach evidence of authority to sign)

Name: _____
(typed or printed)

Title: _____
(Each Joint Venture Partner must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address: _____

Phone No. _____ Fax No. _____

Email: _____

Submitted on _____, 20____

State Contractor License No. _____

Contractor UEI # _____

MBE/WBE Status: Yes: No:

SECTION 01 20 00**MEASUREMENT AND PAYMENT PROCEDURES****PART 1 - GENERAL**

1.01 SUMMARY

- A. This section includes requirements to be used for the basis of measurement and payment. The Contractor shall receive and accept the compensation provided in the Bid Form as full payment for furnishing all materials, labor, tools, and equipment for performing all operations necessary to complete the Work under the Contract. Responsibility and payment for any loss or damage to the Work or any portion thereof shall be governed by Sections 14 and 15 of the Standard Contract Terms and Conditions. Payment for all loss or damages arising from the nature of the Work, or from the action of the elements or any unforeseen difficulties, encountered during the Work until final acceptance by MDMR will be the responsibility of the Contractor.
- B. Bid prices for the various work items are to establish a total price for completing the Project in its entirety. The Contractor shall include in the Bid any item for which a separate pay item has not been established in the Bid Form, to reflect the total price for completing the Project in its entirety as depicted on the Construction Drawings and specified herein. The Contractor must include all costs for this Project to complete all work, in total, designated in the Construction Drawings, Specifications, and Bid Form.

1.02 SUBMITTALS

- A. The following submittals shall be submitted in accordance with **Section 01 33 00 – Submittal Procedures**.
- B. Schedule of Values
 - 1. The Contractor will submit a Schedule of Value on Contractor's standard form acceptable to MDMR in PDF for review and approval prior to the first Application for Payment. List payment items sequentially in the same order as they appear in the Bid Form.
 - 2. Lump sum items are to have adequate breakdown of components to facilitate evaluating completeness for payment in accordance with Section 01 29 73 – Schedule of Values. Breakdown components shall appear directly under the payment item heading to which they apply.
 - 3. The Contractor will revise the schedule to list approved Change Orders with each Application for Payment. The Contractor will submit revised Schedule of Values in accordance with this Specification.
- C. Construction Schedule
 - 1. Within 10 calendar days after effective date of Contract, the Contractor shall prepare and submit to the Engineer for approval, a construction schedule in the form of a progress chart. The Contractor shall indicate on the progress chart the bid items contained in the Contract showing the amount of the item and its relative weighted percentage of the total Contract. The Contractor may separate features of work under each item to show salient work elements such as procurement of materials, personnel and equipment, and supplemental work elements such as excavation, fill, etc. These salient features shall total to the cost and weighted percentages shown for the major bid item. When quantity variations impact the weighted percentages of a separate item by five percent (5%) or more, the Contractor shall revise the contract progress charts to accurately reflect the impact of such variations.

2. Submit copies of the updated construction schedule to the Engineer for each Application for Payment. Changes that have occurred since the last update shall be clearly marked.

1.03 MEASUREMENT

- A. Measurement for Payment for this Project is based upon completion of the Work in accordance with Construction Drawings and Specifications for each of the items. Field measurements will determine the percent complete of work components when listed on the approved Schedule of Values. Measurements will be made using linear, area, volumetric units, or by unit quantity counts, as listed on the ATTACHMENT D – BID FORM for unit quantity items and at the Engineer's sole discretion for lump sum items.
- B. The Contractor will take all measurements and compute quantities. The Engineer will verify measurements and quantities as appropriate.
- C. The Contractor will assist MDMR by providing necessary equipment, workers, and survey personnel as required.
- D. Measurement Devices:
 1. Weigh Scales: Inspected, tested, and certified by the applicable State Weights and Measures department within the past year.
 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
 3. Metering Devices: Inspected, tested, and certified by the applicable State department within the past year.
- E. Measurement of imported sand Tonnage using Barge Displacement Tables
 1. If the sand is delivered by barge, the weight (tonnage) for payment will be determined by barge displacement.
 - a. Suitably mark each barge with a displacement gaging location at or near each corner of the barge. For hopper barges, two amidships on opposite sides should also be marked. Mark each gaging location with orange paint on the deck and side of the barge. For barges with rakes, place the displacement gaging marks at each corner of the box section between the rakes. If a barge has a box end or ends, place the gaging locations approximately 4 feet from the box end(s).
 - b. Measure the freeboard at the six gaging locations on hopper barges or the four gaging locations on deck barges and determine the displacement using "Standard Barge Table" (SBT) from the average of these measurements. The SBT for each barge shall be certified by a licensed marine architect or other approved certifying official.
 - c. Calculate the displacement before and after barge unloading; the difference between these values will be the measure of quantity delivered.
 - d. Load barges so that the readings taken at the gaging locations do not vary more than 3.0 feet port to starboard fore and aft and do not vary more than 1.0 foot port to starboard. If such is not the case, trim the barge by shifting the material until this limit is reached, before the measurement will be accepted. For deck barges, calculate the draft from the average of all four readings. For hopper barges, calculate the draft from the average of all six readings, weighting the readings of the middle gage at double those of the end gages: $(G1 + G2 + 2xG3 + 2xG4 + G5 + G6)$ divided by 8 = average draft.

- e. All barges used in transporting material shall be free of leaks that would render accurate gauging difficult. Provide facilities for inspecting the hold of each barge to determine whether leakage is occurring. Provide each barge with adequate pumping facilities, and if water is found to be accumulating in the hold, pump the barge dry before each gaging, both before and after unloading. Leave rejected and unacceptable material aboard the barge until after the final readings have been taken.
2. If barge tables are furnished for fresh water and if it is believed that barge displacement measurements made within the contract limits of the work are being taken in water that has salinity, the Contractor has the option of obtaining water samples and determining densities or unit weights of these samples.
- a. Take these water samples in accordance with ASTM D3370 (Practice A – Grab Samples) at depths of 4 and 8 feet in the area where measurements are made.
 - b. Perform water sampling when the barges are measured for quantities, both when fully loaded and when empty.
 - c. Take water samples, as witnessed by the Engineer, with the use of "Polypro" 2000 milliliters water sampler, or equal. Determine densities as specified in ASTM D1429 (Method D-Hydrometer Method).
 - d. Testing shall be done for the Contractor by a certified testing laboratory, and test results certified by the laboratory.
 - e. After review and approval of the test results by the Engineer, the average of the densities obtained at 4 and 8 feet will be used as the suitable saltwater conversion factor. In all calculations (fully loaded and empty), the unit weight of 62.4 pounds per cubic foot will be used for fresh water.
- F. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord, in feet and hundredths of a foot.
- G. Measurement by Area: Measurement by square dimension using mean length and width or radius, in feet and hundredths of a foot. When measuring items in acres, use 43,560 square feet per acre and provide acreage in acres and hundredths of an acre.
- H. Measurement of Volume: Measured by cubic dimension using mean length, width, and height or thickness, in feet and hundredths of a foot.
- I. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.04 BASIS FOR PAYMENT

- A. Unless indicated on the Contract Documents, all work indicated on the Construction Drawings and specified in the Contract Documents shall be included in the Contract Sum indicated on the Bid Form.
- B. Prices stated in the Bid Form shall include all costs and expenses for taxes (inclusive of applicable Contractor's tax per Miss. Code Ann. § 27-65-21), labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the Work as depicted on the Construction Drawings and specified herein. The basis of payment for an item in the amount shown in the Bid Form shall be in accordance with the description of that item provided in this section.

- C. The Contractor's attention is again called to the fact that the quotations for the various items of work are intended to establish a total price for completing the Work in its entirety. Should the Contractor feel that the cost for any item of work has not been established by the Bid Form, the Contractor shall include the cost for that work in another applicable bid item, in order that the Bid for the project reflects the total price to be paid by MDMR for completing the Work in its entirety.
- D. Changes in the Contract Price and Contract Time require prior authorization in writing from MDMR and the Engineer, in the form of a Change Order. Refer to Section 22 of the Standard Contract Terms and Conditions for Change Order Procedures. The Contractor is responsible for verification of all bid quantities and to report to the Engineer any discrepancies found prior to ordering materials and/or equipment for construction. Refer to Sections 9 and 10 of the Standard Contract Terms and Conditions.
- E. The various major items of Work will be paid for either by 1) the quantity of the actual Work completed by the Contractor and accepted by the Engineer multiplied by the unit price or 2) a pro rata amount based on the percentage complete of any lump sum Bid Item. The Work shall include all miscellaneous and ancillary items necessary to construct a complete and functional Project.

1.05 SCHEDULE OF VALUES

- A. The below descriptions generally outline the scope of work required for those elements of the Work to be paid for under each item listed in the Bid Form. The Contractor shall submit a Schedule of Values per Section 01 29 73 – Schedule of Values and shall be consistent with Section 01 33 00 – Submittal Procedures.

1.06 PAYMENT OPTIONS

- A. Basis of Payment for Unit Price Items
 - 1. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the Engineer determine payment.
 - 2. If the actual Work requires more or fewer quantities than those quantities indicated, the Contractor will provide the required quantities at the unit prices contracted.
- B. Basis of Payment for Lump Sum Items – Payment for lump sum items for this Project will be made at the lump sum price named in the Contract. The contract price shall constitute full compensation for each item, including all required labor, products, tools, equipment, plant, transportation, services and incidentals, erection, application, or installation of an item of the Work, overhead, and profit as required to complete the item as indicated in the Construction Drawings and Specifications.
- C. Progress Payments
 - 1. Application for Payment shall be submitted to MDMR or the Engineer at the times specified in Paragraph 5.03 of the Agreement (Section 00 52 15).
 - 2. Progress payments will be made upon receipt and acceptance of the post-construction surveys and daily quality control surveys. Surveys will be evaluated based on conformance with the Engineer-Approved Contractor Work Plan and the Construction Documents, including elevations, alignments, allowable tolerances, and minimum lines and grades. The Contractor is required to have all pre-construction and post-construction surveys performed by a third-party independent Mississippi-licensed professional surveyor.

3. Progress and final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by a unit price of the item. Final payment for unit price Work will be accomplished by reconciliation of Change Orders to adjust quantities at the end of the Project.
4. Progress payment for Work governed by lump sum prices will be made in accordance with the approved Schedule of Values.
5. No payment, partial or complete, will be made for defective or rejected work. The Contractor will not receive payment for any material placed outside of the horizontal or vertical limits (allowable tolerances) of the placement limits shown and noted in the Construction Drawings and Specifications. Any material that is deposited in places not designated or approved by the Engineer or MDMR may be required to be removed and the Contractor will be required to deposit such misplaced material where directed at Contractor's expense or will be deducted from the payment quantity. Additional clean-up and environmental damage mitigation requirements may be directed by MDMR. Such efforts will be entirely at the expense of the Contractor and any fines or penalties will be the responsibility of the Contractor.
6. No separate payment will be made for additional labor and materials required for accomplishing the Project in its entirety, unless a Change Order is entered. All labor, materials, and incidental costs shall be included for payment as part of the Bid and the Contract, under the several scheduled items of the Project.

1.07 DESCRIPTION OF WORK ITEMS AND SCHEDULE OF VALUES

- A. The Work items are described in order to assist the Contractor in the preparation of the Bid and to assist the Engineer in the evaluation of Bids and progress payments during construction. The Contractor shall submit a Schedule of Values containing the Work components of each lump sum Bid Item in the Contractor's Bid for approval prior to the first Application for Payment for work in progress.
- B. No separate payment will be made for any testing and/or surveying performed to complete the Work, except for the surveying as shown on Bid Form. Costs for testing and/or surveying (as applicable), except for pre-construction layout and post-construction surveying, shall be included in the cost to complete the work item.
- C. No separate payment will be made for furnishing a fully operated boat with capacity for transporting at least six people for unfettered transportation of MDMR and Engineer personnel for the entire duration of the construction project as described in Section 01 31 00 – Project Management and Coordination.
- D. Submittals are considered part of the Contractor's administrative and overhead costs. The Contractor will not be compensated separately for submittals required by these specifications or those listed on the Construction Drawings.
- E. Separate payment will not be made for providing and maintaining an effective quality control program or ensuring environmental compliance, and all costs associated there with shall be included in the applicable unit prices or lump-sum prices contained in the Bid Schedule.
- F. For the purpose of the work items listed below, complete installation will mean the inclusion of mobilization and demobilization, quality control documentation of materials, photographic documentation, delivery of materials to the Project site, installation of materials and any ancillary components, surveying during and after construction, and any overhead-related items associated with Division 01 of the Contract Documents.

G. Below is a description of the Work listed in the **Bid Form (Attachment D)**. This description is not intended to be a complete and all-inclusive record of the required work items. Work includes but is not limited to the following:

1. Lump Sum Items:

- a. **Mobilization and Demobilization (Bid Item No. 1)** – Payment for this item will be made as a lump sum (LS) for costs associated with or incidental to mobilization, demobilization, and establishment of initial project management and coordination. The Contractor shall breakdown the cost for Mobilization and Demobilization in the Schedule of Values for Engineer's approval prior to the first Application for Payment. Payment for Mobilization and Demobilization shall be in accordance with the following rules and schedule:
 - 1) No more than sixty percent (60%) of the entire lump sum amount will be payable to the Contractor upon completion of the mobilization subject to the following:
 - 2) No more than twenty five percent (25%) of the entire lump sum amount can be claimed for reimbursement in the first Application for Payment.
 - 3) The remaining forty percent (40%) of the entire lump sum will be payable upon the completion of demobilization.
 - 4) Failure to justify the cost for Mobilization and Demobilization in the Schedule of Values to the satisfaction of MDMR will result in non-payment, as determined by MDMR.
- b. **Pre-Construction (Bid Item No. 2)** – Payment for this item will be as lump sum (LS) for costs associated with or incidental to performing the pre-construction survey, layout and As-Build Survey as required by the plans and specifications
- c. **Pipeline Access Corridor (Bid Item 5)** – Payment for this item will be made as a lump sum for all associated or incidental costs for constructing this item in accordance with the plans and specifications.
- d. **Planting (Optional Bid Item 1a)** – Payment for this item will be made as a lump sum for all associated or incidental costs for installing plants in accordance with the Planting Specifications contained in Addendum 1.

2. Unit Price Items

- a. Side-cast Chenier – (Bid Item No. 3) Payment will be made as a unit price linear foot for costs associated with or incidental to the inner and outer cheniers. The price shall include all labor, equipment, materials, transporting, handling, operational costs, environmental compliance, Quality Control surveys, and daily quality control required to complete the cheniers shown in the Construction Drawings.
- b. Imported Sand (Bid Item No. 4) – Payment will be made as a unit price (TON) for costs associated with or incidental to all armor stone installation. The price shall include all labor, equipment, materials, transporting, handling, geotextiles and geogrids, operational costs, environmental compliance, and settlement, daily quality control, and as-built surveys required to complete the armor stone installation to final slopes and grades as shown in the Construction Drawings. See Section 35 41 00 – Chenier Construction.

1.08 DEFECTIVE WORK

- A. The Contractor shall replace the Work, or portions of the Work, not conforming to specified requirements as directed by the Engineer in accordance with Section 13 of the Standard Contract Terms and Conditions (Attachment F).
- B. If, in the opinion of the Engineer or of MDMR, it is not practical to remove and replace the Work, the Engineer will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit or lump sum price for the item will be adjusted to a new price. The adjustment will be performed at the sole discretion of MDMR. The determination for the adjustment will be done by the Engineer, whose determination will be final.
 - 2. The defective Work will be partially repaired according to the instructions of the Engineer, and the unit or lump sum price will be adjusted to a new price at the sole discretion of MDMR. The determination for the adjustment will be done by the Engineer, whose determination will be final.
 - 3. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
 - 4. The authority of the Engineer to assess the defect and identify payment adjustment is final.

1.09 NON-PAYMENT

- A. Notwithstanding any of the foregoing, payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products damaged in transit, during handling, or due to improper storage.
 - 4. Products not completely unloaded from the transporting vehicle.
 - 5. Products placed beyond the tolerance of the required Work.
 - 6. Loading, hauling, and disposing of rejected products.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 REQUESTING PROGRESS PAYMENT

- A. Provide PDFs or other electronic copies of supporting invoices and quantity measurements to support all requested earnings. Ensure the sum of payment activities does not exceed the contract award funding amounts.

END OF SECTION 01 20 00

SECTION 01 32 23**SURVEYS AND LAYOUT DATA****PART 1 - GENERAL**

1.01 SUMMARY

- A. The Contractor shall furnish all labor, equipment, materials, and incidentals necessary to perform surveys required to perform the Work as detailed in the Construction Drawings. The Work includes, but is not limited to, pre-construction surveys, daily quality control surveys, settlement monitoring surveys, and as-built surveys and drawings.

1.02 RELATED SECTIONS:

- A. Section 01 20 00 – Measurement and Payment Procedures
- B. Section 01 33 00 – Submittal Procedures
- C. Section 01 35 43 – Environmental Protection
- D. Section 01 40 00 – Contractor Quality Control
- E. Section 31 05 19 – Geotextiles
- F. Section 35 24 00 – Dredging
- G. Section 35 41 00 – Chenier Construction

1.03 SUBMITTALS

The following submittals shall be in accordance with Section 01 33 00 – Submittal Procedures:

- A. Survey Plan: The Contractor shall prepare and submit, for approval by the Engineer, a written survey plan, presenting the contract survey effort from start to completion. The plan shall cover, as a minimum, Contractor-conducted layout work (including baseline control) and the required surveys described in this section. The Contractor's plan shall show a percentage breakdown of each type of survey phase (baseline, control, pre-construction, etc.) of the total survey effort for the Work.
- B. Pre-construction Bathymetric Survey: The Contractor shall submit the xyz survey data within 2 working days of data collection. The electronic files in PDF and CADD files with templates, end areas and volumes shall be submitted within 5 working days of data collection. Calculated volumes should be broken down by segment.
- C. Daily Quality Control Surveys: The Contractor shall submit the xyz and PDF survey data within 2 working days of data collection.
- D. Monitoring Surveys: The Contractor shall submit the xyz survey data in tabular form with the survey date within 2 working days of data collection.
- E. As-Built Surveys: Upon project completion and before submitting the final Payment Application, the Contractor shall submit to the Engineer drawings showing as-built conditions of the site. The As-Built surveys will highlight any deviations to the Construction Drawings and shall include the following:
 - 1. Field changes of dimension and detail.

- F. Changes made by Change Order or other Modifications.
- G. Details not on original Project Drawings.
- H. Pre- and Post-Construction 3D-generated surfaces (by the equivalent CADD method for each pre- and post-construction surface); and
- I. A plot of the actual pre- and post-construction cross sections of stone layers plotted at the same station as and on top of the design templates.

1.04 QUALITY ASSURANCE

- A. The Contractor shall hire a third-party independent surveyor licensed in the State of Mississippi to perform and certify all pre-construction and as-built surveys and monthly verify the Contractor's Quality Control surveys, survey setup, and local control network. The surveyor shall show more than 10 years of topographic and hydrographic survey experience.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 GENERAL

- A. The Contractor is responsible for all surveying required for layout and performance of the Work. All pre-construction and as-built surveys shall be performed by an independent third-party surveyor licensed in the State of Mississippi. Quality control surveys can be collected by the Contractor's crew using monumentation developed by the independent third-party surveyor. All construction-related drawings, submittals, and as-builts will be prepared by the Contractor in CADD and PDF formats.
- B. The Contractor shall complete the layout of the Work and shall be responsible for all measurements.
- C. The Contractor shall perform surveys of the stone installation. It is the intent of the surveys to have vertical and horizontal accuracies equivalent to land surveying. Cross-section surveys shall be performed prior to placement of stone, and again after placement of the stone.
- D. For all daily quality control, settlement monitoring (as described in Section 3.04 C.), and as-built surveys, the Contractor shall perform cross-section surveys along the containment dike crest at maximum intervals of 50 feet on center (along the centerline of the containment dike) with a minimal data density of one (1) elevation shot every 5 linear feet on line. For all surveys, additional elevation shots shall be taken at the seaward and landward edge of the stone, along the crest, and at abrupt changes in grade. The cross sections shall extend 25 feet beyond the toe of the stone. In addition to the cross sections, a centerline profile survey, with elevations taken at least every 5 feet along the centerline.
- E. All survey submittals shall include the following:
 - 1. Surveyor's name and date survey was performed.
 - 2. Purpose of the survey (e.g., pre-construction, post-construction)
 - 3. Unit of measure in U.S. Survey Feet
 - 4. Horizontal datum in Mississippi State Plane East Zone, NAD 83, U.S. Feet
 - 5. Vertical datum in North American Vertical Datum of 1988 (NAVD88)

- F. CADD File submittals shall also include the following:
1. Contours (and/or the actual surfaces if the surveyor(s) uses AutoCAD Civil 3D or can export to LandXML)
 2. Each survey shall be organized by surveyor and the date performed.
 3. If there is more than one survey in a CADD file, each survey shall be placed on its own layer and the layer shall be appropriately named and dated.
 4. If CSV files are submitted (formatted xyz), the first line of the text file shall identify the items listed in 3.01 E, along with the surveyor's name and date performed in the first line of the text file.

3.02 PRE-CONSTRUCTION SURVEY

- A. Prior to performing the pre-construction survey, the Contractor must field verify the location of all utilities throughout the entire project length. The Contractor is strictly responsible for repair of all damages related to utilities as a result the construction activities.
- B. Prior to construction, the Contractor shall perform a pre-construction bathymetric survey of the project area for Engineer's approval.
- C. The Pre-Construction bathymetric survey shall be collected using low frequency methods as prescribed by the U.S. Army Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003 for soft sediments.
- D. The Contractor shall collect cross sections on 50-foot centers along the containment dike alignment. Each cross section shall extend 100 feet landward and seaward of the alignment producing minimum 200-foot cross sections. The survey can be a combination of bathymetric and real time kinematic data, providing shots at 5-foot intervals and a minimum of 100 feet into the marsh vegetation. Sufficient closure points between sections shall be obtained to develop a 5-foot by 5-foot grid.
- E. In addition to the bathymetry, the Contractor shall collect a centerline profile using RTK static methods, using a 1-square-foot shoe or base for the unit. These data will be used to adjust the bathymetric survey to correlate with each RTK survey of the completed feature.
- F. The Contractor shall submit proposed containment dike templates at each 50-foot cross section in PDF and CADD, as well as estimated stone volume and tonnage calculations for the entire containment dike to the Engineer for approval.

3.03 DAILY QUALITY CONTROL SURVEYS

- A. The Contractor shall perform daily quality control surveys after placement of the fill templates. The surveys shall encompass the previous day's construction to the extent practicable. For quality control purposes, the progress surveys shall be performed and completed no later than 3 calendar days following completion of the stone installation.
- B. Drawings shall be provided showing the surveyed surface elevations in cross section and centerline profile, along with the contract template. Submittal shall include hard copy plots in grid format and electronic files. Electronic files shall include Portable Document Format (PDF) submittal as well as original (native) format. The Contractor shall submit the xyz survey data in ASCII or another common format, if requested and as directed.

3.04 SETTLEMENT MONITORING SURVEYS

- A. After placement of the fill to the design elevations along the feature, the Contractor shall survey and record the elevation of the top of the fill to the nearest 0.1-foot NAVD88..
- B. Crest surveys shall be performed weekly until notification to discontinue by the Agency, or its designated representative is received or to final acceptance. For each crest survey, the Contractor shall survey as close to the initial stone point as possible to track consolidation of the fill during construction.
- C. When directed by the Engineer, the Contractor shall also collect cross-section surveys (as described in Section 3.01). The intent of this survey is to determine if additional slope materials are needed to meet the minimum lines and grades.

3.05 AS-BUILT SURVEYS

- A. When directed by the Engineer, the Contractor shall perform the As-Built surveys.
- B. The As-Built drawings and data sets shall include the pre-construction survey, design template, all quality control cross-section surveys, settlement monitoring elevations, settlement monitoring profile and cross sections, and the final as-built cross sections and centerline profile. The submittal shall be certified by an independent third-party surveyor licensed in the State of Mississippi and include an electronic PDF, xyz files, and the CADD files in an Agency approved format.

END OF SECTION 01 32 23