



Worcester County Government

One West Market Street | Room 1103 | Snow Hill MD 21863-1195

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NOTICE TO BIDDERS
Worcester County Commissioners
Worcester County, Maryland
Coastal Resiliency and Living Shoreline Project

The County Commissioners of Worcester County Maryland are currently soliciting bids for construction services for the Selsey Road Coastal Resiliency and Living Shoreline project in West Ocean City. The work scope involves, generally, the construction of a sill and breakwater system as designed, installing inlets to the tidal pond in the middle of the project area as an active feature with associated phragmites excavation, and rock placement to tie into an existing revetment along the road. Interested contractors are encouraged to attend a **pre-bid meeting at 1:00 PM on Tuesday, August 30, 2022**, at the project site at the eastern end of Selsey Road West Ocean City, MD 21842. Last day for bid questions shall be noon Thursday, September 8, 2022. **Sealed bids will be accepted until 1:00 PM on Monday, September 12, 2022** in the Office of the County Commissioners, at Room 1103 -Worcester County Government Center, One West Market Street, Snow Hill, Maryland 21863, at which time they will be opened and publicly read aloud. **Envelopes shall be marked "Worcester County Coastal Resiliency and Living Shoreline Project"** in the lower left-hand corner. After opening, bids will be forwarded to the Worcester County Department of Environmental Programs for tabulation, review and recommendation to the County Commissioners for their consideration at a future meeting. In awarding the proposal, the Commissioners reserve the right to reject any and all proposals, waive formalities, informalities and technicalities therein, and to take whatever proposal they determine to be in the best interest of the County considering lowest or best proposal, quality of goods and work, time of delivery or completion, responsibility of subcontractors being considered, previous experience of subcontractors with County contracts, or any other factors they deem appropriate. Bid documents are available by contacting the Worcester County Department of Environmental Programs at 410-632-1220 x1302 or by email at kmunson@co.worcester.md.us

THE WORCESTER COUNTY COMMISSIONERS

DOCUMENTS AND SPECIFICATIONS

FOR CONSTRUCTION OF A

Coastal Resiliency and Living Shoreline Project at Selsey Road

ON

Isle of Wight Bay

AT

Selsey Road

IN

WORCESTER COUNTY, MARYLAND

FOR THE

COUNTY COMMISSIONERS OF WORCESTER COUNTY

AND THE

MARYLAND DEPARTMENT OF NATURAL RESOURCES

PROJECT NO: CRP-1-17

DATE: July 25, 2022

BOARD OF PUBLIC WORKS

LAWRENCE J. HOGAN, JR., GOVERNOR

PETER FRANCHOT, COMPTROLLER

NANCY K. KOPP, TREASURER

WORCESTER COUNTY

STATE OF MARYLAND

DEPARTMENT OF NATURAL RESOURCES

JEANNIE HADDAWAY-RICCIO, SECRETARY

PREPARED BY:

Coastline Design PC

P O Box 157

Achilles, Va 23001

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INSTRUCTIONS TO BIDDERS

1. PROPOSALS

- A. Shall be on the furnished proposal forms. All blank spaces in the form shall be filled, signed in ink in longhand where designated, and all numbers shall be stated in words and in figures. Only initialed corrections or erasures will be acceptable.
- B. No changes shall be made in the phraseology of the form. No partial bids or any alternative bids not provided for in the form will be considered.

2. DRAWINGS

Drawings accompanying these specifications are entitled "Coastal Resiliency and Living Shoreline Project at Selsey Road _____ in Worcester _____ County, Maryland" dated 7/26/21 _____".

3. THE BIDDER

- A. May obtain an electronic copy of the Plans and Specifications from the Department of Environmental Programs (phone 410-632-1220 Ext 1302; kmunson@co.worcester.md.us).
- B. Shall carefully examine the documents, the drawings and the specifications, shall visit the site and fully inform themselves as to all existing and controlling conditions and limitations including availability of materials and labor. The submission of a bid shall be a representation that they has inspected the site and has familiarized himself with all of the controlling conditions. Failure to conduct these thorough examinations shall in no way relieve the successful bidder of their responsibility for the complete and satisfactory performance of all required work.
- C. Shall state the lump sum price for which they will execute and complete the contract base bid in accordance with the drawings, specifications, and the requirements of the Contract. Price quoted shall include federal, or state taxes, if such are applicable.
- D. Shall state that they will complete the work of the contract in accordance with the Construction Schedule and/or completion date(s) included as part of the Specifications.

4. THE MANAGER

- A. Manager, as shown on the construction drawings and these specifications, shall be defined as County Commissioners Worcester County.

- B. May, during the bidding period, advise the bidders by addenda, of additions, omissions or alterations in the specifications and drawings. All such changes shall be included in the work covered by the proposal and shall become a part of the specifications as if originally included therein.
- C. Will hold on pre-bid meeting to answer questions on a date to be announced.
- D. Reserves the right to reject the bid of any Bidder who fails to furnish promptly and properly all the required information, when notified to do so. Failure to provide a completion time on the proposal shall result in disqualification of the bid.
- E. Reserves the right to verify the qualification of all bidders. Such qualification may serve as the basis for acceptance or rejection of bids.
- F. Reserves the right to reject any and all bids, or to accept any bid in the interest of the Manager.

5. PROPOSAL GUARANTEE (BID BOND)

No proposal will be considered unless accompanied by a certified check drawn on a solvent clearing house bank, made payable to the Manager, in the amount of 5% of the proposal. A satisfactory bid bond will be acceptable in lieu of a certified check.

The deposit of the unsuccessful bidders will be returned within 30 days after the opening of the bids. Upon the execution of a formal contract and bond, the bid bond or certified check deposit shall be returned to the successful bidder.

6. CONTRACT SECURITY (PERFORMANCE AND PAYMENT BONDS)

The successful bidder shall deliver to the Manager, an executed Performance Bond and Payment Bond, each in an amount at least equal to one hundred percent (100%) of the accepted bid as security for the faithful performance of the contract. The sureties of all bonds shall be such surety company or companies as are approved by the Manager, and as are authorized to transact business in the State where the proposed project is located. The bonds shall be approved by the Manager prior to execution of the formal contract.

In addition, the successful bidder shall deliver to the Manager an executed bond for 125% of an approved estimate for repair and/or replacement of the portion of the road damaged by the project. The Worcester County Department of Public Works estimates the repair cost to be \$264,711.96. A different cost estimate can be submitted for review.

7. BID OPENING

Sealed proposals, addressed to "County Commissioners of Worcester County, 1 W. Market Street, Room 1103; Snow Hill, MD 21863" will be received as specified in the Notice To Bidders, after which they will be publicly opened and read.

GENERAL CONDITIONS

1. **SCOPE:**

The work under this Contract includes all labor, materials, equipment and appurtenances required for the complete construction of all items of work necessary or required to make the installation complete and correct in every aspect. Only new materials will be acceptable for use on the project unless otherwise approved by the Manager.

2. **GENERAL:**

Whenever the words, State, County, Inspector, Engineer, Municipality, Superintendent, et al., appear in these documents, they shall mean the Manager or their authorized representative(s).

All materials and workmanship shall be of the best quality and shall be subject to the approval of the Manager. No deviation from the provisions of the detailed Specifications shall be made without written approval of the Manager.

3. **CONTRACTOR'S PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE:**

The Contractor shall at all times maintain and keep in force such insurance as will protect them from claims under Workmen's Compensation Acts.

The Contractor shall, at their own cost, obtain and maintain such insurance as will protect them and the Manager, from any claim for damages or bodily injury, including death, as well as from claims for damage to any property of the Manager or of the public, which may arise from the operations under this contract, whether such operations be by the Contractor or any Subcontractor retained by said Contractor or by anyone directly employed by them. They shall maintain comprehensive general liability insurance with limits of one million dollars (\$1,000,000) bodily injury liability with one hundred thousand dollars (\$100,000) property damage liability or equivalent combined single property damage liability or equivalent combined single limits, including independent contractor coverage, products and completed operations coverage, and with full coverage for the perils of collapse and underground. The Contractor shall furnish certificates of insurance with respect to the coverage referred to above, naming the Manager, as an additional insured under the policy. Each of the policies shall contain (10) days prior notice of cancellation to the Manager.

The Contractor shall obtain insurance for their workers as specified by the Longshoreman's and Harbor Workers' Compensation Act. In addition, the Contractor shall furnish a "Certificate of Insurance" for Marine Compensation Insurance.

4. **LAWS AND REGULATIONS:**

The Contractor shall comply with all Municipal, County, State, and Federal Laws and Ordinances and also those of the local utility companies having jurisdiction.

5. **SITE INVESTIGATION:**

The Contractor acknowledges that they has satisfied himself to the nature and location of the work, the general and local conditions, including but not restricted to those bearing upon project access, disposal, handling and storage of materials, availability of labor, water, electric power, road and uncertainties of weather, tides or similar physical conditions at the site. Also, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during the prosecution of the work is the responsibility of the Contractor.

The Contractor further acknowledges that they has satisfied himself as to the **CHARACTER, QUALITY AND QUANTITY** of surface and sub-surface materials or obstacles to be encountered insofar as the information is reasonably ascertainable from an inspection of the site, including all exploratory work, as well as, from information presented by the Drawing and Specifications made a part of this Contract. Any failure by the Contractor to acquaint himself with the available information will not relieve them from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Manager assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Manager. The Manager also assumes no responsibility for any understanding or representations made by its officers or agents during or prior to the execution of this Contract, unless (i) such understanding or representations are expressly stated in the Contract and (ii) the Contract expressly provides that the responsibility therefore is assumed by the Manager. Representations which are not expressly stated in the Contract and for which liability is not expressly assumed by the Manager in the Contract shall be deemed only for the information of the Contractor.

6. **PAYMENT:**

- A. This is a lump sum Contract in which no extras are possible. The lump sum bid(s) given by the Contractor in their bid shall be the only recompense for completing in place the work described in these Plans and Specifications.
- B. The Contractor may request progress payments at timely intervals. Such requests will be paid for the value of work completed less 10%. The Contractor may only request payment for completed work that has been inspected and approved by Representatives of the Manager. No payment will be made to the Contractor until payment requests have been reviewed and accepted by the Managers and/or their authorized inspector and satisfactory to the DNR funding agent. The final payment will be made within 30 days after final approval and submission of the final invoice.
- C. Mobilization or setting up of equipment, construction and maintenance of access roads, site preparation or other items incidental to construction shall not be identified as items for separate partial payments to the Contractor. The cost of these items shall be included in the lump sum bid(s).
- D. The Contractor warrants that they and all of their subcontractors have and will have good title to all material and equipment otherwise listed in an Application of Payment, free

and clear of all liens, claims, security interests and encumbrances; and they will not permit a Subcontractor to acquire any such material and equipment subject to an agreement under which an interest therein or encumbrances thereon is retained by the seller or otherwise imposed by the Contractor.

7. **WORK SCHEDULE:**

The Contractor shall at the execution of the Contract, notify the Manager or Manager's Representative in writing of the names of any and all Subcontractors proposed for the principal parts of the work. The Manager or Manager's Representative may, within a reasonable amount of time, object to the employ of any Subcontractor determined incompetent or unfit.

The Contractor will be required to commence work within 10 days after the date of receipt by them of the Notice to Proceed, to prosecute said work diligently and to complete the work within 180 calendar days thereafter adhering to the work restriction times imposed by the State and Federal approval permits. No extension of the working days will be permitted unless approved by the Manager or Manager's Representative.

Before starting work, the Contractor shall submit to the Manager or Manager's Representative for approval an outline of their proposed methods and manner of executing the work, including the means of accessing the site, sequences of operation and a time schedule for performance of Contract work. Road closures will need to be closely coordinated with Worcester County. Road closure signage placement and maintenance will be the responsibility of the Contractor. The Contractor will be permitted to work Monday through Friday dawn to dusk. If the Contractor desires to carry on work outside these hours, including Saturday, Sunday and government holidays, they must provide written request to the Manager or Manager's Representative for permission, 24 hours prior to the requested work day(s). The work outside regular hours shall cause no additional costs to the Manager.

8. **UNSATISFACTORY PROGRESS – CONTRACT CANCELLATION:**

If the Contractor shall not properly man the job with the proper personnel and construction equipment in sufficient number so as to maintain a reasonable construction rate each and every working day until work is complete, the Manager or Manager's Representative shall so notify the Contractor. Thereafter, if Contractor still fails to meet rate of construction requirements or place work in accordance with these Specifications, this shall be sufficient cause for the cancellation of this Contract at date of such default. This decision is the sole discretion of the Manager or Managers' Representative. Ten (10) working days after written notice of Contract cancellation shall represent approval for the Manager or Manager's Representative to contact the next lowest responsible bidder to complete the work. All increased costs are to be defrayed by said Contractor, and/or their bonding company.

9. **SURVEY:**

Horizontal control for the project is shown on the Drawings. The Contractor will be responsible for all layout work. The cost of all/any additional survey work to be performed by the Contractor shall

be included in the lump sum price bid.

10. **NECESSARY DETAILS NOT SPECIFICALLY MENTIONED:**

All work called for in the Specifications and not shown on the Plans, or shown on the Plans and not called for in the Specifications, shall be furnished and executed by the Contractor as if designated in both these ways. Should any work or materials be required which is not denoted on the Plans and Specifications either directly or indirectly, but which is, nevertheless, necessary for the proper carrying out of the intent thereof, it is understood and agreed that the same is implied and required. The Contractor shall perform such work and furnish such materials as fully as if they were completely delineated and described.

11. **NEATNESS:**

As the work progresses, all rubbish, refuse, and unused materials and tools shall be removed from the site and all work upon completion shall be left in a neat and orderly condition ready for use. Upon work completion, all work areas shall be carefully cleaned up and all excess materials shall be removed from the site by the Contractor as directed.

12. **INSPECTION OF WORK:**

All work shall be subject to inspection by the Manager or Manager's Representative. The Contractor shall perform all work requested and required for this inspection and shall make all work accessible to the Manager or Manager's Representative at all times.

The work of the Inspector will not include any supervisory duties. Supervisory duties will remain the sole responsibility of the Contractor at all times. The Inspector shall not be responsible for insuring the Contractor follows all applicable safety regulations. This responsibility remains the sole responsibility of the Contractor.

The Contractor shall be responsible for carrying out the provisions of the contract at all times, regardless whether an authorized Inspector is present or not.

It shall be solely the responsibility of the Contractor to see that the Plans and Specifications are being followed. Failure of the Manager or Manager's Representative to immediately reject any unsatisfactory materials or workmanship or to notify the Contractor of their deviation from the Specifications shall not relieve the Contractor of their responsibility to replace the unsatisfactory work.

Any material or finished work which, in the opinion of the Manager or Manager's Representative, does not comply with these Specifications shall be removed by the Contractor and replaced at their own cost and expense.

13. **SANITARY PROVISIONS:**

Sanitary conveniences for the use of all persons employed on the work shall be provided and maintained by the Contractor in sufficient manner, in such manner, and at such places as shall be approved. The Contractor shall vigorously prohibit the committing of nuisances at the site of the work. Any employee found violating these provisions shall be discharged and not again employed. Such sanitary conveniences shall be constructed in compliance with all laws, ordinances, or regulations governing the same.

14. **UTILITIES:**

Any utilities encountered during the work shall be maintained and protected in their existing location unless otherwise provided. The Contractor shall cooperate in every way with the owning companies or agencies to make it possible for them to provide uninterrupted service. The Contractor shall contact Miss Utility (1-800-257-7777) at least two (2) days prior to construction to allow for marking of existing utilities.

Excavations shall not be started until all gas mains, water mains, and other service mains have been located and flagged by a utility inspector or Engineer. A gas inspector shall be present on the project at all times whenever excavations are in close proximity to gas mains and/or service lines.

Any existing utilities, including individual house services, in the way of proposed construction, shall be readjusted by the supplying utility company; except where the utility is publicly owned. The Engineer shall, whenever possible, allow for minor field adjustments in order to expedite the Contract and to prevent unnecessary hardship and expense to any utility company. The Contractor shall notify the utility companies sufficiently in advance of construction to permit ample time to do such work as necessary to provide clearance for the proposed construction. The Contractor shall be responsible for any costs associated with utility relocation and/or protection.

All known private or public utility lines within or adjacent to the Contract are shown in their approximate existing locations on the Plans. The Contractor is, however, cautioned that these locations shown are not guaranteed nor is there any guarantee to the Contractor that all lines actually in existence within the Contract limits have been shown on the Plans. The Contractor shall satisfy himself as to the exact locations and extent of all utilities that they may encounter in the work.

15. **TEMPORARY WATER AND ELECTRIC SERVICE:**

It is the Contractor's responsibility to provide electricity and water as they may require them during construction at the job site. In all cases the Contractor shall provide all necessary temporary facilities and equipment from point of supply to and about the project.

16. **PROTECTION OF WORK AND PROPERTY:**

The Contractor shall at all times safely guard the public against, and the Manager's property from injury or loss in connection with the Contract. They shall at all times safely guard and protect the public, their own work and that of adjacent property from damage, loss or injury. All passageways,

guard fences, lights, and other facilities required for protection by all authorities or local conditions must be provided and maintained.

It is further understood and agreed that loss or damage arising out of the nature of the work to be done under this Contract or from any unforeseen obstruction or difficulties which may be countered in the performance of the same or from the action of the elements, public or from encumbrances on the line of work or from any injury done in consequence of acts or omissions on the part of the Contractor, Subcontractor, their employees, or agents in carrying out any of the provisions or requirements of this Contract shall be borne and assumed by the Contractor.

17. **NO WAIVER OF LEGAL RIGHTS:**

The Manager or Manager's Representative shall not be precluded or stopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work and payment, therefore, from showing the true amount and character of the work performed and materials furnished by the Contractor, nor from showing that any such measurement, estimate or certificate is untrue or incorrectly made nor that the work or materials do not, in fact, conform to the Contract. The Manager or Manager's Representative shall not be precluded or estopped notwithstanding any such measurement, estimate or certificate any payment in accordance therewith, from recovering from the Contractor or their sureties, or both, such damages as it may sustain by reason of their failure to comply with the terms of the Contract. Neither the acceptance of the Engineer, or any other representative of the Managers, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the Manager or Manager's Representative shall operate as a waiver to any portion of the Contract or any power herein reserved, or of any right to damages.

18. **FINAL ACCEPTANCE OF WORK:**

When the Contractor is of the opinion that the project is ready for final inspection, and the Managers or Managers' Representative concurs, they shall request of the Manager or Manager's Representative, in writing, that this final inspection be made. The Manager or Manager's Representative and the Contractor shall then inspect the site and within approximately one week, shall provide in writing to the Contractor a final "punch list" if required. In the event that punch list repairs are required, the Contractor will complete this work in a diligent manner acceptable to the Manager or Manager's Representative.

If no punch list work is required, or upon the satisfactory completion of this work, the Manager or Manager's Representative shall recommend acceptance of the work and after receipt of signed labor and material affidavit, the Manager or Manager's Representative shall, by letter, notify the Contractor of such final acceptance.

19. **WARRANTY:**

A. Except to the extent that the contract documents impose greater warranty obligations on the Contractor for all or any part of the work, the contractor warrants for a one (1) year period (unless another period is specified) commencing on the date of substantial completion of the project as a whole or on such other date agreed between the parties:

1. that the work contains no faulty or imperfect material or equipment or any imperfect, careless, or unskilled workmanship;
 2. that all mechanical and electrical equipment, machines, devices, etc. shall be adequate for the use to which they are intended, and shall operate with ordinary care and attention in a satisfactory and efficient manner;
 3. that they will re-execute, correct, repair, or remove and replace with proper work without cost to the Manager, any work found not to be as guaranteed by this section or otherwise not in conformity with contract and that they will make good all damages caused to other work or materials in the process of complying with this section;
- B. This Section provides for a period during which the contractor is bound to replace work in addition being liable for failure to perform the contract in accordance with its terms. Nothing herein release or limits the contractor's liability for latent defects or for any substantial failure to perform the work in accordance with the contract, even if such defects or failure are discovered after the expiration of the warranty period provided by this section.

21. **PERMITS AND LICENSES:**

- A. The contractor must be licensed as required by the Home Improvement Law amendment effective July 1, 2008, which requires the contractor to hold a home improvement contractor license from the Home Improvement Commission to construct erosion control projects along the shoreline of residential property.
- B. In accordance with Chapter 286 of the 2010 Laws of Maryland, all marine contractors performing or soliciting marine contractor services in the State of Maryland are required to be registered with the Maryland Department of the Environment (MDE) to become a licensed marine contractor, as of December 31, 2010. The Contractor shall provide proof of registration.

22. **NOTICE TO CONTRACTORS:**

A Contractor's Qualification Questionnaire must be executed and filed with the Manager prior to the Bid Date if not previously submitted. A copy of the questionnaire is located in the Construction Bid Packet.

23. **CONTRACT SECURITY (PERFORMANCE AND PAYMENT BONDS)**

Within ten (10) calendar days after receiving the Notice of Acceptance, the successful bidder shall deliver to the Manager, an executed Performance Bond and Payment Bond, each in an amount at least equal to one hundred percent (100%) of the accepted bid as security for the faithful discharge of the requirements of the contract, when the total bid price is in excess of \$100,000. The sureties of all bonds shall be such surety company or companies as are approved by the Manager and as are authorized to transact business in the State where the proposed project is located. The bonds

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shall be approved by the Manager prior to execution of the formal contract.

SUPPLEMENTAL GENERAL CONDITIONS

1. NOTICE TO PROCEED

Unless otherwise notified, the work shall be started at the job site promptly upon receipt of the written notice to proceed and the receipt of an approved contract and shall be performed with such progress as may be necessary to prevent any delay to other contractors, or to the general completion of the project. The work shall be prosecuted at such times and with such forces, materials, and equipment as may be necessary to assure the substantial completion of the work in accordance with the Contract Time. If the work falls behind the Progress Schedule submitted by the Contractor, the Contractor shall employ additional labor and equipment as necessary to bring the work up to schedule.

2. PRECONSTRUCTION CONFERENCE

Before starting the work, a conference will be held to review schedules, to establish procedures for handling shop drawings and other submissions and for processing Applications for Payment, and to establish a working understanding between the parties as to the project. Present at the conference will be representatives of the Manager, the DNR Funding Agent, the Contractor; and the Superintendent. The anticipated time frame for completion of the project is Fall 2022 to Fall 2024.

3. LIQUIDATED DAMAGES

Liquidated damages will not be assessed for this project. Contractor is expected to perform under the contract provisions. A performance bond is required for this project, as outlined in other sections of these specifications.

4. CONTRACT DRAWINGS, MAPS AND SPECIFICATIONS

An electronic copy of Contract Drawings and specifications will be furnished to the Contractor except applicable publications incorporated into the technical provisions by reference. The work shall conform to the Contract Drawings, all of which form a part of these specifications and are available electronically from the Department of Environmental Programs (410-632-1220 or kmunson@co.worcester.md.us)

5. NOTIFICATION OF MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE)

A. The Contractor shall submit written notification to the Enforcement Section of the State of Maryland Department of the Environment at the address below at least 10 days before the proposed work begins and again within 10 days after the work is completed:

State of Maryland
Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230
410.537.3510

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- B. Included elsewhere in these specifications are copies of construction permits which are required to be available at the construction site. They are included for the Contractor's convenience, compliance and guidance, but the engineering sketches and notes are approximate and suitable only for permit purposes and shall attach no significance to volume mentioned in these permits, but shall compute their own as hereinafter specified.

6. PROJECT MEETINGS AND ADMINISTRATION

A. PROJECT MEETINGS

1. Contractor shall hold progress meetings at the site once a week at a time suitable to the Manager or Manager's Representative. The Contractor will report progress of work in detail with reference to construction schedules. Each interested subcontractor will have present a competent representative to report the condition of his branch of the work and to receive instructions. The Contractor shall take minutes of meetings and type and distribute them to members of the conference and others interested, within three (3) working days of the meeting.
2. Contractor shall request all subcontractors to carefully check all drawings and specifications and have representatives present at the first called progress meeting. At this progress meeting, procedure for prosecution of the work will be discussed and any detailed requirements of the drawings and specifications, which are not understood, will be clarified.

B. ADMINISTRATION OF CONTRACT

1. The Contractor shall follow the drawings strictly and execute all work in accordance therewith, and with the kind and quality of materials set forth in the specifications, using the figured dimensions marked in the drawings and not scaled measurements.
2. The specifications and drawings shall be coordinated, so that any work shown on the drawings and not mentioned in the specifications and vice-versa, shall be executed in the same manner as though mentioned in the specifications and shown on the drawings.
3. The Contractor shall furnish and install such work and material as may be proper and suitable preparation, basis, support, or finish for the work which is shown or specified, whether or not the same is specifically mentioned in the specifications or shown on the drawings. The Contractor shall be required to make plural and complete work which is shown single or partially indicated to avoid needless repetition, for the sake of brevity, and for reasons of clarity. In all cases, the intent and meaning of the drawings and specifications, as defined herein, shall be followed. The Contractor shall not avail himself of any errors or omissions

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therein, should any exist, which may be in conflict therewith. If the Contractor finds a discrepancy between the plans and specifications, they shall bring such discrepancy to the attention of the Manager or Manager's Representative.

C. PROJECT RECORD DOCUMENTS

1. Documents: Maintain at the job site one copy of all Drawings, Specifications, approved Sediment and Erosion Control Plan Set, Addenda, approved Shop Drawings, Change Orders, Field Orders, Other contract Modifications, and other approved documents submitted by the Contractor in compliance with various sections of the Specifications.
2. Identification and Maintenance: Each of these Project Record Documents shall be clearly marked, "Project-Record Copy", maintained in good condition, available at all times for inspection by the Manager or Manager's Representative, and not used for construction purposes.
3. Records:
 - a) Mark up the most appropriate Document to show:
 - (1) Significant changes made during the construction process.
 - (2) Significant detail not shown in the original Contract Documents.
 - b) The information given shall include, but shall not be limited to:
 - (1) The location of internal utilities and appurtenances, referenced to permanent surface improvements.
 - (2) The location of internal utilities and appurtenances, referenced to permanent surface improvements.
 - (3) Any relocation of concealed structural components.
 - (4) Other changes as directed by the Manager or Manager's Representative.
 - c) Keep Project-Record Documents current. Do not permanently conceal any work until the required information has been recorded.

7. DEFAULT AND TERMINATION OF CONTRACT

- A. The Contractor shall be considered in default of their Contract and such default will be considered as cause for the Manager to terminate the Contract for any of the following reasons if the Contractor:
1. Fails to begin the work under the Contract within the time specified in the "Notice to Proceed", or
 2. Fails to perform the work or fails to provide sufficient workers, equipment or Materials to assure completion of work in accordance with the terms of the Contract, or
 3. Performs the work unsuitably or neglects or refuses to correct such work as may be rejected as unacceptable and unsuitable, or
 4. Discontinues the prosecution of the work, or
 5. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
 6. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
 7. Allows any final judgment to stand against them unsatisfied for a period of ten days, or
 8. Makes an assignment for the benefit of creditors, or
 9. For any other cause whatsoever, fails to carry on the work in an acceptable manner.
- B. Should the Manager or Manager's Representative consider the Contractor in default of the Contract for any reason herein before stated, they shall immediately provide written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Manager's intentions to terminate the Contract.

- C. If the Contractor or surety, within a period of ten (10) calendar days after such a notice, does not proceed in accordance therewith, then the Manager will, upon written notification from the Manager of the facts of such delay, neglect or default and the Contractor's failure to comply with such notice, have full power and authority without violating the Contract, to take the prosecution of the work out of the hands of the Contractor. The Manager or Manager's Representative may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Manager or Manager's Representative will be required for the completion of said Contract in an acceptable manner.

- D. All costs and charges incurred by the Manager, together with the cost of completing the work under Contract, will be deducted from all monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the Contract, then the Contractor and the surety shall be liable and shall pay to the Manager the amount of such excess.

8. INDEMNIFICATION

The Contractor shall indemnify and hold harmless and defend the Manager and all officials, employees, and servants thereof against any and all claims, suits, actions, or demands of any name or nature for personal injuries or property damage arising out of any error, omission, gross negligence, negligence, misconduct or violation of any law on the part of the contractor, its agents, employees, or servants in the performance of this Contract.

DIVISION 1

GENERAL DESCRIPTION, SCOPE OF WORK AND SPECIAL CONDITIONS

1-1 DESCRIPTION:

- A. The work to be done under this Contract includes, but is not limited to, furnishing all plant, labor, materials, tools, equipment, superintendence, transportation and performing all work in strict accordance with these specifications and Drawings.
- B. The work consists of the construction and completion for shore erosion control protection improvements including all necessary appurtenances, hereinafter described and located.
- C. The work shall be done under contract to and the supervision of the Manager.
- D. The work shall be complete in all its parts and ready for use in the time specified and in strict accordance with the terms and conditions of the Contract. Any deviation shall be subject to the approval of the Manager or their representative.
- E. The Contractor shall follow the requirements and restrictions of all the permits issued for the proposed construction.
- F. The Contractor shall assume all responsibility for the project and construction site until accepted by the Manager or their authorized representative.
- G. The Contractor shall be prepared to execute a finished project in every particular without any extra charge, unless specifically provided for within the contract.

1-2 PROJECT SITE:

- A. The project site is located at the end of Selsey Road on Isle of Wight Bay , Worcester County.
- B. It is required that the Contractor, before entering private property, identify himself to the owner/s of the property and secure their permission to enter the grounds.
- C. The Contractor, before submitting a proposal for this project, shall visit the construction site and thoroughly familiarize himself with all existing conditions above and below ground.
- D. The Contractor shall satisfy himself as to the accuracy and completeness of these Specifications and Drawings regarding the nature and extent of all work described.

- E. Because of the proximity of improved properties, the Contractor shall exercise extreme care in their construction operations. The Contractor shall secure the written approval of the Manager or Manager's Representative at the work initiation conference for the particular method of ingress and egress, place of storage of materials and equipment, etc., prior to beginning work. Road closures will be coordinated with the Manager. All work must be kept within these limits and within the "Limit of Disturbance" as shown on the Buffer Management Plan (BMP) Drawings.
- F. The existing bottom profiles, shoreline contour and/or bank alignment shown on the Drawings were correct when surveyed. However, because of the interim erosion and littoral transport, the Contractor shall satisfy himself as to all conditions at the time of bidding this project and include in their proposal any changes that would be necessary to accomplish a complete and functional project.
- G. The Contractor shall use the horizontal and vertical survey control points shown on the contract drawings to layout the lines of work, stakeout the location of all proposed structures, and test the levels of all construction.
- H. Should there be any discrepancies between Drawings, and/or field conditions after bidding and prior to the beginning of work, the Contractor shall bring such discrepancies to the attention of the Manager or Manager's Representative at the work initiation conference.
- I. The Contractor shall take all necessary precautions and measures to protect all properties from damage. They shall repair all damage caused by their operations to all public and private property including but not limited to roads, walks, curbs, utilities, trees, shrubs, plantings, etc., and any damaged areas shall be repaired/replaced in kind and shall meet County standards and satisfaction.
- J. The Contractor shall at all times keep the premises free from accumulation of waste materials and rubbish, surplus materials, etc., and shall leave the work area completely clean.
- K. The work under this Contract includes all necessary temporary items required for good, safe and sanitary construction practice and administration of the project. These requirements are subject to the approval of the Manager or Manager's Representative.
- L. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of their employees as may be necessary to comply with the requirements and regulations of the Worcester County Department of Environmental Programs or other authorities having jurisdiction and shall commit no public nuisance.

1-3 CONTRACT DOCUMENTS AND SCHEDULE OF DRAWINGS:

- A. The contract documents consist of these Specifications and any and all subsequent addenda or additions thereto and the Drawings as listed below.

- B. The following list of Drawings all dated 7/26/21 from a part of the contract documents:
1. Project No. CRP-1-17 Sheets 1 through 4.

1-4 SPECIAL INSTRUCTIONS TO THE CONTRACTOR:

- A. Prior to construction the Contractor shall conduct a general cleanup of the site to include fallen limbs, brush and other debris from the construction area and shall dispose of all debris off-site at a site approved by the Manager or Manager's Representative.
- B. Refer to the General Conditions, paragraph 8 Unsatisfactory Progress — Contract Cancellation. All of the conditions and requirements of this paragraph are applicable to this project.
- C. If, between the time Drawings were developed and construction is to begin, it is determined that interim erosion has occurred, the proposed structure alignment may be adjusted, with the approval of the Manager, to conform to the existing beach as proposed by the Project Drawings. The intent is to maintain the relationships between the existing shoreline features and the proposed location of project components as those shown on the Drawings.
- D. Access to the project site will be land based and the construction access as shown on the approved plans. The Contractor shall take the necessary precautions to protect these roads and areas from being damaged during construction. If any areas are damaged as a result of construction activities the Contractor shall repair them to equal or better conditions than existing just prior to the start of construction. The contractor shall provide an estimate of cost of replacement of road damaged during construction, and a bond for 125% of the approved estimate.
- E. The Contractor shall protect any existing structures from damage during construction unless specifically designated for modification in the construction documentation. If structures are damaged, due to construction activities, the Contractor shall repair them, at their own expense, to a condition equal to or better than that found at the time of Award of Contract. Repairs will be made to the satisfaction and approval of the Manager, or their agent.
- F. If any areas are disturbed outside the proposed work limits by the Contractor, they will be responsible for restoring these areas to original ground levels in accordance with Division 6, Restoration of Graded and Disturbed Areas of these Specifications.
- G. Excess and unsuitable bank materials, resulting from the proposed construction, shall be hauled off the project site and taken to an approved disposal area at the Contractor's expense.
- H. The Contractor shall verify horizontal and vertical locations of all utilities. They shall provide adequate means of protection during earthwork operations. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the County immediately for directions as to procedure. Cooperate with the County and the utility

companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of the County at no cost to the County. Do not interrupt existing utilities serving facilities occupied and used by the property owner(s) or others. The Contractor shall notify Miss Utility prior to any excavation.

- I. The Manager assumes no responsibility for actual soil conditions which may be encountered in the execution of Contract.
- J. Upon the completion of the project, the Contractor will be responsible to regrade, stabilize, seed, mulch and completely restore all disturbed areas to a condition that is equal to or better than existing conditions.
- K. The Contractor shall leave the site in a neat and orderly condition to the approval of the Manager and/or Manager's Representative. The Contractor shall legally dispose of all removed material off site at the Contractor's expense.
- L. No trees are designated for removal for access for this project. Should tree removal be necessary for the construction of this project and prior to the cutting of any trees, the Contractor in company with the Manager or Manager's Representative shall mark all trees to be removed. They shall use all necessary care to prevent the roots and branches of trees designated to remain and to protect damage to persons and properties.
- M. The Contractor shall begin construction activities within 10 days after the date of receipt of the Notice to Proceed to prosecute work diligently and complete the work in the time specified.
- N. The Contractor is responsible for the construction and maintenance of the temporary access road to the project site. Construction access and all material delivery shall be via the temporary access road. The temporary access road shall be maintained in a satisfactory condition until completion of the project and accepted by the Manager or Manager's representative. Daily worker traffic and vehicles are permitted to access the site by local roads. The Contractor shall coordinate with the Manager where daily worker vehicles shall be parked during the work day. No daily vehicles may be left at the site unless approved the Manager. The Contractor shall maintain a safe vehicular access for all local property owners. Maintenance and immediate repairs to any defects and/or damages on local roads shall be repeated as often as necessary to keep the road intact and passable. Any area of the local roads including private driveways as applicable that are damaged shall be repaired to equal or better than pre-construction conditions, until the project is accepted by the Manager or Manager's representative.

1-5 PERMITS:

The Contractor shall adhere to the terms and conditions of the various permits issued to this project. This shall include permits from the U.S. Army Corps of Engineers, the State of Maryland, Worcester County and any other applicable permits and approvals.

-END OF SECTION-

DIVISION 2

STONEMWORK

2-1 DESCRIPTION:

The Contractor shall furnish all necessary labor, equipment and materials and perform all operations in connection with the stonework as shown on the Drawings, as described in these Specifications and as directed by the Manager.

2-2 MATERIALS:

A. Geotextile:

The geotextile shall be a porous, plastic sheet of woven calendered and palmered filament yarn. The plastic yarn shall consist of a long-chain synthetic polymer composed of at least 85 percent by weight of propylene, ethylene, ester, amide or vinylidene-chloride, and shall contain stabilizers and/or inhibitors added to the base plastic if necessary to make the filaments resistant to deterioration due to ultra-violet and heat exposure. The fabric shall conform to the following minimum requirements:

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>CRITERIA</u>
AOS	ASTM D-4751	70 U.S. Standard Sieve Size
% Open Area	COE CWO-02215-86	4-6%
Tensile Strength	ASTM D-4632	250 Lb. All Principle Directions
Burst Strength	ASTM D-3786	450 psi
Puncture Strength	ASTM D-4833	120 lb.
Abrasion Resistance	ASTM D-4157/D-4158	60 lb.
Seam Breaking Strength	ASTM D-1683	225 lb.
Clogging resistance	AOS (mm)	>1 or 0.149 (mm) Gradient Ratio < 3.0
Water Permeability Coefficient	ASTM D-4491	-0.01 cm/sec (Lateral Permeability)
Ultra-Violet Stabilization	ASTM D-4355	90% retained strength

1. **Seams:** Seams of fabric shall be sewn with thread meeting or exceeding specifications given for plastic yarn and shall be bonded by cementing or alendaring. Seams shall be tested in accordance with method ASTM D-1683. The seam strength shall meet the strength specified herein but shall not be less than 90% of the tensile strength of the imaged fabric in any principal direction.
2. **Temporary Securing Pins:** Securing pins shall be 3/16 inch in diameter, of steel, pointed on one end and fabricated such that the held retains a steel washer of 1.5" diameter or more. Pins shall be no less than 18" in length.

3. **Acceptance of Fabric:** All plastic geotextile to be used shall be tested for compliance with the above specifications. The Contactor shall submit in duplicate a certificate or affidavit signed by a legally authorized person from the company manufacturing the fabric. The certificates shall state that chemical, physical and manufacturing requirements are met as specified herein.

In addition, evidence of a service record shall be submitted of any filter fabric not previously approved by the Manager providing successful performance in projects of similar scope. Approval of geotextile shall be obtained from the Manager prior to installation.

B. Stone:

1. General: All stone for the protection work shall be durable quarried stone as approved by the Manager. The stone shall be hard and angular, free from laminations, weak cleavages, and undesirable weathering, and of such character that it will not disintegrate from the action of air, salt water, freezing and thawing, and in handling and placing. Sedimentary stone will generally be unacceptable. Individual stones shall be approximately rectangular in cross section and free from thin slabby pieces having a maximum dimension more than three and one-half times the least dimension. All stone shall be supplied from the same quarry.

The armor and chinking stone shall have a minimum unit weight of 160 lbs. per cubic foot.

2. The Contractor may incorporate existing stones into the proposed structure insofar as they meet the size and quality requirements in these specifications. Any existing bricks or concrete rubble within the footprint of the proposed structure shall be removed and disposed offsite by the Contractor.

C. Stone Size: Stone sizes for armor stone, chinking stone, bedding stone and washed cobble stone shall meet the following requirements.

1. Armor stone sizes shall be such that a minimum of 90% of the individual stones shall weight from 600 lbs. to 1,600 lbs. and shall be a well graded distribution of these sizes through these limits. Not more than 10% of the individual stones shall weight more than 1,600 lbs. A minimum of 50% of the armor stones (by volume) shall weigh more than 1,100 lbs. No armor stones shall be less than 600 lbs.
2. Chinking stone sizes shall be such that a minimum of 90% of the individual stones shall weigh from 100 lbs. to 300 lbs. Not more than 10% of the individual stones shall weigh more than 300 lbs. A minimum of 50% of the armor stones (by volume) shall weigh more than 200 lbs. No chinking stones shall be less than 100 lbs.
3. Bedding stone shall be approximately 3" up to 8" in size. Bedding stones smaller than 3" will not be acceptable.

4. Washed cobble stone shall be approximately 2" in size. Washed cobble stone smaller than 2" will not be acceptable.

D. **Field Samples:** The Contractor shall supply samples of stone to be displayed at the site with appropriate individual weights marked as follows: 600 lbs., 1,100 lbs., and 1,600 lbs. These samples of stone shall be from the same quarry and of the same type of stone as that to be supplied for the job and shall be delivered to the site in advance of the time when placing the stone protection is expected to begin. Final approval of stone for the protection work will be based upon these samples. The Contractor will not be granted an extension of time or extra compensation due to delay caused by sampling, testing, approval or disapproval of stone protection material under the requirements of these specifications.

E. **Certification:** The quarry shall submit to Manager a certificate indicating the following:

1. Stone Classification
2. Weight per cubic foot
3. That sizes stipulated in the specifications are being supplied to the site and source of stone shall be indicated.
4. Stone quality will meet all project specifications, including undesirable weathering and disintegration.

2-3 CONSTRUCTION METHOD:

A. **Foundation Conditions:** It should be expected that some settlement and displacement of the foundation (mud-waving) may occur during construction and should be taken into account in determining the total volume of stone required. No additional payment will be made for such additional stone required due to settlement or displacement.

B. **Alignment and Grading:** The geotextile, armor stone and chinking stone shall be placed within the limits and to the lines and grades shown on the Drawings or otherwise required by the Manager. The alignment of the structure(s) shall be laid out in accordance with the stake-out data shown on the Drawings. The structures shall extend no further outboard than is necessary to construct them to the lines, grades and limits shown on the Drawings. The subgrade surface shall be smooth-graded and free from any projections or abrupt changes which may cause damage to or bulging of the filter fabric.

C. **Slope Protection:** The Contractor shall schedule their operations so that the length of time newly graded areas are left exposed to wave action is minimized. Immediately prior to placement of geotextile, the stone backfill slopes shall be fine graded to a tolerance of plus three-tenths (0.3) of a foot from a smooth surface as measured by an approved template. The Contractor shall not prepare more subgrade than can be covered with stone by the end of each working day. Temporary protection for the exposed end of the subgrade shall be provided at the end of each working day.

- D. **Geotextile:** The strips of geotextile shall be spread parallel to the major axis of the structure on the prepared foundation as shown on the Drawings. The fabric shall be loosely laid (not stretched) with no more than one overlap parallel to the major axis of the structure. The overlap shall be a minimum of 5 feet. Strips of cloth shall be spread in a manner such that the strip totally in contact with the soil shall be the upper strip. Overlaps perpendicular to the major axis of the structure shall be staggered a minimum of 5 feet. Rolls of as great a length as it is economical for the Contractor to handle shall be used whenever possible in order to minimize the number of overlaps perpendicular to the major axis of the structure.

Overlaps at or around existing structures, specifically the existing revetment, shall also be a minimum of 5 feet. Existing stones larger than 1" in its largest dimension shall be removed prior to placement of geotextile to prevent damage to cloth.

Adequate precaution shall be taken to prevent damage of the geotextile from placement of overlaying materials. Stone weighing more than 100 pounds should not be dropped from a height greater than 5 feet onto the cloth. Stones weighing more than 500 pounds should not be dropped from a height greater than 2 feet. Any geotextile damaged or displaced before or during placement of overlying layers shall be replaced or repaired to the satisfaction of the Manager at the Contractor's expense.

- E. **Temporary Securing Pins:** The geotextile may be temporarily pinned in place with securing pins to prevent slippage during construction. The pins shall be retained until sufficient armor stones are set to hold the geotextile. The securing pins shall then be removed as additional armor stones are placed to relieve high tensile stress which may cause damage to the geotextile. Alternate anchoring may be used subject to the approval of the Manager.
- F. **Armor Stone:** Armor Stone shall be placed in such a manner as to produce a well graded mass of rock with a minimum percentage of voids and shall be constructed to the specified lines and grades. Stones shall be placed so there is a well-graded distribution of the various sizes throughout the structure. Any oversize stones shall be placed at the toe of the structure. The finished structures shall be free from pockets of small stones and clusters of larger stones. Rearranging of individual stones by mechanical equipment or by hand will be required to the extent necessary to obtain interlocking and a well-graded distribution of stone sizes. After placement of armor stones, only surface voids at or near grade which are large enough to receive chinking stone shall be filled. The Contractor shall maintain the structures until accepted and any material displaced by any cause shall be replaced at their expense to the lines and grades shown on the Drawings.
- G. **Sample Section:** At the start of construction, the Contractor shall construct a full sample section of stone, approximately thirty (30') feet in length, at a location agreed on in the field by the Manager and the Contractor. Wooden templates shall be placed at both ends of the section, so the Contractor and the Manager can verify that the section is in accordance with the plans. This sample section must be approved by the Manager prior to the start of any additional stone construction, and shall serve as the standard for further stone work. Flank walls shall not be considered as part of the sample section.

- H. The Contractor shall anchor the proposed stone into the existing revetment as indicated on the Drawings. They shall remove stones from the existing revetment as necessary in order to make the connection into the proposed stone. New geotextile shall be installed as required lapping the new cloth with the existing cloth as applicable. Existing removed stones, meeting the specifications, can be reused in the proposed stone construction. The connection of the proposed stone to the existing revetment is incidental; therefore, no measurement for payment will be made for the connection.

5-6 **MEASUREMENT:**

No measurement for payment for this item of work will be made since the cost shall be included in the lump sum price bid.

- END OF SECTION –

DIVISION 3

SAND FILL

3-1 DESCRIPTION:

The Contractor shall provide all necessary equipment, labor and material required to perform the sand fill and grading to the lines and grades shown on the Drawings. Unsuitable or excess material shall be disposed of offsite by the Contractor.

3-2 MATERIALS:

- A. Sand fill material shall be medium to coarse grained sandy soils classified as SW and SP in "ANSI/ASTM D-2487-69, Classification of Soils for Engineering Purposes". Crushed stone or slag will not be acceptable.
- B. The sand fill material must contain less than 10% by weight passing the number 100 sieve, not more than 10% by weight retained on a number 4 sieve, with no stone having a diameter greater than one-half inch (1/2"). The material shall consist of rounded or semi-rounded grains with a median diameter of 0.6 mm (± 0.25 mm).
- C. Crushed stone or slag will not be acceptable. No frozen material, trash, roots, or other organic material will be permitted in the fill.
- D. Use of dredge material is of high priority, to the extent possible.

3-3 SAMPLE AND CERTIFICATION:

- A. The Contractor shall furnish for approval, samples and gradation curves of the proposed sand fill to the Manager **prior to placement**. The cost for materials testing shall be included in the Contractor cost for furnishing the sand fill.
- B. The Contractor shall obtain from an inspection firm acceptable to the Manager and submit to the Manager a certificate indicating the following:
 - 1. Sand classification
 - 2. Gradation curves
 - 3. Weight per cubic yard
 - 4. That materials stipulated in the specifications are being supplied to the project site
- C. Additional samples and gradation curves shall be provided for approval by the Manager during the sand fill placement. Sample analysis will be required after placement of each 500 cubic yard increment of sand fill. Nothing in this specification precludes the Contractor from obtaining and analyzing samples of sand fill more frequently for the

Manager approval as it is being delivered and placed. The Manager will inspect sand fill materials as they are delivered to the site. Any materials not meeting specifications shall be entirely removed and disposed of off-site.

3-4 PLACEMENT:

- A. The Contractor shall remove all excess waste materials, rubbish, construction debris, etc. from the construction site prior to placement of the sand fill.
- B. The Contractor shall only place sand fill material along protected reaches of shoreline (landward of the newly constructed stone).
- C. The Contractor shall place sand fill in all areas uniformly to the lines and grades shown on the Drawings. The finished surface shall be smooth, compacted, free of irregular surface changes, free of areas which may collect water or other debris and shall uniformly match the proposed sand fill template.
- D. Cross sections used for verification of the design fill template shall be spaced no more than 50 feet apart and submitted to the Manager or Manager's Representative. Cross sections shall be plotted at a scale no smaller than 1" = 10'. The cross-sectional survey shall be performed by a licensed surveyor or by the Contractor, provided it is done in the presence of the Manager. All costs associated with construction surveys shall be included in the Contractor's lump sum price.
- E. Acceptance of completed sand fill placement will be based upon the receipt of the plotted cross-sectional survey showing that the sand was installed to the proposed lines and grades shown on the Drawings.
- F. The Contractor shall exercise extreme care to protect any existing structures when placing the sand fill. If any are damaged as a result of the Contractor's construction activities, the Contractor shall repair them, at their own expense, to a condition equal to or better than that found at the time of Award of Contract. Repairs will be made to the satisfaction and approval of the Manager.

3-5 MEASUREMENT:

No measurement for payment for this item of work will be made since the cost shall be included in the lump sum price bid.

-END OF SECTION-

DIVISION 4

WETLAND PLANTINGS

4-1 DESCRIPTION:

The Contractor shall furnish all labor, materials, and equipment required to complete the wetland plantings in strict accordance with these Specifications and as specified on the Contract Drawings. Once the wetland plantings operation has been completed, the Contractor shall be responsible for replanting any areas, which do not show the proper density of grass for a period of one (1) year. The minimum acceptable density of surviving plants shall be 85% of shoreline planted.

4-2 MATERIALS:

- A. **Fertilizer:** Fertilize each planting hole with 1.0 ounce of Osmocote 19-6-12 slow release fertilizer (3 to 4 month release) or approved equivalent placed in the hole at the time of planting.

- B. **Plant Stock:** Prior to installing plants at the project site, the Contractor will be required to show proof from plant suppliers of a valid Maryland Nursery Inspection Certificate or Plant Dealers License (or comparable certification for out-of-state installers). All shipments of nursery stock into Maryland must be accompanied by a valid certificate of inspection issued at the state of origin, and acceptable to the Maryland Department of Agriculture Office of Plant Industries and Resource Conservation.
 - 1. **Spartina Alterniflora Plant Stock:** Plant stock shall be Smooth Cordgrass (*Spartina alterniflora*) grown in peat pots. Plants will be three to six months old and approximately 12 inches high. Individual pots will contain four or more plants.
 - 2. **Spartina Patens Plant Stock:** Plant stock shall be Saltmeadow Cordgrass (*Spartina patens*) grown in peat pots. Plants will be three to six months old and approximately 12 inches high. Individual pots will contain four or more plants

- C. **Goose Exclusion Fence:** Goose exclusion fence shall consist of 2 inch by 2 inch wooden posts, 5 feet in length with 12ply cotton twine stretched taut between posts.

4-3 EXECUTION:

- A. **Preparation:**
 - 1. All areas that are to be planted shall be cleaned and removed of rough grass, weeds, and debris and the ground surfaces smoothed.

2. Plants held at the site shall be watered by sprinkling with river water at least once a day. Plants shall not be removed from peat pots. Planting shall be done with moist, but not saturated, root masses.
3. It will be the responsibility of the Contractor to maintain the vigor of the plants held at the site during site preparation work and construction.

B. Planting:

1. The planting season for wetland sprigging shall be accomplished between April 1 and June 30 or August 15 and October 15, during periods of low tide.
2. *Spartina Alterniflora* Soil Preparation and Planting:
 - a. The proposed MHW (Elev. = + 0.9 ') shall be marked on the ground and plantings shall be made in rows parallel to and beginning at the MHW line elevation and extending to the stone. Rows shall be 18 inches apart and plants 18 inches apart from the Mid-tide (Elev. = + 0.5 ') line to the MHW (Elev. = + 0.9 ') line.
 - b. Plantings shall be made by hand with dibble, spade or shovel by opening a hole at the planting site, placing the fertilizer and then the plant in the hole, closing the hole and firming the soil around the plant so that the surface soil level covers the top of the planting pot 1 to 2 inches.

C. *Spartina Patens* Soil Preparation and Planting:

- a. The MHW (Elev. = +0.9 ') lines shall be marked on the ground and plantings shall be made in rows parallel to and beginning three feet (3.0') waterward of the MHW line extending to the limits shown on the Drawings. Rows shall be 18 inches apart and plants 18 inches apart from the MHW (Elev. = + 0.9 ') line to the uplands limit of the wetlands planting.
- b. Plantings shall be made by hand with dibble, spade or shovel by opening a hole at the planting site, placing the fertilizer and then the plant in the hole, closing the hole and firming the soil around the plant so that the surface soil level is ½ to 1 inch above the top of the planting pot root mass. If the soil at the planting site is not wet or damp, the plants shall be sufficiently watered with river water within 4 hours after planting.

4-4 **GOOSE EXCLUSION MEASURES:**

Goose exclusion measures shall be installed to protect new wetland plantings. The goose exclusion fence shall be 2-inch by 2-inch wooden posts, 5 feet in length, will be installed approximately 1.5 feet deep at about 10 foot intervals in a grid pattern throughout the planting area and along the perimeter of the planting area. Nylon string, minimum 18 gauge, will be stretched taut between posts, wrapped once around each post, and secured with staples. The first strand of string will be 6 inches above the ground level with 3 additional strands of string installed at even spacing higher up on the posts, for a total of 4 strands. The goose fence will be tied back into the fast land at the landward limit of the area of wetlands planting.

4-5 **WETLANDS VEGETATION WARRANTY**

The installation contractor will guarantee eighty-five percent (85%) survival of wetland species vegetation that is installed as part of the project every twenty-five (25) feet along the shoreline for a period of one (1) year from the date of acceptance.

4-6 **MEASUREMENT:**

No measurement for payment of these items of work will be made since their cost shall be included in the lump sum bid

- END OF SECTION -

DIVISION 5

RESTORATION OF GRADED AND DISTURBED AREAS

5-1 DESCRIPTION:

The Contractor shall furnish all labor, materials and equipment required to complete the work described herein in strict accordance with these Specifications. When all construction-related activities are completed, upland permanent seeding shall be accomplished by the Contractor on all graded and disturbed areas in accordance with these Specifications. The responsibility of the Contractor is to accomplish the complete permanent seeding operation within seven (7) calendar days as to the surface of all non-wetland planting, disturbed or graded areas on the project site after completion of the grading work. Once the finished upland seeding operation has been accomplished, the Contractor shall be responsible for initial watering and subsequent maintenance of the seeded area. The Contractor will be required to re-seed any areas which do not show the proper density of vegetation.

5-2 PERMANENT SEEDING: (If Necessary)

- A. Site Preparation: Grade as necessary and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring.
- B. Seedbed Preparation: Apply 45 lbs. of 10-20-20 fertilizer per acre (1.0 lb/1,000 sq. ft.) harrow or disk into soil to a depth of 2 to 4 inches. Apply pulverized ground limestone at a rate of 90 lbs. per 1,000 sq. ft.
- C. Seeding:
 - 1. Apply Mix 1 with Coastal Panic Grass at 10 lbs./ac. and add Creeping Red Fescue at 15 lbs./ac. and add Partridge Pea at 4 lbs./ac. between Feb. 15 to June 15.
 - 2. Apply seed uniformly with cyclone seeder, drill, cultipacker, seeder or hydroseeder (slurry includes seed, fertilizer, lime, cellulose fibers with binder and water) preferably on a firm, moist seedbed. Maximum seed depth shall be ¼" in clayey soil and not more than ½" in sandy soil, when using other than hydroseeder method.
 - 3. Where feasible, except when a cultipacker seeder is used, the seedbed shall be firmed following seeding operations with a light roller.
- D. Mulching:
 - 1. Mulch Materials: Mulch materials shall be unweathered, unchopped small grain straw (preferably wheat) at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 lbs. per 1,000 sq. ft. Oat straw may contain viable seeds which may provide serious competition for grass and legume seedlings unless clipped and will therefore not be allowed.

2. Spreading: Spread uniformly by hand or mechanically so that approximately 85% of the soil surface will be covered.
 3. Anchoring: Mulch anchoring shall be accomplished immediately after placement of mulch to minimize loss by wind and water. The chemical binder, "Terra Tack MP" (without fiber) as manufactured by Grass Growers of Plainfield, New Jersey, or an approved equal product shall be applied to all mulched areas at the rate of 100 pounds of dry chemical material to one (1) acre. The dry chemical material shall be mixed with water prior to application, at the rate of one pound per two (2) gallons. Mixing procedures and method of application shall be in accordance with the manufactures latest technical bulletins.
- E. Planting Season: Permanent seedbed preparation and seeding shall be accomplished between Feb. 15 to June 15.

5-3 TEMPORARY SEEDING (If Necessary)

- A. Site Preparation: Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding and mulch application and anchoring.
- B. Seedbed Preparation: Apply 45 lbs. of 10-20-20 fertilizer per acre (1.0 lb/1,000 sq. ft.) harrow or disk into soil to a depth of 2 to 4 inches. Apply pulverized ground limestone at a rate of 90 lbs. per 1,000 sq. ft.
- C. Seeding:
 1. Apply 40 lbs. per acre (1.0 lbs per 1,000 sq. ft.) of Annual Ryegrass between Feb 15 to April 30; August 15 to November 30. Apply 30 lbs. per acre of Foxtail Millet between May 1 to August 14.
 2. Apply seed uniformly with cyclone seeder, drill, cultipacker seeder or hydro-seeder (slurry includes seed, fertilizer, lime, cellulose fibers with binder and water) preferably on a firm, moist seedbed.
- D. Mulching and Mulching Anchoring: Mulching and mulch anchoring shall be accomplished in accordance with Division 6-2D of these Specifications.
- E. Planting Season: Seedbed preparation and seeding shall be accomplished at any time of the year except when the ground is frozen. When the ground is frozen, the seeding shall be postponed until seedbed preparation can be accomplished as described.

5-4 MEASUREMENT

No measurement for payment for this item of work will be made since the cost shall be incidental to the completion of the project.

-END OF SECTION-

DIVISION 6

AS-BUILT DRAWINGS

The Contractor shall keep in the job site office a complete set of all drawings, specifications, shop drawings, schedules, etc., in good order and available to the Engineer and the Manager. Additionally, one set of all contract drawings must be maintained as "as-built" drawings. These as-built drawings shall be marked up by the Contractor in the field on a regular basis (at least monthly) to record all changes in the work as they occur, and the exact location of all work and equipment in such manner as will provide a complete, accurate "as-built" record. Contractor will not be entitled to receive progress payments unless the on-site as-built drawings are kept up to date as required by the Contract. "As-Built" drawings shall be delivered to the Engineer and Manager, in a condition satisfactory to them, as a condition precedent to Substantial Completion Inspection of the work. Final payment and release of final retainage, if any, will not be made until the as-built drawings are revised in accordance with the Engineer's and Manager's comments and these revised drawings are approved by the Engineer and the Manager.

-END OF SECTION-

Contractor's Qualification Questionnaire

IMPORTANT

This questionnaire is intended as a basis for establishing the qualifications of Contractors for undertaking shore erosion control projects.

If a Contractor has not filled in such a questionnaire and turned it over to the Manager prior to setting forth their qualifications to the satisfaction of the Manager, the Contractor may be ineligible for contract award.

I. General

(a) Legal Title, Address and Telephone Number (s) of Organization:

(b) Maryland Representative's Name, Title and Address:

(c) _____ Corporation _____ Co-Partnership _____ Individual (check one)

(d) If Corporation, please indicate:

Date of Incorporation _____ State of Incorporation _____

Title and Name of Principal Officers	Date of Assuming Position
--------------------------------------	---------------------------

President	_____
-----------	-------

Vice-President	_____
----------------	-------

Secretary	_____
-----------	-------

Treasurer	_____
-----------	-------

(e) If Co-Partnership, please indicate:

Date of Organization _____ Type of Partnership _____
(General, Limited or Association)

Name and Address of Partners

(f) If Individual, please indicate full name and address of Owner:

(g) List major items of construction equipment owned by organization (if not fully owned, so state):

(h) Is your firm certified as a Minority Business Enterprise with the State of Maryland?

_____ Yes _____ No (check one)

If yes, Certification No.: _____

(i) Please List:

Maryland Marine Contractor License #: _____

Maryland Home Improvement Contractor License #: _____

Federal Employer I.D. #: _____

Or if individual, Social Security #: _____

II. Financial

(a) Give total contract value of work accomplished by your organization in each of the last three years:

20 _ \$ _____ 20 _ \$ _____ 20 _ \$ _____

(b) Give contract value of work presently being accomplished by or pending award to your organization:

Date: _____ \$ _____

(c) Give maximum value of contract work for which you could obtain Bond:

\$ _____

III. Experience

(a) Indicate type of contracting undertaken by your organization and number of years experience:

General _____ Sub _____ Marine _____
Years Years Years

Other: _____ Other: _____
Type Years Type Years

(b) State construction experience of principal members of your organization:

Name	Position	No. Years	Type of Work	Capacity
_____	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
_____	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
_____	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
_____	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

(c) Give any special qualifications of firm members, e.g., Registered Professional Engineer, Registered Surveyor, etc. :

(Use extension sheet if necessary).

(d) List some principal projects completed by your organization: including shoreline erosion control type projects, if any.

Name of work	General or Sub (if sub, what Type of work)	Type of Project	Year	Owner Name & Address
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

- (e) 1. What is the money value of the largest project accomplished by your organization?
\$ _____
2. Maximum value in last three (3) years? \$ _____
3. Maximum value you prefer to undertake? \$ _____
4. Price range of work your organization is deemed best adapted to undertake
\$ _____ ---- \$ _____

(f) Is your organization licensed in the State of Maryland for the current year?
_____ No _____ Yes

Give Date _____ and license number _____

(g) List any projects your organization has failed to fulfill.

Name of work	General or Sub (if sub, what Type of work)	Type of Project	Year	Owner Name & Address
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

The above statements are certified to be true and accurate.

Signed and dated at _____

this _____ day of _____, 20_____.

By _____

Title of Person Signing

Name of Organization

The **BASE BID** is divided as follows:

BID ITEM 1. Stone Breakwater and sills (totaling approximately _____ L.F.:
_____ Dollars (\$) _____)
(Words) (Numbers)

BID ITEM 2. Clean Sand Fill:
_____ Dollars (\$) _____)
(Words) (Numbers)

BID ITEM 3. Marsh Grass Planting:
_____ Dollars (\$) _____)
(Words) (Numbers)

BID ITEM 4. Trees & Shrubs Work (Removal of Ex. Trees and Planting Native Trees & Shrubs):
_____ Dollars (\$) _____)
(Words) (Numbers)

BID ITEM 5. Debris Removal:
_____ Dollars (\$) _____)
(Words) (Numbers)

BID ITEM 6. Bank Grading and Restoration of All Graded and Disturbed Areas:
_____ Dollars (\$) _____)
(Words) (Numbers)

SCHEDULE OF UNIT PRICES:

The following unit prices, if accepted in the Award of Contract, shall be applied in computing the value of changes, additions, deletions, and substitutions, which may be made in the work following the Award of Contract. Each unit price shall include all work, materials and incidentals necessary to complete the items in accordance with the Project Drawings and Specifications.

NOTE: Prices shall be written in both words and numbers. The schedule of unit prices for all materials and items of work shall be estimated in accordance with the Project Drawings.

1. 600 -lb. to 1,600 -lb. Armor Stone, as shown on the Project Drawings and as specified:
_____ Dollars (\$) _____) per Ton
(Words) (Numbers)

2. Woven Plastic Filter Fabric, as shown on the Project Drawings and as specified:
_____ Dollars (\$) _____) per S.F.
(Words) (Numbers)

(Sign for Identification)

3. Clean Sand Fill, as shown on the Project Drawings and as specified:

_____ Dollars (\$ _____) per C.Y.
(Words) (Numbers)

4. Smooth Cordgrass (*Spartina alterniflora*), as shown on the Project Drawings and as specified:

_____ Dollars (\$ _____) per Plug
(Words) (Numbers)

5. Saltmeadow Hay (*Spartina patens*), as shown on the Project Drawings and as specified:

_____ Dollars (\$ _____) per Plug
(Words) (Numbers)

6. Reinforced Silt Fence, as detailed on the Project Drawings:

_____ Dollars (\$ _____) per L.F.
(Words) (Numbers)

7. Turbidity Curtain, as shown on the Project Drawings:

_____ Dollars (\$ _____) per L.F.
(Words) (Numbers)

8. Stabilized Stone Construction Entrance, as detailed on the Project Drawings (if required):

_____ Dollars (\$ _____) per Each
(Words) (Numbers)

9. Goose Exclusion Fence, if required:

_____ Dollars (\$ _____) per L.F.
(Words) (Numbers)

10. Topsoil, as specified:

_____ Dollars (\$ _____) per C.Y.
(Words) (Numbers)

11. _____ (_____) as shown on the Project Drawings:

_____ Dollars (\$ _____) per Each
(Words) (Numbers)

12. _____ (_____) as shown on the Project Drawings:

_____ Dollars (\$ _____) per Each
(Words) (Numbers)

(Sign for Identification)

13. _____ (_____) as shown on the Project Drawings:
_____ Dollars (\$ _____) per Each
(Words) (Numbers)

14. Restoration of All Graded and Disturbed Areas, as specified (seeding operation only):
_____ Dollars (\$ _____) per S.F.
(Words) (Numbers)

It is understood that the bid price will be firm for a time period of ninety (90) calendar days from the bid opening date and that if the undersigned is notified of the acceptance of this proposal within this time period, he agrees to execute a contract for the above stated compensation and supply all required documents within ten (10) calendar days of notification, and to guarantee the completion of this work in _____ calendar days (not to extend beyond 180 calendar days) thereafter.

_____ Date Issued
Construction Firm License Number

Place of Issuance

Federal Employer Identification Number: _____

or if not an employer, Social Security Number: _____

(Sign for Identification)

INDIVIDUAL PRINCIPAL

FIRM NAME: _____
SIGNED: _____
In Presence of Witness: ADDRESS: _____
TELEPHONE: _____

CO-PARTNERSHIP PRINCIPAL

FIRM NAME: _____
ADDRESS: _____
TELEPHONE: _____
In Presence of Witness:

_____ as to BY _____
PARTNER
_____ as to BY _____
PARTNER
_____ as to BY _____
PARTNER

CORPORATE PRINCIPAL

NAME OF CORPORATION: _____
ADDRESS: _____
Attest: TELEPHONE: _____

_____ BY _____
CORPORATE SECRETARY PRESIDENT
(AFFIX CORPORATE SEAL)

ALL BIDDERS:

The Bidder represents, and it is condition precedent to acceptance of this bid, that the bidder has not been a party to any agreement to bid a fixed or uniform price.

WITNESS:

_____ (SEAL)
SIGNATURE OF OFFICER AND TITLE

NOTARY PUBLIC

SUBSCRIBED AND SWORN TO before me, a Notary Public of the State of _____, county of _____, City of _____, this day of _____, 20____.

My commission expires: _____
NOTARY PUBLIC