



BID DOCUMENTS

Jackson Creek Phase II Dredging Project

July 2016

Bid Due Date:

August 1, 2016 @ 3:00 P.M.

BID FORM

PROJECT: Jackson Creek – Phase II Dredging

PLACE: Dredging of Jackson Creek, Deltaville, Virginia

SEND PROPOSALS TO: Matt Walker, County Administrator
P.O. Box 428
877 General Puller Highway
Saluda, VA 23149

Bid Due Date: August 1, 2016 @ 3:00 P.M.

Sealed bids will be received through the Bid Receipt time and date as stated above. Envelopes are to be marked “Jackson Creek - Dredging Project”. The bids so received will be opened and publicly read at the time and date stated above. The bids will be received in the office of the County Administrator. Bid opening will take place in the Conference Room. Both rooms are located on the second floor of the Woodward Building, 877 General Puller Highway, Saluda, Virginia.

In compliance and subject to your Specifications and the documents therein specified, all of which are incorporated herein by reference, the undersigned bidder proposes to furnish all labor, equipment, and materials and perform all work necessary to carry out and complete this project, in accordance with the maps and request for bids titled **“Specifications – Jackson Creek – Phase II Dredging Project”** as follows:

Dredging by the following method: _____

Disposal of material at: _____

If disposal method is other than by off-loading at Boatyard Rentals LLC location with disposal at the County’s Broad Creek Dredged Material Disposal Site, please explain below (use separate page if necessary):

BASE BID:

TOTAL for mobilization, demobilization and dredging to a minimum depth of **8 feet** MLLW (estimated quantity of **3,000** C.Y.) complete as shown in Appendix A of the specifications:

Lump Sum Price of: _____ And _____/100 Dollars

Subtotal, Part B: (\$ _____).

TOTAL for BASE BID: \$ _____.

_____ And _____/100 Dollars

ALTERNATE #1:

TOTAL for mobilization, demobilization and dredging to a minimum depth of **-9 feet** MLLW (estimated **additional** quantity from base of **3,000 C.Y.**) complete as shown in Appendix A of the specifications.

TOTAL for ALTERNATE #1: \$ _____

_____ And _____/100 Dollars

ALTERNATE #2:

TOTAL for mobilization, demobilization and dredging to a minimum depth of **-10 feet** MLLW (estimated **additional** quantity from base of **6,500 C.Y.**) complete as shown in Appendix A of the specifications.

TOTAL for ALTERNATE #2: \$ _____

_____ And _____/100 Dollars

THE CONTRACT AWARD will either be for the Base Bid (-8'), Alternate #1 (-9') or Alternate #2 (-10'). Contract award will also consider the responsiveness to the Invitation for Bid along with time for completion.

A bid bond in the amount of 5% of the amount bid shall be submitted with the bid (if bid is in excess of \$100,000). A certified check or cashier's check made payable to Middlesex County in the amount of 5% of the amount bid may be submitted with the bid in lieu of a bid bond.

Time for Completion:

The undersigned understands and agrees that the time for Completion of the entire project shall be _____ consecutive calendar days from the date of commencement of the Work as specified in the Notice to Proceed. A charge of \$200.00 per day will be deducted from the final payment amount for any portion of days that the project goes over the contract completion date.

Contract Execution:

The Owner reserves the right to accept or reject any or all bids or parts of bids and to request re-bids. The Owner reserves the right to award a bid in a split order, lump sum or per item basis, any combination that will best serve the needs of Middlesex County.

Once a notice to proceed is given, the contractor shall have 15 days to mobilize his equipment on site. Contractors will give notification to the Coast Guard and have pre-dredge meetings with Army Corps and the Virginia Marine Resources Commission as required during this 15-day period.

The contractor certifies that he has understanding of the project work.

Acknowledgment of Addenda:

No. 1, Date _____ Signature _____

No. 2, Date _____ Signature _____

No. 3, Date _____ Signature _____

I certify that the firm name given below is the true and complete name of the Bidder and that the Bidder is legally qualified and licensed by the Commonwealth of Virginia Department of Commerce, State Board for Contractors, to perform all Work included in the scope of the Contract.

Virginia License No. _____ Bidder _____
(Name of Firm)

Contractor Class _____

Specialty _____ By _____
(Signature)

Valid Until _____
(Typed Name)

FEIN/SSN _____ Title _____

If Partnership (List Partners' Names)

If Corporation, affix Corporate Seal and list
State of Incorporation

(Affix Seal)

Business Address:

Telephone # _____

Fax # _____

INSTRUCTIONS TO BIDDERS

1. Receipt of Bids:

To be considered, bids must be received within the time period specified in the Invitation to Bid. Bids received after the specified time will be returned unopened.

2. Bid Signature Required:

All bids must be signed with the firm name and by a representative with the authority to bind the company with his/her signature.

3. Specification Variation Must be Indicated:

The bidder must note any variation in specification. If no variations are listed, it will be assumed that the product or service complies 100% with our specifications.

4. Award/Rejection of Bids:

Middlesex County reserves the right to accept or reject any or all bids or parts of bids and to request re-bids. The County reserves the right to award a bid in a split order, lump sum or per item basis, any combination which will best serve the needs of Middlesex County.

5. Prices are Firm:

Bid prices will be assumed firm for 90 days after the opening of the bids unless otherwise stated by Middlesex County or the bidder.

6. Delivery:

Costs and other charges associated with the delivery of any product must be included in all bids. Middlesex County reserves the right to cancel all or any part of a bid without obligation if delivery is not made within the time specified on the bid.

7. Terms of Payment:

Usually, invoices received by the 25th of the month will be included in that month's warrants.

8. Change Orders:

Any changes to an existing purchase order or contract must be approved in advance through the Purchasing Department. Middlesex County will not assume any responsibility for the cost of changes without prior approval.

9. Taxes:

Middlesex County is exempt from any Federal or State taxes. Written exemptions will be completed for the bidder upon request.

10. Permits:

The County has obtained permits from the Corps of Engineers and the Virginia Marine Resources Commission and a waiver from the Virginia Department of Environmental Quality for the dredging work. The Contractor is required to obtain all necessary approvals and permits from other agencies, including, but not limited to the Middlesex County Building Official and Dominion Virginia Power.

11. Insurance

A. The Contractor shall maintain and provide evidence of having worker's compensation insurance at the time of signing the contract.

B. The Contractor acknowledges that he is an independent contractor, and not an agent or employee of the Owner. The Contractor further agrees to indemnify and hold harmless the Owner, its officers, agents, officials and employees free from any loss, claim, demand, liability, cost or suit of whatsoever nature arising out of or in any way related to the work to be performed by the Contractor herein. The Contractor shall procure, and shall maintain throughout the life of the Contract, Automobile, Workers Compensation and Commercial General Liability Insurance, with the County named as an additional insured on the Auto and Liability policies, and shall provide the County with proof of same. These insurances shall be in the following amounts:

General Aggregate	\$2,000,000.00
Each Occurrence	\$1,000,000.00
General Aggregate	\$2,000,000.00
Products - Comp/Op Agg.	\$2,000,000.00
Automobile	\$2,000,000.00
Personal & Adv. Injury	\$1,000,000.00
Each Occurrence	\$1,000,000.00
Fire Damage (any one fire)	\$ 50,000.00
Medical Expense (any one person)	\$ 5,000.00

12. Performance and payment bonds.

In conformance with the Code of Virginia § 2.2-4337., the following bonds shall also be required as part of this project:

A. Upon the award of any (i) public construction contract exceeding \$100,000 awarded to any prime contractor; (ii) construction contract exceeding \$100,000 awarded to any prime contractor requiring the performance of labor or the furnishing of materials for buildings, structures or other improvements to real property owned or leased by a public body; (iii) construction contract exceeding \$100,000 in which the performance of labor or the furnishing of materials will be paid with public funds; or (iv) transportation-related projects exceeding \$250,000 that are partially or wholly funded by the Commonwealth, the contractor shall furnish to the public body the following bonds:

1. A performance bond in the sum of the contract amount conditioned upon the faithful performance of the contract in strict conformity with the plans, specifications and conditions of the contract. For transportation-related projects authorized under § 33.1-12, such bond shall be in a form and amount satisfactory to the public body.
2. A payment bond in the sum of the contract amount. The bond shall be for the protection of claimants who have and fulfill contracts to supply labor or materials to the prime contractor to whom the contract was awarded, or to any subcontractors, in furtherance of the work provided for in the contract, and shall be conditioned upon the prompt payment for all materials furnished or labor supplied or performed in the furtherance of the work. For transportation-related projects authorized under § 33.1-12 and partially or wholly funded by the Commonwealth, such bond shall be in a form and amount satisfactory to the public body.

SAMPLE CONTRACT

MIDDLESEX COUNTY DREDGING of JACKSON CREEK PROJECT

This Agreement, made this ____ day of _____, by and between the County of Middlesex, a political subdivision of the Commonwealth of Virginia, hereinafter Owner, and _____, hereinafter, Contractor.

WITNESSETH:

WHEREAS, the Owner is desirous of having an emergency dredging; and,

WHEREAS, the Owner has solicited bids and complied with the terms and requirements of the Virginia Public Procurement Act; and

WHEREAS, a copy of the bid form signed by _____ is attached; and

WHEREAS, the Contractor has been selected by the Owner to perform the work for a total of \$_____.

NOW, THEREFORE, in consideration of the aforesaid premises and other good and valuable consideration, Owner and Contractor agree as follows:

A. Contractor will perform all work, provide all materials, labor and supplies for dredging in accordance with the requirements of the Owner, and specified in the specifications labeled "Jackson Creek – Emergency Dredging Project", dated June 2011 available as advertised in the "Invitation to Bid - Dredging"

B. The Contractor shall maintain and provide evidence of having general liability insurance and worker's compensation insurance in the amounts that follow.

C. The Contractor acknowledges that he is an independent contractor, and not an agent or employee of the Owner. The Contractor further agrees to indemnify and hold harmless the Owner, its officers, agents, officials and employees free from any loss, claim, demand, liability, cost or suit of whatsoever nature arising out of or in any way related to the work to be performed by the Contractor herein.

D. The Contractor represents and warrants that neither he nor his sub-contractors do not discriminate against any persons on the basis of race, color, creed, sex or national origin.

- E. The Contractor agrees that this Agreement may not be assigned without the prior written permission of the Owner.
- F. The Owner may terminate the Contract if the Contractor:
1. persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
 2. fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
 3. persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
 4. otherwise is guilty of substantial breach of a provision of the Contract Documents.
- G. When any of the above reasons exist, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:
1. take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
 2. finish the work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the work.
- H. If the unpaid balance of the Contract Sum exceeds costs of finishing the work, including compensation for expenses made necessary thereby and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner.

I. The Contractor agrees to abide by the following conditions:

1. INSURANCE

The Contractor shall procure, and shall maintain throughout the life of the Contract, Commercial General Liability Insurance, Automobile and Contractor's Property Damage Insurance in the following amounts:

General Aggregate	\$2,000,000.00
Products - Comp/Op Agg.	\$2,000,000.00
Automobile	\$2,000,000.00
Personal & Adv. Injury	\$1,000,000.00
Each Occurrence	\$1,000,000.00
Fire Damage (any one fire)	\$ 50,000.00
Medical Expense (any one person)	\$ 5,000.00

Qualifications of Insurers - Insurance required shall not be carried with an insurer not authorized to do business in the state in which this Contract is performed.

The County shall be named as an additional insured on the above policies. The Contractor shall also maintain and provide evidence of having worker's compensation insurance.

2. APPLICATION FOR PAYMENTS

A. Requisition for payments must be made in duplicate using the form as shown in Section 5.

B. Applications for payment shall be made as follows:

- i. Twenty (20) percent of the original contract price upon completion of mobilization at the work site.
- ii. Fifty (50) percent of adjusted contract price upon substantial completion and notification that the final survey is needed.
- iii. Balance upon successful completion of the work, release of all claims against the County and demobilization.

3. PAYMENTS WITHHELD

A. The County of Middlesex may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any certificate to such extent as may be necessary to protect the County of Middlesex from loss on account of:

- 1) Defective work not remedied.

- 2) Claims filed or reasonable evidence indicating probable filing of claims.
 - 3) Failure of the Contractor to make payments properly to Subcontractors and for material and labor.
 - 4) Reasonable doubt that the Contract can be completed for the balance then unpaid.
 - 5) Failure to prosecute the work in a proper manner, as approved by the County Representative.
 - 6) Failure to furnish proof of material stored (see Article 2-C).
 - 7) Failure to respond to change notice request as required by the Contract.
- B. A charge of \$200.00 per day will be withheld or charged for every day or portion thereof that work goes beyond the approved completion date.
- C. When the aforementioned grounds are removed, payment shall be made for amounts withheld.

4. COMPLETION AND FINAL PAYMENT

- A. Upon completion and acceptance of all work and the release of all claims against the County of Middlesex, the Contractor shall file a request for final payment.
- B. The County of Middlesex shall pay to the Contractor the amount therein stated, less all prior payments and advances whatsoever to or for the account of the Contractor. All previous estimates and payments including those relating to extra work shall be subject to correction by this payment, which is throughout the Contract called Final Payment.
- C. The acceptance by the Contractor of the Final Payment shall be and shall operate as a release to the County of Middlesex of all claims and of all liability to the Contractor for all things done or furnished in connection with this work and for every act of this work. No payments, however, final or otherwise, shall operate to release the Contractor or his Sureties from any obligations under this Contract.

5. REQUEST FOR PAYMENT FORM FOR CONTRACTOR OR SUBCONTRACTOR

(INSERT CONTRACTOR)

DATE _____

REQUISITION NO. _____

PROJECT Jackson Creek - Phase 1 Dredging Project

ORIGINAL CONTRACT: \$ _____

Total Percentage Completed:

Mobilization (20% of original contract cost)
Substantial Completion (70% of original contract cost; includes
previous payment for mobilization)
Successful Completion (100% of contract cost)

Value of Completed Work
(original contract x % completed) \$ _____

Less Previously Paid \$ _____

If final payment,
Change orders - Add \$ _____
Change orders - Deduct \$ _____

Amount of This Payment \$ _____

TOTAL PAYMENTS TO DATE: \$ _____

CONTRACT BALANCE \$ _____

WITNESS the following signatures:

APPROVED AS TO FORM

COUNTY OF MIDDLESEX (Owner)

Michael T. Soberick
County Attorney

Matt Walker
County Administrator

(Contractor)

TECHNICAL SPECIFICATIONS
FOR
MAINTENANCE DREDGING, PHASE II
JACKSON CREEK
MIDDLESEX COUNTY, VIRGINIA

07/16

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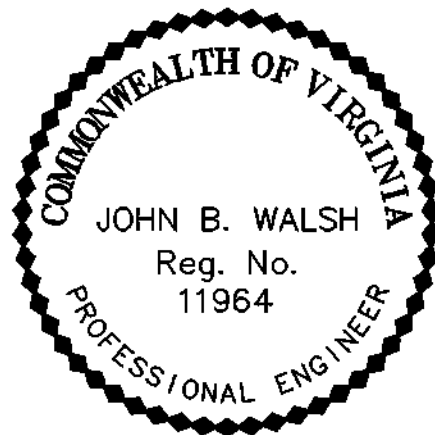
02325 Dredging

DIVISIONS 3 THRU 16

These Divisions not used.

APPENDIX A – LOCATION MAP, DREDGING PLAN & TYPICAL SECTION

APPENDIX B - ENVIRONMENTAL PERMITS



SECTION 01005

SPECIAL WORK REQUIREMENTS AND RESTRICTIONS

1 GENERAL

The Middlesex County Board of Supervisors is requesting bids from qualified contractors to dredge a portion of the Federal Channel in Jackson Creek, Deltaville, VA. The project involves dredging the channel to the depths indicated on the Bid Form and as shown Plans for Dredging prepared by Waterway Surveys & Engineering, dated July 8, 2016. The Plans for Dredging are included with the specifications and is to be used in estimating and constructing the job.

1.1 Special Work Requirements

The work consists of dredging portions of the Jackson Creek Federal project channel to the depths and widths indicated on the drawings attached in Appendix A. The Contractor may perform the scheduled work with either a mechanical dredge or a hydraulic dredge. The Owner has obtained permits from the Corps of Engineers and the Virginia Marine Resources Commission and a waiver from the Virginia Department of Environmental Quality. Copies of the permits are provided in Appendix B to these specifications. All work is to be done in accordance with the terms and conditions of these permits as well as any other county, state or federal requirements.

1.1.1 Owner-Furnished Placement Area

The Contractor can use a mechanical dredge and dispose of all excavated material at his expense in the Broad Creek upland dredged material placement site as described below in paragraph 1.2 – Transportation Restrictions.

1.1.2 Contractor-Furnished Placement Area

If the Contractor proposes to provide an alternative placement area and/or proposes to use a hydraulic dredge, the Contractor must submit written permission from the land owner with his bid. It will be the responsibility of the Contractor to obtain approvals from Middlesex County, the Army Corps of Engineers and the Virginia Marine Resources Commission prior to utilizing an alternative placement site. Obtaining timely approvals from the referenced agencies shall be the sole responsibility of the Contractor and shall be included in his proposed Time for Completion of the work. The dredged material may be pumped to an approved upland area where the material can be de-watered and remain in place if acceptable to the property owner. Alternatively, after material has de-watered, it can then be moved by an excavator and dump trucks to the Owner-furnished or other approved upland site, outside of any RPA or wetland areas.

1.2 Transportation Restrictions

The location of work is served by an all-weather surfaced road network. The Contractor may use Deltaville Marina, 274 Bucks View Lane, as an off-loading and transfer site between the barge and dump trucks. The Contractor shall use sealed-bed dump trucks to transport the dredged material to the approved placement site located on General Puller Highway (VA Rte.33). The Contractor shall keep all roads free of mud and other foreign materials resulting from his operations. All temporary construction shall be removed and the affected areas restored to their original condition. The Contractor shall propose methods for gaining access to the workplace that does not unnecessarily impact convenient and safe access to and from the area by the public. Access and egress to the work area is the responsibility of the Contractor; therefore, any required improvements to facilitate the Contractor's access/egress shall be at the expense of the Contractor. Access/egress shall be maintained throughout construction and restored to as good condition as existed prior to use.

1.3 Noise Control and Abatement

The Contractor shall employ the use of properly installed and maintained mufflers, silencers, and manufacturers' recommended sound suppressors on all plant, machinery, and equipment used on this work. The use of sound signals such as whistles, horns, or bells shall not be used if two-way radio communication can accomplish the required function. The Contractor shall not use sound signals, with the exception of those signals required for vessel operations by the U.S. Coast Guard, during the time between sunset and sunrise.

2 PHYSICAL DATA

2.1 Physical Conditions Information

The physical conditions indicated on the drawings and in the specifications are the result of site investigations and surveys. Information and data furnished or referred to below is furnished for the Contractor's information; however, it shall be expressly understood that the Owner will not be responsible for any interpretation or conclusion drawn from this information or data by the Contractor. Conditions are relative to the dates shown on the drawings.

2.2 Weather Conditions Information

Complete weather forecasts, records and reports may be obtained from the National Weather Service in Wakefield, Virginia, telephone (757) 899-4200, Menu selection service or operator assisted as applicable. The Contractor shall satisfy himself as to the hazards likely to arise from the weather conditions during the dredging period.

2.3 Weather/Physical Conditions

The location of the work is tidal and protected from most storms. The approximate mean range of tide at the site is noted on the contract drawings. Tidal currents are not of sufficient velocity to interfere with dredging operations.

2.4 Condition of Dredging and Placement Areas

The drawings show the condition of the entrance channel at the time of the most recent survey. There are not any known pipes, bridges, or tunnels or other obstructions that cross the area to be dredged. The Contractor shall exercise due care in all dredging and attendant plant operations to prevent damage to all structures, bulkheads, piers, docks, mooring piles, and any other existing items that remain in the work area during dredging operations.

The dredging and placement areas are accessible to the general public; however, the Contractor is informed the Owner will not undertake to exclude the public or restrict public access to the dredging or placement areas during the work. The Contractor shall be solely responsible for protection of the public at all times for the duration of the contract and fully comply with the provisions of OSHA safe working practices.

2.5 Channel Traffic

The traffic in the areas of the work consists of commercial vessels and barges, small craft engaged in the seafood industry and small to medium size pleasure craft. It is expected that there will be minor delays during dredging operations due to this traffic.

2.6 Obstruction of Channel

The Owner will not undertake to keep the area of channels free from vessels or other obstructions. The Contractor will be required to conduct the work in such manner as to obstruct navigation as little as possible, and in case the Contractor's plant so obstructs the channel as to make difficult or endanger the passage of vessels, said plant shall be promptly moved on the approach of any vessel to such and extent as may be necessary to afford a practicable passage. Upon the completion of the work, the Contractor shall promptly remove his plant, including ranges, buoys, piles, and other marks placed by him under this contract in navigable water or on shore.

2.7 Oyster Grounds

There are no known oyster grounds in the vicinity of the areas to be dredged.

2.8 Responsibility

The Contractor shall hold and save harmless the Owner, its officers, and employees from all claims that may arise as a result of the Contractor's negligence in connection with the work performed under the contract, or from noncompliance by the Contractor with the provisions of the contract drawings and specifications, or from noncompliance by the Contractor with the instructions of the Owner.

3 LAYOUT OF WORK AND SURVEYS

3.1 General

The Contractor shall be responsible for the layout of all work and have all markings placed in the field under the direction of a Professional Engineer or Land Surveyor currently licensed in the Commonwealth of Virginia. The markings shall be placed in the immediate work areas only and shall be removed once a work area has been accepted. The Contractor shall be

responsible for dredging within the areas and prisms as shown. The Contractor shall establish and maintain at his own expense all markings of the dredging and placement areas and shall remove same upon completion of the work. The contract completion time will not be extended due to failure of the Contractor to adequately establish and maintain his markings of the work areas.

3.2 Electronic Survey and Positioning Systems

When the Contractor utilizes electronic survey and positioning systems to perform dredging and dredged material placement operations, the systems utilized and all work accomplished with the use of the systems shall be approved by the Engineer.

3.3 Datum and Benchmarks

The plane of reference shall be mean lower low water (MLLW) as established by National Ocean Service (NOS), as used on the drawing and in these specifications. The benchmark(s) referenced on the Corps of Engineers drawing shall be used by the Contractor for the specified dredging area.

It shall be the responsibility of the Contractor to obtain tide level measurements and predictions as required to conduct his dredging operations for the duration of the work.

INSPECTION

3.4 General

The presence of the Owner's construction representative shall not relieve the Contractor of responsibility for the proper execution of the work in accordance with the specifications. The Contractor will be required:

- 3.4.1 To furnish, on the request of the Owner or any construction representative, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the dredging plant as may be reasonably necessary in inspecting and supervising the work. However, the Contractor will not be required to furnish such facilities for the surveys, prescribed in paragraph entitled "FINAL EXAMINATION AND ACCEPTANCE" of this Section.
- 3.4.2 To furnish, on the request of the Owner or any construction representative, suitable transportation from all points on shore designated by the Owner to and from the various pieces of plant, and to and from the dredged material placement site. Should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities may be furnished and maintained by the Owner, and any resultant cost incurred by the Owner will be deducted from any amounts due or to become due the Contractor.

4 PERMISSIBLE WORK DAYS AND HOURS

Dredging activity shall be limited to Mondays through Fridays, from 7:00 a.m. to 7:00 p.m. unless otherwise authorized by the Owner. If the Contractor proposes to perform work at other times, he shall obtain approval from the Owner at least 24 hours in advance. Lighting of the work sites is prohibited except as may be specifically authorized in writing by the Owner.

5 CONTINUITY OF WORK

Payment will not be made for work done in any area designated by the Owner until the full depth required under the contract is secured in the whole of such areas, nor will payment be made for excavation in any area not adjacent to and in prolongation of areas where full depth has been secured except by decision of the Owner. Should any such nonadjacent area be excavated to full depth during the operations carried on under the contract, payment for all work therein may be deferred until the required depth has been made in the area intervening.

6 SHOALING

6.1 Shoaling Prior to Dredging

The drawings and quantity estimates are based on the condition of the channel at the time of the most recent survey which was performed by the Norfolk District, Corps of Engineers on November 11, 2014. Any shoaling that has developed, subsequent to the surveys indicated on the drawings and contiguous to the areas indicated to be dredged under this contract, shall be removed by the Contractor with an applicable price adjustment, if so directed by the Owner.

6.2 Shoaling Subsequent to Dredging

If shoaling occurs before the contract is completed in any section previously accepted because of the natural lowering of the side slopes, re-dredging at an applicable price adjustment, within the limit of available funds, may be done if agreeable to both the Contractor and the Owner.

7 FINAL EXAMINATION AND ACCEPTANCE

As soon as practicable after the completion of the entire work the dredging area will be thoroughly examined by soundings conducted by the Engineer at the cost and expense of the Owner. Should any shoals, lumps, or other lack of contract depth be disclosed by this examination, the Contractor will be required to remove same at no additional cost to the Owner. If the bottom is soft and the shoal areas are small and form no material obstruction to navigation, the removal of such shoal may be waived at the discretion of the Owner. The Contractor shall provide adequate advance notice to the Owner of the completion of dredging to insure prompt performance of the after dredging acceptance survey. The Contractor shall provide the notice at least 5 calendar days in advance of anticipated completion of work. If the Contractor fails to provide this advance notice, the Owner will not be responsible for any delays caused by incomplete surveys. The Contractor will be notified when soundings are to be made, and may accompany the survey party. When the area is found to be in satisfactory condition, it will be accepted. Should more than one sounding operation by the Engineer over the area be necessary by reason of work for the removal of shoals disclosed at a prior sounding, the cost of such third and any subsequent sounding operations will be charged against the Contractor at the rate of \$4,000.00 per day for each day in which the Engineer is engaged in sounding or is in route to or from the site or held at or near the said site for such operations. Final acceptance of the whole or a part of the work and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud, or obvious error, and the acceptance of a completed section shall not change the time of payment of the retained percentages of the whole or any part of the work.

8 SIGNAL LIGHTS

The Contractor shall display signal lights and conduct his operations in accordance with the General Regulations of the Department of the Army and of the Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operations, lights to be displayed on dredge pipe lines, and day signals to be displayed by vessels of more than 65-feet in length moored or anchored in a fairway or channel, and the passing by other vessels of floating plant working in navigable channels, as approved by the Secretary of the Army and the Commandant, U. S. Coast Guard.

9 BRIDGE-TO-BRIDGE RADIO COMMUNICATION

In order that radio communication may be made with passing vessels, all dredges engaged in work under this contract shall be equipped with bridge-to-bridge radio telephone equipment in accordance with 33 USC Chapter 24, as applicable. The radio telephone equipment shall operate on a single channel very high frequency (VHF), FM, on a frequency of 156.65 megahertz (Channel 13 and 16) with low power output having a communication range of approximately 10 miles. The Federal Communications Commission has approved the frequency.

10 NOTIFICATION OF COAST GUARD

Prior to commencement of work on this contract, the Contractor shall notify the Commander, Fifth Coast Guard District of his intended operations to dredge and request that it be published in the Local Notice to Mariners. This notification must be given in sufficient time so that it appears in the Notice to Mariners at least 10 workdays prior to the commencement of this dredging operation.

10.1 Local Notice To Mariners

The Local Notice To Mariners (LNM) is available from the Coast Guard at (757) 398-6367, on the Internet at: <http://www.navcen.uscg.gov/lnm/d5/default.htm>, and from e-mail address: D5Local@LANTD5.uscg.mil. The LNM is the primary means for disseminating information concerning aids to navigation, hazards to navigation, and other items of marine information of interest to mariners on the waters of the United States; its territories, and possessions. These notices are essential to all navigators for the purpose of keeping their charts, light lists, Coast Pilots and other nautical publications up-to-date. These notices are published weekly. They may be obtained free of charge, by making application to the 5th Coast Guard District, Federal Building, 431 Crawford Street, Portsmouth, Virginia 23704. If the Contractor encounters any objects on the channel bottom during dredging operations or transport of his plant, which could be a hazard to navigation, he shall notify the Coast Guard immediately as to location and at the same time notify the Owner.

10.2 Navigation Aids

10.2.1 Relocation of Navigation Aids

The Contractor shall not relocate or move any aids to navigation that have been established by the U. S. Coast Guard. If it becomes necessary to have any aid to navigation moved in order to

complete dredging operations under this contract, the Contractor shall notify the U. S. Coast Guard in writing at the address above with a copy to the Contracting Officer not less than 21 calendar days prior to such need for movement. The Contractor shall notify the U. S. Coast Guard of the approximate time the navigation aid may be relocated to its original position. All notifications to the U.S. Coast Guard shall at the same time be provided to the County. In the event that the Contractor disturbs or damages any navigation aid during work operations, which includes during mobilization or demobilization of his plant, the Contractor shall immediately stop the activity which disturbed or damaged the navigation aid, take immediate corrective action to prevent further disturbances or damage, and shall notify the Coast Guard immediately as to location, and at the same time notify the County.

10.2.2 Use of Coast Guard Navigation Aid Structures

The Commander, Fifth Coast Guard District, has authorized the Norfolk District, Corps of Engineers, and its Contractors to use fixed Federal aids to navigation structures, established and maintained by the U. S. Coast Guard, for support of temporary dredging tide gauges when performing Federal dredging operations. If a Contractor chooses to use navigation aid structures for this purpose, he shall abide by the following requirements:

- a. The Contractor shall advise the Commander, Fifth Coast Guard District, Aids to Navigation Branch, Federal Building, 431 Crawford Street, Portsmouth, Virginia 23704, in writing, of his intention to attach tide gauges to navigation aid and structures, prior to commencing a dredging project. This notice shall include the name of each aid to navigation to which tide gauges are to be attached, and the anticipated dates the gauges will be attached and removed. A copy of this notice shall be furnished at this time to the County.
- b. The Contractor shall be required to remove any temporary tide gauges immediately upon completion of dredging operations and demobilization of dredging plant. The Contractor shall at his expense repair or replace any aids that he has damaged or destroyed as a result of the Contractor's use of such aids.
- c. This provision refers only to Federal aids to navigation structures and does not authorize the Contractor to utilize aids that are not established and maintained by the U.S. Coast Guard. This provision also does not authorize the Contractor to utilize Federal navigation aid structures for any purposes other than the support of temporary tide gauges.

11 ENVIRONMENTAL LITIGATION

If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Owner, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Owner in the administration of this contract under the terms of the "Suspension of Work" clause of this contract. The period of such suspension, delay, or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof. The term "environmental litigation" means a lawsuit alleging that the work will have an adverse

effect on the environment or that the Owner has not duly considered, either substantively or procedurally, the effect of the work on the environment.

Additionally, the Contractor will be responsible for any fines incurred due to permit violations.

*** End of Section ***

SECTION 01025

MEASUREMENT AND PAYMENT

1 LUMP SUM PAYMENT

Payment for the entire work under this contract will be based upon the Total Bid Price as listed in the BID FORM and described below. All costs for the work, which are not specifically mentioned to be included in the lump sum, shall be included. The lump sum price and payment made shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, surveys, environmental protection, meeting safety requirements, tests and reports, and for performing all work as required to complete the project.

1.1 Mobilization

Twenty percent of the original price will be paid to the contractor upon completion of his mobilization at the work site. Mobilization shall include all costs for operations accomplished prior to commencement of actual dredging operations, this shall include transfer of dredge, attendant plant, and equipment to site, all initial installation of pipe, placement site inspection and any other associated work that is necessary in advance of the actual dredging operations.

Once a notice to proceed is given, the contractor shall have 10 days to mobilize his equipment on site.

1.2 Dredging and Demobilization

Fifty percent of the original contract price may be requested upon substantial completion and notice that the job is ready for its compliance survey. The remaining balance, including any change orders, will be paid to the Contractor upon proof to the satisfaction of the County of successful completion of the job and demobilization. Final payment made shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, surveys and layouts, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for the dredging.

Payment to be made for costs associated with dredging shall include the cost of removal, transport and placement of material as indicated and specified exclusive of the mobilization and demobilization as defined above. The drawings are believed to accurately represent conditions at the time of the surveys indicated. The Contractor's bid price shall include his evaluation of shoaling, other natural changes in the waterway, or changes caused by the Contractor's operations that might occur during the period between the before dredging survey and the surveys for acceptance of the work.

Demobilization shall include general preparation for transfer of plant to its home base, removal of pipelines, cleanup of site of work including the placement area, placement site grading and transfer of plant to its home base.

1.3 Misplaced Material

Any material that is deposited elsewhere than in places designated or approved by the Owner will not be paid for, and the contractor may be required to remove such misplaced material and deposit it where directed at his expense.

1.4 Excessive Dredging

Material taken from outside the specific areas to be dredged or beyond the limits as extended in paragraph "Required Dredging Prism, Overdepth, and Side Slopes" will be considered as excessive overdepth dredging, or excessive side slope dredging. Nothing in these specifications shall be construed to prevent payment for the removal of shoals performed in accordance with the applicable provisions of Paragraph SHOALING and Paragraph FINAL EXAMINATION AND ACCEPTANCE of Section 01005. Overdepth beyond the permitted depth as shown on the plans is considered a permit violation. Fines incurred due to permit violations shall be at the Contractor's expense.

2 Liquidated Damages

A charge of \$200.00 per day will be deducted from the final payment amount for any portion of days that the project goes over the contract completion date.

*** End of Section ***

SECTION 01355

ENVIRONMENTAL PROTECTION

1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

- A. *Virginia Erosion and Sediment Control Handbook*, Latest Edition
- B. 40 CFR 68, *Chemical Accident Prevention Provisions*
- C. 40 CFR 261, *Identification and Listing of Hazardous Waste*
- D. 40 CFR 302, *Designation, Reportable Quantities, and Notification*
- E. 40 CFR 355, *Emergency Planning and Notification*
- F. EM 385-1-1, (2003) U.S. Army Corps of Engineers, *Safety and Health Requirements Manual*

2 DEFINITIONS

Environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare; unfavorably alter ecological balances of plant or animal communities; or degrade the environment from an aesthetic, cultural or historic perspective.

2.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally, or historically.

2.2 Environmental Protection

Environmental protection is the prevention and control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e.

methyl ethyl ketone, toluene), waste thinners, excess paints, excess solvents, waste solvents, excess pesticides, and contaminated pesticide equipment rinse water.

2.4 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

2.5 Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs – as well as intertidal areas.

3 ENVIRONMENTAL PROTECTION REQUIREMENTS

The Contractor shall comply with all applicable Federal, State, and local laws and regulations. The Contractor shall provide environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction.

3.1 Protection of Features

This section supplements the Contract Clause PROTECTION OF PERSONS AND PROPERTY. The Contractor shall prepare a list of features requiring protection under the provisions of the contract clause, which are not specifically identified on the drawings or otherwise specified as environmental features requiring protection. The Contractor shall protect those environmental features as indicated and specified, in spite of interference, which their preservation may cause to the Contractor's work under the contract.

3.2 Permits

This section supplements the Contractor's responsibility under the contract clause LAWS AND REGULATIONS to the extent that the Owner is in the process of obtaining environmental permits for the required dredging and dredged material placement. The contractor shall comply with the terms and conditions of these permits.

4 ENVIRONMENTAL PROTECTION PLAN

Within 10 calendar days of Notice of Award, the Contractor shall submit an Environmental Protection Plan for review and acceptance by the Owner. The Owner will consider an interim plan for the first 5 days of operations; however, the Contractor shall furnish an acceptable final plan not later than 10 calendar days after receipt of the Notice to Proceed. Acceptance is conditional and is predicated upon satisfactory performance during construction. The Owner reserves the right to require the Contractor to make changes in the Environmental Protection Plan or operations if the Owner determines that environmental protection requirements are not being met. The plan shall detail the actions that the Contractor will take to comply with all applicable Federal, State, and local laws and regulations concerning environmental protection and pollution control and abatement, as well as the additional specific requirements of this contract. No physical work at the site shall begin prior to acceptance of the Contractor's plan or

an interim plan covering the work to be performed. The environmental protection plan shall comply with the requirements of the latest edition of the *Virginia Erosion and Sediment Control Handbook* and EM 385-1-1 and include, but not be limited to, the following:

4.1 List of State and Local Laws and Regulations

The Contractor shall provide as part of the Environmental Protection Plan a list of all Federal, State and local environmental laws and regulations that apply to the construction operations under the Contract.

4.2 Spill Control Plan

The Contractor shall include as part of the environmental protection plan, a Spill Control Plan. The plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, by the Emergency Response and Community Right-to-Know Act or regulated under State or local laws or regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:

- a) The name of the individual who will be responsible for implementing and supervising the containment and cleanup.
- b) Training requirements for Contractor's personnel and methods of accomplishing the training.
- c) A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.
- d) The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
- e) The methods and procedures to be used for expeditious contaminant cleanup.
- f) The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Owner in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity spill occurs. The plan shall contain a list of the required reporting channels and telephone numbers.

4.3 Recycling and Waste Minimization Plan

The Contractor shall submit a Recycling and Waste Minimization Plan as a part of the Environmental Protection Plan. The plan shall detail the Contractor's actions to comply with the following recycling and waste minimization requirements:

The Contractor shall participate in State and local government sponsored recycling programs to reduce the volume of solid waste materials at the source.

4.4 Contaminant Prevention Plan

As a part of the Environmental Protection Plan, the Contractor shall prepare a contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.

4.5 Environmental Monitoring

The Contractor shall include in the plan the details of environmental monitoring requirements under the laws and regulations and a description of how this monitoring will be accomplished.

4.6 Pre-construction Survey

The Contractor shall perform a survey of the project site with the Owner and take photographs showing existing environmental conditions in and adjacent to the site. The results of this survey shall be prepared by the contractor and copies included in the plan.

5 SPECIAL ENVIRONMENTAL PROTECTION REQUIREMENTS

5.1 Tree Protection

No ropes, cables, or guys shall be fastened to or attached to any tree(s) for anchorage unless specifically authorized by the Owner. Where such special use is permitted, the Contractor shall provide effective protection to prevent damage to the tree and other land and vegetative resources. Unless specifically authorized by the Owner, no construction equipment or materials shall be placed or used within the dripline of trees. No excavation or fill shall be permitted within the dripline of trees.

5.2 U.S. Department of Agriculture (USDA) Quarantined Considerations

The Contractor shall thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present. The Contractor shall consult with the USDA Plant Protection and Quarantine (USDA - PPQ) jurisdictional office for additional cleaning requirements that may be necessary.

5.3 Disposal of Solid Wastes

Solid waste is rubbish, debris, waste materials, garbage, and other discarded solid materials. Solid waste shall be placed in containers and disposed on a regular schedule. All handling and disposal shall be conducted in such a way as to prevent spillage and contamination. The Contractor shall transport all solid waste and dispose in compliance with Federal, State, and local requirements.

5.4 Disposal of Contractor Generated Hazardous Wastes

Hazardous wastes are hazardous substances as defined in 40 CFR 261, or as defined by applicable State and local regulations. Hazardous waste generated by construction activities shall be removed from the work area and be disposed in compliance with Federal, State, and local requirements. The Contractor shall segregate hazardous waste from other materials and wastes, and shall protect it from the weather by placing it in a safe covered location; precautionary measures against accidental spillage such as berming or other appropriate measures shall be taken. Hazardous waste shall be removed from Owner property within 60 days. Hazardous waste shall not be dumped onto the ground, into storm sewers or open watercourses, or into the sanitary sewer system.

5.5 Fuels and Lubricants

Fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants and waste oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with Federal, State, and local laws and regulations.

6 PROTECTION OF WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters. The Contractor shall perform discharge monitoring, inspections, sampling and testing, reporting, and record keeping as indicated and specified and as set forth in the permit conditions.

7 INSPECTION

If the Owner notifies the Contractor in writing of any observed noncompliance with contract requirements or Federal, State, or local laws, regulations, or permits, the Contractor shall inform the Owner of proposed corrective action and immediately take such action to correct the noncompliance. If the Contractor fails to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action is taken. No time extensions will be granted or costs or damages allowed to the Contractor for any such suspension.

8 MAINTENANCE OF POLLUTION CONTROL FACILITIES

The Contractor shall maintain all constructed pollution control facilities and portable pollution control devices for the duration of the Contract or for the length of time construction activities create the particular pollutant.

9 TRAINING OF CONTRACTOR PERSONNEL

Contractor personnel shall be trained in environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel as a part of the weekly toolbox meetings. The training and meeting agenda shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, installation and care of facilities, and instruments required for

monitoring purposes to ensure adequate and continuous environmental protection/pollution control. Anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants shall also be discussed. Other items to be discussed shall include recognition and protection of archaeological sites and artifacts, navigation aides, wildlife and waterfowl habitats, and dredged material placement operations.

*** End of Section ***

SECTION 02325

DREDGING

1 GENERAL

1.1 Plant

The work shall be performed by either a mechanical dredge or a hydraulic dredge with all dredged material transported and placed in an approved upland placement site. Plant and equipment employed on the work shall be in satisfactory operating condition and capable of safely and efficiently performing the work as indicated or specified and shall be subject to inspection and approval by the Owner at all times. Equipment and machinery, including pipelines and supporting plant associated with hydraulic dredge operations, shall be of sufficient size and kept in good condition at all times. Any leaks or deficiencies shall be promptly and properly repaired. No reduction in the capacity of the plant employed on the work shall be made except by written permission of the Owner. The measure of the "Capacity of Plant" shall be its actual performance on the work to which these specifications apply. All floating plant and pipelines used as access ways or working platforms shall be equipped with walkways and guardrails conforming to Corps of Engineers Manual EM 385-1-1 and meet OSHA requirements for worker safety.

1.2 Character of Materials

The material to be removed from within the limits indicated on the contract drawings includes shoal material that has accumulated since the areas was last dredged. The material generally consists of fine to medium size sand. Bidders are expected to examine the site of work and decide for themselves the character of the materials.

1.2.1 Obstruction Identification

The dredging areas may contain trash, debris, and small obstructions not shown on the plans for dredging. The Contractor may encounter obstructions or other debris that is not identified and may pose a hazard to navigation. **The Contractor shall advise the Owner immediately of any obstructions or other debris of this nature that is encountered.**

2 PLACEMENT OF EXCAVATED MATERIAL

2.1 General

The Contractor shall transport and deposit the material to be excavated at his expense as indicated and specified in Paragraph 1.1 – Special Work Requirements of SECTION 01005 and in accordance with all terms and conditions of the permits and regulations. The Contractor shall make all necessary arrangements and bear all costs in connection with the placement of the dredged material.

2.2 Warning Signs

The Contractor shall erect and maintain at his own expense suitable navigation warning signs at each end of a submerged pipeline and at any other points necessary to prevent hazards to navigation.

2.3 Examination of Pipeline

The pipeline, including connections used for a submerged line, shall be examined and determined to be in good condition to reasonably expect it to last throughout the job without wearing to the extent of allowing leaks. In the event that leaks occur anywhere in the pipeline, the Contractor will be required to immediately discontinue using the respective equipment until the leaks are stopped. The Contractor shall also be required to recover at no cost to the Owner any material improperly placed because of a leak or leaks in the equipment.

2.4 Misplaced Material

The requirements and methods of dredged material placement for this contract have been planned in accordance with Environmental Permits obtained by the Owner for the scheduled work. Any material that is deposited elsewhere than in places designated or in a manner not approved by the Owner and/or the Corps of Engineers is in violation of the Environmental Permits and will not be paid for. Additionally, the Contractor may be required to remove such misplaced material and deposit it where directed by the Owner at the Contractor's expense.

3 REQUIRED DREDGING PRISM, OVER DEPTH, AND SIDE SLOPES

3.1 Required Dredging Prism

Within the specific area indicated to be dredged or areas approved by the Owner, the required dredging prism is defined by the required depths and applicable side slopes as indicated and specified in APPENDIX A of these specifications. Side slopes of 1:3 were assumed in order to estimate the bid quantities.

3.2 Method of Obtaining Soundings

Hydrographic surveys will be conducted to meet USACE Performance Standards as defined in the Hydrographic Surveying Manual, EM 1110-2-1003. Surveys will be performed by single transducer sounding techniques, multi-beam sweep type surveys, or a combination of both at the discretion of the Engineer. Bottom soundings will be obtained by the single beam survey fathometer operating at a frequency ranging from 190 to 210 Khz. When utilizing multi-beam technology, the operating frequency will range from 180 to 250 khz. All fathometers will be calibrated daily following procedures outlined in the Hydrographic Surveying Manual, EM 1110-2-1003.

3.3 Basis of Surveys

The Engineer's hydrographic surveys shall be the sole basis for determining payment for dredging and final acceptance.

4 QUALITY CONTROL

The Contractor shall establish and maintain a quality control system for all dredging operations to assure compliance with contract requirements and record his inspections and tests under this system.

4.1 Inspections and Testing Requirements

Inspections and testing shall be the responsibility of the Contractor including but not limited to the following:

4.1.1 Placement Area Inspections

Inspection of any required placement area maintenance and surveillance for leaks or breaks in pipeline.

4.1.2 Dredging Area Inspections and Tests

Inspections and tests to assure water quality standards are not exceeded in the vicinity of the dredge during dredging operations.

4.1.3 Equipment and Machinery Requirements

All measuring equipment, global positioning systems (GPS) and other electronic positioning systems, data plotting and recording equipment, and procedures associated with each respective item of equipment, shall be subject to the approval of the Owner. All records produced by the equipment shall be inspected and certified as complete by the Contractor's Quality Control Representative and included as a part of the Daily Quality Control Report.

4.1.4 Miscellaneous Inspections and Test Records

A copy of the records of all inspections and tests, as well as record of corrective action taken, shall be included in the Control Plan and furnished to the Owner as a part of the Daily Quality Control Report.

4.1.5 Inspection and Test Records

A copy of the records of inspections and tests, as well as record of corrective action taken, shall be provided to the Owner with the Daily Report of Operations.

4.1.6 Reporting and Certificates

All measuring, plotting and recording equipment and procedures shall be subject to the approval of the Owner. All records produced by the equipment shall be authenticated by an authorized representative of the Contractor and then provided to the Owner with the Daily Report of Operations.

5 REPORTING REQUIREMENT

The Contractor shall prepare and maintain a daily report of operations and furnish copies daily to the Owner. Form prescribed for recording the required information and any further instructions on the preparation and submission of the required reports will be furnished and approved by the Owner at the preconstruction conference.

*** End of Section ***