

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES	
			J	1	50
2. AMENDMENT/MODIFICATION NO. 0009	3. EFFECTIVE DATE 16-Jun-2004	4. REQUISITION/PURCHASE REQ. NO. W13G86-3142-0699		5. PROJECT NO.(If applicable)	
6. ISSUED BY U S ARMY ENGR DISTRICT, NEW ENGLAND 696 VIRGINIA RD CONCORD MA 01742-2751	CODE W912WJ	7. ADMINISTERED BY (If other than item 6) See Item 6		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)			X	9A. AMENDMENT OF SOLICITATION NO. DACW33-03-B-0006	
			X	9B. DATED (SEE ITEM 11) 02-Jul-2003	
				10A. MOD. OF CONTRACT/ORDER NO.	
				10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE		11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS		
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input checked="" type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Amendment necessary to revise Bidding Schedule, various Specification Sections, and to extend the Bid Opening date.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
			TEL: _____ EMAIL: _____		
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 16-Jun-2004	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES**1.1 CHANGES TO SOLICITATION OFFER AND AWARD****SECTION 00010 - SOLICITATION CONTRACT FORM**

The required response date/time has changed from 21-Jun-2004 02:00 PM to 28-Jun-2004 02:00 PM.

SECTION 00100 – BIDDING SCHEDULE

The Bidding Schedule is deleted and a new Bidding Schedule, revised 06/16/04, inserted in its place.

Please Note that Line Item 0002 has been deleted in its entirety and Line Item 0003AD quantity and unit have been revised.

1.2 CHANGES TO SPECIFICATIONS**1.2.1 Table of Contents**

The Table of Contents is deleted and a new Table of Contents, dated 06/16/04, inserted in its place.

1.2.2 Deleted Sections

Section **02328** UNDERWATER DRILLING AND BLASTING is deleted in its entirety from the specifications.

1.2.3 Revised Sections

The sections listed below are deleted and replaced with revised sections of the same section number as indicated. Changes in the text are indicated by additions and deletions. Added text is identified by underscoring and deleted text is identified by overstrike.

DELETE SECTION:

Section 01110
Section 01330
Section 01355
Section 01270
Section 02325

REPLACE WITH SECTION (DATED):

Section 01110 06/16/04
(Submittal Register Only)*
Section 01355 06/16/04
Section 01270 06/16/04
Section 02325 06/16/04

* Additions and deletions are not identified by underscoring and overstrike in the Submittal Register.

The previous Bidding Schedule is deleted and the replaced with the following new bidding schedule.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Mobilization and Demobilization	1	Lump Sum	N/A	\$

ITEM NO	SUPPLIES/SERVICES
0003	Maintenance Dredging and Ocean Disposal of Dredged Material

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AA	Outer 35' Main Ship Channel	41000	Cubic Yard	\$	\$
Includes 28000 cubic yards of allowable overdepth					

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AB	Outer 40' main Ship Channel and Presidents Road Anchorage	1,038,000	Cubic Yard	\$	\$
Includes 397,000 cubic yards of allowable overdepth					

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AC	40' Broad Sound Channel	61000	Cubic Yard	\$	\$
Includes 32000 cubic yards of allowable overdepth					

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AD	Boulder Excavation and Disposal	1	Lump Sum	N/A	\$

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004	Removal and Disposal of Steel Deck Barge	1	Lump Sum	N/A	\$

TOTAL ESTIMATED AMOUNT: \$ _____

ATTACHMENTS

Section 01110

Section 01270

Section 01330 - (Submittal Register Only)*

Section 01355

Section 02325

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01110

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PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

The general description below is given to indicate the approximate scope of this project only. It does not limit the work required under the project drawings and specifications.

Maintenance dredging of the Federal project will be performed to restore the Main Ship Channel from the Ted Williams Tunnel to the President Roads Channel and Anchorage area, the President Roads channel and anchorage area, and the 40-foot Broad Sound North Channel and the approach to the Navy Dry Dock off the Main Ship Channel to their authorized depths. Sandy silt and clay dredged material will be removed from the Federal project. ~~Rock ledge and some large boulders will be blasted and removed by mechanical means.~~ A sunken flat deck barge about 100-120 feet long and 40-50 feet wide will also be broken up and removed. All material dredged from the Harbor, except the sunken barge, shall be disposed of at the Massachusetts Bay Disposal Site (MBDS).

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Progress Schedule; G, C.

In accordance with the contract clauses, the Contractor shall, within five (5) days after receipt of notice to proceed or as otherwise determined by the Contracting Officer, submit for approval a practicable progress schedule. When changes are authorized that result in contract time extensions, Contractor shall submit a modified chart for approval by the Contracting Officer.

1.3 PROJECT/SITE CONDITIONS

1.3.1 Physical Data

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

- a. Site Conditions: The indications of physical conditions on the drawings and in the specifications are the result of site investigations and surveys. The conditions represented prevailed at

the time the investigations and surveys were made. A pre-dredge survey may be performed by the Government of the areas to be dredged prior to the start of Contractor dredging operations at the site. Before commencing work at the site, the Contractor shall verify the existing conditions indicated on the drawings and in the specifications. See CONTRACT CLAUSE entitled "SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK."

b. Weather Conditions: The monthly normal mean temperature and the monthly normal mean precipitation for the site may be obtained by the Contractor from the nearest U.S. National Weather Service Office.

c. Tide Conditions: The mean tide level is 9.0 feet. The fastest tidal currents in Boston outer harbor occur in the deep ship channels (up to 1.4 knots) during spring tides in the southern lane of the Main Ship Channel (Corps/Massport, 1994).

d. Conditions of Channel and Anchorage: Maintenance dredging of the navigation channel was last undertaken in 1983, when about 450,000 cy of material was dredged. Soundings shown on the contract drawings are the results of surveys conducted during the time period indicated on the drawings and are believed to indicate existing conditions.

f. Channel Traffic: Boston Harbor and the adjacent areas to be dredged are mainly used by deep draft commercial vessels, fishing vessels, and numerous small recreation and commercial craft, which may cause some interference with contract operations. Oil barges frequent the harbor during the winter heating season. Certain restrictions on vessel movement are in place when liquid natural gas tankers traverse the harbor. The Contractor will be required to conduct the work in such a manner as to obstruct navigation as little as possible, and in the event the Contractor's plant so obstructs the channel as to make difficult or endanger the passage of any vessels, the plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. Moving of dredging plant may also be based on the determination of the docking pilot if vessel traffic requires it.

g. Height Limitations: The Contractor shall coordinate his construction activities with the FAA and Massport Aviation Department's Operations Unit. Height limitations of crane booms, hoisting equipment or other equipment used by the Contractor to complete the dredging shall conform to the ceiling heights established by the FAA. The FAA will require the Contractor to stop work in the event declining weather conditions hinder visibility to the extent that the Contractor's plant becomes a hazard to flying aircraft. Also, when performing dredging operations in the Navy Dry Dock Channel and Main Ship channel near the airport, the dredge shall not be moored in the area during non-work periods or the crane boom shall be lowered.

1.4 SEQUENCING AND SCHEDULING

1.4.1 Hours of Operations

~~Except as specified for particular items of work, such as blasting, t~~The Contractor will be allowed to perform work 24 hours per day, 7 days per week, including holidays, for the entire performance period. Refer to other sections of these specifications for environmental requirements and restrictions to dredging and disposal activities and for temporary

suspension of the work, if required.

1.4.2 Work Sequence

1.4.2.1 General

There are certain essential criteria relative to the preparation of a work sequence and time schedule which the Contractor will be required to implement and follow during the prosecution of the work. Minor variations in the sequence of the items of work as approved may be made by the Contractor, provided such variations do not conflict with critical elements of the schedule and permit requirements. Variations shall be approved by the Contracting Officer prior to implementation.

1.4.2.2 Progress Schedule

The progress schedule shall be in the form of a chart graphically indicating the sequence proposed to accomplish each work feature or operation. The chart shall be prepared to show the starting and completion dates of all work features on a linear horizontal time scale beginning with date of Notice to Proceed and indicating calendar days to completion. Contractor shall indicate on the chart the important work features or operations that are critical to the timely overall completion of the project. Key dates for such important work features and portions of work features are milestone dates and shall be so indicated on the chart. This schedule will be the medium through which the timeliness of the Contractor's construction effort is appraised. Anticipated adverse weather delay days shall be included in the schedule.

1.4.3 Organization at the Site

1.4.3.1 General

The Contractor shall employ ample personnel and sufficient equipment to accomplish the work of this contract in the least amount of time, within the specified prosecution period.

1.4.3.2 Rate of Progress

Should the Contractor fail to maintain a satisfactory rate of progress, the Contracting Officer may require that additional personnel and equipment be placed on the work and weekend and overtime work be performed, in order that the work be brought up to schedule and maintained.

1.5 CONTRACTOR USE OF PREMISES

1.5.1 Storage Areas

Storage area will be provided to the Contractor at the prework conference. Area will be made available for one office trailer, pickup truck parking, and other minor materials. The Contractor shall confine his storage areas to the limits as designated or approved by the Contracting Officer and Harbormaster and shall be responsible for the security of the areas. Upon completion of the contract, the Contractor shall remove all equipment and materials, except as otherwise specified, and restore the site to its original condition as approved by the Contracting Officer at no additional cost to the Government.

1.5.1.1 Work Limits

The limits of work consist of the shoaled areas of the channel and anchorage, and the locations for the removal of ~~ledge rock~~, boulders, and the sunken barge, as shown on the contract drawings, including the side slope areas which must be dredged to obtain the required depth.

1.5.2 Contractor's Receipt of Supplies

The Contractor shall be responsible for all arrangements for the receipt of materials and supplies at the job site. Government personnel are not permitted to receive or sign for items delivered to the site.

1.5.3 Access to Work Site

Access to the project site is limited as shown on the drawings.

1.6 COORDINATION

1.6.1 Public Notice

The public shall be notified of this dredging project approximately two weeks before commencement of dredging operations at the site. A brief description of the work to be performed and the intended schedule of dredging and disposal operations shall be published in a newspaper of general circulation in the area adjacent to the dredging. The notice shall include the locations where the work is to be performed, the time sequence of events, a map of the haul route to be followed between the dredging areas and the disposal site with reference to the width of the haul lane, the location and limits of the disposal site, and the procedure the Contractor will use to respond to claims of loss of fishing gear during the hauling work. The notice shall include the Contractor's point of contact and telephone number.

1.6.2 Coast Guard

All work conducted in areas in or adjacent to the ship channel shall be coordinated with the U.S. Coast Guard.

1.6.3 Notice to Mariners

Before beginning dredging operations, the Contractor shall coordinate with the U.S. Coast Guard (USCG) to issue a "Notice to Mariners" regarding the work to be performed and the Contractor's proposed operations.

The Corps of Engineers and the USCG have agreed to phraseology when issuing navigational bulletins and notices. The information furnished shall be consistent with USCG Broadcast Notice to Mariners and Local Notice to Mariners. When requesting local USCG offices to issue navigational information for Corps of Engineers work involving marine construction, the following terminology shall be used, as applicable:

For cautionary areas: "Mariners are urged to use extreme caution in the area."

For dredging and work operations: "Mariners are urged to transit at their slowest safe speed to minimize wake and proceed with caution after passing arrangements have been made."

1.6.4 Aids to Navigation

Aids to navigation have been placed by the Coast Guard. The Contractor shall coordinate with the Coast Guard in advance of any dredging work to provide for any necessary relocation or movement of aids to navigation. The Contractor shall also contact the Coast Guard at the completion of all work and the removal of all dredging plant from the Harbor.

1.6.5 Harbormaster

Before beginning dredging operations and barge transport of dredged materials, the Contractor shall coordinate his work operations with the Boston Harbor Master, Sergeant Robert P. Guiney, Boston Police Department, Telephone Number (617)343-4721, (617)343-5349(fax), Beeper (617)-343-5617 #706.

1.6.6 Boston Lobstermen

Before beginning dredging operations and barge transport of dredged materials, the Contractor shall coordinate work areas and barge routes with the Boston Harbor Lobstermen's Cooperative, (Mr. Al Ferent, 30 Ericson Road, Weymouth, MA 02188, 781-331-4593; and the Massachusetts Lobstermen's Association Mr. Bill Adler, 8 Otis Place, Scituate, MA 02066, Telephone Numbers (781)545-6984, 781-834-7418, and (617)545-7837(fax). EMAIL is mla@lobstermen.com

1.6.7 Docking Pilots

In come cases the channels to be dredged will not permit ship traffic during dredging operations, timely communication between the dredge and the Docking Pilots is necessary to avoid conflicts. The Contractor shall maintain daily telephone contact with the dispatchers at Boston Towing and Transportation (781) 567-9100 ext 111 or ext 112 and Bay State Towing (781) 561-0223. While dredge operations are underway the Contractor shall monitor VHF channel 13. Since vessel movements are apt to occur on a random basis, the Contractor shall provide a positive means of communication between the dredge and the towing companies such as a cell phone number.

1.6.8 Weekly Schedule to Users of the Harbor

Coordination with users of the harbor is critical for a smooth operation. All parties should have knowledge of the others' potential activities. Therefore, the Contractor shall prepare a weekly schedule of dredging and disposal activities and forward it to the following:

US Coast Guard: Lt Gary Williams, Chief Waterways 617-223-3030
(617-223-3032 Fax)

Boston Pilots: Captain Larry Cannon 617-569-4500 (617-569-4502 fax)

Harbormaster: Sgt. Robert Guiney (617) 343-5349 (fax), telephone
617-343-4721.

Boston Harbor Lobstermen Co-op: Alex Ferent 781-331-4593 (781-812-1446 Fax)

Mass. Lobstermen Assoc: - Mr. Bill Adler 781-545-6984 (617) 545-7837 (fax)

Docking Masters: Mr. Dave Galman (617) 567-2583 (fax) Mr. Mike Duarte

(617) 561-0813 (fax)

This weekly schedule shall identify all anticipated dredging and disposal activities and shall be updated as appropriate.

1.6.9 Points of Contact

a. Coast Guard: Lt. Frank Kingett (617) 223-8384.

b. Harbor Master: Sergeant Robert P. Guiney, 617-343-4721.

1.7 PRECONSTRUCTION CONFERENCE

The Contracting Officer will conduct a preconstruction conference with key Contractor personnel. The purpose of the conference is to review contract requirements and to establish a working relationship between the Contractor's Staff and the Corps Of Engineers personnel who will be closely associated with the project. During the conference, the Contracting Officer will inform the Contractor concerning Job Safety, Quality Control, Labor Relations, and Environmental Protection. The Contractor's Superintendent, Quality Control Representative, and Site Safety and Health Officer (SSHO) shall attend this conference. All submittals which are ready for submission prior to start of work may be brought to the conference for distribution to the participating reviewers.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01270

MEASUREMENT AND PAYMENT

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- 1.4 UNIT PRICE PAYMENT ITEMS
- 1.5 BIDDING SCHEDULE - PAYMENT ITEMS
 - 1.5.1 Item No. 0001, "Mobilization and Demobilization for Dredging"
 - 1.5.2 Item No. 0003, "Maintenance Dredging and Ocean Disposal of Dredged Material"
 - 1.5.3 Item No. 0003AD, Boulder Excavation and Disposal
 - 1.5.4 Item No. 0004 "Removal and Disposal of Steel Hull Deck Barge"

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 REFERENCES (Not Applicable)

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-05 Design Data

Quantity Surveys

Submit originals of all field notes and all other records relating to the quantity surveys.

1.3 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.4 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items. Submit originals of all field notes and all other records relating to Quantity Surveys.

1.5 BIDDING SCHEDULE - PAYMENT ITEMS

Payment items for the work of this contract on which the contract progress payments will be based are listed in the BIDDING SCHEDULE and are described below. All costs for items of work, which are not specifically mentioned to be included in a particular Bidding Schedule lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved.

1.5.1 **Item No. 0001, "Mobilization and Demobilization for Dredging"**

- a. Payment will be made for costs associated with mobilization and demobilization for dredging operations, as defined in Special Contract Requirements clause "PAYMENT FOR MOBILIZATION AND DEMOBILIZATION."
- b. Unit of measure: lump sum.

~~1.4.2 **Item No. 0002, "Mobilization and Demobilization for Blasting Operations"**~~

- ~~a. Payment will be made for costs associated with mobilization and demobilization of equipment and materials for performing blasting operations, as defined in Special Contract Requirements clause "PAYMENT FOR MOBILIZATION AND DEMOBILIZATION." Separate payment will be made for the mobilization and demobilization of equipment and materials for performing dredging operations as specified above for Item No. 0001.~~
- ~~b. Unit of measure: lump sum.~~

1.5.2 **Item No. 0003, "Maintenance Dredging and Ocean Disposal of Dredged Material"**

Item No. 0003AA, "Outer 35' Main Ship Channel"

Item No. 0003AB, "Outer 40' Main Ship Channel and Presidents Roads Anchorage"

Item No. 0003AC, "40' Broad Sound Channel"

~~**Item No. 0003AD, "Navy Dry Dock"**~~

~~**Item No. 0003AE "Ledge Rock Excavation and Disposal"**~~

- a. The contract price per cubic yard for the Payment Items listed above shall include all cost of removal and disposal of all materials, except as specified below for "Boulder Excavation and Disposal," from the applicable Federal Channels and Anchorage Areas indicated on contract drawings for each site.
- b. The total amount of material removed and paid for under the contract for this Item, will be measured by the cubic yard in place by computing the volume between the bottom surface shown by soundings of the last pre-dredge survey made before dredging begins and the bottom surface shown by the soundings of a post-dredge survey made as soon as practicable after the removal of the material, including that within the limits of the side slopes and specified channel overdepth as described in Section 02325 DREDGING, paragraph OVERDEPTH AND SIDE SLOPES, less any deductions that may be required for misplaced material described in paragraph DISPOSAL OF EXCAVATED MATERIAL.
- c. The contract drawings listed in Special Contract Requirements, Paragraph "Contract Drawings, Maps and Specifications" are believed to accurately represent conditions existing on the date of the survey shown on the drawings, but the depths and the specific areas to be dredged shown thereon may be verified and corrected by soundings taken by the Government before dredging begins. Determination of quantities removed and the deductions made to determine quantities after having once been made by the Contracting Officer, will not be reopened, except on evidence of collusion,

fraud, or obvious error.

d. Monthly partial payments will be based on approximate quantities determined by Contractor quality control surveys. The pre-dredge survey made immediately before dredging, and the post-dredge survey made as soon as practicable after the removal of the material, will be performed by the Government at no cost to the Contractor.

e. Unit of measure: Cubic Yard.

1.5.3 Item No. 0003AF~~D~~, Boulder Excavation and Disposal

a. The contract price ~~per ton~~ for Item No. 0003AF, "Boulder Excavation and Disposal" shall include all cost of removal and disposal of two boulders, measuring approximately 4'x4'x4' and 8'x8'x8' respectively, ~~qualifying heavy boulders from the Federal Channel by mechanical means, in accordance with Section 02325 DREDGING~~~~02328 UNDERWATER DRILLING AND BLASTING.~~

~~b. Qualifying heavy boulders are defined as large rocks which can not be removed by the plant and equipment employed for the project, but which require equipment, procedures and, techniques not a part of the ordinary dredging operation, to accomplish the removal, such as drilling and blasting. Qualifying heavy~~The boulders shall be disposed in the same manner as maintenance material. ~~Each boulder or rock piece removed by the Contractors special plant or equipment will be measured and photographed by the on site Contracting Officer Representative, who will calculate the weight of the object for payment.~~ No volume deduction will be made under the above payment items for "Maintenance Dredging and Disposal" for the volume of removed and disposed boulders under this payment item.

c. Verification of removal will be made by the Government using soundings.

~~d. Unit of measure: Ton (2,000 lbs).~~

d. Unit of measure: lump sum.

1.5.4 Item No. 0004 "Removal and Disposal of Steel Hull Deck Barge"

a. Payment will be made for all costs associated with operations necessary for the location, removal and proper disposal of the steel hull deck barge as specified in Section 02325.

b. Verification of removal will be made by the Government using soundings.

c. Unit of Measure: One job, Lump Sum.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SUBMITTAL REGISTER

CONTRACT NO.
DACW33-03-B-0006

TITLE AND LOCATION
MAINTENANCE DREDGING BOSTON HARBOR, BOSTON, MA

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01110	SD-01 Preconstruction Submittals														
			Progress Schedule	1.4.2.2	G C												
		01270	SD-05 Design Data														
			Quantity Surveys	1.4													
		01355	SD-01 Preconstruction Submittals														
			Environmental Protection Plan	1.7	G RE												
			SD-03 Product Data														
			Fish Startle Equipment and Sonar		G RE												
			SD-07 Certificates														
			Fisheries Observer		G ED												
			Marine Mammal Observer		G ED												
		01500	SD-01 Preconstruction Submittals														
			Site Plan		G RE												
			SD-02 Shop Drawings														
			Temporary Electrical System		G RE												
		01525	SD-01 Preconstruction Submittals														
			Accident Prevention Plan (APP)	1.8	G RE												
			Activity Hazard Analysis (AHA)	1.9	G RE												
			SD-06 Test Reports														
			Reports	1.13													
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SUBMITTAL REGISTER

CONTRACT NO.
DACW33-03-B-0006

TITLE AND LOCATION
MAINTENANCE DREDGING BOSTON HARBOR, BOSTON, MA

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEWER	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01545	SD-01 Preconstruction Submittals Plant and Equipment														
		01723	SD-01 Preconstruction Submittals Survey Plans Layout Plan Charts Survey Personnel	3.1.1	RE RE												
			SD-05 Design Data Field Survey Data Electronic Tracking System	1.7													
		02325	SD-01 Preconstruction Submittals Work Plan Enclosed, Clamshell Bucket Performance Data Debris Management Plan Inspection of Disposal Scow Cards	3.1.2	RE C												
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SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 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.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328	Definitions
40 CFR 68	Chemical Accident Prevention Provisions
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification

ENGINEERING MANUALS (EM)

EM 385-1-1	(1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual
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1.2 DEFINITIONS

1.2.1 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 and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/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.

1.2.3 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 etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Pesticide

Pesticide is defined as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

1.2.5 Pests

The term "pests" means arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.2.6 Waters of the United States

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

1.3 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

1.5 PAYMENT

No separate payment will be made for work covered under this section. The Contractor shall be responsible for payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor. All costs associated with this section shall be included in the contract price. The Contractor shall be responsible for payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations.

1.6 SUBMITTALS

Government approval is required for submittals with a "G" designation;

submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G, RE

The environmental protection plan.

SD-03 Product Data

Fish Startle Equipment and Sonar; G, RE.

Note that Fish Startle Equipment and Sonar will be required only in the event underwater blasting is proposed by the Contractor as a means for the removal of the sunk barge shown on the drawings. Submit for review and approval sufficient data showing compliance with specification requirements.

SD-07 Certificates

Fisheries Observer; G, ED.

Note that a Fisheries Observer will be required only in the event underwater blasting is proposed by the Contractor as a means for the removal of the sunk barge shown on the drawings. Submit for review and approval the name and qualifications of the Fisheries Observer. Present evidence that the Fisheries Observer is acceptable to the Massachusetts Division of Marine Fisheries and the National Marine Fisheries Service.

Marine Mammal Observer; G, ED.

Submit for review and approval the name and qualifications of the Marine Mammal Observer. Present evidence that the Marine Mammal Observer meets the qualifications as specified in the "Conditions Recommended by the National Marine Fisheries Service for Projects Funded or Undertaken by the Corps of Engineers that Include Disposal of Dredged Material at the Massachusetts Bay Disposal Site" attached at the end of this section.

1.7 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Contracting Officer for the purpose of discussing the implementation of the

initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

1.7.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.7.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

- a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
- b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program.
- e. A silt and sediment control plan which identifies the equipment and construction methods to minimize dispersment of silt and sediment during dredging operations. The plan shall include monitoring and reporting requirements to assure that the control measures are in compliance with the plan.
- j. The Spill Control 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, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:
 1. 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 Contracting Officer and the local Fire Department 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 is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.
 2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

3. Training requirements for Contractor's personnel and methods of accomplishing the training.
 4. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.
 5. 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.
 6. The methods and procedures to be used for expeditious contaminant cleanup.
- k. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including debris collected during dredging operations. The Contractor shall identify any subcontractors responsible for the transportation and disposal of solid waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal facility's acceptance of the solid waste shall be attached to this plan during the construction.
- m. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.
- n. 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.
- o. Note that a Fisheries Observer, "Fish Detection and Protection Plan" and Fish Startle Equipment and Sonar will be required only in the event underwater blasting is proposed by the Contractor as a means for the removal of the sunk barge shown on the drawings. Protection of Fish and Wildlife Resources: The Contractor shall prepare and submit a "Fish Detection and Protection Plan" and a "Marine Mammal Protection Plan" as part of the Environmental Protection Plan. The plan shall include the names and qualifications of the designated observers, as well as specific details regarding protection of fish and wildlife resources during the work, including the type of fish deterrent system that will be used. If at any time during the implementation of the project, a significant fish kill or significant water quality problem occurs, and can be attributed to the project, all site activities impacting the water shall cease until the source of the problem is identified. Adequate mitigating measures shall be followed upon discussion with the appropriate state, Federal, State, and local agencies. The Contractor shall also comply with all aspects of the "Legal Requirements for operation of any vessel around North Atlantic Right Whales:" and other requirements relative to the protection of marine mammals attached at the end of this section. See also Section

02492 UNDERWATER DRILLING AND BLASTING for additional requirements for the protection of fish and wildlife to be included in the plans.

1.7.3 Appendix

Copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents shall be attached, as an appendix, to the Environmental Protection Plan.

1.8 PROTECTION FEATURES

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, the Contractor and the Contracting Officer shall make a joint condition survey. Immediately following the survey, the Contractor shall prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report shall be signed by both the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness. The Contractor shall protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the Contractor's work under the contract.

1.9 SPECIAL ENVIRONMENTAL REQUIREMENTS

The Contractor shall comply with the special environmental requirements included below. These special environmental requirements are an outgrowth of environmental commitments made by the Government during the project development.

1.9.1 Fisheries Observer

Note that a Fisheries Observer, "Fish Detection and Protection Plan" and Fish Startle Equipment and Sonar will be required only in the event underwater blasting is proposed by the Contractor as a means for the removal of the sunk barge shown on the drawings. The Contractor shall provide the services of a Fisheries Observer with qualifications acceptable to the Massachusetts Division of Marine Fisheries and the National Marine Fisheries Service. The Fisheries Observer will be responsible for prohibiting blasting operations during the passage of schools of fish and other duties as specified, including performing marine mammal observer duties in the absence of the Marine Mammal Observer. Funding of the Fisheries Observer shall be the Contractor's responsibility. The Fisheries Observer shall be approved by the Contracting Officer. The Contractor shall provide sonar equipment and fish startle equipment for the exclusive use of the Fisheries Observer for performing ~~dredging~~ blasting operations ~~at the specific locations and time periods specified in Section 02325-DREDGING~~ ~~02328 UNDERWATER DRILLING AND BLASTING.~~

Sonar (hydroacoustic monitoring equipment) shall be a side-scan type, which can provide a low target recognition value, distance to fish, determine the direction the fish are traveling, and provide a record of the information collected on a tape or disk.

Fish startle equipment shall be capable of deterring fish from the family Cupeidae (blueback herring, alewife) using high amplitude sound at specific frequencies. The equipment shall be similar or approved equal to Electronic Fish Startle System (EFSS) by Sonalysts, Inc., 215 Parkway North, Waterford, CT.

1.9.1.1 Marine Mammal Observer

The Contractor shall provide the services of a Marine Mammal Observer with qualifications and duties as specified in the "Conditions Recommended by the National Marine Fisheries Service for Projects Funded or Undertaken by the Corps of Engineers that Include Disposal of Dredged Material at the Massachusetts Bay Disposal Site" attached at the end of this section. Provide ~~whale~~ mammal observers on board the scows transiting to the MBDS from February 1 to May 31 to avoid potential ship strikes, and for all underwater blasting operations. The Marine Mammal Observer will be responsible for prohibiting harassment of marine mammals and sea turtles during disposal operations, February 1 to May 31, and for all blasting operations. Funding of the Marine Mammal Observer shall be the Contractor's responsibility. The Marine Mammal Observer shall be approved by the Contracting Officer.

1.10 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.11 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

This Article supplements the Contractor's responsibility under the contract clause PERMITS AND RESPONSIBILITIES to the extent that the Government has already obtained the listed environmental permits issued for the Boston Harbor maintenance Project. A Coastal Zone Consistency Determination has been obtained for this project. The Contractor shall comply with permit

terms and conditions that are applicable to this contract. Such applicable terms and conditions have been extracted from the permit and are specified in the various sections of these specifications and on the contract drawings. The above referenced document shall not be relied on for contract requirements. In the event a discrepancy is discovered between the reference document and these specifications or the contract drawings, the Contractor shall notify the Contracting Officer for clarification. The Contracting Officer will rely on permit requirements and conditions to resolve perceived conflicts. A copy of the Coastal Zone Consistency Determination obtained for this project is included at the end of this section for reference only.

3.2 WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters.

3.3 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

3.3.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall comply with all State and local visibility regulations.

3.3.2 Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

3.3.3 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with the provisions of the State of Massachusetts rules.

3.4 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.4.1 Solid Wastes

Solid wastes shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of landfill areas.

3.4.2 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. Storage of fuel on the project site shall be accordance with all Federal, State, and local laws and regulations.

3.5 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in impact to or the destruction of these resources. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.6 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

3.7 PREVIOUSLY USED EQUIPMENT

The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

3.8 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.9 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings

shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, 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; recognition and protection of archaeological sites, artifacts, and endangered species and their habitat that are known to be in the area.

3.10 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

ATTACHMENTS

Boston Harbor Fisheries (and Marine Mammal) Observer Criteria

The fisheries observer should have an educational background in marine biology, general experience aboard dredges, and hands on field experience with Massachusetts marine fish species. A person who does not have a college degree in marine biology or related field may be qualified as an observer if s/he has field experience with fisheries, sonar, and fish startle systems..

1. Education: College degree (B.S. or higher) in marine biology or related field.
2. Field Experience and Equivalents:
 - a. Documented field research focused on Massachusetts marine fish species or its habitat OR has worked at least two years on a commercial fishing vessel identifying and locating at least two of the following fish species, rainbow smelt, alewife, blueback herring, menhaden, winter flounder, and striped bass, using sonar AND
 - b. Has at least one month of work experience with a fish startle system.
3. Dredge Experience: Experience in any capacity aboard dredges of the same type as those to be used in the proposed project, would be helpful.
4. Skill Set - Observers must be able to:
 - a. identify the following six species: rainbow smelt (*Osmerus mordax*), alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), menhaden (*Brevoortia tyrannus*), winter flounder (*Pseudopleuronectes americanus*), and striped bass (*Morone saxatilis*).
 - b. take standard field measurements (total length and weight) of fish killed by blasting (i.e. floating at the surface), if more than a few dozen fish. If hundreds or thousands of fish are killed, then representative samples will be taken.
 - c. run the fish startle system and observe and record the behavior of fish before and during use of the fish startle system.
 - d. observe fish patterns and any marine mammals (such as harbor porpoises and seals) in the area, and advise dredge and disposal operators on the appropriate blast timing to avoid impacting these biological resources.
 - e. provide a summary report of data collected on fish behavior, before and during the use of the fish startle system, results of fish killed (including species, length, and weight) during blasting, and observations of marine mammals to dredging and blasting operations.

**Conditions Recommended by the National Marine Fisheries Service for
Projects Funded or Undertaken by the Corps of Engineers that Include
Disposal of Dredged Material at the Massachusetts Bay Disposal Site**

(1) From February 1 through May 31 of any year, disposal vessels including tugs, barges, and scows transiting between the dredge site and the Massachusetts Bay Disposal Site shall operate at speeds not to exceed 5 knots after sunset, before sunrise, or in daylight conditions where visibility is less than one nautical mile. Disposal shall not proceed if these requirements cannot be met due to weather or sea conditions. In that regard, the vessel captain and/or contractor should be aware of predicted conditions before departing for the disposal site. The intent of this condition is to reduce the potential for vessel collisions with threatened and endangered species, including right whales.

(2) From February 1 through May 31 of any year, an approved marine observer (i.e., meeting the attached National Marine Fisheries Service (NMFS) criteria on observer qualifications, including the specified skill sets for sea turtles and whales) must be present aboard disposal vessel transiting between the dredge site and the Massachusetts Bay Disposal Site during daylight hours. When threatened or endangered species are observed to be present, the vessel captain shall, except when precluded by safety considerations, follow the advice of the marine mammal observer to avoid harassment of or direct impact to individual animals. The observer shall fully complete a separate Corps of Engineers marine mammal observation report for every sighting and shall ensure that this report is received by the Corps New England District, Environmental Resources Section (fax number (978) 318-8560) and The Regulatory Compliance Branch (fax number (978) 318-8303) within one week of the trip date. The observer shall maintain contact with the NMFS (Habitat and Protected Resource Division, phone number (508)281-9328) and other recognized experts to provide and receive information regarding the presence and distribution of threatened and endangered species in Massachusetts Bay. All right whale sightings (including location) shall be reported. The contractor or observer shall call a pager # 978-585-8473 if a right whale is spotted. The intent of this condition is to reduce the potential for vessel collisions with threatened and endangered species, including right whales, and to minimize potential impacts of dredged material disposal on threatened and endangered species.

Marine mammal observers shall use the following guidelines to minimize conflicts with threatened or endangered species:

(a) A marine mammal observer shall be posted on lookout at all times during daylight hours when disposal vessels have left the harbor and are underway or at the disposal site.

(b) Disposal vessels shall not approach threatened or endangered species closer than 100 feet (see additional condition below for approaching right whales).

(c) Disposal vessels shall adhere to the attached NMFS regulations for approaching right whales, 50 CFR Part 222.32, which restrict approaches within 500 yards of a right whale and specify avoidance measures for vessels that encounter right whales.

(d) If threatened or endangered species are sighted within 500 feet from

the disposal point, dredged material shall not be released. In this case, the vessel captain may elect to wait until the animals move away from the disposal point prior to disposal, or, subject to the judgement of the observer, may dispose at an authorized alternative disposal location under the same restrictions noted herein for disposal at the primary disposal location.

(e) If threatened or endangered species are sighted between 500 feet and 1500 feet from the disposal point, the observer shall note the animal's behavior, relative position, and direction and speed of movement to determine if release of dredged material is likely to harass or endanger the animals. For example, whales actively feeding at or near the disposal point are more likely than resting whales to interact with released sediments. If the observer judges that disposal is likely to harass or endanger the animals, the observer shall inform the vessel captain and disposal shall be delayed until the animals change their behavior or move away such that the observer judges that no danger to the animals will result from disposal.

OBSERVER CREDENTIALS

Certain credentials and experience might indicate an observer has the skills listed below. Ideally, the applicant will have an educational background in marine biology, general experience aboard dredges, and hands on field experience with the species of concern.

A person who does not have a college degree in marine biology or a related field may be qualified as an observer if she/he has successfully completed an approved endangered species dredge observer training program (item 3a), and has twice the experience identified as necessary in items 2b, 3c, and 3d.

1. EDUCATION: College degree (BS or higher) in marine biology or a related field, and
2. DREDGE/FLOAT EXPERIENCE:
 - a) For shortnose sturgeon or sea turtle observers: Work for a minimum of one week in any capacity aboard dredges of the same type as those to be used in the proposed project, or
 - b) For large whale observers: Work for a minimum of two months as a naturalist or wildlife guide aboard an active whale watch vessel or other vessel primarily engaged in the observation of large whales in the wild, and
3. FIELD EXPERIENCE AND EQUIVALENTS
 - a) Successful completion of an approved endangered species dredge observer training course, or
 - b) Documented field research focused on the species or its habitat, or
 - c) Work for a minimum of four months as an endangered species observer-in-training aboard dredges that have interacted with the species in question, or
 - d) Active involvement for a minimum of one year in organized responses to protected species stranding events where sea turtles and marine mammals are identified and handled.

Note: If dredge operations are likely to interact with more than one group of protected species, the observer must demonstrate that he/she has all of the respective skill sets.

4. SKILL SETS

- a) Observers must be able to identify sea turtle species.
- b) Observers must be able to advise dredge operators on the appropriate maneuvering to avoid harassing or impacting sea turtles.
- c) Observers must be able to identify endangered whale species that may be encountered during project operations.
- d) Observers must be able to discern whale behaviors, such as milling, traveling, and feeding.
- e) Observers must be able to demonstrate knowledge of individually distinctive markings on humpback and right whales for identification purposes.

5. NOAA AND NMFS APPROVAL

Marine mammal observers for this project shall be NOAA Fisheries approved observers and shall also have written approval/certification from the National Marine Fisheries Service (NMFS).

I. Legal Requirements for operation of any vessel around North Atlantic Right Whales:

50 CFR Parts 217 and 222

222.32 Approaching North Atlantic Right Whales

(a) Prohibitions. Except as provided under paragraph (c) of this section, it is unlawful for any person subject to the jurisdiction of the United States to commit, attempt to commit, to solicit another to commit, or cause to be committed any of the following acts:

(1) Approach (including by interception) within 500 yards (460m) of a right whale by vessel, aircraft, or any other means;

(2) Fail to undertake required right whale avoidance measures specified under paragraph (b) of this section.

(b) Right Whale Avoidance Measures. Except as provided under paragraph (c) of this section, the following avoidance measures must be taken if within 500 yards (460m) of a right whale:

(1) If underway, a vessel must steer a course away from the right whale, and immediately leave the area at a slow safe speed;

(2) An aircraft must take a course away from the right whale and immediately leave the area at a constant air speed.

(c) Exceptions. The following exceptions apply to this section, but any person who claims the applicability of an exception has the burden of proving that the exception is applicable:

(1) Paragraph (a) and (b) of this section do not apply if a right whale approach is authorized by NMFS through a permit issued under subpart C (Endangered Fish or Wildlife Permits) of this part or through a similar authorization.

(2) Paragraph (a) and (b) of this section do not apply where compliance would create an imminent and serious threat to a person, vessel, or aircraft

(3) Paragraph (a) and (b) of this section do not apply when approaching to investigate a right whale entanglement or injury, or to assist in the disentanglement or rescue of a right whale.

(4) Paragraphs (a) and (b) of this section do not apply to an aircraft unless the aircraft is conducting whale watch activities or is being operated for that purpose.

(5) Paragraph (b) of this section does not apply to the extent that a vessel is restricted in her ability to maneuver, and because of the restriction, cannot comply with paragraph (b) of this section.

II. Requirements on operation around any large whale or sea turtle for purposes of ocean disposal at the Massachusetts Bay Disposal Site:

(a) Operational restrictions.

(1) Disposal operators must not approach within 500 yards (460m) of any

large whale or 100 yards of any sea turtle with a vessel;

(2) Disposal operators must follow the avoidance measures described below:

(b) Avoidance Measures. Except as provided under paragraph (c) of this section, the following avoidance measure must be taken if within 500 yards (460m) of any large whale or 100 yards of any sea turtle:

(1) If underway, a vessel must steer a course away from the whale or sea turtle, and immediately leave the area at a slow safe speed;

(c) Exceptions. The following exceptions apply to this section, but any person who claims the applicability of an exception has the burden of proving that the exception is applicable:

(1) These requirements do not apply where compliance would create an imminent and serious threat to a person or vessel.

(2) These requirements do not apply when approaching to investigate a right whale entanglement or injury, or to assist in the disentanglement or rescue of a right whale, provided that permission is received from NMFS or a NMFS designee prior to the approach.

(3) Paragraph (b) of this section does not apply to the extent that a vessel is restricted in her ability to maneuver (as defined in 72 COLREGS, 33 CFR) , and because of the restriction, cannot comply with paragraph (b) of this section.

III. Requirements for release of dredged material at the Massachusetts Bay Disposal Site:

If threatened or endangered species of any kind (including whales and sea turtles) are sighted within 500 yards from the disposal point, operators must wait for the animals to leave the area or must use an alternative disposal point specified by the Corps of Engineers (NAE) within the boundary of the designated disposal site. If threatened or endangered species of any kind are sighted between 500 and 1500 yards from the disposal point, the observer shall note animals behavior, relative position, and direction and speed of movement to determine if release of dredged material is likely to harass or endanger the animals. For example, whale actively feeding at or near the disposal point are more likely than resting whales to interact with released sediments. If the observer judges that disposal is likely to harass or endanger the animals, the observer shall inform the vessel captain. Disposal shall be delayed until the animals change their behavior or move away such that the observer judges that no danger to the animals will result from disposal. In the event that behavior and direction of movement is unpredictable, operators should use the alternative approved disposal point. In the presence of right whales, the most protective operational measure is advised.

IV. Other Responsibilities of Vessel Operator/Onboard Observer (as appropriate):

(a) The observer is responsible for contacting NMFS early warning network for the most recent information on whale movements and locations prior to departure for the disposal site to check for the presence of whales.

(b) The observer shall report all whale sightings, noting location, to the early warning network at the end of the day. The observer shall call pager

number 978-585-8473 if a Right Whale is spotted. The World Wide Web site is http://whale.wheelock.edu/whalenet-stuff/rw_intro.html.

-- End of Section --

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SECTION 02325

DREDGING

PART 1 GENERAL

1.1 REFERENCES

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

CORPS OF ENGINEERS (COE)

COE EM-385-1-1 (1996) Safety and Health Requirements Manual

1.2 RELATED WORK SPECIFIED ELSEWHERE

1.2.1 Environmental Protection Requirements

Provide and maintain during the life of the contract, environmental protective measures. Also, provide environmental protective measures required to correct conditions, such as oil spills or debris, that occur during the dredging operations. Comply with Federal, State, and local regulations pertaining to water, air, and noise pollution. See Section 01355 ENVIRONMENTAL PROTECTION.

Additional requirements relative to protection of finfish and marine mammals, are specified in Sections 01355 ENVIRONMENTAL PROTECTION ~~and 02328 UNDERWATER DRILLING AND BLASTING.~~

1.2.2 Underwater Diving Operations

In the event that underwater diving operations become necessary due to the work of this contract, such operations shall be conducted in accordance with CORPS OF ENGINEERS (COE) COE EM-385-1-1 Section 30.

1.3 DEFINITIONS

1.3.1 Maintenance Material

Maintenance material is defined as the shoals and silty sediments that have accumulated within the Federal Channel, anchorage areas, and the Navy Dry Dock approach channel since completion of the last improvement or maintenance dredging. Maintenance material also includes accumulated silty sediment material that sloughs off side slopes.

1.3.2 Rock Material

Rock material is defined as material requiring drilling and blasting or the use of special equipment for economical removal, and includes boulders or rock fragments too large to be removed in one piece by the dredge. Two

boulders, measuring approximately 4'x4'x4' and 8'x8'x8' respectively, and located as shown on the drawings, shall be removed and disposed under this contract by mechanical means. Underwater drilling and blasting should not be required to remove the boulders. ~~Rock material shall be removed as specified in Section 02328 UNDERWATER DRILLING AND BLASTING. Blasting shall be performed only by experienced persons. Conduct operations in strict accordance with applicable regulations.~~

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Work Plan; G, RE.

The Contractor shall submit a work plan for accomplishing the dredging work of this contract. The following items shall be considered, at a minimum, for inclusion in the work plan:

- a. Anticipated plant and equipment.
- b. Proposed means and methods for removal of rock ledge and two boulders, measuring approximately 4'x4'x4' and 8'x8'x8' respectively, and located as shown on the drawings ~~boulders.~~
- c. Proposed method of demolition and removal of the sunken flat deck barge. Include the proposed procedures for breaking-up the barge, removing all of the resulting debris, and verifying that the barge has been completely removed.
- d. Expected coordination requirements.
- e. Survey requirements.
- f. Proposed means and methods for minimizing turbidity during dredging operations.
- g. Proposed measures for avoiding damage to adjacent structures and banks of the Harbor.
- h. Proposed measures to avoid overdredging.

Enclosed, Clamshell Bucket Performance Data; G, C.

Submit Enclosed Clamshell Bucket Performance Data to the Contracting Officer of approval before commencement of work.

Debris Management Plan.

A debris management plan shall be developed as specified in this section and submitted to the Contracting Officer for review.

Inspection of Disposal.

Submit names of inspectors certified by the Corps of Engineers to be used for monitoring disposal activities for the Government.

Scow Cards.

Submit scow cards for each scow to be used for contract work. Scow cards shall have information specified in paragraph "Scows."

SD-05 Design Data

Equipment and Performance Data.

The Contractor shall furnish proof of electronic positioning equipment calibration to the Contracting Officer.

Daily/Monthly Report of Operations

The Contractor shall prepare and submit two (2) copies of the Daily Report of Operations, using ENG Form No. 4267, for each dredge. This report shall be submitted on a daily basis. A copy of this form is appended to the end of this Section. In addition to the daily report, the Contractor shall prepare a Monthly Report of Operations for each month or partial month's work on ENG Form No. 4267. The monthly report shall be submitted to the Contracting Officer on or before the 7th of each month, consolidating the previous month's work. Upon completion of the project, the Contractor shall submit a consolidated project report, combining the monthly reports.

Additionally, one copy of the reports shall be maintained by the Contractor on each dredge for the Contracting Officer's inspection purpose. Further instructions on the preparation of the reports will be furnished at the Preconstruction Conference.

1.5 NOTIFICATIONS

1.5.1 Notice of Misplaced Material

The Contractor shall notify the Contracting Officer and the U.S. Coast Guard Marine Safety Office of any misplaced material.

1.5.2 Notice of Need for Dredging Survey

The Contractor shall give advance notice to the Contracting Officer of the need for a after-dredging survey for final acceptance for each acceptance section. See Section 01723FIELD ENGINEERING FOR DREDGING, Article GOVERNMENT SURVEYS.

1.5.3 Relocation of Navigation Aids

The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid to navigation. The Contractor shall notify the Coast Guard District Commander, in writing, with a copy to the Contracting Officer, 30 days in advance of the time he plans to dredge adjacent to any aids which require relocation to facilitate the dredging operation. A copy of the notification shall be provided to the Contraction Officer.

1.6 MATERIAL TO BE REMOVED

1.6.1 Character of Materials to be Removed

Samples have been taken by the Government to determine the character of materials to be removed. Although the results of such explorations are representative of subsurface conditions at their respective locations, local minor variations in the subsurface materials are to be expected and, if encountered, will not be considered materially different within the purview of the contract. Grain size analysis of the samples and maps of the locations where the samples were taken in the areas to be dredged are included in Appeddix A, attached at the end of this section. The Contractor is expected to examine the site of the work and decide the character of the material for himself.

1.6.1.1 Grain Size Analysis

Physical grain size analysis showed that the material from the 35-foot and 40-foot MLW Main Ship Channel and the Navy Dry Dock are composed of silty black mud. The material from the President Roads anchorage area is composed of dark clay/silt material with fine sand while grain size analysis of the material from the 40-foot MLW Broad Sound (North) Channel indicates that the material is predominately sand, gravel, and cobbles.

1.7 WORK AREA

1.7.1 Access

The Contractor shall be responsible for providing and maintaining access necessary for his equipment and plant to and from the work site, mooring areas, and the disposal areas. The Contractor shall ascertain the environmental conditions which can affect the access such as climate, winds, currents, waves, depths, shoaling, and scouring tendencies.

1.7.2 Protection of Existing Waterways

The Contractor shall conduct his operations in such a manner that material or other debris are not pushed outside of dredging limits or otherwise deposited in existing side channels, basins, docking areas, or other areas being utilized by vessels. The Contractor will be required to change his method of operations as may be required to comply with the above requirements. Should any bottom material or other debris be pushed into areas described above, as a result of the Contractor's operations, the material must be promptly removed.

1.7.3 Adjacent Property and Structures

The Contractor shall conduct the dredging operation such that it does not undermine, weaken or otherwise impair existing structures located in or near the areas to be dredged. The Contractor shall investigate the existing structures at the site and plan the dredging work accordingly.

Damage to private or public property or structures resulting from the disposal or dredging operations shall be repaired promptly by the Contractor at his expense. Damage to structures resulting from the Contractor's negligence will result in suspension of dredging and require prompt repair at the Contractor's expense as a prerequisite to the resumption of dredging.

1.7.4 Artificial Obstructions

The Contractor may encounter bottom debris such as, but not limited to, pieces of broken cable, rope, miscellaneous metal, and broken and derelict moorings. The location of the sunken barge to be removed is indicated on the drawings. Special or additional plant may be required for the economical removal of the barge. The Government has no knowledge of other existing wrecks, wreckage, or other artificial obstructions of such size or character as to require the use of explosives or special means for its removal. During dredging operations, the Contractor shall remove all debris encountered. Floating debris removed from the dredging area shall be separated and stockpiled for upland disposal. Disposal in accordance with local, Federal, and State laws and regulations shall be the responsibility of the Contractor. In case the actual conditions differ from those stated or shown, or both, an adjustment in contract price or time of completion, or both, will be made in accordance with "FAR 52.236-2, Differing Site Conditions."

1.7.5 Existing Utilities

1.7.5.1 Private Utilities and Public Agencies

The following tabulation of utility owners and public agencies is provided for the convenience of the Contractor:

~~LIST NOT CONFIRMED~~

- a. Nstar - Greg Sullivan Director, Transmission Engineering
NSTAR Electric
One NSTAR Way
Westwood, MA 02090-9230 (781) 441-8515 and (781) 441-8559 (fax) or Beverly Schultz 781-441-3809.
- ~~b. NYNEX: — Everette Bryan (617) 381-6423.~~
- c. Keyspan - Walter Fromme 617-723-5512 x 4421.
- d. MWRA - Robert Casey (E&CD Dept/Tech Support) Chelsea Facility 2 Griffin Way Chelsea MA 02150 (617) 305-5715 and (617) 371-1606 (fax).
- e. Verizon - Mr. Frank Furber (185 Franklin St., Boston) (617) 743-4329 (617) 330-1688 (fax).

1.7.5.2 Protection of Utility Lines

Existing utility lines that are shown on the drawings or the locations of which are made known to the Contractor prior to dredging, and that are to be retained, shall be protected from damage during dredging, and if damaged, shall be satisfactorily repaired by the Contractor at no additional cost to the Government. Prior to commencement of dredging, the Contractor shall coordinate with the Contracting Officer and the applicable utility company to mark the exact locations of existing utilities, and establish in detail the proposed method of protecting the existing utilities. "No Spud" areas are marked on the contract drawings for protection of known utilities. In the event that the Contractor damages any existing utility lines that are not shown on the drawings or the locations of which are not known to the Contractor, report thereof shall be made immediately to the Contracting Officer. If the Contracting Officer determines that repairs shall be made by the Contractor, such repairs will

be ordered under the Contract Clause entitled "DIFFERING SITE CONDITIONS."

1.8 QUANTITY OF MATERIAL

The total estimated amount of material to be removed from within the specified limits, including side slopes and allowable overdepths is shown on the Bidding schedule. The estimated quantity for bidding purposes and for application of the "FAR 52.212-11, Variation in Estimated Quantity" shall be the total quantity, including overdepth. The quantities listed are estimates only.

1.9 OVERDEPTH AND SIDE SLOPES

1.9.1 Allowable Overdepth

To cover unavoidable inaccuracies of dredging processes, material removed to the overdepth shown on the drawings and within the dredging limits will be measured and paid for at full contract price.

1.9.2 Side Slopes

Material dredged to provide for final indicated side slopes will be measured and paid for at the applicable unit price. The material may be dredged from the original position or by dredging the space below the pay slope plane at the bottom of the slope for upslope material capable of falling into the cut. Payment will not be made for material in excess of the amount originally lying above the pay slope plane. The limiting amount of side-slope overdepth will be measured vertically.

Dredging on side slopes shall follow, as closely as practicable, the lines indicated on the drawings. An allowance will be made for dredging beyond the lines indicated or specified for side slopes. The allowance will be determined by projecting a line upwards, paralleling the project design side slopes, from the intersection of the overdepth dredging limit (at a point located vertically below the limit of dredging at the top of slope). The amount of material excavated from side slopes will be determined by either cross-sections or computer, or both.

1.9.3 Excessive Dredging

Material taken from beyond the limits as extended in the Article "OVERDEPTH AND SIDE SLOPES" above will be deducted from the total amount dredged as excessive overdepth dredging, or excessive side-slope dredging for which payment will not be made.

1.10 INSPECTION

Inspect the work, keep records of work performed, and ensure that gages, targets, ranges, and other markers are in place and usable for the intended purpose. See Section 01451 CONTRACTOR QUALITY CONTROL.

1.10.1 Method of Communication

Provide a system of communication between the dredge crew, towboats, the ~~fish and~~ mammal Observer, the disposal inspector, and the Contracting Officer. Portable two-way marine radios are acceptable.

1.10.2 Transportation

The Contractor shall furnish, at the request of the Government Representative or ~~fish~~ and mammal observer, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the equipment or marine plant as may be reasonably necessary in inspecting and monitoring the work. The Contractor shall furnish, on the request of the Government Representative observer, suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant, and the work site.

1.11 INSPECTION OF DISPOSAL

The Contractor shall be and provide qualified disposal inspection services at no additional cost to the Government. The Contractor shall notify the Contracting Officer of the names of the Corps of Engineers Certified inspectors to be used prior to commencement of work. Every discharge of dredge material must be officially witnessed and properly documented by an onboard inspector who has been trained by, and who holds a current certification from the New England District, Army Corps of Engineers. Failure to adhere to this requirement will be considered a serious violation of this contract and cause for an immediate stop-work order by the Contracting Officer and which could precipitate substantial penalties including but not necessarily limited to fines, withholding of funds and non-payment due to misplaced materials.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 DREDGING PLANT AND ASSOCIATED EQUIPMENT

3.1.1 Dredging Plant

All dredging under this contract shall be performed using a mechanical type dredge. Hydraulic dredging will not be permitted. To reduce the effects of turbidity on water quality, an enclosed clamshell bucket shall be used when dredging in silty areas. A conventional open bucket may be used for dredging in sandy areas. The maintenance material in the area indicated on the drawings as "Broad Sound North Channel" is considered sandy and may be dredged using a conventional bucket. ~~Blasted rock bedrock and Boulders~~ may also be excavated using a conventional bucket. Maintenance material in all other reaches of the Federal channel and harbor is considered silty and shall be dredged using an enclosed clamshell bucket. Overflow of water from scows while being filled will not be permitted for any part of dredging operations.

3.1.2 Enclosed Clamshell Bucket

Dredging of silty maintenance material, in the areas indicated on the drawings, shall be performed using an enclosed clamshell bucket. The dredge bucket shall be designed to completely enclose the dredged sediment and water captured. The bucket shall not have teeth. This is to prevent the bucket from digging into the harder native material. The bucket shall be equipped with escape valves which shut when the bucket is withdrawn from the water column. Submit Enclosed, Clamshell Bucket Performance Data to the Contracting Officer for approval before commencement of work.

3.1.2.1 Enclosed Clamshell Bucket Control

The Contractor shall demonstrate that the dredge operator has sufficient control over bucket depth in the water and bucket closure so that silty sediment re-suspension from bucket contact with the bottom and due to bucket over-filling can be minimized.

3.1.2.2 Equivalent Alternative Dredging Technology

Alternatives to the enclosed clamshell bucket technology for the removal of silt maintenance materials will not be considered under this contract.

3.1.3 Tow Boats

All tow boats used for towing to disposal areas shall be equipped with DGPS navigational equipment, radar, corrected compass, marine radio, and depth sounding equipment which is to be maintained in operating condition during each tow. The tow boats utilized by the Contractor for this purpose shall be of a size adequate for towing in heavy seas and shall have necessary reserve power for maneuvering with scows in rough seas and under emergency conditions as well as for control of scows at the disposal point.

3.1.4 Scows Cards

a. Water and dredged materials shall not be permitted to overflow or spill out of scows when being filled. Failure to repair leaks or change the method of operation which is resulting in overflow or spillage will result in suspension of dredging operations and require prompt repair or change of operation to prevent overflow or spillage as a prerequisite to the resumption of dredging.

b. The Contractor shall provide and maintain markings on all scows clearly indicating the draft of the scow and shall provide scow cards for each scow used on the contract work. The scow cards shall show dimensions and volumes of individual pockets of scows and total volumes for varying depths below coaming or top of pockets. This is to enable Government personnel to make a determination of scow volume and corresponding drafts under partial and full load conditions. These measurements are to be made at the time of initial use of each scow. This information will then be furnished to disposal inspectors to enable them to estimate scow volume from draft of scows for each scow being towed to the disposal area. The scow volume estimates are for use in connection with disposal area monitoring studies and are not intended to be used in determining quantities dredged. At the beginning of the work and as additional scows arrive on the project, sufficient time shall be allowed by the Contractor and assistance of Contractor personnel shall be made available by the Contractor for the purpose of obtaining the measurements of each scow under various partial and full load conditions. During the entire period of contract work, the Contractor shall provide and maintain sufficient spot or floodlights to permit the reading of the draft on the sides of scows at bow and stern from the tow boat at night and when visibility is impaired. The draft readings and each pocket/compartments measurement will be required for each scow towed to the disposal area and will be made by the disposal inspector. Measurements are to be taken and recorded prior to departure from the dredge site and upon arrival at the immediate disposal location. The Contractor shall ensure that adequate time is allowed by the tow boat captain for these readings to be obtained.

c. Due to the fine nature of the dredged material, the Contractor shall

achieve proper closure and watertightness of pocket doors to eliminate seepage or leakage of material. The use of plastic material to cover cracks in scow pockets will not be allowed.

3.1.5 Lights

Each night, between sunset and sunrise and during periods of restricted visibility, provide lights for floating plants, ranges, and markers. Also, provide lights for buoys that could endanger or obstruct navigation. When night work is in progress, maintain lights from sunset to sunrise for the observation of dredging operations. Lighting shall conform to United States Coast Guard requirements for visibility and color.

3.2 CONDUCT OF DREDGING WORK

3.2.1 Order of Work

- a. In order to avoid potential impact on winter flounder spawning, the Contractor shall sequence the work so that dredging West of Spectacle Island is not conducted during the 1 February to 15 June timeframe.
- b. The Contractor shall start and complete the work in the order of precedence as approved by the Contracting Officer. The Government reserves the right to change the order of work at any time. The Contractor shall fully coordinate all work with the Harbormaster.
- c. The Contractor shall prepare and submit to the Contracting Officer for review and approval a progress schedule in accordance with Section 01110, Paragraph "Work Sequence."

3.2.2 Method of Dredging

- a. All dredging under this contract shall be performed using a mechanical type of dredge and scows.
- b. Contract depth shall be achieved by mechanically dredging the bottom using a clamshell bucket. Dragging the bottom to remove lack of contract depth, using a steel beam or similar equipment, will not be permitted.
- ~~c. Requirements for the excavation of rock and boulders by drilling and blasting are specified in Section 02328 UNDERWATER DRILLING AND BLASTING.~~
- dc. Requirements for the removal of the sunken steel barge are specified below in Article "Removal of Sunken Barge."

3.2.3 Method of Disposal

- a. Disposal of the dredged material will be at the Massachusetts Bay Disposal Site, the center of which is located at 42 25.106 north latitude and 70 34.969 west longitude. Every discharge of dredged material shall be witnessed by an inspector who has been trained and certified by the New England District, Corps of Engineers to insure that disposal occurs at the designated site.
- b. Provide for safe transportation and disposal of dredged materials. Transport and dispose of dredged material at the Massachusetts Bay Disposal Site (MBDS) and dispose at a taut wire buoy. The maximum distance to which material will have to be transported to the disposal site will not exceed 20 nautical miles.

c. Deposit dredged material by self-dumping scow or barge. Do not remove loaded or partially loaded scows or barges from the dredge area until the load has been measured by the Contracting Officer. Notify the Contracting Officer when scows or barges are returned to the dredge area.

d. Buoy positions will be documented and monitored by Government inspectors during the course of work. The Contractor will be required to use care in making his turn into the travel lane to avoid lobster buoys/fishing gear. The disposal points will be marked by one or more buoys. Coordinates of the buoys locations will be specified at the time a disposal inspector is approved by the Contracting Officer. All disposal shall be done at the buoys with the scow at a complete halt. This requirement must be followed except when weather or sea state create unsafe conditions, in which case disposal within 100 feet of the buoy with the scow moving only fast enough to maintain safe control (generally less than one knot) will be permitted. Disposal shall not be attempted if the above conditions cannot be met. Anticipated weather conditions shall be determined prior to departing for the disposal site.

e. Provide whale observers on board the scows transiting to the MBDS from February to May 31 to avoid potential ship strikes.

3.2.4 Removal of Sunken Barge

The barge is located on the edge of the Broad Sound North Channel, as indicated on the drawing. The vessel is a steel hull, flat deck barge in two pieces. The larger piece is about 100-120 feet long and 40-50 feet wide. The smaller piece is about 10-20 feet long and 40-50 feet wide. There is marine growth on the barge, indicative that the barge has been sunk for some time. There is no cargo aboard the barge. The contractor shall propose a plan for demolition and removal of the sunken barge and include the plan in the work plan submittal for the approval of the Contracting Officer. Include in the proposed the procedures for verifying the location of the barge, breaking-up the barge, removing all of the resulting debris, and verifying that the barge has been completely removed.

Demolition methods may include underwater cutting, breaking, controlled blasting and other methods approved by the Contracting Officer. Underwater blasting shall be performed in accordance with Section 29 of EM 385-1-1 SAFETY AND HEALTH REQUIREMENTS MANUAL ~~02328 UNDERWATER DRILLING AND BLASTING~~, with peak particle velocities no greater than 1.0 inch per second. Steel parts comprising the barge shall be disposed at a upland disposal site furnished by the Contractor.

3.2.5 Alternative Disposal Sites

Bids received shall be based on utilizing only the above described areas. Alternate areas will not be considered until after the award of the contract. If, after the award of the contract, a disposal area other than that stipulated in these specifications is proposed, its acceptance will be subject to the approval of the Contracting Officer after an adjustment of the contract price if found necessary by the Contracting Officer to protect the Government interest. The Contractor shall obtain the written consent of the owners of the substitute grounds and furnish evidence thereof to the Contracting Officer. All expenses incurred in connection with providing and making available such disposal areas shall be borne by the Contractor, and all materials deposited thereon, and all operations in connection therewith, shall be at the Contractors risk. Comply with rules and regulations of local port and harbor governing authorities.

3.2.6 Misplaced Material Disposal

Material that is deposited elsewhere than in locations designated or approved by the Contracting Officer will not be paid for and the Contractor shall be required to remove such misplaced material and deposit it where directed at his expense.

3.2.7 Interference with Navigation

Minimize interference with the use of channels and passages. The Contracting Officer will direct the shifting or moving of dredges or the interruption of dredging operations to accommodate the movement of vessels and floating equipment, if necessary. The Contractor shall comply with all requests from the Contracting Officer to move or interrupt dredging operations for a reasonable time period at no additional cost to the Government.

3.2.8 Ranges, Gages, and Lines

Furnish, set, and maintain ranges, buoys, and markers needed to define the work and to facilitate inspection. Establish and maintain gages in locations observable from each part of the work so that the depth may be determined. Suspend dredging when the gages or ranges cannot be seen or followed. The Contracting Officer will furnish, upon request by the Contractor, survey lines, points, and elevations necessary for the setting of ranges, gages, and buoys.

3.2.9 Debris Management

Debris removed from the bottom during dredging operations, which is not suitable for disposal at the Massachusetts Bay Disposal Site (MBDS), shall be collected and removed from the site. Unsuitable materials include large items such as timbers, pilings, sections of piers, and metallic debris. A debris management plan shall be developed, reviewed by the Contracting Officer and followed by the Contractor. Each day during dredging operations, the Contractor shall use a boat to collect and remove floating debris resulting from project activities. Floating debris shall also be removed from within scows or barges. Containers for temporary storage of the collected debris shall be maintained on the dredge or support barge. In the event debris material prevents the dredge bucket from closing properly, then the bucket shall be held close to the bottom to allow the dredged material and debris to fallout before lifting the bucket through the water column to reduce turbidity impacts.

3.3 SHOALING

If, before the contract is completed, shoaling occurs in any section previously accepted, including shoaling in the finished channel because of the natural lowering of the side slopes, redredging at contract price, within the limits of available funds may be done if agreeable to both the Contractor and the Contracting Officer.

3.4 FINAL CLEANUP

Final cleanup shall include the removal of all the Contractor's plant and equipment. Plant, equipment, and materials to be disposed of shall only be disposed in a manner and at locations approved by the Contracting Officer. Unless otherwise approved by the Contracting Officer, the Contractor will

not be permitted to abandon any equipment in the disposal area or other areas adjacent to the worksite.

Failure to promptly remove all plant, equipment, and materials upon completion of the dredging will be considered a delay in the completion of the final cleanup and demobilization work. In such case, the Government will exercise its right to remove any plant, equipment, and materials at the Contractor's expense.

-- End of Section --