

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE OF PAGES

1

2. AMENDMENT/MODIFICATION NO.

0001

3. EFFECTIVE DATE

10/02/02

4. REQUISITION/PURCHASE REQ. NO.

5. PROJECT NO. (If applicable)

6. ISSUED BY

CODE

7. ADMINISTERED BY (If other than Item 6)

CODE

JACKSONVILLE DISTRICT OFFICE
U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019
VICKI V. TIPTON (904) 232-1146

JACKSONVILLE DISTRICT OFFICE
U.S. ARMY CORPS OF ENGINEERS
400 WEST BAY STREET
JACKSONVILLE, FLORIDA 32202-4412

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

9A. AMENDMENT OF SOLICITATION NO.

DACW17-02-B-0005

9B. DATED (SEE ITEM 11)

8/23/02

10A. MODIFICATION OF CONTRACTS/ORDER NO.

10B. DATED (SEE ITEM 13)

CODE

FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers tended.

is extended,

is not extended.

Offers 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 1 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

is not,

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.)

MAINTENANCE DREDGING, 42 AND 46-FOOT PROJECT, ENTRANCE CHANNEL (CUT-1N) AND RANGES A, A1, AND A2, KINGS BAY, GEORGIA AND FERNANDINA HARBOR, FLORIDA IS AMENDED AS SHOWN ON THE CONTINUATION PAGE.

THE DATE SET FOR RECEIPT OF BIDS REMAINS UNCHANGED.

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)

15B. CONTRACTOR/OFFEROR

15C. DATE SIGNED

16B. UNITED STATES OF AMERICA

16C. DATE SIGNED

(Signature of person authorized to sign)

BY

(Signature of Contracting Officer)

SF 30 CONTINUATION SHEETS

1. SPECIFICATIONS:

A. Either asterisks appear before and after the line or lines where revisions have been made to the text on the enclosed revised or added pages or the text changes have been updated with additions noted with underlined text and deletions noted with line/cross-outs, and pertain only to changes made by this amendment.

B. The text changes may have necessitated reformatting of subsequent text or pages. If this is the case, those pages have also been issued as amended pages but are not marked with asterisks or underlined text and line/cross-outs.

SECTION 00010A: STANDARD FORM 1442; DELETE SF 1442, PAGES 00010-1 and 00010-2 and REPLACE with the attached revised SF 1442 pages 00010-1 and 00010-2. (The Description of Work page 00010-3 remains unchanged.)

SECTION 00010A: LINE ITEMS & PRICING SCHEDULE; DELETE SECTION 00010A and REPLACE with the attached revised SECTION 00010A.

SECTION 00700: CONTRACT CLAUSES; SEE "DESCRIPTIVE SPECIFICATION CHANGES" below.

SECTION 01000: GENERAL REQUIREMENTS; DELETE SECTION 01000 excluding the Appendices and REPLACE with the attached revised SECTION 01000.

SECTION 01270: MEASUREMENT AND PAYMENT; DELETE SECTION 01270 and REPLACE with the attached revised SECTION 01270.

SECTION 01355: ENVIRONMENTAL PROTECTION; DELETE SECTION 01355, excluding the Appendices with the exception of appendix 01355-D and REPLACE with the attached revised SECTION 01355 and the attached revised Appendix 01355-D. Also, add the attached new Appendix 01355-N to SECTION 01355.

SECTION 01411: TURBIDITY AND DISPOSAL MONITORING; DELETE SECTION 01411, excluding the Appendices and REPLACE with the attached revised SECTION 01411.

SECTION 01500: TEMPORARY CONSTRUCTION FACILITIES; DELETE SECTION 01500, excluding the Appendices and REPLACE with the attached revised SECTION 01500.

SECTION 01525: GENERAL SAFETY REQUIREMENTS; DELETE SECTION 01525, excluding the Appendices and REPLACE with the attached revised SECTION 01525.

SECTION 02325: DREDGING; DELETE SECTION 02325, excluding the Appendices and REPLACE with the attached revised SECTION 02325.

DESCRIPTIVE SPECIFICATION CHANGES: The following are descriptive changes to the specifications. Specifications should be adequately marked to indicate that they have been changed.

SECTION 00700: CONTRACT CLAUSES; ADD the following Contract Clause 52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984) to SECTION 00700, including the Index.

"52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient

features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(End of clause)"

2. DRAWINGS: D. O. File No. 90K-38,316 dated June 2002 in 19 Sheets + Cover: DELETE Drawing No. 3/1 and REPLACE with the attached revised Drawing No. 3/1. All other Drawing Nos. and Cover remain unchanged.

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. DACW 17-02-B-0005	2. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 23 Aug 2002	PAGE OF PAGES
	IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.			

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
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7. ISSUED BY CODE	8. ADDRESS OFFER TO
JACKSONVILLE DISTRICT OFFICE U.S. ARMY CORPS OF ENGINEERS 400 WEST BAY STREET JACKSONVILLE, FLORIDA 32202-4412	BY HAND: DELIVER TO "ISSUED BY" ADDRESS BY MAIL: USAED JACKSONVILLE P.O. BOX 4970, ATTN: CESAJ-CT JACKSONVILLE, FLORIDA 32232-0019

9. FOR INFORMATION CALL	A. NAME VICKI V. TIPTON	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) (904) 232-1146
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SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, identifying no., date):

MAINTENANCE DREDGING, 42 AND 46-FOOT PROJECT, ENTRANCE CHANNEL (CUT-1N) AND RANGES A, A1 AND A2, KINGS BAY GEORGIA AND FERNANDINA HARBOR, FLORIDA

DRAWINGS: D.O. File No. 90K-38,316 IN 19 SHEETS

DESCRIPTION OF WORK: See Page 00010-3 for Description of work.

MAGNITUDE OF CONSTRUCTION: Between \$5,000,000.00 and \$10,000,000.00

THIS SOLICITATION IS BEING ISSUED AS AN UNRESTRICTED ACQUISITION. ALL RESPONSIBLE SOURCES MAY SUBMIT A BID WHICH WILL BE CONSIDERED.

YOU MUST BE REGISTERED IN THE CENTRAL CONTRACTOR REGISTRATION (CCR) IN ORDER TO RECEIVE AN AWARD FROM THIS SOLICITATION. CALL 1-888-227-2423 FOR MORE INFORMATION. THE INFORMATION IS ALSO AVAILABLE AT www.ccr.gov

11. The Contractor shall begin performance within 25 calendar days and complete it within * calendar days after receiving

award, notice to proceed. This performance period is mandatory, negotiable. (See * Section 00700 J)

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES," indicate within how many calendar days after award in Item 12B.) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12B. CALENDAR DAYS 10
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13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 1 copies to perform the work required are due at the place specified in Item 8 by 2:00 p.m. (hour) local time 16 Oct 2002 (date). If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee is, is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

SECTION 00010A
Line Items & Pricing Schedule

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>U/M</u>	<u>U/P</u>	<u>AMOUNT</u>
MAINTENANCE DREDGING, 42 AND 46-FOOT PROJECT ENTRANCE CHANNEL (CUT-1N) AND RANGE A, A-1, & A-2 KINGSBAY, GEORGIA AND FERNANDINA HARBOR, FLORIDA					
BASE BID:					
0001	MOBILIZATION AND DEMOBILIZATION	1	JOB	<u>LUMP SUM</u>	\$ _____.
0002	DREDGING CUT-1N STA. 100+00 TO STA. 220+00 (D/A-B Disposal) EXCAVATION, UNCLASSIFIED (ESTIMATED QUANTITY) (1)	200,000	CY	\$ _____.	\$ _____.
0003	DREDGING CUT-1N STA. 220+00 TO STA. 230+00 (D/A-N Disposal) EXCAVATION, UNCLASSIFIED (ESTIMATED QUANTITY) (1)	20,000	CY	\$ _____.	\$ _____.
0004	DREDGING CUT-1N STA. 230+00 TO STA. 340+00 (D/A-O Disposal) EXCAVATION, UNCLASSIFIED (ESTIMATED QUANTITY) (1)	725,000	CY	\$ _____.	\$ _____.
0005	TURBIDITY MONITORING	1	JOB	<u>LUMP SUM</u>	\$ _____.
0006	ENDANGERED SPECIES OBSERVER	1	JOB	<u>LUMP SUM</u>	\$ _____.
0007	MOBILIZATION AND DEMOBILIZATION FOR SEA TURTLE TRAWLING AND RELOCATION (5)	1	JOB	<u>LUMP SUM</u>	\$ _____.
0008	SEA TURTLE TRAWLING AND RELOCATION (ESTIMATED QUANTITY) (5)	14	DAY	\$ _____.	\$ _____.
TOTAL BASE BID					\$ _____.
OPTION BID A:					
DREDGING NORTH SETTLING BASIN STA. 177+50 TO STA. 227+50 (RANGE 1250 TO RANGE 1350)					
0009	EXCAVATION, UNCLASSIFIED (41-FOOT REQUIRED PLUS 2-FOOT ALLOWABLE OVERDEPTH) (ESTIMATED QUANTITY) (1)	91,000	CY	\$ _____.	\$ _____.
0010	EXCAVATION, UNCLASSIFIED (2-FOOT REQUIRED DEPTH ADDED TO LINE ITEM 0009 ABOVE) (ESTIMATED QUANTITY) (1)	32,000	CY	\$ _____.	\$ _____.
0011	EXCAVATION, UNCLASSIFIED (2-FOOT REQUIRED DEPTH ADDED TO LINE ITEMS 0009 AND 0010 ABOVE) (ESTIMATED QUANTITY) (1)	38,000	CY	\$ _____.	\$ _____.
0012	EXCAVATION, UNCLASSIFIED (2-FOOT REQUIRED DEPTH ADDED TO LINE ITEMS 0009 THRU 0011 ABOVE) (ESTIMATED QUANTITY) (1)	49,000	CY	\$ _____.	\$ _____.
0013	EXCAVATION, UNCLASSIFIED (2-FOOT REQUIRED DEPTH ADDED TO LINE ITEMS 0009 THRU 0012 ABOVE) (ESTIMATED QUANTITY) (1)	57,000	CY	\$ _____.	\$ _____.
0014	TURBIDITY MONITORING	1	JOB	<u>LUMP SUM</u>	\$ _____.
0015	ENDANGERED SPECIES OBSERVER	1	JOB	<u>LUMP SUM</u>	\$ _____.
0016	SEA TURTLE TRAWLING AND RELOCATION (ESTIMATED QUANTITY) (5)	1	DAY	\$ _____.	\$ _____.
TOTAL OPTION BID A					\$ _____.
TOTAL BASE BID PLUS OPT. BID A					\$ _____.

SECTION 00010A
Line Items & Pricing Schedule

OPTION BID ITEM B:

0017	DREDGING RANGE A, A-1, & A-2 EXCAVATION, UNCLASSIFIED (ESTIMATED QUANTITY) (1)	42,000	CY	\$ _____.	\$ _____.
0018	TURBIDITY MONITORING	1	JOB	<u>LUMP SUM</u>	\$ _____.
0019	ENDANGERED SPECIES OBSERVER	1	JOB	<u>LUMP SUM</u>	\$ _____.
TOTAL OPTION BID B					\$ _____.
TOTAL BID (INCLUDES BASE BID, OPTION BID A, AND OPTION BID B)					\$ _____.

NOTES:

- (1) QUANTITY INCLUDES REQUIRED DEPTH, ALLOWABLE OVERDEPTH, AND SHOALING ESTIMATED TO OCCUR BETWEEN DATES OF SURVEYS SHOWN ON DRAWINGS AND ACTUAL DREDGING.
- (2) BIDDERS MUST BID ON ALL LINE ITEMS. SEE PROVISION AT 52.214-18 (SECTION 00100)
- (3) FAILURE TO COMPLETE AND RETURN ALL REQUIRED SUBMISSIONS (SF1442, SECTION 00010 (EXCEPT WAGE RATES) AND SECTION 00600) COULD RENDER YOUR BID NONRESPONSIVE.
- (4) SEE SECTION 00100, "INSTRUCTIONS, TO OFFERS/EVALUATION FACTORS FOR AWARD."
- (5) SEA TURTLE TRAWLING AND RELOCATION IS REQUIRED IF THE CONTRACTOR TAKES TWO OR MORE SEA TURTLES DURING DREDGING OPERATIONS.

U/M = UNIT MEASURE U/P = UNIT PRICE CY = CUBIC YARD

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01000

GENERAL REQUIREMENTS

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- 1.3 PHYSICAL DATA
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-- End of Section Table of Contents --

SECTION 01000

GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK

a. Read this paragraph in conjunction with the Clause COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (FAR 52.211-10) of Section 00700 CONTRACT CLAUSES.

b. It is the intent of the Government to issue the Notice to Proceed (NTP) on 20 November with commencement of work 15 December.

c. In addition to the above, the following shall apply: The "commence work" means "commence dredging." The commencement time of 25 days applies unless precluded by inclement weather as determined by the Contracting Officer.

d. In addition to the above, the dredging work required by the Base Bid Item shall be completed no later than 28 February 2003, the work required by Option Bid Item A shall be completed no later than 15 March 2003, and the dredging work required by Option Bid Item B shall be completed no later than 25 March 2003.

e. The Contractor shall notify the EPA (Chris McArthur at phone number 404-562-9391, e-mail McArthur.Christopher@epamail.epa.gov) and the Department of Environmental Protection Northeast District Office (Steve Sabia at phone number 904-807-3344, e-mail stephen.sabia@dep.state.fl.us) prior to work commencement and provide them the anticipated date of commencement.

1.2 LIQUIDATED DAMAGES-CONSTRUCTION

Refer to the Clause LIQUIDATED DAMAGES-CONSTRUCTION (SEP 2000) (FAR 52.211-12) of Section 00700 CONTRACT CLAUSES.

1.3 PHYSICAL DATA

Read this paragraph in conjunction with the Clause PHYSICAL DATA (FAR 52.236-4) of Section 00700 CONTRACT CLAUSES.

1.3.1 Physical Conditions

The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys and/or by core borings. When the indicated physical conditions are the result of site investigations by core borings, the core boring logs and laboratory

data are appended to the end of this Section and the core boring locations are shown on the drawings. While the Government's borings are representative of subsurface conditions at their respective locations and vertical reaches, local variations characteristic of the rocks and subsurface materials of this region are to be expected. The material recovered from the core borings is not available for inspection.

1.3.2 Location

The project site is located on the northeast coast of Florida in Nassau County, at north Amelia Island.

1.3.3 Weather Conditions

The project area is subject to tropical storms and hurricanes from June through November and to windy and/or rainy weather during any time of the year. The climate of the area is essentially subtropical, and temperatures below freezing occur infrequently. The wet season in the project area is from May through October. Rainfall during these months is closely associated with convective activity. These rainfall events are normally of short duration and amounts are quite variable spatially. In general, the winter months constitute the dry season. Rainfall during the winter months is usually associated with mid-latitude systems (fronts and low pressure systems) and is distributed in a more spatially uniform pattern. Occasionally, daily rainfall in the dry season can be quite heavy as mid-latitude systems penetrate into Florida. Dangerous thunderstorms can occur at any time of the year. It shall be the contractor's responsibility to obtain information concerning weather conditions. The publication Local Climatological Data - Monthly Summary published by NOAA, Asheville, North Carolina, contains climatological and meteorological observations and data relevant to the project area. The Annual Summary gives a summary of the observations for the period of record. This publication is available for review at the U.S. Army Corps of Engineers, Jacksonville District Office, 400 West Bay Street, Jacksonville, Florida. Subscription price and ordering information are available from the National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.

1.3.3.1 Publications

The following publications include wave, wind and tide information and are available for review in the Jacksonville District Office or can be purchased from the agencies indicated:

a. East Coast of North and South America Tide Tables, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service: Provides daily tidal predictions at locations along the coastline of North and South America, including locations in the vicinity of the project. It also provides mean and spring tide ranges and mean tide levels. Some astronomical data is also included, such as time of sunrise, sunset, moon rise, and moon set. This publication is available through NOAA.

b. Hindcast Wave Information for the U.S. Atlantic Coast, Wave Information Studies of U.S. Coastlines, WIS Report 30, Waterways

Experiment Station, March 1993: This report presents 20-year wave hindcast summaries at various stations located along the U.S. Atlantic Ocean shoreline, including a location offshore of the project area. Available data includes wave height, period, and direction tables for two 20-year periods: 1956-1975 (excludes tropical disturbances/hurricanes), and 1976-1995 (includes tropical disturbances/hurricanes), summary wind speed and wind direction tables, summary tables of mean wave heights by month and year, largest wave heights by month and year, and a table of extreme wave events. The project site is protected from direct impact from ocean waves, but other meteorological data contained in this publication may be useful. This publication is available from National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151. Time series listings of wave data for both 20-year periods and some summary information are available at the Waterways Experiment Station web site at: <http://bigfoot.wes.army.mil/u003.html>.

c. National Data Buoy Center (NDBC) Web Site: This Internet web site provides a wide range of meteorological and oceanographic buoy data collected worldwide. The project area lies almost midway between two sets of data buoys--buoy #41008, which lies off the Georgia coast near Savannah, and buoys #41009 and #41010, which lie offshore of Cape Canaveral. Data provided on this web site includes wind speed, wind gusts, atmospheric pressure, air temperature, sea temperature, wave height, and wave period. In addition, a C-MAN station (station SAUF1, providing meteorological data only--no wave data) is located at the St. Augustine Beach pier, and may provide some data which is applicable to the project area. Gage readings are updated hourly. Achieved data is available for these buoys from 1988 to the present. The web site address is: <http://www.nws.fsu.edu/buoy/>.

1.3.4 Transportation Facilities

1.3.4.1 Major Highways, Airports, Port Facilities, and Rail Access

The project site is accessible from water via the Intracoastal Waterway and the Atlantic Ocean. The beach disposal site is accessible by improved roads from the town of Fernandina Beach, Florida. Fernandina Beach is served by State Roads A1A, 105, and 200; by port facilities; by the Fernandina Beach Municipal Airport; and by the CSX Transportation Railroad. Gisell Street provides Beach access in Fernandina Beach.

1.3.4.2 Contractor Investigation

In addition to the information given in the contract drawings, the Contractor shall make his own investigation of available roads for transportation, load limits for bridges and roads, and other road conditions affecting the transportation of materials and equipment to the site. The Contractor shall investigate the availability of railroad sidings, and shall make all arrangements for use of any sidings for the delivery of any materials and equipment to be used on the work.

1.3.5 Maritime Traffic

Marine Traffic in the project area consists of Naval, commercial, pleasure, and small recreational vessels of all types and sizes which can be accommodated by existing depths.

1.3.6 Local Conditions - Water Stages and Tides

1.3.6.1 Water Fluctuations

The below stated water fluctuations are for information only and are not to be utilized in conjunction with any contract related hydrographic surveying. Reference should be made to the water level datum for surveying purposes as noted on the control drawings(s) of the contract plans.

1.3.6.2 Water Stages

. Water levels in the project area are mainly affected by tidal fluctuations in the Atlantic Ocean. The project area is also subject to storm surges from hurricanes and tropical storms from June through November. Surges from extratropical storms may affect the area during any time of the year.

Elevations of tidal datums referred to mean lower low water (MLLW) are provided in the following table. These values are based on field measurements collected at a tide gage operated by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS). This tide gage is located on the Amelia River in Fernandina Beach, Florida. These and other tidal datums at nearby locations can be obtained through the NOAA Website:

<http://www.opsd.nos.noaa.gov/bench.html>.

Highest Observed Water Level (10/02/1898)	= 13.80 Feet
Mean Higher High Water (MHHW)	= 6.60 Feet
Mean High Water (MHW)	= 6.26 Feet
Mean Tide Level (MTL)	= 3.23 Feet
National Geodetic Vertical Datum -1929 (NGVD)*	= 2.95 Feet
Mean Low Water (MLW)	= 0.20 Feet
Mean Lower Low Water (MLLW)	= 0.00 Feet
Lowest Observed Water Level (01/24/1940)	= -3.83 Feet

*NGVD reference based on elevations published in Quad 300811, 1973, and NOS leveling of 1985.

Daily tidal predictions at locations along the coastline of North and South America, including locations in the vicinity of the project can be found in the publication East Coast of North and South America Tide Tables, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service. In addition to daily tidal predictions, this publication provides mean and spring tide ranges and mean tide levels. Some astronomical data is also included, such as time of sunrise, sunset, moonrise, and moonset. This publication is available through NOAA.

1.3.7 Subsurface Investigations

Refer to core boring logs and laboratory data appended to the end of this

Section.

1.3.8 Obstruction of Channel

The Government will not undertake to keep the channel free from vessels or other obstructions, except to the extent of such regulations, if any, as may be prescribed by the Secretary of the Army, in accordance with the provisions of Section 7 of the River and Harbor Act approved 8 August 1917.

The Contractor will be required to conduct the work in such manner as to obstruct navigation as little as possible, and in case the Contractor's plant so obstructs the channel as to make difficult or endanger the passage of any vessels, said plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. Upon completion of the work the Contractor shall promptly remove his plant, including ranges, buoys, piles, and other marks placed by him under the contract in navigable waters or on shore.

1.4 DAMAGE TO WORK

The responsibility for damage to any part of the permanent work shall be as set forth in Clause PERMITS AND RESPONSIBILITIES of Section 00700 CONTRACT CLAUSES. However, if, in the judgement of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood, earthquake, hurricane, or tornado, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work, an equitable adjustment pursuant to Clause CHANGES of Section 00700 CONTRACT CLAUSES will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.

1.5 BRIDGE-TO-BRIDGE COMMUNICATION

In order that radio communication may be made with passing vessels, all dredges/marine equipment engaged in work under this contract shall be equipped with bridge-to-bridge radio telephone equipment. The radio equipment shall operate on a single channel very high frequency (VHF), FM, on a frequency of 156.55 MC per second with low power output having a communication range of approximately ten miles. The frequency has been approved by the Federal Communications Commission. Channels #13 and #16 must be monitored at all times.

1.6 ACCOMMODATIONS AND MEALS FOR INSPECTORS

- a. The Contractor shall furnish regularly to inspectors, for office purposes, a suitable separate room on board the dredge or other craft

upon which they are employed or, if not available thereon, shall furnish suitable alternate accommodations ashore at a location approved by the Contracting Officer, and furnish suitable transportation between the alternate accommodations and the dredge or other craft upon which they are employed.

b. If the Contractor maintains on this work an establishment for the subsistence of the Contractor's own employees, the Contractor shall, when required, furnish to inspectors employed on the work, and to all Government agents who may visit the work on official business, meals of a quality satisfactory to the Contracting Officer. The meals furnished will be paid for by the Government employees at a rate of \$1.75 per person for each meal.

1.7 CORE BORING LOGS AND LABORATORY DATA

See APPENDIX G at the end of this Section (56 pages).

Appendices A through F not used.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

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SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 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 LINE ITEMS AND PRICING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. 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.

1.1.1 Mobilization and Demobilization (Line Item 0001)

a. Payment will be made for costs associated with or incidental to mobilization and demobilization and establishment of initial project management and coordination. See Clause PAYMENT FOR MOBILIZATION AND DEMOBILIZATION of Section 00700 CONTRACT CLAUSES and Section 01310 ADMINISTRATIVE PROCEDURES.

1.1.2 SEA TURTLE TRAWLING AND RELOCATION MOBILIZATION AND DEMOBILIZATION
(Base Bid Line Item 00087; ~~Option A Line Item 0016~~)

Payment will be made for costs associated with or incidental to mobilization and demobilization for sea turtle trawling and relocation, only upon implementation of this Bid Item. If performance of this Bid Item is not required and implemented per Note (5) of the Bidding Schedule, no payment will be made to the Contractor for this Bid Item.

1.1.3 Endangered Species Observers (Base Bid Line Item 0006; Option A Line Item 0015; Option B Line Item 0019)

Payment will be made for costs associated with or incidental to endangered species observers. See Section 01355 ENVIRONMENTAL PROTECTION.

1.1.4 Turbidity Monitoring (Base Bid Line Item 0005; Option A Line Item 0014; Option B Line Item 0018)

Payment will be made for costs associated with or incidental to obtaining, analyzing, and reporting the results of monitoring for turbidity. See Section 01411 TURBIDITY AND DISPOSAL MONITORING.

1.2 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 LINE ITEMS AND PRICING 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.

1.2.1 Excavation, Unclassified (Base Bid Line Items 0002, 0003, 0004; Option A Line Items 0009, 0010, 0011, 0012, and 0013; Option B Line Item 0017)

1.2.1.1 Payment

a. Payment will be made for costs associated with or incidental to excavation, transportation, and disposal of materials; providing and maintaining access to the work site(s) and disposal area(s); removal of utility cable; noise control; debris removal; and installation, operation or maintenance of the electronic tracking system for surveillance of all dredging and disposal activities. ~~nearshore disposal area marking; and, monitoring sea turtles.~~ See Sections 02325 DREDGING and 01355 ENVIRONMENTAL PROTECTION.

b. Insofar as consistent with the paragraph CONTINUITY OF WORK of Section 02325 DREDGING, monthly partial payments will be based on approximate quantities determined by soundings or sweepings performed by the Contractor behind the dredge. The term "area designated by the Contracting Officer" as used in the CONTINUITY OF WORK paragraph, is defined as "acceptance section".

c. Soundings for payment purposes shall be made by the Government at the frequency listed in the Channel Survey Notes on the contract drawings.

1.2.1.2 Measurement

a. The maps and/or drawings already prepared (paragraph CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS of Section 00700 CONTRACT CLAUSES) are believed to represent accurately average existing conditions, but the depths shown thereon may be verified and corrected by soundings taken before dredging. Determination of quantities removed and the deductions made therefrom to determine quantities by place measurement to be paid for in the area specified, after having once been made, will not be reopened, except on evidence of collusion, fraud, or obvious error.

b. The total amount of material removed, and to be paid for under the contract, will be measured by the cubic yard in place and quantities determined by the average end area method. The volume computed shall be between the bottom surface shown by soundings taken within 3 weeks before dredging and the bottom surface shown by the

soundings taken within 3 weeks after the work specified in each acceptance section indicated on the drawings has been completed. The Contractor shall give 10 days notice, in writing, to the Contracting Officer's Representative of the need for a pre-dredging survey or after-dredging survey for final acceptance for each acceptance section.

The quantity shall include the volume within the limits of the side slopes described in subparagraph "Side Slopes" of paragraph REQUIRED DEPTH, ALLOWABLE OVERDEPTH, AND SIDE SLOPES of Section 02325 DREDGING, less any deductions that may be required for misplaced material described in subparagraph "Misplaced Materials" of paragraph DISPOSAL OF EXCAVATED MATERIAL of Section 02325 DREDGING.

1.3 Unit of Measure

Cubic yard.

1.4 SEA TURTLE TRAWLING AND RELOCATION (Base Bid Line Item 0008; Option A Line Item 0016)

All costs associated with sea turtle trawling and relocation shall be included in the contract unit price per day for Base Bid Line Item 0008; Option A line Item 0016 "SEA TURTLE TRAWLING AND RELOCATION" of this Section 0008, 0016 BIDDING SCHEDULE. If performance of this Bid Item is not required and implemented per Note (5) of the Bidding Schedule, no payment will be made to the Contractor for this Bid Item. See Section 01355 ENVIROMENT PROTECTION.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

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SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 SCOPE

This Section covers prevention of environmental damage as the result of construction operations under this contract and for those measures set forth in other Technical Requirements of these specifications. For the purpose of this specification, environmental damage is defined as the presence of hazardous, physical, chemical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; affect other species, biological communities, or ecosystems; or degrade the quality of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental damage requires consideration of land, water, and air, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

1.2 REFERENCES

1.2.1 Miscellaneous Environmental Laws And Regulations

There are numerous environmental laws and regulations. At the Federal level, the applicable laws and regulations include compliance with the Clean Water Act (CWA); Clean Air Act (CAA); Coastal Zone Management Act (CZMA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Endangered Species Act (ESA); Fish and Wildlife Coordination Act (FWCA); Marine Protection, Research, and Sanctuaries Act (MPRSA); Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), National Environmental Policy Act (NEPA); National Historic Preservation Act (NHPA); National Pollution Discharge Elimination System (NPDES); Research and Sanctuaries Act; Native American Graves Protection and Repatriation Act (NAGPRA); Resource Conservation and Recovery Act (RCRA); Rivers and Harbors Act (R&H); Safe Drinking Water Act (SDWA); Toxic Substance Control Act (TSCA); Wild and Scenic Rivers Act (WSRA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Code of Federal Regulations (CFRs); Executive Orders; and, Environmental Protection Agency (EPA) requirements. NEPA compliance measures specified in an Environmental Assessment (EA) or Environmental Impact Statements (EIS) are also applicable with regard to compliance.

1.2.2 Publication Reference(s)

The publication(s) listed below form(s) a part of this specification to the

extent referenced. The publication(s) are referred to in the text by basic designation only.

ENGINEERING MANUALS (EM)

EM 385-1-1 (1996) Safety and Health Requirements
EM 1110-1-1003 (1996) NAVSTAR Global Positioning System
Surveying

1.3 QUALITY CONTROL

The Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall record on daily quality control reports or attachments thereto, any problems in complying with laws, regulations and ordinances, and corrective action taken.

1.4 PERMITS AND AUTHORIZATIONS

The Contractor shall obtain all needed permits or licenses. The Government will not obtain any permits for this project; see Clause PERMITS AND RESPONSIBILITIES of Section 00700 CONTRACT CLAUSES. The Contractor shall be responsible for implementing the terms and requirements of the appropriate permits as needed and for payment of all fees.

In addition to the above, the Contractor shall comply with all requirements under the terms and conditions set out in the following permit(s) and authorization(s) obtained by the Corps of Engineers listed below. These permit(s) and authorization(s) are available for review by contacting the Jacksonville District, Operations and Technical Support Section at 904-232-2539

a. Florida Department of Environmental Protection Permit No. 452025136; Effective Date: 30 December 1992; Expiration Date: 30 December 2002. A new permit application has been submitted to DEP; however, the Contractor shall work under the existing permit for the duration of this contract.

b. Department of Army Permit (DOA), No. 452025136; issued 20 December 1995; expires 31 January 2005.

c. DOA Permit, No. 199201854; issued 21 February 2002; expires 19 February 2005.

d. DOA Permit, No, 960010370, which expires 30 September 2006.

~~e.~~ e. Section 103 Concurrency; issued 19 February 2002; expires 19 February 2005.

f. National Marine Fisheries Service Biological Opinion on Hopper Dredging along the South Atlantic Coast, 25 September 1997

1.5 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. Submittals shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan ; G|PD.

Within 10 calendar days after the date of Notice of Award, the Contractor shall submit an Environmental Protection Plan for review and acceptance by the Contracting Officer. The Government will consider an interim plan for the first 30 days of operations. However, the Contractor shall furnish an acceptable final plan no later than 25 calendar days after receipt of Notice to Proceed. Acceptance of the Contractor's plan shall not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. Acceptance of the plan is conditional and predicated on satisfactory performance during construction. The Government reserves the right to require the Contractor to make changes to the Environmental Protection Plan or operations if the Contracting Officer determines that environmental protection requirements are not being met. No physical work at the site shall begin prior to acceptance of the Contractor's plan or an interim plan covering the work to be performed. The Environmental Protection Plan shall include but not be limited to the following:

- a. A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control, and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations, and permits.
- b. Methods for protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archeological, and cultural resources.
- c. Procedures to be implemented to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall provide written assurance that immediate corrective action will be taken to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures set out in accordance with the environmental protection plan.
- d. A permit or license for and the location of the solid waste disposal area.
- e. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossing, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.

- f. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.
- g. Traffic control plan.
- h. Methods of protecting surface and ground water during construction activities.
- i. Spill prevention. The Contractor shall specify all potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction of such materials into the air, ground, water, wetlands, or drainage areas. The plan shall specify the Contractor's provisions to be taken to meet Federal, State, and local laws and regulations regarding labeling, storage, removal, transport, and disposal of potentially hazardous substances.
- j. Spill contingency plan for hazardous, toxic, or petroleum material.
- k. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.
- l. Plan of borrow area(s).
- m. A statement as to the person who shall be responsible for implementation of the Environmental Protection Plan. The Contractor personnel responsible shall report directly to the Contractor's top management and shall have the authority to act for the Contractor in all environmental protection matters.
- n. Recycling and Waste Management Plan. Executive Order 12873 of 20 October 1993 requires a number of considerations in planning a project. Fallen trees should not be burned or buried. Mulching, composting, and other uses for trees should be considered. Also, recovery of metals at the job site, including aluminum cans, should be considered with proceeds to be retained by the Contractor. Non-Federal recycling and waste minimization efforts shall also be incorporated into this plan.
- p. Operational plan to achieve protection of sea turtles during hopper dredge(s) operation.
- q. Construction activities shall be conducted in a manner as not to impact migratory birds or induce their nesting.

SD-02 Shop Drawings

‡Turtle Deflector Device ; G|COR.

If the Contractor proposes to use a hopper dredge for this work, detail drawings shall be submitted showing the proposed device and its attachment to the Contractor's equipment. Contractor's drawings to be submitted shall

include the approach angle for any and all depths to be dredged during this contract. A copy of the approved drawings and calculations shall be available on the vessel during the life of this contract. No dredging work shall be allowed to commence until approval of the turtle deflector device.†

SD-07 Certificates

Qualifications ; .

The Contractor shall submit a certified copy of Florida Fish and Wildlife Conservation Commission (FF&WCC) permit for handling of sea turtle eggs.

Sea Turtle Trawling and Relocation (For Hopper Dredges Only) Permit.

The Contractor shall submit a certified copy of National Marine Fishery Service (NMFS) permit for sea turtle trawling and relocation as well as a statement as to the person responsible for implementation of the NMFS permit.

SD-11 Closeout Submittals

Logs/Final Summary Report ; .

Contractor shall submit as specified, logs and final summary report of sightings and incidents with endangered species.

Project Environmental Summary Sheet ; .

Contractor shall submit within 30 days following completion of the project, a written report of the absence or occurrence of environmental incidents. In addition, for construction activities whose anticipated duration is more than one calendar year, the Contractor shall complete a sheet each May 31st (plus/minus 14 days).

Hopper Dredge(s) Recording Chart(s) ; .

Contractor shall submit as specified, a copy of the hopper dredge(s) output recording chart(s) for each day's operation on a daily basis.

1.6 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors shall be the responsibility of the Contractor.

1.7 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the aforementioned Federal, State, or local 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 proposed corrective action and take such action as may be approved. If the Contractor fails to comply

promptly, 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 costs or damages allowed to the Contractor for any such suspension.

Additionally, the Contractor shall notify the Contracting Officer, in writing, of the absence or occurrence of environmental incidents, as required on the Project Environmental Summary Sheet, copy appended to the end of this Section. (Refer to paragraph SUBMITTALS above.)

1.8 CONTRACTOR PERSONNEL QUALIFICATIONS IN POLLUTION CONTROL

The Contractor's personnel shall be qualified to perform all phases of environmental protection including methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and careful installation and monitoring of the project to ensure adequate and continuous environmental pollution control. Quality Control and supervisory personnel shall be thoroughly knowledgeable of Federal, State, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the Contractor. Quality Control personnel will be identified in the Quality Control Plan submitted in accordance with Section 01452 DREDGING/BEACH FILL PLACEMENT - CONTRACTOR QUALITY CONTROL.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

For contract work, the Contractor shall comply with all applicable Federal, State, or local laws and regulations. The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected at least during the entire period of this contract. The Contractor shall confine his activities to areas defined by the drawings and specifications. Deviations from drawings or specifications (e.g., proposed alternate borrow areas, disposal areas, staging areas, and alternate access routes) could result in the need for the Government to reanalyze and re-approve the project from an environmental standpoint. Environmental protection shall be as stated in the following subparagraphs.

3.1.1 General Project Environmental Design and Installation Criteria

Some project sites have features that shall not be impacted in any way, including cultural, historic, or archeological features. At all sites, project plans should minimize disturbance to existing features at the site to the extent possible, including vegetative, topographic, and drainage pattern features. Wetland impacts (temporary access, detours, staging areas, and other work area impacts) to project sites should be avoided and may require separate permitting action. Any wetlands temporarily impacted shall have its soil restored upon project completion. Expansion of previously permitted project footprints may likewise require separate permitting action.

In all cases, the design and/or installation of project system shall provide for protection of the environment during handling, installing, storing, utilizing, transporting, servicing, testing, refilling, transferring, pumping, processing, removing waste products, repairing and maintaining systems and their components. Necessary design protection shall also be considered that would prevent contamination of the environment from impacts to the system caused by storm water runoff and flooding. Retrofit of connected systems on project sites to modern environmental protection design standards shall also be considered.

In the event environmental protection measures fail, the Contractor shall implement procedures to control and correct environmental damage.

3.1.1.1 Sewage-Based Systems Environmental Design and Installation Criteria

In general, there shall be no waste or debris discharges of any kind for a project unless authorized by the Contracting Officer. This shall include the Contractor's providing sufficient temporary sanitary equipment and facilities for the project. The design and/or installation of temporary or permanent sewage systems shall ensure that waters will be free of effects of sewage discharges. Applicable Federal, State, or local codes and requirements regarding sewage shall be strictly adhered to in the design, such as those of the EPA and, in the case of the State, Chapter 62-620 (Wastewater Facilities) of the FAC. Best Management Practices from the applicable agencies shall also be adhered to in the design.

3.1.2 Protection of Land Resources

Prior to the beginning of any construction, the Contractor shall identify all land resources to be preserved or avoided within the Contractor's work area. Materials displaced into uncleared areas shall be removed. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without special permission from the Contracting Officer. The Contractor shall engage a qualified tree surgeon to perform all tree surgery. The Contractor shall be responsible to repair injuries to bark, trunk, branches, and roots of protected trees by dressing, cutting, and painting as specified for Class I Fine Pruning, of the National Arborist Association Pruning Standards for Shade Tree or as per State's Agricultural Extension Agency Guidelines, immediately as occurrences arise. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

3.1.2.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that are not required to accomplish all work to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. The Contractor shall protect from damage all existing trees designated to remain. Protection of tree roots shall be provided against noxious materials in solution caused by

run-off or spillage. Fires shall be located outside the canopy of protected trees. No materials, trailers, or equipment shall be stored within the drip line of any protected tree. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

The Contractor shall thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present. The Contractor shall consult with the U.S. Department of Agriculture (USDA) regarding additional cleaning requirements that may be necessary.

3.1.2.2 Disturbed Areas

The Contractor shall effectively prevent erosion and control sedimentation through approved methods including, but not limited to, the following:

a. Retardation and Control of Runoff

Runoff from the construction site or from storms shall be controlled, retarded, and diverted to protected drainage courses by means of diversion ditches, benches, and by any measures required by area wide plans approved under paragraph 208 of the Clean Water Act.

b. Erosion and Sedimentation Control Devices

The Contractor shall construct or install temporary and permanent erosion and sedimentation control features as directed by the Contracting Officer. Temporary velocity dissipation devices shall be placed along drainage courses so as to provide for non-erosive flows. Temporary erosion and sediment control measures such as berms, dikes, drains, sediment traps, sedimentation basins, grassing, mulching, baled hay or straw, and silt fences shall be maintained until permanent drainage and erosion control facilities are completed and operative. For silt fences, the filter fabric is to be of nylon, polyester, propylene, or ethylene yarn of at least 50 lb/in strength and able to withstand a flow rate of at least 0.3 gal/ft sq/minute. The fabric should contain ultraviolet ray inhibitors and stabilizers and be a minimum of 45 inches in width. The toe of the fence shall be buried at least 8 inches deep to prevent undercutting and shall be secured to posts by suitable staples, tie wire, or hog rings. Posts shall have a cross section of at least 2"x4" and a minimum of 4 foot in length. Fence shall be overlapped to the next post if fabric joints are necessary.

c. Sediment Basins

Sediment from construction areas shall be trapped in temporary or permanent sediment basins in accordance with basin plans shown on the drawings. The basins shall accommodate the runoff of a local 24-hour storm. After each storm, the basins shall be pumped dry and accumulated sediment shall be removed as necessary to maintain basin effectiveness. Overflow shall be controlled by paved weir or by vertical overflow pipe, draining from the surface. The collected topsoil sediment shall be reused for fill on the

construction site, and/or conserved (stockpiled) for use at another site(s). The Contractor shall institute effluent quality monitoring programs as required by State and local environmental agencies.

3.1.2.3 Contractor Facilities and Other Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made when approved by the Contracting Officer. Borrow areas shall be managed to minimize erosion and to prevent sediment from entering nearby watercourses, wetlands, or lakes. Spoil areas shall be managed and controlled to limit spoil intrusion into areas designated on the drawings and to prevent erosion of soil or sediment from entering nearby watercourses, wetlands, or lakes. Spoil areas shall be developed in accordance with the grading plan indicated on the drawings. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment. If there is suspicion that sediment may be unsuitable for disposal at a specified location, the Contractor shall immediately take measures to contain the suspect sediment and notify the Contracting Officer.

3.1.2.4 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. Solid waste materials shall be hauled to an approved solid waste disposal site designated by the Contracting Officer. The Contractor shall comply with Federal, State, and local regulations pertaining to the use of the solid waste disposal site.

3.1.2.5 Fuel, Oil, and Lubricants

Fuel, oil, and lubricants shall be managed so as to prevent spills and evaporation. To prevent spills, fuel dispensers shall have a 4-foot square, 16-gauge metal pan with borders banded up and welded at corners right below the bibb. Edges of the pans shall be 8-inch minimum in depth to ascertain that no contamination of the ground takes place. Pans shall be cleaned by an approved method immediately after every dispensing of fuel and wastes disposed of offsite in an approved area. Should any spilling of fuel occur, the Contractor shall immediately recover the contaminated ground and dispose of it offsite in an approved area. Petroleum waste generated shall be stored in marked corrosion-resistant containers and recycled or disposed of in accordance with 40 CFR 279, State, and local regulations.

3.1.2.6 Hazardous Waste

Hazardous wastes are defined in 40 CFR 261. The Contractor shall ensure that hazardous wastes are stored and disposed of in accordance with 40 CFR 261 and State and local regulations. The Contractor shall ensure that hazardous wastes are packed, labeled, and transported in accordance with 49 CFR 173 and State and local regulations.

3.1.2.7 Hazardous Materials

The Contractor shall ensure that hazardous materials are labeled, stored, and transported in accordance with 49 CFR 173, State, and local regulations.

3.1.2.8 Disposal of Other Materials

Other materials than previously discussed (Construction and Demolition, vegetative waste, etc.) shall be handled as directed.

3.1.3 Preservation and Recovery of Historic, Archeological, and Cultural Resources

3.1.3.1 Applicable Law

A number of Federal laws require protection of cultural resources. Two laws, in particular, can be potentially involved with dredging activities: (1) the National Historic Preservation Act, as amended; and, (2) the Abandoned Shipwreck Act.

3.1.3.2 Known Resources

Known historic, archeological and cultural resources within the Contractor's work area(s) are designated as a "sensitive environmental area" on the contract drawings or other documents. If so designated, the Contractor shall install protection for these resources and shall be responsible for their preservation during the contract's duration. The Contractor shall not distribute maps or other information on these resource locations except for distribution among the Contractor's staff with a "need to know" technical responsibility for protecting the resources.

3.1.3.3 Inadvertent Discoveries

If, during or other construction activities, the Contractor observes items that may have historic or archeological value, such observations shall be reported immediately to the Contracting Officer so that the appropriate Corps staff may be notified and a determination for what, if any, additional action is needed. Examples of historic, archeological and cultural resources are bones, remains, artifacts, shell, midden, charcoal or other deposits, rocks or coral, evidences of agricultural or other human activity, alignments, and constructed features. The Contractor shall cease all activities that may result in the destruction of these resources and shall prevent his employees from further removing, or otherwise damaging, such resources.

The possibility of encountering submerged cultural resources is inherent in dredging and snagging operations. Such findings could include shipwrecks, shipwreck debris fields (such as streamed engine parts), prehistoric watercraft (such as log "dugouts"), and other structural features intact or displaced. The materials may be deeply buried in sediment, resting in shallow sediments or above them, or protruding into water. Suspected cultural materials inadvertently gathered from a water-saturated context should be kept moist by re-immersion, spraying, or some other expedient means of wetting until the appropriate Corps staff provide further

directives. No interviews or other contact with media shall occur without clear authorization from the Contracting Officer or the appropriate Corps representative.

3.1.3.4 Claims for Downtime due to Inadvertent Discoveries

Upon discovery and subsequent reporting of a possible inadvertent discovery of cultural resources, the Contractor shall seek to continue work well away from, or otherwise protectively avoiding, the area of interest, or in some other manner that strives to continue productive activities in keeping with the contract. Should an inadvertent discovery be of the nature that substantial impact(s) to the work schedule are evident, such delays shall be coordinated with the Contracting Officer.

3.1.4 Protection of Water Resources

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface, ground waters, and wetlands. The Contractor shall plan his operation and perform all work necessary to minimize adverse impact or violation of the water quality standard. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract. The Contractor's construction methods shall protect wetland and surface water areas from damage due to mechanical grading, erosion, sedimentation and turbid discharges. There shall be no storage or stockpiling of equipment, tools, or materials within wetlands or along the shoreline within the littoral zone unless specifically authorized.

3.1.4.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. These waste waters shall be collected and placed in retention ponds where suspended materials can be settled out or the water evaporates so that pollutants are separated from the water. Analysis shall be performed and results reviewed and approved by Corps staff before water in retention ponds is discharged.

3.1.4.2 Monitoring of Water Areas

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

3.1.4.3 Turbidity

The Contractor shall conduct his operations in a manner to minimize turbidity. See section 01411 Turbidity and Disposal Monitoring Specs for further instructions.

3.1.4.4 Oil, Fuel, and Hazardous Substance Spill Prevention and Mitigation

The Contractor shall prevent oil, fuel, or other hazardous substances from

entering the air, ground, drainage, local bodies of water, or wetlands. This shall be accomplished by design and procedural controls. In the event that a spill occurs despite the design and procedural controls, the following shall occur:

- (1) Immediate action shall be taken to contain and cleanup any spill of oil, fuel or other hazardous substance.
- (2) Spills shall be immediately reported to the Contracting Officer.
- (3) Spill contingency planning shall be strictly in accordance with the criteria of 40 CFR, Part 109.
- (4) To control the spread of any potential spill, absorbent materials shall be readily available and capable of absorbing the contents of the single largest tank.
- (5) To control the spread of any potential spill, the Contractor shall provide a written certification of commitment of manpower, equipment, and materials required to expeditiously cleanup and dispose of spill materials.

a. Spill Preventive Systems

System design and installation requirements have been discussed at the beginning of this Section. Temporary or portable tanks shall conform to applicable Federal, State, and local codes and requirements and shall not be placed where they may be affected by storm, flooding, or washout. Diversionary structures for spills shall be put in place in advance where practical. Both spill preventive systems and any deviations from associated requirements must be approved by the Contracting Officer prior to implementation.

b. Liabilities

The Contractor shall be liable in the amounts established in 40 CFR, Part 113 when it can be shown that oil was discharged as a result of willful negligence or willful misconduct. The penalty for failure to report the discharge of oil shall be in accordance with the provision of 33 CFR, Part 153.

3.1.5 Protection of Fish and Wildlife Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed in the Contractor's Environmental Protection Plan prior to the beginning of construction operation.

3.1.5.1 Endangered Species Protection

The Contractor shall instruct all personnel associated with the project of

the potential presence of manatees, and sea turtles, and whales in the area, and the need to avoid collisions with harming these animals. All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, or sea turtles, or whales which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The Contractor shall be held responsible for any manatee, sea turtle, or whale harmed, harassed, or killed as a result of construction activities.

a. Siltation Barriers

If siltation barriers are used, they shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.

b. Special Operating Conditions

(1) All vessels associated with the project shall operate at "no wake/idle" speeds at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom, and vessels shall follow routes of deep water whenever possible. Boats used to transport personnel shall be shallow-draft vessels, preferably of the light-displacement category, where navigational safety permits. Mooring bumpers shall be placed on all barges, tugs, and similar large vessels wherever and whenever there is a potential for manatees to be crushed between two moored vessels. The bumpers shall provide a minimum stand-off distance of four feet.

(2) If a manatee(s) is sighted within 100 yards of the project area, all appropriate precautions shall be implemented by the Contractor to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. If a manatee is closer than 50 feet to moving equipment or the project area, the equipment shall be shut down and all construction activities shall cease within the waterway to ensure protection of the manatee. Construction activities shall not resume until the manatee has departed the project area.

(3) During the period December through March, barges or dredges moving through the designated critical habitat of the right whale (*Eubalaena glacialis*) shall take the following precautions. During evening hours or when there is limited visibility due to fog or sea states greater than Beaufort 3, the tug/barge or dredge operator shall slow down to 5 knots or less when traversing between areas if whales have been spotted within 15 nautical miles (nm) of the vessel's path within the previous 24 hours. During the period from 1 December through 30 March, daily aerial surveys within 15 nautical miles of the dredging and disposal sites will be conducted by ~~others~~ NMFS to monitor for the presence of the Right Whales. ~~Right whale sightings will be immediately~~

~~communicated by marine radio to the dredging Contractor's dredge.~~
In addition, the tug/barge or dredge operator shall maintain a 500-yard buffer between the vessel and any whale. The area designated as critical habitat in the southeastern United States encompasses waters between 31 degrees 15 seconds N (approximately located at the mouth of the Altamaha River, GA) and 30 degrees 15 seconds N (approximately Jacksonville, FL) from the shoreline out to 15 nm offshore; and the waters between 30 degrees 15 seconds N and 28 degrees 00 seconds N (approximately Sebastian Inlet, FL) from the shoreline out to 5 nm.

(4) Dredging operations shall cease if two endangered turtles or three turtles in total are taken. ~~until the COR notifies the Contractor to resume dredging.~~ The Contractor shall not resume dredging until directed by the COR.

c. Manatee Monitoring (Clamshell Only)

During clamshell dredging operations, a dedicated observer shall monitor for the presence of manatees. If manatees are present, the observer shall document all activities with the use of a video camera with the capabilities of video taping at night. The video tape shall have date/time signature and record all manatee movements in the construction area and note any reactions to turbidity, sound, and light. The Contractor shall forward 3 copies to Chief, Environmental Branch, P.O. Box 4970, Jacksonville, Florida, 32232-0019, within 10 days of completion of the dredging.

d. Manatee Signs

Prior to commencement of construction, each vessel involved in construction activities shall display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8-1/2" x 11" reading, "CAUTION: MANATEE HABITAT/IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA." In the absence of a vessel, a temporary 3' x 4' sign reading "CAUTION: MANATEE AREA" shall be posted adjacent to the issued construction permit. A second temporary sign measuring 8-1/2" x 11" reading "CAUTION: MANATEE HABITAT. EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION" shall be posted at the dredge operator control station and at a location prominently adjacent to the issued construction permit. The Contractor shall remove the signs upon completion of construction. Sample Manatee Caution Signs are appended to the end of this Section.

3.1.5.2 Endangered Species Observers (Hopper Dredge Only)

During dredging operations, an observer approved by the National Marine Fisheries Service (NMFS) for sea turtles and whales shall be aboard to monitor for the presence of the species. During transit to and from the disposal area, the observer shall monitor from the bridge during daylight hours for the presence of endangered species, especially the right whale, during the period December through March. During dredging operations, the observer shall monitor the inflow screening for turtles and/or turtle parts.

a. Observation Sheets

The results of the monitoring shall be recorded on the appropriate observation sheet. An observation sheet shall be completed for each dredging cycle whether or not sea turtle or sea turtle parts are present. Sample observation sheets are appended to the end of this Section.

b. Endangered Species Observer(s)

NMFS-approved firms shall provide and manage the endangered species observer(s). A list of acceptable firms can be obtained by contacting NMFS Chief of Office of Protective Species in St. Petersburg, Florida at 727-570-5312. The trained observer(s) shall require quarters on board the dredge.

3.1.5.3 Manatee, Sea Turtle, and Whale Sighting Reports

Any manatee, sea turtle, or whale or sighting of any injured or incapacitated manatees, sea turtles, or whales shall be reported immediately to the Corps of Engineers. The order of contact within the Corps of Engineers shall be as follows:

Order of Contact of Corps Personnel for Dredging Contractor to Report
Endangered Species Death or Injury

<u>Title</u>	<u>Telephone Number</u>	
	<u>Work Hours</u>	<u>After Hours</u>
Corps, Inspector	On site	Lodging Location
Mr. Russ Tolle, Area Engineer, (CESAJ-CO-N)	904-232-2086	To be Provided
Chief, Environmental Branch, Planning Division (CESAJ-PD-E)	904-232-1010	To be Provided
Mr. Charles McGehee, Chief, Construction Branch, Construction-Operations Division (CESAJ-CO-C)	904-232-1122	To be Provided
Mr. Gordon M. Butler, Jr., Chief, Construction-Operations Division (CESAJ-CO)	904-232-3765	To be Provided

A copy of the incidental take report shall be provided within 24 hours of the incident. The Contractor shall immediately report any collision with and/or injury to a manatee to the Florida Marine Patrol "Manatee Hotline" 1-800-342-5367 as well as the U.S. Fish and Wildlife Service, Jacksonville Field Station 904-232-2580 for North Florida. The Contractor shall also report any stranded or injured Whales to National Marine and Fishery Service by paging "Whale Stranding Network's" at 305-862-2850.

3.1.5.4 Disposition of Turtles or Turtle Parts

PositivelyAll turtles lethally taken by the dredge shall have a tissue sample collected for genetic analysis by the observer. The observer shall follow the protocols found appended at the end of this section. After sample collection, positively identified turtle parts shall be disposed of in accordance with the direction of the COR. Turtle parts which cannot be positively identified on board the dredge or barge(s) shall be preserved by the observer(s) for later identification. Observer(s) shall measure, weigh, tag, and release any uninjured turtles incidentally taken by the dredge. Observer(s) (or their authorized representative) shall transport, as soon as possible, any injured turtles to a rehabilitation facility such as Sea World at Orlando, Florida.

3.1.5.5 Report Submission

The Contractor shall maintain a log detailing all incidents, including sightings, collisions with, injuries, or killing of manatees, sea turtles, or whales occurring during the contract period. The data shall be recorded on forms provided by the Contracting Officer (sample forms are appended to the end of this Section). All data in original form shall be forwarded directly to Chief, Environmental Branch, P. O. Box 4970, Jacksonville, Florida, 32232-0019, within 10 days of collection and copies of the data shall be supplied to the Contracting Officer. Following project completion, a report summarizing the above incidents and sightings shall be submitted to the following:

Florida Fish and Wildlife Conservation Commission
Bureau of Protected Species Management
620 South Meridian Street
Tallahassee, Florida 32399-1600

Chief, Environmental Branch
U.S. Army Corps of Engineers (CESAJ-PD-E)
P.O. Box 4970
Jacksonville, Florida 32232-0019

AreaEngineer,
U.S Army Corps of Engineers (CESAJ-CO-N
4070 Boulevard Center Drive, Suite 201
Jacksonville, Florida 33702

U.S. Fish and Wildlife Service
6620 Southpoint Drive South, Suite 310
Jacksonville, Florida 32216-0912

National Marine Fisheries Service
Protected Species Management Branch
9721 Executive Center Drive
St. Petersburg, Florida 33702

3.1.5.6 Hopper Dredge Equipment

Hopper dredge drag heads shall be equipped with rigid sea turtle deflectors

which are rigidly attached. No dredging shall be performed by a hopper dredge without a turtle deflector device that has been approved by the Contracting Officer. (Sample Turtle Deflector Design Details are appended to the end of this Section.)

a. Deflector Design

(1) The leading vee-shaped portion of the deflector shall have an included angle of less than 90 degrees. Internal reinforcement shall be installed in the deflector to prevent structural failure of the device. The leading edge of the deflector shall be designed to have a plowing effect of at least 6" depth when the drag head is being operated. Appropriate instrumentation or indicator shall be used and kept in proper calibration to insure the critical "approach angle". (Information Only Note: The design "approach angle" or the angle of lower drag head pipe relative to the average sediment plane is very important to the proper operation of a deflector. If the lower drag head pipe angle in actual dredging conditions varies tremendously from the design angle of approach used in the development of the deflector, the 6" plowing effect does not occur. Therefore, every effort should be made to insure this design "approach angle" is maintained with the lower drag pipe.)

(2) If adjustable depth deflectors are installed, they shall be rigidly attached to the drag head using either a hinged aft attachment point or an aft trunnion attachment point in association with an adjustable pin front attachment point or cable front attachment point with a stop set to obtain the 6" plowing effect. This arrangement allows fine-tuning the 6" plowing effect for varying depths. After the deflector is properly adjusted there shall be NO openings between the deflector and the drag head that are more than 4" by 4".

b. In Flow Basket Design

(1) The Contractor shall install baskets or screening over the hopper inflow(s) with no greater than 4" x 4" openings. The method selected shall depend on the construction of the dredge used and shall be approved by the Contracting Officer prior to commencement of dredging. The screening shall provide 100% screening of the hopper inflow(s). The screens and/or baskets shall remain in place throughout the performance of the work.

(2) The Contractor shall install and maintain floodlights suitable for illumination of the baskets or screening to allow the observer to safely monitor the hopper basket(s) during non-daylight hours or other periods of poor visibility. Safe access shall be provided to the inflow baskets or screens to allow the observer to inspect for turtles, turtle parts or damage.

c. Hopper Dredge Operation

(1) The Contractor shall operate the hopper dredge to minimize

the possibility of taking sea turtles and to comply with the requirements stated in the Incidental Take Statement provided by the National Marine Fisheries Service in their Biological Opinion.

(2) The turtle deflector device and inflow screens shall be maintained in operational condition for the entire dredging operation.

(3) When initiating dredging, suction through the drag heads shall be allowed just long enough to prime the pumps, then the drag heads must be placed firmly on the bottom. When lifting the drag heads from the bottom, suction through the drag heads shall be allowed just long enough to clear the lines, and then must cease. Pumping water through the drag heads shall cease while maneuvering or during travel to/from the disposal area.

(Information Only Note: Optimal suction pipe densities and velocities occur when the deflector is operated properly. If the required dredging section includes compacted fine sands or stiff clays, a properly configured arrangement of teeth may enhance dredge efficiency which reduces total dredging hours and "turtle takes." The operation of a drag head with teeth must be monitored for each dredged section to insure that excessive material is not forced into the suction line. When excess high-density material enters the suction line, suction velocities drop to extremely low levels causing conditions for plugging of the suction pipe. Dredge operators should configure and operate their equipment to eliminate all low level suction velocities. Pipe plugging in the past was easily corrected, when low suction velocities occurred, by raising the drag head off the bottom until the suction velocities increased to an appropriate level. Pipe plugging cannot be corrected by raising the drag head off the bottom. Arrangements of teeth and/or the reconfiguration of teeth should be made during the dredging process to optimize the suction velocities.)

(4) Raising the drag head off the bottom to increase suction velocities is not acceptable. The primary adjustment for providing additional mixing water to the suction line should be through water ports. To insure that suction velocities do not drop below appropriate levels, the Contractor's personnel shall monitor production meters throughout the job and adjust primarily the number and opening sizes of water ports. Water port openings on top of the drag head or on raised stand pipes above the drag head shall be screened before they are utilized on the dredging project. If a dredge section includes sandy shoals on one end of a tract line and mud sediments on the other end of the tract line, the Contractor shall adjust the equipment to eliminate drag head pick-ups to clear the suction line.

(5) Near the completion of each payment section, the Contractor shall perform sufficient surveys to accurately depict those portions of the acceptance section requiring cleanup. The Contractor shall keep the drag head buried a minimum of 6 inches in the sediment at all times. Although the over depth prism is

not the required dredging prism, the Contractor shall achieve the required prism by removing the material from the allowable over depth prism.

(6) During turning operations the pumps must either be shut off or reduced in speed to the point where no suction velocity or vacuum exists.

(7) These operational procedures are intended to stress the importance of balancing the suction pipe densities and velocities in order to keep from taking sea turtles. The Contractor shall develop a written operational plan to minimize turtle takes and submit it as part of the Environmental Protection Plan.

(8) The Contractor must comply with all requirements of this specification and the Contractor's accepted Environmental Protection Plan. The contents of this specification and the Contractor's Environmental Protection Plan shall be shared with all applicable crew members of the hopper dredge.

3.1.5.7 Recording Charts for Hopper Dredge(s)

All hopper dredge(s) shall be equipped with recording devices for each drag head that capture real time, drag head elevation, slurry density, and at least two of the following: Pump(s) slurry velocity measured at the output side, pump(s) vacuum, and/or pump(s) RPM. The Contractor shall record continuous real time positioning of the dredge, by plot or electronic means, during the entire dredging cycle including dredging area and disposal area. Dredge location accuracy shall meet the requirements of the latest version of EM 1110-1-1003. A copy of the EM can be downloaded from the following website:

<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>. The recording system shall be capable of capturing data at variable intervals but with a frequency of not less than every 60 seconds. All data shall be time correlated to a 24 hour clock and the recording system shall include a method of daily evaluation of the data collected. Data shall be furnished to the Contracting Officer for each day's operation on a daily basis. A written plan of the method the Contractor intends to use in order to satisfy these requirements shall be included with the Contractor's Quality Control Plan.

3.1.5.8 Sea Turtle Risk Assessment (For Hopper Dredges Only)

a. Sea Turtle Trawling and Relocation

A sea turtle risk assessment survey shall be conducted following the take of two sea turtles and continue until directed by the Contracting Officer. The results of each trawl shall be recorded on Sea Turtle Trawling Report appended to the end of this Section. A final report shall be prepared and submitted to the Contracting Officer prior to re-commencement of dredging summarizing the results of the survey (with all forms and including total trawling times, number of trawls and number of captures). Any turtles captured during the survey shall be measured and tagged in accordance with standard biological sampling procedures with sampling data recorded on Sea

Turtle Tagging and Relocation Report appended to the end of this Section. Any captured sea turtles shall be relocated south of the work area at least 3 miles from the location recorded on the Sea Turtle Tagging and Relocation Report form.

b. Sea Turtle Trawling Procedures

An approved sea turtle trawling and relocation supervisor shall provide researchers and nets to capture and relocate sea turtles, shall conduct Sea Turtle Risk Assessment Survey, and shall conduct any initiated sea turtle trawling. Turtles shall be captured with trawl nets to determine their relative abundance in the channel during dredging. Methods and equipment shall be standardized including data sheets, nets, trawling direction to tide, length of station, length of tow, and number of tows per station. Data on each tow shall be recorded using Sea Turtle Trawling Report appended to end of this Section. The trawler shall be equipped with two 60-foot nets constructed from 8-inch mesh (stretch) fitted with mud rollers and flats as specified in Turtle Trawl Nets Specifications appended to the end of this Section. Paired net tows shall be made for 10 to 12 hours per day or night. Trawling shall be conducted with the tidal flow using repetitive 15-30 minute (total time) tows in the channel. Tows shall be made in the center, green and red sides of the channel such that the total width of the channel bottom is sampled. Positions at the beginning and end of each tow shall be determined from GPS Positioning equipment. Tow speed shall be recorded at the approximate midpoint of each tow. Refer to EM 1110-1-1003, paragraph 5.3 and Table 5-1, for acceptable GPS criteria.

c. Water Quality and Physical Measurements

Water temperature measurements shall be taken at the water surface each day using a laboratory thermometer. Weather conditions shall be recorded from visual observations and instruments on the trawler. Weather conditions, air temperature, wind velocity and direction, sea state-wave height, and precipitation shall be recorded on the Sea Turtle Trawling Report appended to the end of this Section. High and low tides shall be recorded.

d. Initiation of Trawling

Initiate trawling if two turtles are taken. The Contractor must initiate trawling and relocation activity in the dredging area within 8 hours of the occurrence of the take. Trawling shall continue until suspended by the Contracting Officer.

e. Approved Trawling Supervisor

Trawling shall be conducted under the supervision of a biologist approved by the NMFS. A letter of approval from NMFS shall be provided to the Contracting Officer prior to commencement of trawling.

f. Turtle Excluder Devices

Approval for trawling for sea turtles without Turtle Excluder Devices (TEDs) must be obtained from NMFS. Approval for capture and relocation of sea turtles must be obtained from the Florida Fish and Wildlife

Conservation Commission (FF&WCC). Approvals must be submitted to the Contracting Officer prior to trawling.

g. Report Submission

Following completion of the project, a copy of the Contractor's log regarding sea turtles shall be forwarded to the Chief, Environmental Branch and the Area Engineer, within 10 working days.

~~3.1.5.9 Sea Turtle Beach Nest Monitoring~~

~~a. Sea Turtle (Work Stoppage) Window and Monitoring~~

~~If dredging and placement of material in the beach fill area along Florida Beaches has commenced on or before March 1st, turtle monitoring and nest location shall commence on March 1st and continue concurrently with the performance of work. If dredging and placement of material on Florida Beaches has not commenced prior to March 1st, the Contractor shall commence turtle monitoring and nest location activities for a period of 65 days prior to performing any work (including movement of equipment) in the beach fill area or commence turtle monitoring March 1 which ever date is later. In such case, after turtle monitoring and nest location activities have been performed for a period of 65 days, the Contractor shall commence work in the beach fill area and continue the monitoring activities concurrently with performance of the work. In any case turtle monitoring and nest location/relocation activities are required through November 30th or until completion of the work on Florida Beaches, whichever is earlier.~~

~~b. Daily Visual Inspection~~

~~Turtle monitoring activities shall include performance of daily visual inspections of the beach at sunrise by a person permitted by the FF&WCC for handling sea turtle eggs. Any nests discovered shall be excavated and relocated prior to 9:00 a.m. to a nearby self-release beach location where artificial lighting and/or other disturbances shall not interfere with successful incubation, hatching nor hatchling orientation. A log of the results of turtle egg monitoring and recovery activities shall be kept and a copy submitted weekly to the Chief, Environmental Branch, Jacksonville District (sample Marine Turtle Nesting Summary Report form is appended to the end of this Section).~~

~~c. Turtle Subcontractor~~

~~The Contractor shall have a FF&WCC permitted subcontractor approved by the Contracting Officer to accomplish the sea turtle monitoring of this section unless he demonstrates to the satisfaction of the Contracting Officer the capability to accomplish sea turtle monitoring and recovery by obtaining a permit from the FF&WCC to take turtles.~~

~~d. Report Submission~~

~~Following completion of the project, a copy of the Contractor's log regarding sea turtles shall be forwarded to the Chief, Environmental Branch and the Area Engineer.~~

~~3.1.5.10 Beach Placement Restrictions~~

~~a. Equipment Lighting During Sea Turtle Nesting Period March 1 to November 30~~

~~Direct lighting of the beach and near shore waters shall be limited to the immediate construction area and shall comply with safety requirements. Lighting on offshore or onshore equipment shall be minimized through reduction, shielding, lowering, and appropriate placement to avoid excessive illumination of the waters surface and nesting beach while meeting all Coast Guard, EM 385-1-1, and OSHA requirements. Light intensity of lighting plants should be reduced to the minimum standard required by OSHA for General Construction areas, in order not to misdirect sea turtles. Shields should be affixed to the light housing and be large enough to block light from all lamps from being transmitted outside the construction area. Refer to Beach Lighting Schematic appended to the end of this Section.~~

~~b. Pipeline Placement~~

~~Any construction pipes placed parallel to the shoreline shall be placed as far landward as possible up to the vegetated dune line.~~

~~c. Beach Tilling~~

~~Till the fill area between the landward edge and the seaward edge of the top of the berm with equipment operated so as to penetrate and loosen beach sand (a) to a depth of 36 inches and (b) laterally without leaving unloosened compact sand between the adjacent paths of tines or penetrating part of the equipment. (Suitable equipment is Caterpillar D9L/No. 9 Adjustable Parallelogram Multishank Ripper, or equal.) The Contractor should be careful not to drag the beach where rock structures have been covered less than 3 feet of sand.~~

3.1.5.9 Escarpments

The Contractor shall perform daily visual surveys for escarpments along finished sections of the beach nourishment area that have not been accepted by the Contracting Officer as complete. Results of the surveys shall be submitted to the Contracting Officer. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet or more shall be mechanically leveled by the Contractor to the natural beach contour.

3.1.6 Protection of Air Resources

The Contractor shall keep construction activities under surveillance,

management, and control to minimize pollution of air resources. All activities, equipment, processes and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with the applicable air pollution standards of the State of Florida (Florida Statute, Chapter 403 and others and Chapters 200 series of the FAC) and all Federal emission and performance laws and standards, including the U.S. Environmental Protection Agency's Ambient Air Quality Standards. Information regarding Florida Statutes can be obtained from the following websites:

<http://www.dep.state.fl.us/ogc/documents/statutes/text/403.doc>;

<http://www.dep.state.fl.us/ogc/documents/rules/aiur/62-213.doc>; and,

<http://www.dep.state.fl.us/ogc/documents/rules/mainrule.htm>.

3.1.6.1 Particulates

Particulates, such as dust, shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and work areas within or outside the project boundaries free from particulates that would cause air pollution standards to be exceeded or that would cause a hazard or nuisance. The Contractor shall have the necessary equipment and approved methods to control particulates as the work proceeds and before a problem develops.

3.1.6.2 Burning

All burning shall be subject to State and local requirements, including requirements for burn permits and bans during certain conditions such as droughts.

3.1.6.3 Odors

Odors shall be controlled at all times for all construction activities.

3.1.7 Protection of Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise.

3.2 POSTCONSTRUCTION CLEANUP

The Contractor shall clean up any area(s) used for construction.

3.3 PRESERVATION AND RESTORATION OF LANDSCAPE AND MARINE VEGETATION DAMAGES

The Contractor shall restore all landscape features and marine vegetation damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be a part of the Environmental Protection Plan as defined in subparagraph "Environmental Protection Plan" of paragraph SUBMITTALS above. This work shall be accomplished at the Contractor's expense.

3.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES

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

3.5 SAMPLE - MANATEE CAUTION SIGNS

See APPENDIX 01355-A at the end of this Section (2 pages).

3.6 SAMPLE - DAILY MANATEE REPORTING LOG

See APPENDIX 01355-B at the end of this Section (1 page).

3.7 SAMPLE - HOPPER DREDGE REPORTING LOG--TURTLE OBSERVER NOTES

See APPENDIX 01355-C at the end of this Section (1 page).

3.8 SAMPLE - INCIDENT REPORT OF SEA TURTLE MORTALITY AND DREDGING ACTIVITIES

See APPENDIX 01355-D at the end of this Section (13 pages).

3.9 MARINE TURTLE NESTING SUMMARY REPORT

See APPENDIX 01355-E at the end of this Section (2 pages).

3.10 BEACH LIGHTING SCHEMATIC

See APPENDIX 01355-F at the end of this Section (1 page).

3.11 CONCEPTUAL TURTLE DEFLECTOR DESIGN DETAILS

See APPENDIX 01355-G at the end of this Section (2 pages).

3.12 SEA TURTLE TRAWLING REPORT

See APPENDIX 01355-H at the end of this Section (1 page).

3.13 SEA TURTLE TAGGING AND RELOCATION REPORT

See APPENDIX 01355-J at the end of this Section (1 page).

3.14 TURTLE TRAWEL NETS SPECIFICATIONS

See APPENDIX 01355-K at the end of this Section (1 page).

3.15 SAMPLE - WHALE SIGHTING LOG

See APPENDIX 01355-L at the end of this Section (1 page).

3.16 PROJECT ENVIRONMENTAL SUMMARY SHEET

See APPENDIX 01355-M at the end of this Section (2 pages).

~~--- End Of Section ---~~

3.17 PROTOCOL FOR COLLECTING TISSUE FROM DEAD TURTLES FOR GENETIC ANALYSIS

See APPENDIX 01355-N at the end of this Section (2 pages).

-- End of Section --

PROJECT: _____

INCIDENT REPORT OF SEA TURTLE MORTALITY
AND DREDGING ACTIVITIES

Species: _____

Date: _____ Time: 24 hour clock _____

Geographic Site: _____

Location: Latitude _____ Longitude _____

Vessel Name: _____

Type of Dredging Activity: _____

Load #: _____ Sampling Method: _____

Location Specimen Recovered: _____

Draghead Deflector? YES _____ NO _____

Condition of Deflector: _____

Weather Conditions: _____

Water Temp: Surface _____ Column _____

Head Width: _____ Plastron Length: _____

Carapace S.L. Length: _____ Carapace S.L. Width: _____

Carapace O.C. Length: _____ Carapace O.C. Width: _____

Condition of Specimen: _____

Turtle Tagged: YES _____ NO _____

Tag #: _____ Tag Date: _____

Comments/Other: _____

Observer's Name: _____

SAMPLES

ENDANGERED SPECIES OBSERVER PROGRAM

Project: Kingsbay, St. Mary's Entrance Channel.

INCIDENT REPORT OF SEA TURTLE TAKE BY DREDGING ACTIVITY

Date 03/18/02 Time(24hr) 2350 hrs
 Species of Turtle Taken Loggerhead Caretta caretta
 Dredging Site (channel, port, etc.) Kingsbay, St. Mary's Entrance Channel.
 Location of Take: Latitude 30°42'.46 - 30°42'.59 N Longitude 81°23'.16 - 81°25'.05 W
 Vessel Name and Company M/V Stuyvesant, Bean Dredging.
 Type of Dredging Activity Maintenance Dredging.
 Load # 75 Times: Start 2030 End 2120 Dump 2215
 Sampling Method (overflow, inflow, etc.) overflow
 Samples Recovered From lower port overflow.
 Condition of Screening good
 Draghead Deflector? Yes No
 Condition of Deflector good.
 Weather Conditions SE 5-10kts, BSS = 2, partly cloudy Tide 3.8 - 4.75
 Water Temperature: Surface 17°C ^{62.4} Column 17°C or F (circle one)
 Condition of Specimen(s) Sampled Head + small piece of carapace recovered. Slight odour + fresh blood present upon exam.

Measurements--

Give estimate of entire carapace dimensions, as well as fragments sampled (in metric when possible, indicate if not):

Head Width 10.0 cm
 Plastron Length N/A Width N/A
 Carapace S. L. Length N/A S.L. Width N/A
 Carapace O.C. Length N/A O.C. Width N/A
 Turtle Tagged? Yes No Tag # N/A Tag Date 1/1

Comments It is possible that this turtle was taken in a previous load earlier the same day. Load 73 was dumped at 1155 hrs. It consisted of stiff clay severely clogging the inflow box, making viewing entire contents impossible, even after extensive flushing. The inflow box was opened + contents flushed into the hopper.

Observer's Name Stacie Knight, Susan Hann

SAMPLES

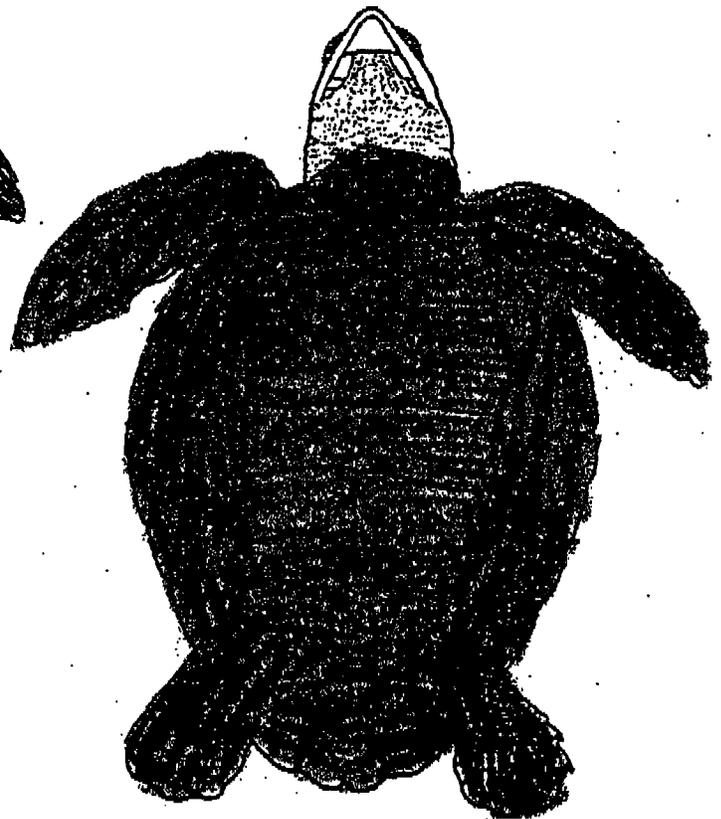
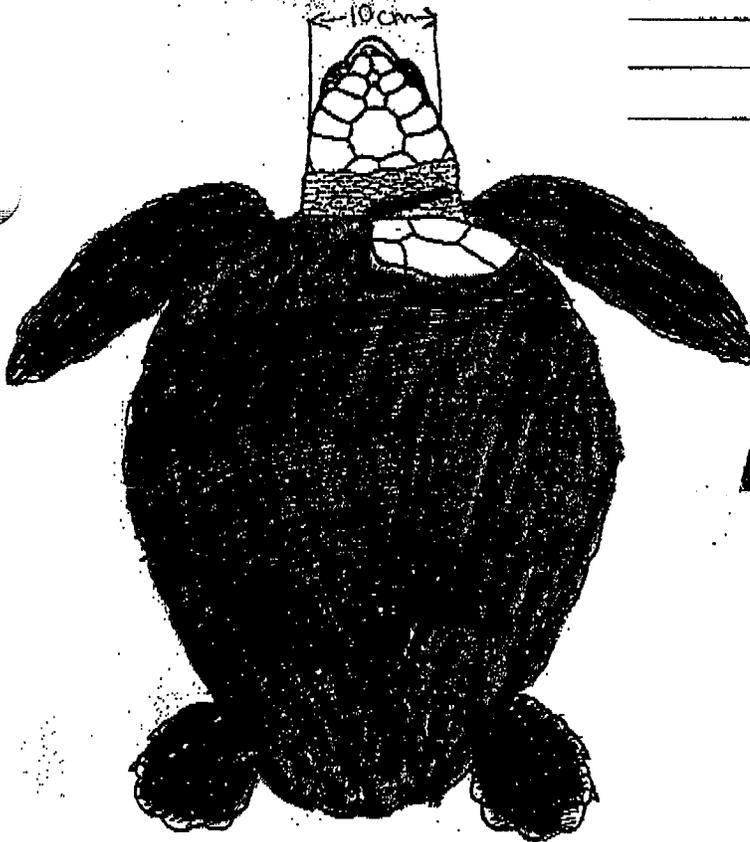
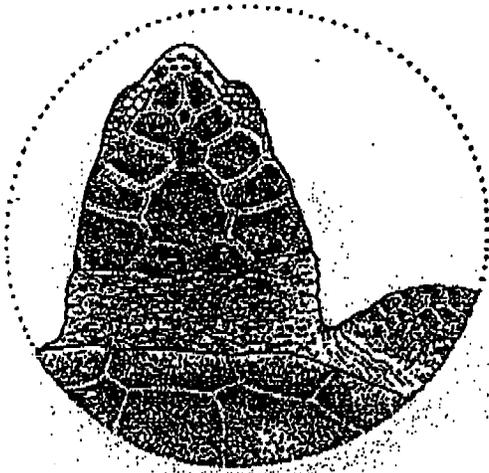
Caretta caretta (loggerhead)

Shade areas of turtle that are missing. Sketch cracks and lacerations.

Comments: 03/18/02 Dredge Stuyvesant
Load 75 St. Mary's Entrance Channel

Entire head found on lower part
 overflow along with small piece of
 carapace. Specimen had slight odour
 + fresh blood was found upon
 examination of tissue + bone.

2 photos taken.



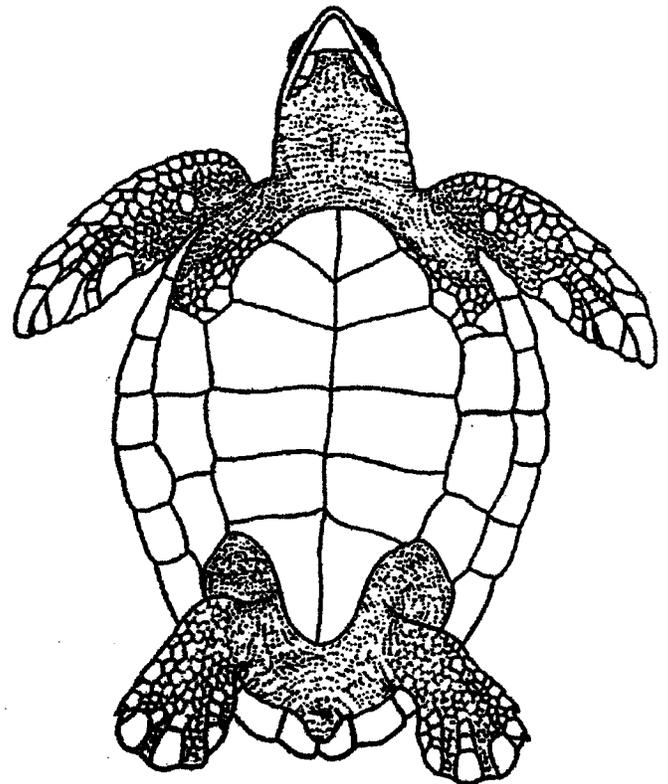
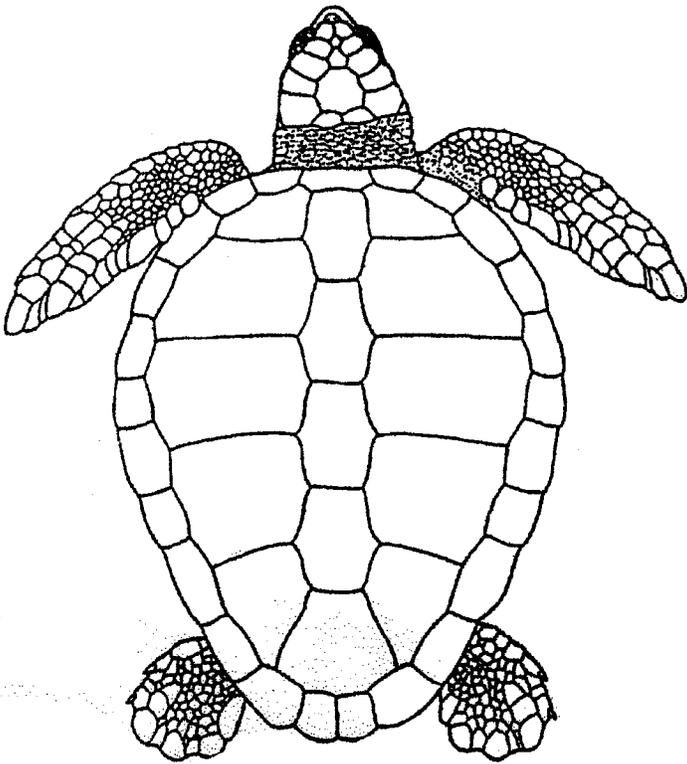
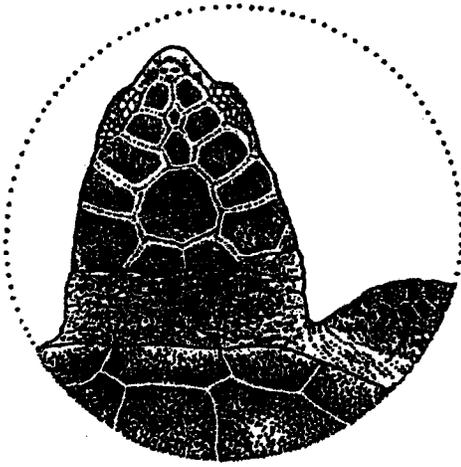
Observers: Stacie Knight
 Susan Hann

Diagrams by Tom McFarland

Caretta caretta (loggerhead)

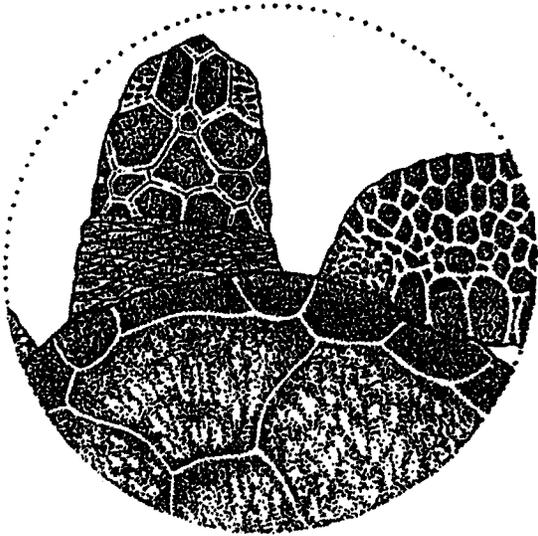
Shade areas of turtle that are missing. Sketch cracks and lacerations.

Comments: _____

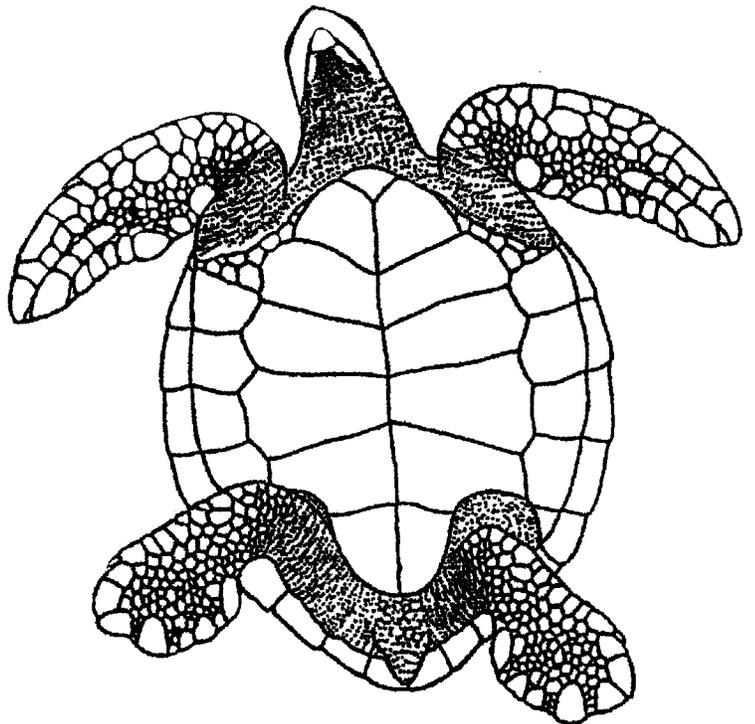
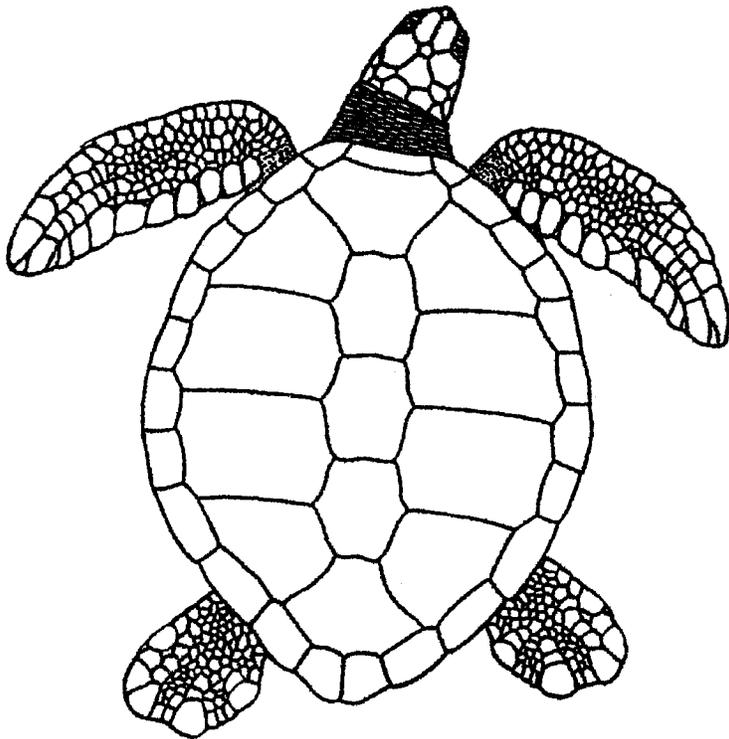


Chelonia mydas (green turtle)

Shade areas of turtle that are missing. Sketch cracks and lacerations.



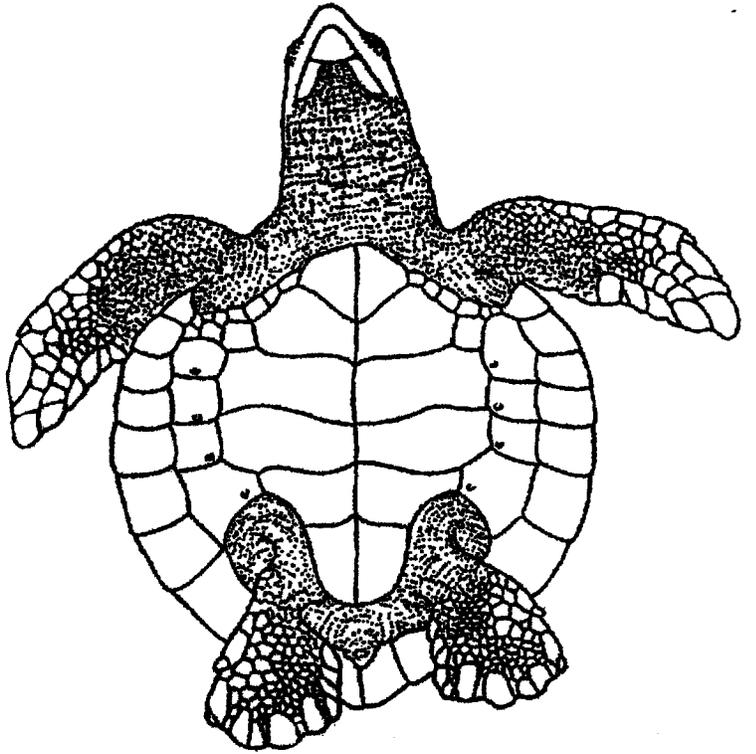
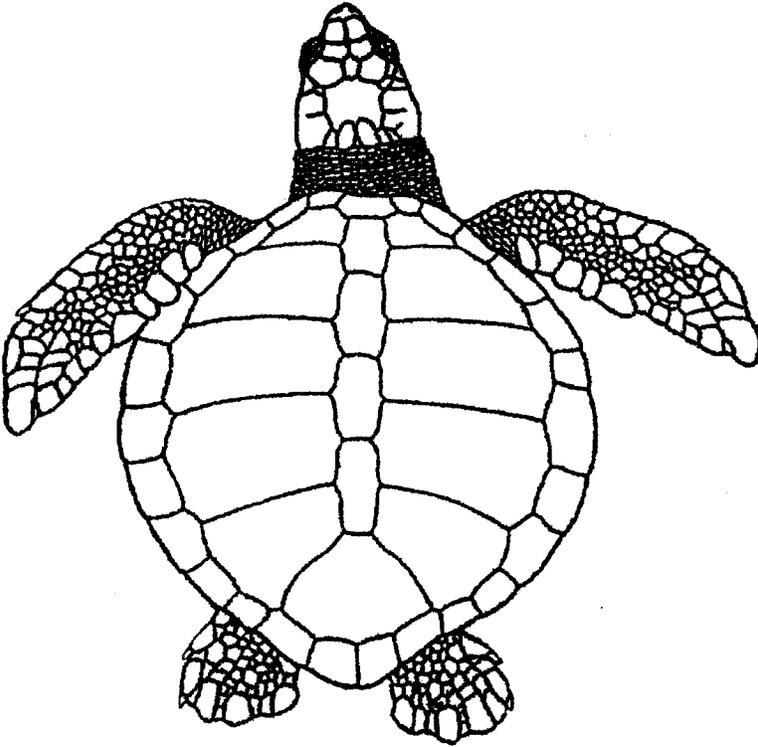
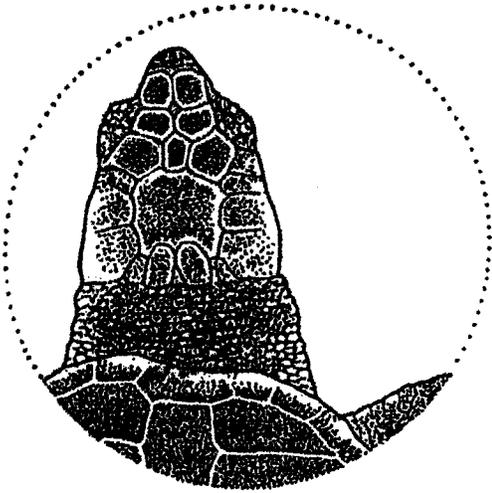
Comments: _____



Lepidochelys kempii (Kemp's Ridley)

Shade areas of turtle that are missing. Sketch cracks and lacerations.

Comments: _____



***PROTOCOL FOR COLLECTING TISSUE FROM DEAD TURTLES FOR GENETIC ANALYSIS**

Method for Dead Turtles

<<<IT IS CRITICAL TO USE A NEW SCALPEL BLADE AND GLOVES FOR EACH TURTLE TO AVOID CROSS-CONTAMINATION OF SAMPLES>>>

1. Put on a new pair of latex gloves.
2. Use a new disposable scalpel to cut out an approx. 1 cm (1/2 in) cube (bigger is NOT better) piece of muscle. Easy access to muscle tissue is in the neck region or on the ventral side where the front flippers “insert” near the plastron. It does not matter what stage of decomposition the carcass is in.
3. Place the muscle sample on a hard uncontaminated surface (plastron will do) and make slices through the sample so the buffer solution will penetrate the tissue.
4. Put the sample into the plastic vial containing saturated NaCl with 20% DMSO *(SEE BELOW)
5. Use the pencil to write the sample ID number (observer initials, year, month, day, turtle number by day), species, state and carapace length on the waterproof paper label and place it in the vial with the sample.

EXAMPLE: For a 35.8 cm curved carapace length green turtle documented by Jane M. Doe on July 15, 2001 in Georgia, the label should read “JMD20010715-01, C. mydas, Georgia, CCL=35.8 cm”. If this had been the third turtle Jane Doe responded to on July 15, 2001, it would be JMD20010715-03.

6. Label the outside of the vial with the same information (stranding ID number, species, state and carapace length) using the permanent marker.
7. Place clear scotch tape over the writing on the vial to protect it from being smeared or erased.
8. Wrap parafilm around the cap of the vial by stretching it as you wrap.
9. Place vial within whirlpak and close.
10. Dispose of the scalpel.
11. Note on the incidental take reporting form that a genetic sample was taken and specify the location on the turtle where the sample was obtained.
12. Submit the vial to the NMFS- La Jolla, CA Laboratory, care of Dr. Peter Dutton at the address referenced below.

*The 20% DMSO buffer in the plastic vials is nontoxic and nonflammable. Handling the buffer without gloves may result in exposure to DMSO. This substance soaks into skin very rapidly and is commonly used to alleviate muscle aches. DMSO will produce a garlic/oyster taste in the mouth along with breath odor. The protocol requires that you WEAR gloves each time you collect a sample and handle the buffer vials.

The vials (both before and after samples are taken) should be stored at room temperature or cooler. If you don't mind the vials in the refrigerator, this will prolong the life of the sample. DO NOT store the vials where they will experience extreme heat (like in your car!) as this could cause the buffer to break down and not preserve the sample properly.

Sample Submission

Sea Turtle Program
NOAA/NMFS/SWFSC
Dr. Peter Dutton
8604 La Jolla Shores Drive
La Jolla, CA 92037-1508

***Genetic Sample Kit Materials – DEAD turtles**

- latex gloves
- single-use scalpel blades (Fisher Scientific 1-800-766-7000, cat. # 08-927-5A)
- plastic screw-cap vial containing saturated NaCl with 20% DMSO, wrapped in parafilm
- waterproof paper label, 1/4" x 4"
- pencil to write on waterproof paper label
- permanent marker to label the plastic vials
- scotch tape to protect writing on the vials
- piece of parafilm to wrap the cap of the vial
- whirl-pak to return/store sample vial

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SECTION 01411

TURBIDITY AND DISPOSAL MONITORING

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 - 3.2.1 Testing
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-- End of Section Table of Contents --

SECTION 01411

TURBIDITY AND DISPOSAL MONITORING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all work required to obtain, analyze, and report the results of turbidity and disposal monitoring.

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. Submittals shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Calibration Standard ;

The Contractor shall furnish to the Contracting Officer a copy of the operating instructions and standards used in calibrating equipment used in collecting samples for turbidity.

SD-06 Test Reports

Turbidity Monitoring

All required turbidity test reports shall be submitted (preferably by electronic mail) to the Contracting Officer, the Environmental Branch (CESAJ-PD-E), and the Florida Department of Environmental Protection (FDEP) ~~within 24 hours~~ every 7 days after completion of each test.

Disposal Reports

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 MONITORING REQUIREMENTS

3.1.1 General

Nearshore or inland water samples shall be obtained and analyzed for turbidity. Sampling shall be conducted in accordance with techniques described in the latest edition of "Standard Methods" published by the

American Public Health Association (APHA), American Waterworks Association (AWWA), and Water Pollution Control Federation (WPCF), and other current techniques recognized by the scientific community and approved by the Jacksonville District, Corps of Engineers. Samples obtained for turbidity analysis shall be analyzed within 30 minutes of collection. Samples shall be taken with a sampler obtaining samples uncontaminated by water from any other depth.

3.1.1.1 Turbidity Monitoring Equipment

Monitoring required for turbidity shall be measured in Nephelometric Turbidity Units (NTU) using a standard Nephelometer. Global Positioning System (GPS) is also required to record sampling stations.

3.1.2 Dredging and Disposal Locations

Routine monitoring shall occur at the following locations:

3.1.2.1 Station Descriptions

~~Location:~~

- (1) During dredging at the dredge site:

Compliance:

No more than 150 meters downcurrent of the dredge or point of discharge within the densest portion of any visible turbidity plume at surface, mid-depth, and 1 foot above bottom.

Background:

At least 300 meters upcurrent of the point of dredging outside of any turbidity plume at surface, mid-depth, and 1 foot above bottom.

Frequency: Once daily during daylight hours, after dredging has been ongoing for at least 2 hours.

~~b. At the Disposal Sites~~

- (2) During disposal at the beach disposal sites on Amelia Island.

~~Location:~~

Compliance:

No more than 150 meters downcurrent of the point of discharge within the densest portion of any visible turbidity plume at surface and mid-depth. If no plume is visible, samples shall be collected 150 meters downcurrent of the discharge point and 50 meters offshore.

Background:

At least 200 meters upcurrent of the point of dredging outside of any turbidity plume at the same distance offshore as the compliance point and at surface and mid-depth.

Frequency: Once daily during daylight hours, samples shall be collected after discharge has been continual for at least 1 hour.

(3) During disposal at the nearshore site.

~~Location:~~

Compliance:

No more than 150 meters downcurrent of the point of discharge within the densest portion of any visible turbidity plume at surface, mid-depth, and 1-foot above the bottom.

Background:

At least 200 meters upcurrent of the point of dredging outside of any turbidity plume at surface and mid-depth, and 1 foot above the bottom.

Frequency: Once daily during daylight hours, samples shall be collected after discharge has been continual for at least 1 1/2 hour.

3.2 TURBIDITY TESTS

3.2.1 Testing

The Contractor shall provide the Government with a certification, attesting to the accuracy of his testing equipment and procedure. The Contractor shall also provide the Contracting Officer with a duplicate of the standard used to calibrate his testing instrument as well as a complete set of operating instructions for the turbidity testing equipment. The Contractor and the Contracting Officer will use this standard throughout the project to maintain the calibration of the equipment. Whenever there is doubt as to the adequacy of the testing or validity of the results, the Contracting Officer may direct that additional tests be performed at no additional cost to the Government.

3.2.2 ~~Reporting~~ Monitoring Report

~~The monitoring data shall be recorded on summary forms that contain the pertinent information in the following paragraphs. Example forms are appended to the end of this Section. Other data shall be submitted in the form supplied by the laboratory chosen to do the analysis. All data shall be forwarded (preferably electronically) to the Contracting Officer, Environmental Branch (CESAJ-PD-E), and FDEP within 24 hours of collection. Electronic mail addresses of the Corps and FDEP personnel to receive these reports are provided below. Reports shall be provided in a common format such as Excel Spreadsheet (.xls) files, Word (.doc) files, and Web Graphics (Joint Photographic Group or .jpg) files.~~ The monitoring data shall be recorded on summary forms that contain the pertinent information in the following paragraphs. Example forms are appended to the end of this Section. Other data shall be submitted in the form supplied by the laboratory chosen to do the analysis. Within 7 days of collection the following information shall be submitted:

- a. Permit application number
- b. Dates of sampling and analysis.
- c. A statement describing the methods used in collection, handling, storage, and quality control methods used in the analysis of the samples.
- d. A map indicating the sampling location and plume configuration, if any.
- e. A map plotting the dredge location during each traverse through the borrow area. This map can be combined with the map indicating the sampling location.
- f. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection, and accuracy of the data.
- g. Results of the analyses.
- h. A description of any factors influencing the dredging or disposal operation or the sampling program. Reports shall be furnished daily even when no sampling is conducted. When sampling is not conducted, a brief statement shall be given in the report explaining the reason for not conducting the sampling, such as "dredge not working due to mechanical problems" or "no sampling taken due to high seas".
- j. State plane coordinates (x and y) shall be provided for all sampling stations along with the coordinates of the dredge and discharge pipe and the distance between the sampling station and dredge/discharge pipe for each sampling event.
- k. Time of day and date samples were taken.
- l. Depth of water body.
- m. Depth of sample.
- n. Antecedent weather conditions.
- o. Construction equipment or disposal location (station location and map).
- p. Water sample location.
- q. Wind direction and velocity.
- r. Tidal stage and direction of flow.

<u>NAME</u>	<u>ORGANIZATION</u>	<u>E-MAIL ADDRESS</u>
Martin Seeling	FDEP	Martin.Seeling@dep.state.us.fl

3.2.3 ~~Report Contents~~ Post Dredge Reporting

Within 30 days after the project is completed, the following information below shall be submitted:

- a. ~~Permit application number.~~ Description of dredging and disposal methods and equipment.
- b. ~~Dates of sampling and analysis.~~ Dates in which work began and was completed.
- c. ~~A statement describing the methods used in collection, handling, storage, and quality control methods used in the analysis of the samples.~~ Tables of turbidity data collected at the dredging and disposal sites, which list the date each sample was collected in one column, the value of every background sample collected at given depth in a second column, the value of every compliance sample collected at a given depth in a third column, and difference between the background and compliance

values in a fourth column. A separate table shall be provided for each set of compliance and background stations collected at different depths and at different locations. Each table shall have a title which states if the data was collected at the dredge site or disposal site and name of the disposal site should be provided. A statement identifying any violations of the turbidity standard which occurred during the event, the probable cause of the violation, and corrective measure(s) taken to reduce turbidity.

~~d. A map indicating the sampling location and plume configuration, if any.~~

~~e. A map plotting the dredge location during each traverse through the borrow area. This map can be combined with the map indicating the sampling location.~~

~~f. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection, and accuracy of the data.~~

~~g. Results of the analyses.~~

~~h. A description of any factors influencing the dredging or disposal operation or the sampling program. Reports shall be furnished daily even when no sampling is conducted. When sampling is not conducted, a brief statement shall be given in the report explaining the reason for not conducting the sampling, such as "dredge not working due to mechanical problems" or "no sampling taken due to high seas".~~

~~i. State plane coordinates (x and y) shall be provided for all sampling stations along with the coordinates of the dredge and discharge pipe and the distance between the sampling station and dredge/discharge pipe for each sampling event.~~

3.2.4 Monitoring Reports Method of Submittal

Monitoring reports shall also include the following information for each day that samples are taken: All data shall be forwarded (preferably electronically) to the Contracting Officer, Environmental Branch (CESAJ-PD-E), and FDEP. Electronic mail addresses of the Corps and FDEP personnel to receive these reports are provided below. Reports shall be provided in a common format such as Excel Spreadsheet (.xls) files, Word (.doc) files, and Web Graphics (Joint Photographic Group or .jpg) files

~~a. Time of day and date samples were taken.~~

~~b. Depth of water body.~~

~~c. Depth of sample.~~

~~d. Antecedent weather conditions.~~

~~e. Construction equipment or disposal location (station location and map).~~

~~f. Water sample location.~~

~~g. Wind direction and velocity.~~

~~h. Tidal stage and direction of flow.~~

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Russ Tolle	USACE COR	russ.tolle@usace.army.mil
Matt Miller	USACE PD-E	matthew.j.miller@usace.army.mil

<u>NAME</u>	<u>ORGANIZATION</u>	<u>E-MAIL ADDRESS</u>
Martin Seeling	FDEP	Martin.Seeling@dep.state.us.fl

3.2.5 Notification

If turbidity exceeds background levels by more than 29 NTU, the Contractor shall immediately notify Chief, Environmental Branch at 904-232-1010 and the Contracting Officer, or on the morning of the following work day if it occurs after normal work hours. In addition, all dredging or disposal activity shall cease immediately and all measures to reduce turbidity shall be taken. Dredging or disposal shall not resume until corrective measures have been taken and turbidity has returned to acceptable levels as determined by proper testing described in subparagraph "Dredging and Disposal Locations" above.

3.3 WORK DELAY

Delays in work due to the fault or negligence of the Contractor or the Contractor's failure to comply with this specification shall not be compensable. Any adjustments to the contract performance period or price that are required as a result of compliance with this section shall be made in accordance with the provisions of the Clause SUSPENSION OF WORK of Section 00700 CONTRACT CLAUSES.

3.4 SAMPLE - TURBIDITY MONITORING TEST REPORT

See APPENDIX A at the end of this Section (with example location map appended) (3 pages).

-- End Of Section --

-- End of Section --

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-- End of Section Table of Contents --

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SUMMARY

In addition to Construction Facilities this Section covers:

Temporary Utilities
Construction Aids
Vehicular Access and Parking
Project Identification

See Section 01355 ENVIRONMENTAL PROTECTION for requirements including silt control, trailer placement, fueling restrictions, dust control, solid waste, and ~~clean-up~~ cleanup. Upon completion of project, ~~clean-up~~ and restore area in accordance with Clause ~~CLEAN-UP~~ CLEANING UP of Section 00700 CONTRACT CLAUSES.

a. Construction Facilities include, but are not limited to, the following:

- (1) Contracting Officer's Field Office
- (2) Contractor Offices
- (3) Information Bulletin Board
- (4) Material and Equipment Storage Area
- (5) Fueling Area
- (6) Secured Storage Area
- (7) Employee Parking Area
- (8) Debris Container (dumpster)
- (9) Construction Signage to include Project Sign; Safety Sign; and, Construction Warning Signs

b. Temporary Utilities include, but are not limited to, the following:

- (1) Water
- (2) Electric
- (3) Sewage
- (4) Communications
- (5) Lighting

1.2 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C2 (1997) National Electrical Safety Code

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (1999) National Electrical Code

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CESAJR 385-1-1 (1998) Safety and Occupational Health
Program

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

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Within 10 days following date of receipt of Notice to Proceed and prior to mobilization to site submit following in accordance with Section 01330
SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Mobilization/Demobilization Plan

Plan shall include, but not be limited to, the following:

a. Mobilization Requirements:

- (1) Methods, equipment and materials
- (2) Connection of utilities
- (3) Placement of site facilities and temporary controls
- (4) Construction of facilities

b. Demobilization Requirements (methods, equipment and materials required to clean-up and restore site at project conclusion):

- (1) Collection, recycle and disposal of solid waste
- (2) Contract-generated material
- (3) Utility disconnection
- (4) Removal of Contractor facilities
- (5) Repair and restoration of site (i.e., fences, roads, or permanent facilities)

Manufacturer's Literature for Equipped Boat, Trailer, and Hand-Held Radios

Within 10 calendar days after date of Notice of Award, the Contractor shall submit manufacturer's literature of all items to

be furnished for exclusive use of Government personnel.

1.4 EXISTING UTILITIES

There is no potable water, sanitary sewer, or natural gas available at the site. Contractor is responsible for furnishing at the project site.

1.4.1 Water

In addition to the above, the Contractor shall provide and maintain at his own expense an adequate supply of water for his use for construction, and to install and maintain necessary supply connections and piping for same, but only at such locations and in such manner as may be approved by the Contracting Officer. The Contractor shall also provide and maintain his own temporary toilet and washing facilities. Toilet and washing facilities shall be installed and maintained in a location approved by the Contracting Officer. Refer to paragraph AVAILABILITY AND USE OF UTILITY SERVICES below.

1.4.2 Electricity

In addition to the above, all electric current required by the Contractor shall be furnished at his own expense. All temporary lines will be furnished, installed, connected, and maintained by the Contractor in a workmanlike manner satisfactory to the Contracting Officer and shall be removed by the Contractor in like manner at his expense prior to completion of the construction. Refer to paragraph AVAILABILITY AND USE OF UTILITY SERVICES below.

1.5 RESIDENT MANAGEMENT SYSTEM (RMS)

Contractor shall use Government-furnished Construction Contractor module of RMS, referred to as Quality Control System (QCS), software for construction information management (CIM). QCS will be the latest version of "QCS" which is personal computer based. Additional information will be provided to the Contractor at the Preconstruction Conference. Refer to Section 01312 QUALITY CONTROL SYSTEM (QCS).

PART 2 PRODUCTS

2.1 CONSTRUCTION PROJECT SIGNS

Refer to paragraph BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN below and APPENDIX A at the end of this Section.

2.2 QCS HARDWARE AND SOFTWARE REQUIREMENTS

Refer to Section 01312 QUALITY CONTROL SYSTEM (QCS).

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

3.1.1 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display, identification as approved and directed by the Contracting officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

3.1.2 Onsite Information

Keep copy of contract drawings, specifications, and other contract documents at Contractor's Office onsite, available for use at all times.

3.2 AVAILABILITY AND USE OF UTILITY SERVICES

Install temporary facilities and utilities in accordance with ANSI C2, COE CESAJR 385-1-1, COE EM 385-1-1, NFPA 70. Obtain necessary construction, building, zoning, or soil erosion and sediment control approvals required by local authorities and utility companies. Equip trailer(s) with wind tie downs in accordance with local wind and building code requirements.

3.3 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

3.3 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

3.3.2 Project and Safety Signs

The requirements for the signs, their content, and location shall be as indicated in APPENDIX A appended to the end of this Section. The signs shall be erected within 15 days after receipt of the Notice to Proceed. The data required by the safety sign shall be corrected daily, with light colored metallic or non-metallic numerals. The sample Safety Scoreboard sign appended to the end of this Section shall be used on board the dredge in lieu of the safety performance sign. This applies only to the dredge. Upon completion of the project, the signs shall be removed from the site.

3.4 CONTRACTOR'S TEMPORARY FACILITIES

3.5 Appearance of Trailer(s)

Trailer(s), used for both office and material storage purposes, shall be clean, neat exterior appearance and in good repair. Trailer(s) requiring exterior painting or maintenance will not be allowed on site until determined satisfactory by Contracting Officer.

3.6 Waste Storage

Provide dumpsters or suitable debris containers. Prevent wind blown trash; cover as needed. Dispose of offsite when needed. Refer to Section 01355 ENVIRONMENTAL PROTECTION.

3.7 Fuel Storage and Fueling Operations

Refer to Section 01355 ENVIRONMENTAL PROTECTION. Provide light when fueling at night.

3.8 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. The devices shall be made available for use by Government personnel.

3.9 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Materials resulting from demolition activities which are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored. Refer to Section 01355 ENVIRONMENTAL PROTECTION for solid waste and post construction clean-up.

3.10 CONSTRUCTION PROJECT SIGNS

See APPENDIX 01500-A at the end of this Section (5 pages).

-- End of Section --

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SECTION 01525

GENERAL SAFETY REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

Section covers general site safety, accident prevention, accident reporting and Jacksonville District specific safety procedures, "Safety Pays" accident prevention incentive and recognition program.

1.1.1 Related Section

Refer to Section 01500 TEMPORARY CONSTRUCTION FACILITIES for safety signs and required bulletin board posters.

1.2 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.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- | | |
|----------|---|
| NFPA 10 | (1995) Portable Fire Extinguishers |
| NFPA 70 | (1999) National Electrical Code |
| NFPA 241 | (1996) Safeguarding Construction, Alteration, and Demolition Operations |

U.S. ARMY CORPS OF ENGINEERS (USACE)

- | | |
|--------------------|---|
| COE CESAJP 385-1-2 | (1998) Safety Pays |
| COE CESAJR 385-1-1 | (1998) Safety and Occupational Health Program |
| COE EM 385-1-1 | (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual |

1.3 SAFETY MANUALS

COE EM 385-1-1, COE CESAJR 385-1-1, COE CESAJP 385-1-2 are available at <http://www.saj.usace.army.mil/conops/index.html>. One copy of each will be provided to Contractor at a Preconstruction Conference (refer to Section 01310 ADMINISTRATIVE PROCEDURES. COE EM 385-1-1 is also at above web site in a Spanish version. Additional paper copies of COE EM 385-1-1 may be

purchased for \$30.00 using a check or money order as follows:

U.S. Government Printing Office (GPO)
Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954
(GPO Stock Number for the manual is 0008-022-00-310-0)

or

order by credit card by calling 202-512-1800 (Master Card or Visa only)

Additional copies of COE CESAJR 385-1-1 and COE CESAJP 385-1-1 will be provided upon written request.

1.4 DEFINITIONS

Use definitions found in COE EM 385-1-1 and COE CESAJR 385-1-1 in submitted work plans.

Safety Officer - Qualified employee or competent person trained or having required experience in safety, occupational health and who is assigned overall responsibility to oversee on-site safety.

Safety Specialist - A person with specialized training or experience in safety and occupational health for specific items of work.

Qualified Person - One who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve or resolve problems related to the subject matter, the work or the project.

Certified Industrial Hygienist (CIH)- An industrial hygienist is an individual who is certified by the American Board of Industrial Hygiene.

Certified Safety Professional - A safety manager, safety specialist, or safety engineer that has passed the CSP exam administered by the Board of Certified Safety Professionals.

Competent Person - A competent person is one who is trained and capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

1.5 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

Accident Prevention Plan (APP); G|COR

Within 10 calendar days after Notice of Award, submit Accident Prevention Plan with applicable specific work plans required by paragraph PLANS (PROGRAMS, PROCEDURES) REQUIRED BY THE SAFETY MANUAL of Appendix MINIMUM BASIC OUTLINE FOR ACCIDENT PREVENTION PLAN of COE EM 385-1-1. Refer to paragraphs ACCIDENT PREVENTION PLAN (APP) and ACCIDENT PREVENTION below.

Activity Hazard Analyses (AHA); G|COR

Refer to paragraph ACTIVITY HAZARD ANALYSES (AHA) below.

Employee Safety and Health Indoctrination (ESHI) and Training Plan

Refer to paragraph SAFETY AND HEALTH INDOCTRINATION AND TRAINING below.

Hazard Communication Plan

Refer to paragraph HAZARD COMMUNICATION below.

Emergency Response Plan

Refer to paragraph EMERGENCY RESPONSE PLAN below.

Hurricane and Severe Storm Plan; G|COR

Refer to paragraph HURRICANE AND SEVERE STORM PLAN below.

Dive Operations Plan; G|COR

Refer to paragraphs DIVE PLAN, DIVING OPERATIONS, and DIVE OPERATIONS below.

Confined Space Plan; G|COR

Refer to paragraphs CONFINED SPACE PLAN, CONFINED SPACE ENTRY, and WORKING IN CONFINED SPACES below.

Spill Response Plan; G|COR

Refer to paragraph SPILL RESPONSE PLAN below.

SD-07 Certificates

Qualifications; G|COR

Qualifications, and training certificates of safety personnel performing as safety specialists or assisting as Quality Control Staff. Includes first aid and CPR certifications. Refer to paragraph SAFETY OFFICER below.

Dredge Plant Inspection Checklists;G|COR

Checklists are located in COE CESAJR 385-1-1 as well as Jacksonville District web site shown in paragraph SAFETY MANUALS above.

1.6 ACCIDENT PREVENTION PLAN (APP)

Prepare APP using format in Appendix MINIMUM BASIC OUTLINE FOR ACCIDENT PREVENTION PLAN of COE EM-385-1-1. See Appendix ACCIDENT PREVENTION PROVISIONS FOR CONTRACTORS AND IDENTIFIED GOVERNMENT ACTIVITIES of COE CESAJR 381-1-1 for additional detail.

1.6.1 Contents

1. Signature Sheet
2. Background Information
3. Statement of Safety and Health Policies
4. Responsibilities, lines of Authorities
5. Subcontractors and Suppliers
6. Training
7. Safety and Health Inspections
8. Safety and Health Expectations, Incentive Programs
9. Accident Reporting
10. Medical Support
11. Personal Protective Equipment
12. Supplemental ("Tabbed") Work Specific Plans required by COE EM 385-1-1
13. Supplemental Information on how Contractor will meet major applicable portions of COE EM 385-1-1

1.6.2 Tabbed APP Appendices

Submit tabbed appendices to Accident Prevention Plan including: Activity Hazard Analyses; Jacksonville District work plans and applicable supplementary specific plans; and, procedures listed in Appendix A, paragraph PLANS (PROGRAMS, PROCEDURES) REQUIRED BY THE SAFETY MANUAL of COE EM-385-1-1 or COE CESAJR 385-1-1 Appendices.

1.6.2.1 Jacksonville District Required Work Plans

Jacksonville District Required Work Plans include:

- Tab A - Activity Hazard Analysis Worksheets
- Tab B - Employee Safety and Health Indoctrination and Training (See sample ESHI appended to the end of this Section)
- Tab C - Hazard Communication
- Tab D - Hurricane and Severe Storm Plan
- Tab E - Emergency Response Plan
- Tab F - Dive Plan
- Tab H - Confined Space
- Tab I - Spill Response

1.6.2.2 Supplementary Plans in COE EM 385-1-1

Submit additional tabbed supplementary plans listed in Appendix A, paragraph PLANS (PROGRAMS, PROCEDURES) REQUIRED BY THE SAFETY MANUAL of COE EM 385-1-1 that are applicable to work as follows:

Temporary Facility Layout
Hazardous Energy "Lock Out/Tag Out"
Fire Prevention

1.7 ACTIVITY HAZARD ANALYSES (AHA)

Submit AHAs as a tabbed APP Appendix. See Figure ACTIVITY HAZARD ANALYSIS of COE EM 385-1-1 for sample form. Contractor can download activity hazard analysis form (MS Word file) at Jacksonville District's Construction web page, "QC Forms":

http://www.saj.usace.army.mil/conops/construction/construction_forms.htm.

Describe activity being performed; sequence of work; specific hazards anticipated; control measures to eliminate or reduce each hazard to acceptable levels; training requirements for all involved; and, competent person in charge of that work.

1.8 SAFETY AND HEALTH INDOCTRINATION AND TRAINING

Submit Safety and Health Indoctrination and Training Plan as an APP tabbed appendix in accordance with paragraph INDOCTRINATION AND TRAINING of Section PROGRAM MANAGEMENT of COE EM 385-1-1. Provide a sample Employee Health and Safety Indoctrination (EHSI) Sheet.

1.8.1 New Employee Indoctrination

Describe new employee indoctrination and training required to be completed prior to an employee working on site. Document employee orientation. Keep records on file at project site or nearest office. Each employee shall sign an ESHI sheet. Sample form is appended to the end of this Section.

1.8.2 Visitor Briefing

Describe procedures for safety briefing site visitors. Train them on specific site hazards, sitesafety controls (i.e., hard-hat areas). Provide needed protective clothing (i.e., hard hats, reflective vest) and equipment (i.e., ear plugs, safety glasses) before they enter construction limits. Document visitor briefing with a file and visitor sign-in log on site. Report visitors in QC daily report.

1.9 HAZARD COMMUNICATION

Comply with OSHA 1910.1200 (the Hazard Communication Standard) and provide a Hazard Communication Plan describing implementation of the standard. Ensure site personnel including subcontractor employees, visitors, Contracting Officer personnel are informed about health and physical hazards associated with materials being used. Provide a hazardous materials inventory to Contracting Officer upon request. Ensure proper labeling of hazardous material containers. Ensure Material Safety Data Sheets are on site.

1.10 HURRICANE AND SEVERE STORM PLAN

Submit proposed procedures to be taken to prevent: injury; damage to materials, equipment, and completed construction; and, minimize delays due to severe weather. A sample format is provided below:

a. Address following conditions:

Hurricanes - Preparations prior to forecasted hurricane at 72 hours, 48 hours and 6 hours prior to predicted storm arrival.

Tornado/Water Spout - Actions to be taken for tornado warning and tornado warnings.

Thunderstorms/Squalls - Actions to be taken for high winds, lightning, heavy rainfall.

b. Include:

1. Provide detailed descriptions for actions to be taken.
2. The time intervals before storms when action will be taken for each type hazard.
3. List of equipment to be used on the project and its ability to handle adverse weather.
4. Distance from work area to a safe place and time required to move plant and equipment.
5. Method of securing equipment.
6. Methods of securing equipment not moved.
7. Plan of evacuation to include immediate reaction plans to be taken for all storm occurrences, particularly sudden storms.
8. List of equipment or vessels to be used to move plant and equipment to a safe harbor (tug boats, work boats, etc.); include name and horsepower of the equipment.
9. A statement that full time monitoring of NOAA marine weather broadcasts or other local commercial weather forecasting services will be the Contractor's primary source of information in the decision process to implement action under severe weather plan.

1.11 EMERGENCY RESPONSE PLAN

Describe planned response procedures and planned drills as applicable for medical, fire fighting, injury evacuation, wildfire, or man overboard. Submit certificates or wallet cards for designated First Aid and Coronary Pulmonary Resuscitation (CPR) responders. Provide planned communication methods to monitor employees working in remote areas. Provide sample

posting sheets for local emergency responder phone numbers, reporting instructions, strip map to nearest medical treatment facility. Provide site sketch of location of first aid kits and fire extinguishers.

1.12 DIVE PLAN

See paragraph DIVE OPERATIONS below and Appendix CONTRACT DIVING OPERATIONS of COE CESAJR 385-1-1. Dive planning is required on all projects with work on, adjacent to or over water; see paragraph DIVING OPERATIONS below. The dive plan shall address all requirements of Section CONTRACT DIVING OPERATIONS of COE EM 381-1-1, and Appendix CONTRACT DIVING OPERATIONS of COE CESAJR 385-1-1.

1.13 CONFINED SPACE PLAN

Confined space plan shall comply with paragraph CONFINED SPACE of Section HAZARDOUS SUBSTANCES, AGENTS AND ENVIRONMENTS of COE EM 385-1-1. Describe planning, control, policy and procedures to identify confined spaced, safe entry procedures and policy for emergency evacuation of injured persons.

1.14 SPILL RESPONSE PLAN

Provide information on hazardous chemicals and liquids anticipated to be stored on site and how Contractor proposes to contain spills, safely respond and clean up spills. Describe planning, controls, personal protective equipment and clean-up procedures.

1.15 SAFETY OFFICER

Designate an on-site Safety Officer to manage accident prevention program. Safety Officer or assistant shall be on site during all work. Safety Officer may not have other duties in addition to Safety Officer. Safety Officer shall report to and work directly for Contractor's on-site top manager (or higher level official) or corporate safety officer. Safety Officer shall be authorized to take immediate steps to correct unsafe and unhealthful conditions. Submit Safety Officer's resume of qualifications and job description with within 20 days after Notice of Award.

1.15.1 Safety Officer Qualifications

Safety Officer shall have five years construction site experience on similar projects with experience as site safety specialist or Safety Officer. Safety Officer shall be qualified and have ability to manage on-site Contractor safety program, identify hazards and identify resources necessary to reduce hazards. Must have worked on similar types of projects and completed an OSHA training qualification class of at least 10 hours of classroom instruction. To be credited for satisfying experience requirements, a minimum 50 percent of the time shall have been devoted to safety and occupational health work. First aid work is not creditable.

1.16 DISTRICT SAFETY PROGRAM

1.16.1 Site Safety Inspections by District Personnel

District Safety Office personnel perform periodic safety inspections on contract work sites as a staff function on behalf of District Engineer. District Construction Quality Assurance personnel periodically inspect plant, equipment and contract sites and evaluate safety as part of District construction program. When contract diving operations occur District Dive Coordinator may visit to inspect and observe Contractor. Inspectors evaluate how well both District personnel and Contractor are complying with requirements in COE EM 385-1-1, COE CESAJR 385-1-1, approved Accident Prevention Plan and supplements. Inspector reports will be submitted to Contracting Officer's Representative. Contractor will be notified of both accomplishments and deficiencies by Contracting Officer's Representative. Promptly correct deficiencies, document corrections and notify Contracting Officer.

1.16.2 Safety Pays Program

Safety Pays is described in COE CESAJP 385-1-2 located on Jacksonville District web site shown in paragraph SAFETY MANUALS above. Safety Pays is an incentive safety program where both Contractor and Contracting Officer's personnel are recognized for efforts to provide safer working environment.

1.17 MEETINGS

1.17.1 Phase Meetings

Refer to Section 01452 DREDGING/BEACH FILL PLACEMENT - CONTRACTOR QUALITY CONTROL. Activity Hazard Analysis for each definable feature of work shall be reviewed and personnel attendance documented by Contractor. Examination of safety controls equipment is on-going in follow-up phase and progress meetings.

1.17.2 Supervisor Weekly Safety Meetings

Hold weekly meeting with on-site supervisors, foremen and QC Staff, at project site. Supervisor meeting shall address prevention of accidents, lessons learned, items of concern. Attach minutes with Contract number, signatures of attendees, and a list of topics discussed to the Contractor Quality Control Daily Report.

1.17.3 Weekly "Tool Box Meeting"

Hold a brief weekly meeting with all on-site personnel before start of work shift on a safety subject planned to prevent problems. For example, if hot weather is expected, discuss heat stress prevention and treatment. Report subject and number of employees attending on the Contractor Quality Control Daily Report.

1.18 DISPLAY OF SAFETY INFORMATION

Refer to Section 01500 TEMPORARY CONSTRUCTION FACILITIES. Provide a bulletin board to display following for viewing by on-site construction personnel:

- a. Poster "Safety and Health Protection On the Job" required by

Department of Labor, OSHA.

- b. Emergency phone numbers.
- c. Strip map with route to nearest emergency care facility.
- d. Accident Reporting and Workman's Compensation information.
- e. Applicable Activity Hazard Analyses (AHA).

1.18.1 Placarding

- a. Label confined spaces.
- b. Post confined space entry permit at entry point prior to persons entering.
- c. Label and placard all hazardous materials stored or encountered on site (refer to Clause HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (CESAJ ADAPTATION) of Section 00800 SPECIAL REQUIREMENTS).
- d. Safety Scoreboard Sign.
- e. Provide a sign indicating number of days since last lost time injury (refer to Section 01500 TEMPORARY CONSTRUCTION FACILITIES).

1.19 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to project including: equipment operating manuals; manufacturer catalogs; Material Safety Data Sheets (MSDSs) on-site. (Refer to Clause HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (CESAJ ADAPTATION) of Section 00800 SPECIAL REQUIREMENTS.) Maintain one copy of APP with AHA and supplemental plans required by the contract.

1.19 REPORTS

1.20 Complaints and Accident Investigation

Contracting Officer will investigate complaints of unsafe or unhealthful working conditions received from Contractor employees or others. Contracting Officer will assign personnel to investigate serious accidents. Contractor will be notified of investigation results.

1.21 Accident Reports

Designate individual to track exposure data (hours worked); perform accident investigations; prepare reports and logs; and, notify Contracting Officer of accidents (to include subcontractors). Conduct accident investigations to establish causes for accidents and injuries. For an accident or work related illness which results in a lost workday or over \$2,000 in property damage, notify Contracting Officer's Representative within one work day providing information in paragraph "Notification" below. Complete Accident Investigation Report (ENG FORM 3394) and provide

completed report to Contracting Officer within 5 work days of accident. For fatal accident, over \$200,000 damage, three or more persons hospitalized, or any accident which may result in adverse publicity to Corps Of Engineers, immediately notify Contracting Officer's Representative and District Safety Office using phone and fax numbers provided at Preconstruction Conference. Submit completed ENG 3394 as soon as possible after initial phone or fax notification. Accident Investigation Report form (ENG FORM 3394) and instructions for completing form are at <http://www.usace.army.mil/inet/usace-docs/forms/>.

1.22 Notification

Notify Contracting Officer with following information:

- Contractor Name
- Contract Number and Title
- Type of contract
- Location where accident occurred
- Date and time of accident
- Names of personnel injured
- Extent of injury and property damage
- A brief description of accident (to include type of construction equipment used, PPE used, etc.).

1.23 Monthly Exposure Report

Submit a monthly exposure report to Contracting Officer. Exposure report is a total of employee-hours worked each month for all site workers, both prime and subcontractor.

1.24 Crane Notification

Notify Contracting Officer at least 10 working days prior to bringing crane equipment on-site so Contracting Officer may arrange for additional quality assurance checks.

PART 2 PRODUCTS

2.1 CONFINED SPACE SIGNAGE

Provide permanent signs at access covers for new permit required confined spaces. Signs wording: "DANGER -- PERMIT REQUIRED CONFINED SPACE - DO NOT ENTER" on bold letters a minimum of one inch in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 5 feet.

2.2 FIRST AID KITS

Furnish one 16-unit first aid kit per 25 employees, inspect weekly for supplies and note on inspection form located at kit.

2.3 PORTABLE FIRE EXTINGUISHERS

Portable fire extinguishers shall be located and used in accordance with

paragraph FIRST RESPONSE FIRE PROTECTION of Section FIRE PREVENTION AND PROTECTION of COE EM 385-1-1, inspected monthly, maintained, and recharged as specified in NFPA 10.

PART 3 EXECUTION

3.1 EMERGENCY MEDICAL TREATMENT

Contractor shall arrange with local authorities for emergency medical response, treatment and evacuation. Provide first aid kits in areas of work and inspect weekly to ensure stockage. Provide 2 personnel trained in first aid and CPR for each shift in accordance with paragraph GENERAL of Section MEDICAL AND FIRST AID REQUIREMENTS of COE EM 385-1-1.

3.2 ACCIDENT PREVENTION

Comply with COE EM-385-1-1, NFPA 241, approved APP, AHA, and other related submittals. Contractor shall become familiar with safety requirements in Clause ACCIDENT PREVENTION of Section 00700 CONTRACT CLAUSES; COE EM 385-1-1 ; COE CESAJR 385-1-1; COE CESAJP 381-1-2, and latest OSHA standards, applicable U.S. Coast Guard safety regulations, and applicable State of Florida laws and regulations and local fire and safety regulations. Contractor shall have full knowledge of personal protective equipment to be provided workmen and applicable safety standards. COE EM 385-1-1 and COE CESAJR 385-1-1 are consistent with OSHA Construction Safety and Health Regulations 29 CFR 1926. For operations not covered under COE EM 385-1-1 or COE CESAJR 385-1-1, OSHA standards shall be complied with. When there is no OSHA standard, comply with Department of the Army, Department of Defense, U.S. Coast Guard or National Consensus Standards (e.g., API - American Petroleum Institute). Contractor shall only use plant and equipment in compliance with contract safety requirements.

3.3 CONFINED SPACE ENTRY

Establish a confined space entry permit system. A permit shall be issued for each confined space entry. Permits shall include location of work, work description, employees assigned entry, entry date and time, results of atmospheric tests performed, person performing test, authorization and permit expiration time. A sample confined space permit is at Jacksonville District's Construction web site:
<http://www.saj.usace.army.mil/conops/index.htm>. Post permits at entry point when working in confined space and renew when entry personnel change. Forward a copy of confined space permits to Contracting Officer prior to entry.

3.4 OIL AND HAZARDOUS MATERIAL SPILLS AND CONTAINMENT

Report all spills to Contracting Officer immediately. Clean-up spills in accordance with COE EM 385-1-1 and MSDSs. Use dikes, curbs to prevent spread of oil or hazardous materials from storage tanks and piping leaks. Comply with Section 01355 ENVIRONMENTAL PROTECTION reporting.

3.5 DIVING OPERATIONS

Submit a Dive Operations Plan when work is performed adjacent to, on or over water. No matter if a dive is actually planned or only required as a contingency (i.e., most dredging projects) submit a Diving Operations Plan for Contracting Officer's approval. Dive Operations Plan shall cover all requirements in Section CONTRACT DIVING OPERATIONS of COE EM 385-1-1 and Appendix CONTRACT DIVING OPERATIONS of COE CESAJR 385-1-1. Dive Operations Plan consists of a "Safe Practices Manual" describing Contractor's diving program and a "Dive Plan" describing site specific information of proposed dive or contingency dive. Safe Practices Manual, Dive Plan and revisions shall have cover sheets signed and dated by Contractor. When diving is subcontracted, cover sheets shall also be signed and dated by diving contractor's principal or authorized representative.

3.5.1 Dive Operations Reviewer

Dive Operation Plans shall be submitted by Contractor to Contracting Officer in accordance with Section 01330 SUBMITTAL PROCEDURES. Dive Operations Plans are reviewed by Jacksonville District Diving Coordinator. A copy of the Dive Operation Plan shall be furnished to:

U.S. Army Corps of Engineers, Jacksonville District
ATTN: CESAJ-CO-CQ (Mr. Tappmeyer or Mr. Vecchitto)
P.O. Box 4970
Jacksonville, FL 32232-0019

Diving Coordinator fax is 904-232-3696.

3.6 PERSONNEL PROTECTION

Designate and mark safety zones requiring personal protection. Examples include hard hat zone, areas where eye and hearing protection is required.

3.6.1 Hazardous Noise

Provide hazardous noise signs, and hearing protection, wherever equipment and work procedures produce sound-pressure levels greater than 85 dBA steady state or 140 dBA impulse, regardless of duration of exposure.

3.7 ELECTRICAL WORK

Underground electrical spaces shall be certified safe for entry before entering to conduct work. Cable intended to be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with Contracting Officer and utility owner for identification. No outage request will be accepted until Contractor satisfactorily documents circuits have been clearly identified. In walls or concealed areas use non-conductive fish tape to pull wire. Perform all high voltage cutting remotely. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in

energized substations, only qualified electrical workers shall be permitted to enter. When work requires Contractor to work near energized circuits as defined by NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. Insulating blankets, hearing protection, and switching suits may be required, depending on the specific job and as delineated in the Contractor AHA.

3.8 WORK IN CONFINED SPACES

Comply with the requirements in paragraph CONFINED SPACE of Section HAZARDOUS SUBSTANCES, AGENTS AND ENVIRONMENTS COE EM-385-1-1. Any potential for a hazard in the confined space requires a permit system to be used.

- a. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See subparagraph "Permit-required confined space entry procedures" of paragraph CONFINED SPACE of Section HAZARDOUS SUBSTANCES, AGENTS AND ENVIRONMENTS of COE EM-385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.
- b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained.
- c. Ensure the use of rescue and retrieval devices in confined spaces greater than 5 feet in depth. Conform to subparagraphs "On-site rescue/emergency teams", "Off-site rescue and emergency services", and "To facilitate non-entry rescues, retrieval systems or methods" of paragraph CONFINED SPACE of Section HAZARDOUS SUBSTANCES, AGENTS AND ENVIRONMENTS of COE EM-385-1-1.
- d. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.
- e. Include training information for employees who will be involved as entrant attendants for the work. Conform to subparagraph "Training" of paragraph CONFINED SPACE of Section HAZARDOUS SUBSTANCES, AGENTS AND ENVIRONMENTS of COE EM-385-1-1.
- f. Entry Permit. Use ENG FORM 5044-R or other form with the same minimum information for the Daily Confined Space Entry Permit, completed by the qualified person. Post the permit in a conspicuous place close to the confined space entrance.

3.9 HOUSEKEEPING

3.9.1 Clean-up

All debris in work areas shall be cleaned up daily or more frequently as

necessary. Construction debris may be temporarily located in an approved location; however, garbage accumulation must be removed each day.

~~3.9.2 Dust Control~~

~~In addition to the dust control measures required elsewhere in contract documents, dry cutting of brick or masonry shall be prohibited. Wet cutting must address control of water run off.~~

3.10 ACCIDENT SCENE PRESERVATION

For serious accidents and accidents involving weight handling equipment, ensure the accident site is secured and evidence is protected remaining undisturbed until released by the Contracting Officer.

3.11 QUALITY CONTROL

Quality Control and Safety are supporting complimentary functions. Include safety activities and documentation of meetings and site safety inspection as a part of Quality Control activities and QC Daily report required in Section 01452 DREDGING/BEACH FILL PLACEMENT - CONTRACTOR QUALITY CONTROL.

3.12 DIVE OPERATIONS

Execute dives in accordance with approved Dive Operations Plan submittal; Section CONTRACT DIVING OPERATIONS of COE EM 385-1-1; and, Appendix CONTRACT DIVING OPERATIONS of COE CSAJR 385-1-1. Contractor shall submit completed daily dive logs at the end of each dive day. Daily dive logs shall be faxed to District Dive Coordinator 904-232-3696 or his authorized representative. Contractor shall use COE form ENG 4615 and ENG 4616 to record daily diving activities. Dive forms may be downloaded from Jacksonville Construction-Operations web site at:
<http://www.saj.usace.army.mil/conops/diving/>.

3.13 SAFE ACCESS AND FALL PROTECTION

Furnish ladders, nets, guard rails and other required fall protection equipment to provide safe access and fall protection in accordance with Section SAFE ACCESS AND FALL PROTECTION of COE EM-385-1-1. Furnish personal protective equipment of body harnesses, lanyards, lifelines in accordance with subparagraph "Lineman's equipment" of Section PERSONAL PROTECTIVE AND SAFETY EQUIPMENT of COE EM-385-1-1. Furnish safety and debris nets designed and tested in accordance with paragraph SAFETY AND DEBRIS NETS - DESIGN AND TESTING of Section PERSONAL PROTECTIVE AND SAFETY EQUIPMENT of COE EM-385-1-1. Identify features of work and work areas with high falling risk requiring fall protection. Examples include: work above six feet; work on scaffolding; work near edges or penetrations of floors; roofs or decks; steel erection; overhead electrical work; dredging; work with construction lift equipment. In preparatory phase review activity hazard analysis, required equipment, employee supervision and supervisor inspection of equipment. In initial phase provide employee training and perform supervisor inspection of PPE and other fall protection equipment. During follow-up phase perform on going supervision and inspection by supervisors, safety and quality control staff.

3.13 Fall Protection Training

Train employees exposed to fall hazards in use of PPE, hazard identification, avoidance, and policy to correct hazards. Train Supervisors to inspect fall protection equipment and supervise work to reduce fall risks.

3.14 EMPLOYEE SAFETY AND OCCUPATIONAL HEALTH INDOCTRINATION (ESHI)

See APPENDIX A at the end of this Section (2 pages).

-- End of Section --

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SECTION 02325

DREDGING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all excavation and disposal of all material as specified herein or indicated on the drawings. This scope also includes all necessary measures for protection of the environment. Environmental protection requirements under this contract are as important to overall completion of the work as other technical aspects. Failure to meet the requirements of these specifications for environmental protection may result in work stoppages or termination for default. No part of the time lost due to any such work stoppages shall be made the subject of claims for extensions of time or for excess costs or damages by the Contractor. If the Contractor fails or refuses to promptly repair any damage caused by violation of the provisions of these specifications, the Contracting Officer may have the necessary work performed and charge the cost thereof to the Contractor.

1.2 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. ARMY CORPS OF ENGINEERS (USACE)

COE EM 1110-1-1000	(1993) Photogrammetric Mapping
COE EM 1110-1-1002	(1990) Survey Markers and Monumentation
COE EM 1110-1-1003	(1996) NAVSTAR Global Positioning System Surveying
COE EM 1110-1-1004	(1994) Deformation Monitoring and Control Surveying
COE EM 1110-1-1005	(1994) Topographic Surveying
COE EM 1110-1-2909	(1998; Chg 2) Geospatial Data and Systems
COE EM 1110-2-1003	(2002) Hydrographic Surveying

FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS (FBPSM)

FBPSM Minimum Technical Standards, Chapters 177,
472, 61G17

TRI-SERVICE STANDARDS (TSS)

TSS (2001) A/E/C CADD Standards

1.3 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

Notice of Intent to Dredge

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

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. Within 7 calendar days following receipt of Notice of Award, the Contractor shall notify the Commander, Seventh Coast Guard District, Miami, Florida, of his plan to dredge adjacent to any aids which require relocation to facilitate dredging. The notification shall be sent via Fax to 305-415-6757, ATTN: Mr. Joe Embres. This notification shall be immediately followed by a formal written request with a copy to the Contracting Officer. The Contractor shall also contact the U.S. Coast Guard for information concerning the position to which the aids will be relocated.

SD-07 Certificates

Electronic Tracking System Data

The Contractor shall furnish required discs, CD-ROM, and charts to the Contracting Officer.

Equipment and Performance Data

The Contractor shall furnish proof of electronic positioning

equipment calibration to the Contracting Officer.

Notification of Discovery of Historical Period Shipwreck Sites

The Contractor shall immediately notify the Contracting Officer if any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered.

Notice of Need for Dredging Survey

The Contractor shall give 10 days advance notice, in writing, to the Contracting Officer of the need for a pre-dredging survey or after-dredging survey for final acceptance for each acceptance section.

Daily/Monthly Report of Operations

The Contractor shall prepare and submit two (2) copies of the Daily Report of Operations, using ENG Form No. 27A for each dredge and/or unloader working. This report shall be submitted on a daily basis and not in groups (groups = multi-days reports packaged together at one time). 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. 27A. The monthly report shall be submitted on or before the 7th of each month, consolidating the previous month's work. Upon completion of the job, the Contractor shall submit a consolidated job report, combining the monthly reports. The Contractor shall distribute one copy of each report to the District Engineer; ATTN: CESAJ-EN-C; U.S. Army Engineer District, Jacksonville, P.O. Box 4970; Jacksonville, Florida 32232-0019. Reports shall be submitted on a monthly basis with daily reports accompanying the monthly report and job report.

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

Notice of Misplaced Material

The Contractor shall notify the U.S. Coast Guard Marine Safety Office of any misplaced material as stated in the Clause OBSTRUCTION OF NAVIGABLE WATERWAYS of Section 00700 CONTRACT CLAUSES.

Log of Near Beach Quality Sand Disposal

Refer to subparagraph "Logs" of subparagraph "Near Beach Quality Sand" of paragraph DISPOSAL OF EXCAVATED MATERIAL below for submittal.

Declaration of Inspection Stateside

Refer to paragraph FUEL OIL TRANSFER OPERATIONS below for submittal.

Surveillance of Ocean Disposal

Refer to subparagraph "Surveillance of Ocean Disposal" of paragraph NOTIFICATION OF COAST GUARD below for submittal.

1.4 DREDGING RESTRICTIONS

1.4.1 Order of Work

There is no specific order of work for this project. The dredging performed by all dredges shall be continuous within reaches approved by the Contracting Officer.

1.4.2 Hopper Restriction

The use of hopper dredges within Kings Bay Entrance Channel is prohibited from 16 March through 14 December.

1.4.3 Transportation of Material

Water and dredge material shall not be permitted to overflow or spill out of barges or hopper dredges during transport to the disposal site.

1.5 PUMPING OF BILGES

Contractors are warned that pumping oil or bilge water containing oil into navigable waters, or into areas which would permit the oil to flow into such waters, is prohibited by Section 13 of the River and Harbor Act of 1899, approved 3 March 1899 (30 Stat. 1152; 33 U.S.C. 407). Violation of this prohibition is subject to the penalties under the referenced Acts.

1.6 HISTORICAL PERIOD SHIPWRECK SITES

If any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered, the Contractor acknowledges that:

a. The site(s), articles, or other materials are the property of the State of Florida, with title vested in the Department of State, Division of Historical Resource; and that,

b. He will immediately notify the Contracting Officer.

1.7 UTILITY CROSSINGS

1.7.1 General

It is the Contractor's responsibility to investigate the location of all utility crossings. The Contractor shall take precautions against damages

which might result from his operations in the vicinity of the utility crossings. If any damage occurs as a result of his operations, the Contractor will be required to suspend dredging until the damage is repaired and approved by the Contracting Officer. Costs of such repairs and downtime of the dredge and attendant plant shall be at the Contractor's expense.

1.8 PERMITS

The Contractor's attention is directed to the Clause PERMITS AND RESPONSIBILITIES of Section 00700 CONTRACT CLAUSES and the paragraph PERMITS AND AUTHORIZATIONS of Section 01355 ENVIRONMENTAL PROTECTION.

1.9 FUEL OIL TRANSFER OPERATIONS

In accordance with U.S. Coast Guard regulations (33 CFR 156.120), couplings used in fuel oil transfer operations on any vessel with a capacity of 250 or more barrels of oil shall be either a bolted or full-threaded connection; or a quick-connect coupling approved by the Commandant; or an automatic back-pressure shutoff nozzle used to fuel the vessel. An executed fuel oil transfer (Declaration) form signed by the tanker operator shall be submitted to the Contracting Officer for each refueling operation.

The U.S. Coast Guard shall also be notified prior to any refueling. A copy of the Declaration of Inspection for Refueling is appended to the end of this Section.

1.10 SIGNAL LIGHTS

The Contractor shall display signal lights and conduct operations in accordance with the General Regulations of the Department of the Army and of the Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operations, lights to be displayed on dredge pipe lines, and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by other vessels of floating plant working in navigable channels, as set forth in Commandant U.S. Coast Guard Instruction M16672.2, Navigation Rules: International-Inland (COMDTINST M16672.2), or 33 CFR 81 Appendix A (International) and 33 CFR 84 through 33 CFR 89 (Inland) as applicable.

1.11 NOTICE TO MARINERS -- DREDGING CONTRACTS

Should the Contractor, during operations, encounter any objects on the channel bottom which could be a hazard to navigation, the Contractor shall immediately notify the Contracting Officer as to the location of said object and shall provide any other pertinent information necessary for the Contracting Officer to prepare and issue a Notice to Mariners.

1.12 FINAL CLEANUP

Final cleanup, as stated in the paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK of Section 00700 CONTRACT CLAUSES, shall include the

removal of all the Contractor's plant and equipment either for disposal or reuse. Plant and/or equipment and/or 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.

a. Failure to promptly remove all plant, pipeline, 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 as stated in Clause DEFAULT (FIXED-PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES to remove any plant and/or equipment and/or materials at the Contractor's expense.

1.13 WORK VIOLATIONS

Work done in violation of these specifications or a verbal or written stop order of the Contracting Officer will be considered as unsatisfactory progress for purposes of progress payments in accordance with Clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 NOTIFICATION OF COAST GUARD

3.1.1 Navigation Aids

Navigation aids located within or near the areas required to be dredged will be removed, if necessary, by the U.S. Coast Guard in advance of dredging operations. The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid of navigation.

3.1.2 Dredging Aids

The Contractor shall obtain approval from the U.S. Coast Guard for all buoys, dredging aid markers to be placed in the water, and dredging aid markers affixed with a light prior to the installation. Dredging aid markers and lights shall not be colored or placed in a manner that they will obstruct or be confused with navigation aids.

3.1.3 Surveillance of Ocean Disposal

a. The Contractor shall notify the local Coast Guard Captain of the Port at least 5 calendar days prior to the first ocean disposal. The notification will be by certified mail with a copy to the Contracting Officer. The following information shall be included in the notification:

- (1) Project designation; Corps of Engineers' Contracting

Officer's name and contract number; and, the Contractor's name, address, and telephone number.

- (2) Port of departure.
- (3) Location of ocean disposal area.
- (4) Quantity of material to be deposited in ocean.
- (5) Schedule for ocean disposal, giving date and time proposed for first ocean disposal.

b. The Contracting Officer may require dump monitoring personnel to be on board the tow or dump vessel during complete cycles of loading, travel and disposal in the ocean. The monitoring personnel will check the disposal of the material and obtain any necessary dredged material samples. Meals, as normally provided to the crew, will be served to the monitoring personnel on board. Any charge for these meals will be paid by the Government at a rate of \$1.75 per person for each meal.

3.2 WORK AREA

The Contractor will be permitted to exclude the public from the work areas in the immediate vicinity of his dredging, transporting, and disposal operations. The Contractor shall prevent public access to the discharge end of the pipeline. The Contractor shall erect, maintain, and move as necessary, a restrictive barrier around the discharge of the hydraulic pipeline. The barrier shall be constructed so as to prevent the public from approaching the discharge from any direction closer than 40 feet. The Contractor shall post signs in a conspicuous location with the wording "DANGER - HIGH PRESSURE DISCHARGE FROM DREDGE". Enforcement shall be the Contractor's responsibility at no additional cost to the Government. The enforcement shall be coordinated with local enforcement agencies and will be subject to approval of the Contracting Officer. Additionally, the Contractor shall place a safety person at the discharge end of the disposal pipeline. The safety person shall be present at all times during discharge operations and will maintain radio communication between the dredge and the disposal operation.

3.2.1 Access

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

3.2.2 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 same must be promptly removed by and at the expense of the Contractor to the satisfaction of the Contracting Officer.

3.2.3 Adjacent Property and Structures

No dredging will be permitted within 25 feet of any structure. Any 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. Any damage to structures as a result of 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.

3.2.4 Subaqueous Cable Crossings

The Contractor shall be responsible for verifying the locations and depths of all utility crossings and take precautions against damages which might result from his operations, especially the sinking of dredge spuds and/or anchors into the channel bottom, in the vicinity of utility crossings. If any damage occurs as a result of his operations, the Contractor will be required to suspend dredging until the damage is repaired and approved by the Contracting Officer. Costs of such repairs and downtime of the dredge and attendant plant shall be at the Contractor's expense.

3.3 DISPOSAL OF EXCAVATED MATERIAL

3.3.1 General

Material excavated shall be transported to and deposited in the disposal areas designated on the drawings. The approximate maximum and average distances to which the material will have to be transported are as follows:

Disposal Area	Maximum Distance	Average Distance
D/A-B (Beach Area)	9.0 miles	4.0 miles
D/A-N (Nearshore)	8.0 miles	6.5 miles
D/A-O (Ocean)	13.0 miles	12.5 miles

3.3.2 Ocean Dredged Material Disposal Site (ODMDS)

The designated material excavated shall be transported to and deposited in the ODMDS offshore disposal area designated as "Ocean Disposal Area - O" as shown on the drawings. The material shall be dumped at the center of "Ocean Disposal Area - O". Dredged material shall not be placed higher than elevation -30 feet MLLW in "Ocean Disposal Area - O".

3.3.3 Beach Disposal

Dredged material from Kings Bay Entrance Channel Cut 1-N, Station 100+00 to Station 220+00 and from Ranges A, A1 and A2 shall be placed in Beach Disposal Area (D/A-B) as shown on the contract drawings. The dredged material shall be placed to the sections and limits as shown on the drawings to the extent of the dredged material. Passage of equipment, pipeline, etc., shall be seaward of the apparent MHW within the limits of the D/A B.

3.3.3.1 Order of Placement

Dredged material shall be placed in D/A B commencing at DEP Monument R-15 and proceeding southerly until all dredged material has been placed to the sections and limits shown on the contract drawings.

a. Prior to placement of fill, the Contractor shall remove from the site of the work all snags, driftwood, and similar debris lying within the foundation limits of the beach fill section. All materials removed shall be disposed of in areas provided by and at the expense of the Contractor and approved by the Contracting Officer. Grading and other construction equipment will not be permitted outside the easement lines shown on the drawings except for ingress and egress to and from the site.

b. The excavated material shall be placed and brought to rest on the beach to the lines, grade, and cross sections indicated on the drawings, unless otherwise provided for herein or directed by the Contracting Officer. The Contractor shall not stockpile pipe or any other equipment or debris on the beach except as approved by the Contracting Officer. The beach is subject to changes and the elevations on the beach at the time the work is done may vary from the elevations shown on the drawings. The Contracting Officer reserves the right to vary the width or grade of the berm from the lines and grade shown on the plans in order to establish a uniform beach for the entire length of the project. The beach disposal section shown on the drawing is for the purpose of estimating the theoretical amount of fill needed and will be used by the Contracting Officer in making any change in the lines and grade. The Contractor may not be able to achieve the exact disposal area shown on the drawings. He will, however, be required to move the pipeline discharge to another part of the disposal area when he has discharged the amount of dredged materials in an area that would produce that cross section. Earthen pedestrian access ramps shall be provided across the dredge discharge pipeline at 200-foot intervals. The Contractor shall monitor the dredge and fill operations and shall notify the Contracting Officer if and when the quantity to be dredged appears to be excessive for the designated beach disposal area. The Contractor will not be required to dress the fill below the water line to the slope shown but will be required to do the dressing specified in subparagraph "Dressing" below.

3.3.4 Grade Stakes

Grade stakes shall be metal pipes that can be completely removed intact by the Contractor after placement of the fill. Grade stakes shall be of sufficient length to protrude above the final berm elevation and facilitate their extraction.

3.3.5 Temporary Longitudinal Dikes

Temporary longitudinal dikes and spreader and/or pocket pipe shall be used to prevent gullying and erosion of the beach and fill and to retain the fill on the beach and within the limits of the fill cross section. As the work progresses, dikes or mounds shall be constructed along the beach to direct the pipeline discharge longitudinally along the beach to avoid transverse gullying directly from the discharge point to the ocean, and to

build the new berm to design grade. Longitudinal dikes shall initially be 300 feet long in advance of filling operations. They may need to be lengthened to meet water quality standards, to build to the required lines and grades, and to keep material within the toe-of-fill. The Contractor will not be held responsible for erosion caused by waves after the beach fill has been satisfactorily placed. No undrained pockets shall be left in any fill during or upon completion of the work. The Contractor shall not permit wastewater to flow landward of the fill section or water to pond between the fill and upland. Groins, bulkheads, revetments, seawater pipe structures, and other structures within the fill section shall be protected by the Contractor to prevent damage thereof by the Contractor's operations. Any damages assessed as a result of any of the above items shall be at the Contractor's expense.

3.3.6 Rehandled Materials

Any material that is rehandled or moved and placed in its final position by methods other than hydraulic shall be placed in horizontal layers not exceed three (3) feet in thickness. Compaction of the layers will not be required. The Contractor shall schedule his operations to take advantage of tides so that filling is done in the dry or as directed.

3.3.7 Dressing

Final dressing shall not take place until all dredging is completed, at which time all evidence of haul road or pipeline shall be removed and the fill shall be graded and dressed so as to eliminate any undrained pockets and abrupt humps and depressions in the beach fill surfaces and as necessary to comply with subparagraph "Tolerances" below. Grade stakes used in the placement of the fill shall be removed intact, without breaking. All dikes shall be completely degraded. The bank caused by wave forces shall be graded down to a slope no steeper than 1 vertical on 20 horizontal for D/A B.

3.3.8 Tolerances

A tolerance of one (1.0) foot above the prescribed berm grade and slopes above the wave zone will be permitted in the final beach surface.

3.3.9 Debris Removal

The Contractor shall clean and remove from the beach disposal areas all debris that has been placed on the beach as a result of the disposal operation. The debris will be disposed of in a location provided by the Contractor and accepted by the Contracting Officer.

3.3.10 Near Beach Quality Sand

The material excavated from the channel (Cut-1N north half of channel, Station 220+00 to Station 223+00) is suitable for disposal in the Nearshore Disposal Area shown on the contract drawings.

3.3.10.1 Logs

The Contractor shall keep a log for each load placed in the Nearshore Disposal Area. The log entry for each load shall include the date, the time of dump, the approximate volume of material in the load, the EPS coordinates at the dump location, and a map of the Nearshore Disposal Area showing the location of the dump. At the completion of dredging in the near beach quality sand reach of the channel, the log(s) shall be submitted to the Contracting Officer for forwarding to the appropriate State agency.

3.3.11 Barges

Water and dredged materials shall not be permitted to overflow or spill out of barges while transporting to the disposal site(s). 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.

3.3.12 Nearshore Disposal

Dredged material from Channel Cut 1N, Station 220+00 to Station 230+00 (Range 1000 to Range 1250), shall be placed in D/A-N as shown on the contract drawings. D/A-N is located approximately 5 miles south of the southerly channel jetty, Kings Bay Entrance Channel, and extends from that point southerly approximately 2.4 miles. Exact X-Y location coordinates are shown on the contract drawings. The westerly/easterly limits of D/A N are the -10.0 foot MLLW contour line and the -35 foot MLLW contour line, respectively. Depth sounding instruments shall be used to verify location of westerly and easterly contour lines. Dredged material shall be placed uniformly throughout D/A in as shallow water as possible with available dredging and disposal equipment.

3.3.13 Offshore Disposal

a. Dredged material from Channel Cut 1N Station 220+00 to Station 340+00, except for Station 220+00 to Station 230+00 (Range 1000 to Range 1250), shall be placed in Disposal Area (D/A)-O, the designated ocean disposal area, as shown on the contract drawings.

b. The use of bottom dump barges or bottom dump dredges and hydraulic unloading barges and hydraulic unloading hopper dredges to dispose of dredged material in the offshore disposal area will be permitted. Water and excavated material shall not be permitted to overflow or spill out of barges, dump scows, or hopper dredges while in route to the disposal site. Failure to repair leaks or change the method of operation which is resulting in overflow or spillage will result in suspension of excavation operations and require prompt repair or change of operation to prevent overflow or spillage as a prerequisite to the resumption of excavation. Material shall be placed in the offshore disposal area below the -30 MLLW level, and within the working ~~limits~~ boundary as shown on the contract drawings.

3.3.14 Electronic Tracking System (ETS) for Ocean Disposal Vessels

The Contractor shall furnish an ETS for surveillance of the movement and

disposition of dredged material during excavation and disposal (nearshore and ocean). This ETS shall be established, operated and maintained by the Contractor to continuously track in real-time the horizontal location and draft condition of the disposal vessel for the entire dredging cycle, including dredging area and disposal area. The ETS shall be capable of displaying and recording in real-time the disposal vessel's draft and location.

3.3.14.1 ETS Standards

The Contractor shall provide automated (computer) system and components to perform in accordance with COE EM 1110-1-2909. A copy of the EM can be downloaded from the following web site:
<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>. Horizontal location shall have an accuracy equal to or better than a standard DGPS system, equal to or better than plus/minus 10 feet (horizontal repeatability). Vertical (draft) data shall have an accuracy of plus/minus 0.5 foot. Horizontal location and vertical data shall be collected in sets and each data set shall be referenced in real-time to date and local time (to nearest minute), and shall be referenced to the same state plane coordinate system used for the survey(s) shown in the contract plans. The ETS shall be calibrated, as required, in the presence of the Contracting Officer at the work location before disposal operations have started, and at 30-day intervals while work is in progress. The Contracting Officer shall have access to the ETS in order to observe its operation. Disposal operations will not commence until the ETS to be used by the Contractor is certified by the Contracting Officer to be operational and within acceptable accuracy. It is the Contractor's responsibility to select a system that will operate properly at the work location. The complete system shall be subject to the Contracting Officer's approval.

3.3.14.2 ETS Data Requirements and Submissions

a. The ETS for each disposal vessel shall be in operation for all dredging and disposal activities and shall record the full round trip for each loading and disposal cycle. (NOTE: A dredging and disposal cycle constitutes the time from commencement of dredging to complete discharge of the material.) The Contracting Officer shall be notified immediately in the event of ETS failure and all dredging operations for the vessel shall cease until the ETS is fully operational. Any delays resulting from ETS failure shall be at the Contractor's expense.

b. All data shall be collected and stored on 3 1/2-inch discs or CD-ROM(s) in ASCII format and shall be readable by MS Windows compatible software. Each dredging and disposal cycle shall be a separate and distinct ASCII file, labeled by the trip number. More than one file may be stored on the disc(s) or CD-ROM(s).

c. Data shall be collected, during the dredging and disposal cycle, every 500 feet (at least) during travel to the disposal area, and every minute or every 200 feet, whichever is smaller, while approaching within 1,000 feet and within the disposal area.

d. The required digital data to be collected for each dredging and

disposal cycle includes the following:

- (1) Trip Number
- (2) Date
- (3) Time
- (4) Vessel ID
- (5) Vessel Captain
- (6) State Plane X Coordinate - in accordance with subparagraph c. above
- (7) State Plane Y Coordinate - in accordance with subparagraph c. above
- (8) Vessel Draft
- (9) Type of Disposal Vessel
- (10) Exact State Plane X and Y coordinate at start of dump
- (11) Volume of Material Disposed

e. Plot Reporting (2 types):

(1) Tracking Plot - For each disposal event, data collected while the disposal vessel is in the vicinity of the disposal area shall be plotted in chart form, in 200-foot intervals, to show the track and draft of the disposal vessel approaching and traversing the disposal area. The plot shall identify the exact position at which the dump commenced. A sample Track and Draft Plot Diagram is appended to the end of this Section.

(2) Scatter Plot - Following completion of all disposal events, a single and separate plot will be prepared to show the exact disposal locations of all dumps. Every plotted location shall coincide with the beginning of the respective dump. Each dump shall be labeled with the corresponding Trip Number and shall be at a small but readable scale. A sample Scatter Plot Diagram is appended to the end of this Section.

(3) Summary Table - A spreadsheet which contains all of the information described in subparagraph d. above shall be prepared and shall correspond to the exact dump locations represented on the Scatter Plot Diagram. A sample Summary Table spreadsheet is appended to the end of this Section.

f. All digital ETS data shall be furnished to the Contracting Officer within 24 hours of collection. The digital plot files should be in an easily readable format such as Adobe Acrobat PDF file, Microstation DGN file, JPEG, BMP, TIFF, or similar. The hard copy of the ETS data and tracking plots shall be both maintained onboard the vessel and submitted to the Contracting Officer on a weekly basis.

3.3.15 Placing of Dredged Material

During placement of dredged material in the disposal areas, the Contractor will be required to provide constant radio contact between the dredge and the disposal areas. This will enable the Contractor's personnel at the disposal areas to immediately notify the dredge in the event of dike or pipeline failure. In the event of dike or pipeline failure, the dredging

operations shall be immediately suspended and require prompt repair of the dike or pipeline as a prerequisite to the resumption of dredging.

3.3.16 Dredge Pipelines

3.3.16.1 Dredge Discharge Pipeline

The Contractor shall plainly mark the pipeline access routes with conspicuous stakes, targets and/or buoys to be maintained throughout the contract operations. A tight dredge discharge pipeline shall be maintained to prevent spilling of dredged material or dredge water outside of the disposal area. The Contractor shall provide and maintain radio communication between the dredge and the disposal areas and the dredge and the Contracting Officer. The pipeline shall be inspected at least twice daily for leaks. Failure to immediately repair leaks in the discharge pipeline will result in suspension of dredging operations and require prompt repair of pipeline as a prerequisite to the resumption of dredging. Any damage to private or public property resulting from the Contractor's operations shall be repaired by the Contractor at his expense.

3.3.16.2 Submerged Pipeline

In the event the Contractor elects to submerge his pipeline, the pipeline shall rest on the bottom, and the top of the submerged pipeline and any anchor securing the submerged pipeline shall be no higher than the required project depth for the channel in which the submerged pipeline is placed. Should the Contractor elect to use a pipeline material which is buoyant or semi-buoyant, such as PVC pipe or similar low density materials, the Contractor shall securely anchor the pipeline to prevent the pipeline from lifting off the bottom under any conditions. The Contractor shall make daily underwater inspections of the submerged pipeline to ensure buoyancy has not loosened the anchors. The Contractor shall remove all anchors when the submerged pipeline is removed. The location of the entire length of submerged pipeline shall be marked with signs, buoys, lights, and flags conforming to U.S. Coast Guard regulations.

3.3.16.3 Floating Pipeline

Should the Contractor's pipeline not rest on the bottom, it will be considered a floating pipeline and shall be visible on the surface and clearly marked. In no case will the Contractor's pipeline be allowed to fluctuate between the surface and the bottom, or lie partly submerged. Lights shall be installed on the floating pipeline as required in paragraph SIGNAL LIGHTS above. The lights shall be supported either by buoys or by temporary piling, provided by the Contractor and approved by the Contracting Officer. Where the pipeline does not cross a navigable channel, the flashing yellow all-around lights shall be spaced not over 200 feet apart, unless closer spacing is required by U.S. Coast Guard personnel, in which case the requirements of the U.S. Coast Guard shall govern, at no additional cost to the Government.

3.3.17 Booster Pumps

Any booster pumps installed by the Contractor shall be located at least 300

feet from any residential-type building or house. Booster pumps, their prime movers, and any auxiliary equipment shall be fitted or equipped with mufflers, noise control enclosures, or other engineering noise control methods, measures, and features such that steady noise emanating from this equipment does not exceed 85 decibels on the A scale at slow response, and impulsive noise does not exceed 140 decibels. Such items shall be maintained throughout the course of the work.

3.3.18 Misplaced Materials

Materials deposited outside of the ~~ODMDS~~ designated disposal area(s) boundaries as shown on the contract drawings will be classified as misplaced material and will result in a suspension of dredging operations. Redredging of such materials will be required as a prerequisite to the resumption of dredging unless the Contracting Officer, at his discretion, determines that redredging of such material is not practical. If redredging of such material is not required then the quantity of such misplaced material shall be deducted from the Contractor's pay quantity. If the quantity for each misplaced load to be deducted cannot initially be agreed to by both the Contractor and Contracting Officer, then an average hopper/scow load quantity for the entire contract will be used in the determination. Materials deposited above the maximum indicated elevation or outside of the disposal area template shown will require the degrading or removal of such materials at the Contractor's expense. The Contractor will not be held responsible for erosion caused by waves after the material has been satisfactorily placed. In addition, the Contractor must notify the Contracting Officer and ~~the Environmental Protection Agency~~ Mr. Jim McAdams (904-232-2117) within 24 hours of a misplaced dump or any other violation of the Site Monitoring and Management Plan for Fernandina ODMDS. Corrective actions must be implemented by the next dump and the Contracting Officer must be informed of actions taken.

3.4 REQUIRED DEPTH, ALLOWABLE OVERDEPTH, AND SIDE SLOPES

3.4.1 Required Depth

The material actually removed from the designated areas to be dredged, to a depth of not more than the required depth shown on the drawings, will be estimated and paid for in accordance with the provisions contained in the subparagraphs "Measurement" and "Payment" of Section 01270 MEASUREMENT AND PAYMENT.

3.4.2 Allowable Overdepth

To cover the inaccuracies of the dredging process, material actually removed from the designated areas to be dredged, to a depth below the required depth of not more than the allowable overdepth shown on the drawings, will be measured and paid for in accordance with the provisions contained in the subparagraphs "Measurement" and "Payment" of Section 01270 MEASUREMENT AND PAYMENT.

3.4.3 Side Slopes

Although dredging of side slope material may be necessary to provide the

required project channel dimensions (depth and width), the side slopes shown on the drawings are provided for payment purposes only. Side slopes may be formed by box cutting, step cutting, or dredging along the side slope. Material actually removed, within the limits approved by the Contracting Officer, to provide for final side slopes not flatter than that shown on the contract drawings, but not in excess of the amount originally lying above this limiting side slope, will be measured and paid for in accordance with the provisions contained in subparagraphs "Measurement" and "Payment" of Section 01270 MEASUREMENT and PAYMENT. Such amount will be estimated and paid for whether dredged in original position or by box cut dredging whereby a space is dredged below the allowable side slope plane on the bottom of the slope for upslope material capable of falling into the cut. End slopes and transition slopes will not be estimated or paid for under this contract. In such cases, a 0 horizontal on 1 vertical will be used with no upslope allowance provision applied outside the required prism.

3.4.4 Excessive Dredging

Material taken from beyond the limits as described in subparagraphs "Allowable 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. Nothing herein shall be construed to prevent payment for the removal of shoals performed in accordance with the applicable provisions of the paragraphs FINAL EXAMINATION AND ACCEPTANCE or SHOALING of this Section.

3.4.5 Areas to be Dredged

Based on information currently available to the Government, areas known to require dredging are depicted on the drawings as crosshatched areas. The actual areas to be dredged may vary from the crosshatched areas shown in the drawings. In order to provide the required project dimensions within and throughout the project limits shown on the drawings, the Contractor shall remove material located within the project limits as directed by the Contracting Officer, regardless of whether the material is located in a crosshatched area or not. Payment for all dredged material, regardless of whether it is dredged from a crosshatched area or a non-crosshatched area, will be made at the applicable contract unit price.

3.5 SURVEYS

3.5.1 General

The Contracting Officer shall be notified, in writing, 10 days in advance of the need for pre-dredging and after-dredging surveys. Surveys will be performed in accordance with the paragraph QUANTITY SURVEYS of Section 00700 CONTRACT CLAUSES; Section 01452 DREDGING/BEACH FILL PLACEMENT - CONTRACTOR QUALITY CONTROL; COE EM 1110-1-1000, COE EM 1110-1-1002, COE EM 1110-1-1003, COE EM 1110-1-1004, COE EM 1110-1-1005, COE EM 1110-1-2909, and COE EM 1110-2-1003; FBPSM; and, TSS. A copy of the EM's can be downloaded from the following web site:

<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>. A copy of the TSS can be downloaded from the following web site:
<http://tsc.wes.army.mil>.

3.5.2 Contractor Representative

All in-place measurement surveys and final acceptance sweep surveys will be performed with a representative of the Contractor on board the Government platform during the full execution of the survey. No in-place measurement or final acceptance sweep survey will be performed without a representative of the Contractor on board the survey vessel. The Contractor's representative shall be fully knowledgeable in offshore construction subsurface surveying procedures, techniques, equipment, and horizontal and vertical calibration methods, and state-of-the-art horizontal and vertical accuracy limitations. The Contractor's representative shall observe and review, in progress, the adequacy and accuracy of the survey for in-place payment purposes, and for the potential existence of collusion, fraud, or obvious error in the data.

3.5.3 Survey Certification

a. Immediately upon completion of any survey, the Contractor's representative shall, based on his on-site review of the survey execution, determine that the survey contains no evidence of collusion, fraud, obvious error, and that subsequent horizontal and vertical corrections are accurately annotated on the subsurface record.

b. The Contractor's authorized representative shall bring aboard the survey vessel a blank copy of the Certification Statement and shall attest to an acceptable survey by signing the Certification Statement before leaving the vessel. Sample copy of the Certification Statement is appended to the end of this Section.

c. In the event the Contractor's authorized representative observes (and quantifies) specific documentary evidence of either fraud, collusion, or obvious error, the survey will be immediately rerun. Resurveys will totally supersede any previously run survey and will be run over the full reach of any particular Acceptance Section.

d. If acceptability is not acquired after performing one resurvey of an Acceptance Section, a meeting shall be held between the Contractor and the Contracting Officer to expeditiously resolve the issue causing rejection of the survey. Contractor equipment and personnel standby time to resolve acceptability of the survey shall be at the Contractor's expense.

e. In no case shall a previously unacceptable survey be later judged acceptable by the Contractor; unless such a reassessment/reevaluation is performed within 24 hours after the original survey, and prior to initiating any resurvey action based upon identifiable collusion, fraud, or obvious error.

f. Should the Contractor or his authorized representative refuse to certify to the acceptability of a survey for contract payment without identifiable collusion, fraud, or obvious error, then the following actions will follow:

(1) Preconstruction (pre-dredging) Survey: Excavation shall not commence until representatives of the Contractor and Contracting Officer have met and resolved the basis for refusal of certification. Should the Contractor commence excavation prior to obtaining an acceptable survey, he shall be liable for any excavation performed. If a resurvey is performed, and accepted, prior excavation will not be measured, estimated, or paid for.

(2) Post-Construction (after-dredging) Survey: The 3-week survey window allowed under subparagraph "Measurement" of Section 01270 MEASUREMENT AND PAYMENT will be indefinitely extended until a final survey is accepted. Any material accretion which might occur due to such a time extension will neither be measured, estimated, or paid for.

(3) Refusal to Certify: Contractor equipment and personnel standby time to resolve his refusal to certify to the acceptability of a survey when there is no identifiable collusion, fraud, or obvious error shall be at the Contractor's expense and resultant delays shall not be the basis for time extensions of the contract.

g. Intermediate surveys taken between the pre-dredging and post-dredging surveys will not be considered for the purposes of determining quantities for final payment and acceptance of the area dredged.

3.5.4 Tide Data

3.5.4.1 Real Time Kinematic (RTK) GPS

RTK GPS will be used for determining Real Time water levels (tide corrections). The Contractor is responsible for providing an RTK capable GPS receiver on board the vessel for all surveying ~~and dredging~~ operations.

The Contractor is also responsible for providing a radio/modem in order to receive carrier-phase corrections from the Corps-owned RTK GPS reference station located at the bath house at the west end of the Fort Clinch fishing pier. Radio frequencies should be obtained from Mr. Bill Brunjes at 904-232-2081. The Contractor will be instructed as to the proper use of this system by Corps personnel.

3.5.4.2 Kinematic Tidal Datum

A file listing the separations between the Reference Ellipsoid and the Chart Datum (Mean Lower Low Water) will be provided to the Contractor for entry into the hydrographic survey software. A Tidal Datum Diagram showing the relationship between NAVD 88 and Mean Lower Low Water is shown in the contract drawings. NAVD 88 will be referenced in all new surveys and new contract documentation as related to this contract.

3.5.4.3 Non-Operational Reference Station

In the event that the reference station becomes non-operational, the Contractor shall contact Mr. Bill Brunjes at the telephone number shown

above. The Government will take measures to ensure correction of any problems with the GPS equipment located at the bath house within 72 hours of notification.

3.6 INSPECTION

3.6.1 Quality Assurance Representative (QAR)

The QAR shall be notified prior to the establishment of horizontal control work (baseline layout, ranges, station flags, shore-based control for EPS/RPS, etc.) and vertical control work (tide staff(s), upland cross sections, construction elevations top/invert, maximum/minimum elevations of dredged materials within disposal area(s), etc.), but the presence or absence of the QAR shall not relieve the Contractor of his responsibility for proper execution of the work in accordance with the specifications. The Contractor will be required:

a. To furnish, on the request of the Contracting Officer or any QAR, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the dredging plant as may be reasonably necessary in inspecting and supervising the work. [However, the Contractor will not be required to furnish such facilities for the surveys prescribed in the paragraph FINAL EXAMINATION AND ACCEPTANCE of this Section.]

b. To furnish, on the request of the Contracting Officer or any QAR, suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant, and to and from the disposal areas.

3.6.2 Failure to Comply

In conjunction with the Clause INSPECTION OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES, should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities may be furnished and maintained by the Contracting Officer and the cost thereof will be deducted from any amounts due or to become due the Contractor.

3.7 FINAL EXAMINATION AND ACCEPTANCE

3.7.1 Final Examination of Work

As soon as practicable and no later than three (3) weeks after the completion of the entire work or any section thereof (if the work is divided into sections) as in the opinion of the Contracting Officer will not be subject to damage by further operations under the contract, such work will be thoroughly examined at the cost and expense of the Government by sounding or by sweeping, or both, as determined by the Contracting Officer. Should any shoals, lumps, or other lack of contract depth be disclosed by this examination, the Contractor will be required to remove same by dragging the bottom or by dredging at the contract rate of dredging. The Contractor or his authorized representative will be notified when soundings and/or sweepings are to be made and will be permitted to accompany the survey party. When the area is found to be in a satisfactory

condition, it will be accepted finally. Should more than two sounding or sweeping operations by the Government over an area be necessary by reason of work for the removal of shoals disclosed at a prior sounding or sweeping, the cost of such third and any subsequent soundings or sweeping operations will be charged against the Contractor at the rate of \$5,500 per day for each day in which the Government plant is engaged in sounding or sweeping and/or is enroute to or from the site or held at or near the said site for such operation.

3.7.2 Final Acceptance

Final acceptance of the whole or a part of the work and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud or obvious error, and the acceptance of a completed section shall not change the time of payment of the retained percentages of the whole or any part of the work.

3.8 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.

3.9 CONTINUITY OF WORK

No payment will be made for work done in any area designated by the Contracting Officer until the full depth required under the contract is secured in the whole of such area, unless prevented by ledge rock, nor will payment be made for excavation in any area not adjacent to and in prolongation of areas where full depth has been secured, except by decision of the Contracting Officer. Should any such nonadjacent area be excavated to full depth during the operations carried on under the contract, payment for all work therein may be deferred until the required depth has been made in the area intervening. The Contractor may be required to suspend dredging at any time when, for any reason, the gauges or ranges cannot be seen or properly followed.

3.10 NOISE CONTROL

All equipment and dredges, boats, and tugs used on this work shall be equipped with satisfactory mufflers or other noise abatement devices. The Contractor shall conduct his operations so as to comply with all Federal, State and local laws pertaining to noise. The use of horns and whistle signals shall be held to the minimum necessary in order to ensure as quiet an operation as possible.

3.11 DREDGE AND ATTENDANT PLANT SAFETY

3.11.1 Dredge Plant

The Contractor's dredge shall have a current Certificate of Inspection issued by the U.S. Coast Guard. The inspections shall include both Topside

and Drydock. The Topside inspection shall have occurred within 15 months and the Drydock inspection within 3 years prior to the date that dredging commences.

3.11 Attendant Plant

In addition to the requirements of EM 385-1-1, Section 19 and sub-paragraph 19.A.01.b, all supporting floating plant for dredging operations (to include, but not limited to, anchor barges, deck/work barges, tug boats, tow boats, tenders, work boats, pump-out barges, derrick barges and spider barges) shall have a current marine survey inspection certificate. The only exceptions to this requirement include pipeline support pontoons or floats and outboard powered skiffs under 16 feet in length. The certificate shall have been issued by a licensed and accredited marine surveyor within the previous 12 months. The marine surveyor must be accredited by either the National Association of Marine Surveyors or the Society of Accredited Marine Surveyors. No attendant plant shall be used on this contract that does not have a valid certification. These certifications and inspections shall be appropriate for the intended use of the plant in all locations specified in this contract. Unless the Contracting Officer decides otherwise, documentation of the inspection for each piece of plant shall be provided prior to issuance of Notice To Proceed.

3.12 DAILY REPORT OF OPERATIONS

See APPENDIX A at the end of this Section (4 pages).

3.12 CERTIFICATION STATEMENT

See APPENDIX B at the end of this Section (1 page).

3.13 DECLARATION OF INSPECTION FOR REFUELING

See APPENDIX C at the end of this Section (3 pages).

3.14 SAMPLE - TRACK AND DRAFT PLOT DIAGRAM

See APPENDIX D at the end of this Section (1 page).

3.15 SAMPLE - SCATTER PLOT DIAGRAM

See APPENDIX E at the end of this Section (1 pages).

3.16 SAMPLE - SUMMARY TABLE SPREADSHEET

See APPENDIX F at the end of this Section (1 page).

-- End of Section --

