AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
J	1 of 2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO.(If applicable)
0001	04-Apr-2003	W32CS5-2350-6013	

6. ISSUED BY CODE DACW17

USA ENGINEER DISTRICT, JACKSONVILLE
PRUDENTIAL OFFICE BLDG
701 SAN MARCO BLVD
CESAJ-CT
JACKSONVILLE FL 32207-8175

7. ADMINISTERED BY (If other than item 6) CODE DACW17

CO-W SO FL AREA OFFICE
4400 PGA BLVD, SUITE 203
CESAJ-CO-W
PALM BEACH FL 33410

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)

X	9A. AMENDMENT OF SOLICITATION NO. DACW17-03-B-0006
X	9B. DATED (SEE ITEM 11) 14-Mar-2003
	10A. MOD. OF CONTRACT/ORDER NO.
	10B. DATED (SEE ITEM 13)

CODE FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer [ ] is extended, [X] is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning 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.)

SOUTH JETTY SAND TIGHTENING, SOUTH JETTY REHABILITATION, NORTH JETTY RENABILITATION, AND NORTH REVETMENT REHABILITATION, PALM BEACH HARBOR, FLORIDA

Any enclosures accompanying this amendment should be inserted in the plans and specifications as applicable. All superseded materials should be removed or adequately marked to indicate they have been superseded.

THE DATE FOR RECEIPT OF BIDS REMAINS APRIL 15, 2003 AT 2:00 PM.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)
	TEL: EMAIL:

15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	04-Apr-2003

SF 30 CONTINUATION SHEET

South Jetty Sand Tightening, South Jetty Rehabilitation, North Jetty Rehabilitation, and North Revetment Rehabilitation, Palm Beach Harbor, Florida IFB No. DACW17-03-B-0006.

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

1. Asterisks appear before and after the line or lines where revisions have been made to the text on the enclosed revised pages and pertain only to the changes made by this amendment except where the reverse side of a page has been previously amended; however, these can be identified by the amendment number opposite the page number at the bottom of each page.

2. Some specification revisions include additions with underlined text or deletions with line/cross-outs.

3. 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, underlining or line/cross-outs.

SECTION 01000:

a. **Delete** the entire Section 01000 and **insert** the new Section 01000.

SECTION 01355:

a. **Delete** the entire Section 01355 and **insert** the new Section 01355.

DESCRIPTIVE CHANGES TO THE DRAWINGS: The following are descriptive changes to the drawings. Drawings should be adequately marked to indicate that they have been changed.

DRAWING 3/12:

a. **Delete** Drawing 3/12 and **replace** it with the new Drawing 3/12.

DRAWING 6/1:

a. **Delete** Drawing 6/1 and **replace** it with the new Drawing 6/1.

-End of Changes-

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01000

GENERAL REQUIREMENTS

-- 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. In addition to the above, the following shall apply: The words "commence work" means "commence construction." The commencement time of 30 days applies unless precluded by inclement weather as determined by the Contracting Officer.

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.

1.3.2 Contractor Staging Area

A staging area, shown on the contract drawings as Tract No. A-102, has been identified for the Contractor's use. Access to the staging area is shown on the contract drawings as Tract No. 111-E. The Contractor is responsible for all clearing and grubbing and all work incidental to preparing the site for use. It shall be the responsibility of the Contractor to investigate and obtain any additional areas that may be necessary for his/her construction operations. The additional areas shall be subject to the approval of the Contracting Officer.

1.3.3 Location

The Palm Beach Harbor site is located on the east coast of Florida at the northern edge of the town of Palm Beach, Florida.

1.3.4 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 are rare. The wet season in the project area is from May through October. In general, the winter months constitute the dry season and rainfall is usually associated with mid-latitude systems (fronts and low-pressure systems) and is distributed in a spatially uniform pattern. The summer months comprise the wet season and rainfall is closely associated with convective activity. These rainfall events are normally of short duration and amounts are quite variable spatially. Occasionally, daily rainfall in the dry season can be quite heavy as mid-latitude systems penetrate into Florida.

It shall be the Contractor's responsibility to obtain information concerning rain, wind, and wave conditions that could influence his construction operations. Reference is made to the following publications which contain climatological and meteorological observations and data. The publication "Local Climatological Data - Monthly Summary" published by NOAA, Asheville, North Carolina, contains climatological and meteorological observations and data. The Annual Summary gives a summary of the observations for the period of record. This publication is available for review in the office of 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, N.C. 28801.

1.3.4.1 Publications

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

a. U.S. Coast Pilot, Atlantic Coast: Cape Henry to Key West, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service: This publication supplements the navigational information shown on the nautical charts. It also provides miscellaneous meteorological data. 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.eduy/buoy/.

1.3.5 Transportation Facilities

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

The project site is accessible by water from the Intracoastal Waterway and the Atlantic Ocean. The project site is also accessible by land by traveling north on I-95 or US 1 from Miami then east on either Southern Blvd. or SR 704. The town of West Palm Beach (just to the west of Palm Beach) is serviced by AMTRAK railroad system.

1.3.5.2 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.

1.3.6 Maritime Traffic

Channel traffic in the project area consists of cruise ships, commercial, pleasure, and small recreational vessels of all types and sizes which can be accommodated by existing depths.

1.3.7 Local Conditions - Water Stages and Tides

1.3.7.1 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.

1.3.7.2 Water Stages

Wind and tidal fluctuations of the Atlantic Ocean mainly affect water levels in the project area, which are diurnal. 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. Data collected by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS) at tide gages near the project area is provided in the following tables:

Table I

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDAL BENCH MARKS

FLORIDA 872 2607

PALM BEACH, LAKE WORTH

LATITUDE: 26° 44.0' N LONGITUDE: 80° 2.5' W
NOAA CHART: 11466 USGS QUAD: PALM BEACH

Tidal datums at PALM BEACH, LAKE WORTH are based on the following:

LENGTH OF SERIES	=	12 MONTHS
TIME PERIOD	=	MAY 1970 - APRIL 1971
TIDAL EPOCH	=	1960-1978
CONTROL TIDE STATION	=	MIAMI BEACH (872 3170)

Elevations of tidal data referred to mean lower low water (MLLW) are as follows:

MEAN HIGHER HIGH WATER (MHHW)	=	3.14 FEET
MEAN HIGH WATER (MHW)	=	2.93 FEET
MEAN TIDE LEVEL (MTL)	=	1.56 FEET
*NATIONAL GEODETIC VERTICAL DATUM - 1929 (NGVD)	=	1.31 FEET
MEAN LOW WATER (MLW)	=	0.19 FOOT
MEAN LOWER LOW WATER (MLLW)	=	0.00 FOOT

*NGVD reference based on elevations published in Quad 260801, February 1972, and NOS leveling of 1981.

Table II

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDAL BENCH MARKS

FLORIDA 872 2670

LAKE WORTH PIER, ATLANTIC OCEAN

LATITUDE: 26° 36.7' N LONGITUDE: 80° 2.0' W
NOAA CHART: 11466 USGS QUAD: LAKE WORTH

Tidal datums at LAKE WORTH PIER, ATLANTIC OCEAN are based on the following:

LENGTH OF SERIES	=	4 YEARS
TIME PERIOD	=	1974-1977
TIDAL EPOCH	=	1960-1978
CONTROL TIDE STATION	=	MIAMI BEACH (872 3170)

Elevations of tidal data referred to mean lower low water (MLLW) are as follows:

MEAN HIGHER HIGH WATER (MHHW)	=	3.13 FEET
MEAN HIGH WATER (MHW)	=	2.98 FEET
MEAN TIDE LEVEL (MTL)	=	1.57 FEET
*NATIONAL GEODETIC VERTICAL DATUM - 1929 (NGVD)	=	1.14 FEET
MEAN LOW WATER (MLW)	=	0.16 FOOT
MEAN LOWER LOW WATER (MLLW)	=	0.00 FOOT

*NGVD reference based on elevations published in Quad 260801, February 1972, and NOS leveling of 1987.

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.

1.3.8 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.

1.3.9 Work Restrictions

The Contractor shall perform work only during daylight hours for the Base Bid at the construction site.

1.4 LAYOUT OF WORK

1.4.1 Established Monuments

The Government has established monuments, control data and elevations for the work site(s) as indicated on the contract drawings. Control monument descriptions are appended to the end of this Section.

1.4.1.1 Construction Impacts to Survey Monuments

The contractor shall make a list of all survey monuments and/or markers that will be or may be disturbed or destroyed (including covering of monument with concrete) by his necessary activities in the active construction area. The contractor will not be responsible for replacement or re-setting of such monuments or markers; however, the contractor shall submit said list to the Contracting Officer for approval before disturbing any survey monument or marker. In addition, the contractor shall preserve the brass monument identifier disk from each disturbed or destroyed monument and shall submit same to the Contracting Officer.

1.4.2 Layout

From the monuments, control data and elevations established by the Government, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Contracting Officer may require to meet changed conditions or as a result of necessary modifications to the contract work.

1.4.3 Survey

The Contractor shall furnish, at his own expense, such stakes, templates, platforms, equipment, tools and material, and all labor as may be required in laying out any part of the work from the monuments, control data and elevations established by the Government. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks established by the Contracting Officer until authorized to remove them, and if such marks are destroyed by the Contractor or through his negligence, prior to their authorized removal, they may be replaced by the Contracting Officer, at his discretion, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Contracting Officer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

1.5 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.

1.6 STONE SOURCES (JAN 2000)

The Contractor shall be responsible for all arrangements in obtaining and testing of proposed stone sources. Bidders must verify that sources can meet gradation and quantity requirements. The Contractor shall submit within 10 days after Notice of Award, the proposed stone sources for all classes of stone, including all laboratory test data and service records for the proposed stone source(s). The Contractor shall submit a letter stating that he has verified that the stone, or sources, which he plans to use will be able to produce, either solely or collectively, the quantity of stone, of an acceptable quality, necessary for this project. This letter must include a list of the source or sources from which the Contractor plans to obtain the stone. The Government reserves the right to revoke approval and reject any or all material furnished from any source at any time during the course of the contract if and when it is determined by the Contracting Officer that such material does not conform to the gradation or quality specified. The Contractor's attention is called to the fact that the specified gradations are not industry standard and processing of materials will be required to meet the specified gradations. The Contractor shall submit the "Stone Source Information" form for each stone source. A sample of this form is appended to the end of this Section.

1.7 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (31 OCT 1989)

This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the Clause DEFAULT (FIXED-PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES. In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

a. The weather experienced at the project site during the contract period must be found to be unusually severe; that is, more severe than the adverse weather anticipated for the project location during any given month.

b. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

1.7.1 Schedule

The average number of days in each calendar month with rain equal to, or greater than, 0.1 inches is provided for the project area in the following table. This information is based on data obtained from the NOAA rain gage located in Pompano Beach, Florida, at latitude 26° 14'N, 80° 09'W. The data were obtained from Climatography of the United States No. 20 Climatic Summaries for Selected Sites in Florida publications by the National Climatic Center, NOAA, for the period of record from 1951 through 1980.

Average Number of Days Per Month
With Rainfall

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4	4	3	3	7	10	9	11	11	10	4	4

1.7.2 Contractor Responsibility

Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor will record on the daily CQC report the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph (b) above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the Clause DEFAULT (FIXED PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES.

1.8 CONTROL MONUMENT DESCRIPTIONS

See APPENDIX A at the end of this Section (17 pages).

1.9 STONE SOURCES INFORMATION SHEET

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

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01355

ENVIRONMENTAL PROTECTION

-- End of Section Table of Contents --

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 listed below forms a part of this specification to the extent referenced. The publication is referred to in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

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

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~~2071. *

* a. Florida Department of Environmental Protection Permit ~~No. 502141369; Effective Date: 24 May 1993; Expiration Date: 24 May 2003.~~ to be issued. *

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

Environmental Protection Plan; G|PD

Within 20 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 30 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. 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.

m. 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.

n. Construction activities shall be conducted in a manner as not to impact migratory birds or induce their nesting.

SD-07 Certificates

* Qualifications

The Contractor shall submit a certified copy of Florida Fish and Wildlife Conservation Commission permit for handling of sea turtle eggs. *

Bird Nesting Monitoring Qualifications; G|PD

Within 20 calendar days after the date of Notice of Award, the Contractor shall furnish to the Contracting Officer for approval, the qualifications of the bird monitor/observer. Appropriate qualifications for bird monitor/observer shall be a demonstrated ability to find and/or identify bird species, nesting behavior, eggs and nests, and habitat requirements. The Contractor shall consult with and coordinate all monitoring plans and activities with COR.

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).

Logs/Summary of Bird Nesting Monitoring

Contractor shall submit as specified, logs and summary of monitoring detailing nesting and nesting success.

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 on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below. 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 01451 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 Petroleum-Based Systems Environmental Design and Installation Criteria

For petroleum-based systems, a statement of site suitability shall be provided and shall include what would be necessary to prevent adverse impact to water quality; natural resources; habitat; historic, cultural, and archeological sites; and fragile local resources in the event of a fuel spill. Human error and mechanical/electrical failure of components without human intervention shall also be considered in the design with regard to spills. Additionally, appropriate noise and emissions controls shall be incorporated into the design, including vapor and exhaust controls.

At a minimum, environmental protection design requirements shall also include the following: (1) stationary tanks and piping shall have

secondary containment features; (2) approved materials and corrosion protection systems shall be utilized; (3) system leaks shall be readily detected and contained without human intervention; and, (4) overfill containment systems shall be provided.

Applicable Federal, State, and local codes and requirements shall be strictly adhered to in the design, including those of the U.S. Environmental Protection Agency (EPA), the State of Florida, the South Florida Water Management District (SFWMD), and other local governing agencies such as those of counties and municipalities. In the case of the State, requirements include Chapter of the Florida Administrative Code (FAC) such as 62-17 (Approved Materials), 62-252 (Vapor Emissions), 62-296 (Emissions), 62-761 (Underground Storage Tanks), and 62-762 (Aboveground Tanks). Note that Chapters 62-761 and 62-762 of the FAC may be combined into one Chapter. Best Management Practices from the applicable agencies shall also be adhered to in the design.

3.1.1.2 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 unless designated for removal on the drawings. 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. ~~The contractor shall restore all grasses damaged or destroyed, including sea oats. The amount and extent of areas to be re-sod will be determined by the Contracting Officer; the seed mixture shall be compatible with the surrounding grassed areas.~~ 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 Restoration of Dune Resources

The Contractor shall restore all sea oats and sea grape damaged or destroyed. *

3.1.2.2 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 and tools 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. In addition, if this contract involves the identification, shipping, storage, testing, or disposal of soils from such a quarantined area, the Contractor agrees to comply with the provisions of COE ER 1110-1-5 and attachments. The Contractor agrees to assure compliance with this obligation by all subcontractors.

3.1.2.3 Protection of Landscape

Trees and their roots, shrubs, vines, grasses, land forms, and other landscape features shall be clearly identified and protected by fencing or any other approved techniques. Protection of trees shall be as illustrated in the Tree Protection Plan Detail on the web site indicated in the paragraph CONSTRUCTION FORMS AND DETAILS below. Tree protection fencing shall be placed before excavation or grading is begun and maintained in place until construction is complete. Branches of protected trees, if required, shall be removed to clear for construction and pruning shall subsequently be performed to restore the natural shape of the entire tree. Branches or roots, if required, shall be cut with sharp pruning instruments and not broken or chopped. Protected trees shall be fertilized to compensate for root loss with 6-6-6 as per manufacturer's application direction. Any damage to tree crowns or roots shall be repaired promptly after damage occurs.

a. Trench or Bore Under Trees: Where trenching for utilities is required within tree drip lines, the Contractor shall hand dig under and around roots or bore under them. The Contractor shall protect roots from drying and cover exposed roots within an hour as specified in subparagraph "Excavation for Structures" below. No lateral roots which interfere with new construction shall be cut. Boring is

permitted.

b. Excavation for Structures: Where excavating for new construction is required within tree drip lines, the Contractor shall hand excavate to minimize damage to root systems. The Contractor shall use narrow tine pitchforks and comb soil to expose roots. The Contractor shall relocate roots in backfill areas. If large, main lateral roots are encountered that are exposed beyond the excavation limits, the Contractor shall bend and relocate these roots without breaking or girdling. If roots are encountered immediately adjacent to new construction such that relocation is not practical, the Contractor shall saw roots approximately 3" back from the new construction, seal with tree wound dressing, and protect any exposed embankment of roots from drying by covering with straw and black plastic. The Contractor shall irrigate affected areas daily until final grade conditions are established and the exposed roots are backfilled properly for continued plant growth.

c. Replacement: The Contractor shall remove dead or damaged protected trees determined, by the Government, to be incapable of restoration to normal health growth. The Contractor shall replace each removed tree up to 4" caliper with tree of equal specie and size. For each tree removed larger than a 4" caliper, the Contractor shall replace the tree with one 4" caliper tree per 4" caliper increment or fraction thereof.

3.1.2.4 Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in instances where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be totally cleared. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas developed as approved by the Contracting Officer.

3.1.2.5 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.

3.1.2.6 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.

3.1.2.7 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.

3.1.2.8 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.

3.1.2.9 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.

3.1.2.10 Hazardous Materials

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

3.1.2.11 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 construction activities: (1) the National Historic Preservation Act, as amended; and, (2) the Abandoned Shipwreck Act.

3.1.3.2 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 excavating 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.

3.1.3.3 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. Contract adjustments resulting from compliance with this paragraph shall be determined in accordance with Clause DIFFERING SITE CONDITIONS of Section 00700 CONTRACT CLAUSES.

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 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.

3.1.4.2 Turbidity

The Contractor shall conduct his operations in a manner to minimize turbidity and shall conform to all water quality standards as prescribed by Chapter 62-302, State of Florida, Department of Environmental Protection (FDEP). FDEP surface water quality standards can be obtained from the following web sites:
http://www.dep.state.fl.us/ogc/documents/rules/shared/62-302.pdf and
http://www.dep.state.fl.us/ogc/documents/rules/shared/62.302t.pdf.

3.1.4.3 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.

The Contractor shall instruct all personnel associated with the project of the potential presence of manatees, and sea turtles in the area, and the need to avoid collisions with and 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 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 or sea turtle 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.

c. Manatee Monitoring (Clamshell Only): During clamshell excavating operations, a dedicated observer shall monitor for the presence of manatees. The dedicated observer shall have experience in manatee observation and be equipped with polarized sunglasses to aid in observing. 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. ~~Nighttime lighting of waters within and adjacent to the work area shall be illuminated, using shielded or low-pressure sodium-type lights, to a degree that allows the dedicated observer to sight any manatee on the surface within 200 feet of the operation.~~ The construction operator shall gravity-release the clamshell bucket only at the water surface, and only after confirmation that there are no manatees within the safety distance identified in the standard construction conditions. 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 excavation.

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 construction 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 on the web site indicated in the paragraph CONSTRUCTION FORMS AND DETAILS below.

3.1.5.1 Manatee, Sea Turtle, and Whale Sighting Reports

Any take concerning a manatee, or sea turtle, or sighting of any injured or incapacitated manatees or sea turtles 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

Title	Telephone Number Work Hours	After Hours
Corps, Inspector	On site	Lodging Location
Mr. George Cooper, Area Engineer, (CESAJ-CO-W)	561-626-8195	To be Provided
* Mr. Loren Mason, Chief, Environmental Branch, Planning Division (CESAJ-PD-E)	904-232-~~1010~~1598	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 also 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, Vero Beach Field Office 561-562-3909 for South Florida.

3.1.5.2 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 on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below). 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

Area Engineer,
U.S Army Corps of Engineers (CESAJ-CO-W
4400PGA Boulevard, Suite 203
Palm Beach Gardens, Florida 33410

U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, Florida 32960-3559

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

* 3.1.5.3 Sea Turtle Beach Nest Monitoring

a. Sea Turtle (Work Stoppage) Window and Monitoring: If construction activities on the project beach have 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 construction activities have 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 construction 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 construction 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 the project beach, 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 Florida Fish and Wildlife Conservation Commission (FWC) for handling sea turtle eggs. Inspections must be performed in such a manner so as to ensure that construction activities do not occur in any location prior to completion of the necessary sea turtle protection measures as described below. Only those nests that may be affected by construction activities shall be relocated. Nests

requiring relocation shall be excavated and moved 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. Nest relocations in association with construction activities must cease when construction activities no longer threaten nests. Nests deposited within areas where construction activities have ceased or will not occur for 65 days must be marked and left in place unless other factors threaten the success of the nest. Any nests left in the active construction zone must be clearly marked, and all mechanical equipment must avoid nests by at least 10 feet. In the event a sea turtle nest is excavated during construction activities, the permitted person responsible for egg relocation for the project must be notified so the eggs can be moved to a suitable relocation site. Upon locating a sea turtle adult, hatchling, or egg harmed or destroyed as a direct or indirect result of the project, notification must be made to the FWC, Bureau of Marine Enforcement at 800-342-5367 and the U.S. Fish and Wildlife Service at 772-562-3909. 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 on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below).

c. Excavated Trenches: During any periods when excavated trenches must remain on the beach at night, night-time sea turtle monitoring by the sea turtle permit holder will be required in the project area in order to further reduce possible impacts to nesting and hatching sea turtles. Night-time monitors will record data on false crawls, successful nesting, and any additional activities of nesting or hatchling sea turtles in the project area.

d. Turtle Subcontractor: The Contractor shall have a FWC 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 FWC to take turtles.

e. 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, Area Office.

3.1.5.4 Sea Turtle Barrier

In addition to monitoring, a barrier (e.g. staked hay bales) sufficient to prevent adult and hatchling sea turtles from accessing the project site must be in place around the perimeter of the project site if construction activities are to be performed from March 1 to November 30. The barrier must be placed shore-parallel and shore-perpendicular to the project site. The barrier will need to start as close to the south jetty as practicable, proceed south along the MHW line, turn west toward the dunes following the project perimeter and stopping 20-feet past the beginning of the dune line taking care to minimize damage to vegetation. A temporary opening in the barrier can be made to allow movement of construction equipment but must be

closed as soon as possible, and must remain closed particularly during the period from sunset to sunrise. The barrier is to be removed from the site upon completion of the project.

3.1.5.5 Construction Restrictions

a. Construction Work Hours: The Contractor shall perform work only during daylight hours at the construction site.

b. Daylight Sighting of Nesting Sea Turtles: If any nesting turtles are sighted on the beach during daylight hours, construction activities must cease immediately until the turtle has returned to the water, and the sea turtle permit holder responsible for nest monitoring has marked any nest that may have been laid for avoidance.

c. Construction Site Access: On-beach access to the construction site will be restricted to the wet sand below mean high water.

d. Equipment Staging Areas: From March 1 to November 30, staging areas for construction equipment must be located off the beach to the maximum extent practicable. Night-time storage of construction equipment not in use must be off the beach to minimize disturbance to sea turtle nesting and hatching activities.

e. Pipeline Placement: Any construction pipes placed parallel to the shoreline shall be placed as far landward as possible up to the vegetated dune line. Temporary storage of pipes on the beach must be in such a manner so as to impact the least amount of nesting habitat and must likewise not compromise the integrity of the dune systems (placement of pipes perpendicular to the shoreline is recommended as the method of storage).

3.1.5.6 Beach Tilling

Till the construction area 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 then 3 feet of sand.

3.1.5.7 Escarpments

Visual surveys for escarpments along the project area shall be made immediately after completion of the project. 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 by March 1. If the project is completed during the early part of the nesting season (March 1 to April 30), escarpments may be required to be leveled immediately, while protecting nests that have been relocated or left in place. The Chief, Environmental Branch and the Area Engineer, Area Office will be notified immediately if escarpments are

identified in the project area between May 1 to November 30. *

3.1.5.8 Protection of Migratory Bird Species

The Contractor shall keep construction activities under surveillance, management, and control to prevent impacts to migratory birds and their nests. All construction personnel shall be advised that migratory birds are protected by the Florida Endangered and Threatened Species Act of 1977, Title XXVIII, Chapter 372.072, and the U.S. Fish and Wildlife Service pursuant to the Migratory Bird Treaty Act of 1918 and the Endangered and Threatened Species Act of 1982, as amended. The Contractor may be held responsible for harming or harassing the birds, their eggs or their nests as a result of the construction.

a. Monitoring of Construction Area: In order to meet these responsibilities, the Contractor shall conduct monitoring of the construction area beginning 1 April through 31 August, if construction activities occur during that period. Daily monitoring using the Daily Bird Monitoring Report shall be conducted during the dawn or dusk time frames by a bird monitor approved by the Contracting Officer. (Caution shall be taken by the monitor to avoid disturbance to the nesting birds.) The Contractor shall maintain a daily log detailing monitoring and nesting activity (not all bird species are listed). Sample monitoring report and qualification sheet are on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below. Within 30 days after completion of construction, a summary of monitoring shall be submitted to the Corps detailing nesting and nesting success/failure including species, number of nests created, location, number of eggs, number of offspring generated during the project and reasons for nesting success or failure, if known.

b. Presence/Absence Survey: At least 3 visits must be made to each site during April-July. A 6-minute point count (variable circular plot) should be conducted between sunrise and 3 hours after or 1 hour prior to sunset. If breeding birds are encountered, nests shall be located and observed without disturbance to the nesting activity. Nests shall be marked and visited every 3-5 days to determine fate.

c. Nesting Activity Notification: Any nesting activity observed by the Contractor shall be reported immediately to the Contracting Officer who shall have sole authority for any work stoppages, creation of the buffer area, or restart of construction activities. In addition, the following personnel shall be notified:

Order of Contact of Corps Personnel
to Report Bird Nesting Activities

Title	Telephone Number Work Hours	After Hours
Corps, Inspector	On site	Lodging Location
Mr. George Cooper, Area Engineer, (CESAJ-CO-W)	561-626-8195	To be Provided
* Mr. Loren Mason, Chief, Environmental Branch,		

Planning Division (CESAJ-PD-E)	904-232-~~10101~~1598	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	

d. Nesting Within Construction Area:

(1) Should nesting begin within the construction area, a temporary, 200-foot buffer shall be created around the nests and marked to avoid entry (the Contracting Officer will provide signs). The area shall be left undisturbed until nesting is completed or terminated, and the chicks fledge. The decision to allow construction in a former nesting site will be determined by the Contracting Officer in consultation with the U.S. Fish and Wildlife Service and the FF&WCC. Access to the nesting sites by humans (except limited access when accompanied by the bird monitor or Contracting Officer), equipment or pets under control of the Contractor is prohibited.

(2) If nesting occurs within the construction area, a bulletin board shall be placed and maintained by the Contractor in the contracting shed with the location map of the construction site showing the bird nesting areas and a warning, clearly visible, stating that "BIRD NESTING AREAS ARE PROTECTED BY THE FLORIDA THREATENED AND ENDANGERED SPECIES ACT AND THE FEDERAL MIGRATORY BIRD TREATY ACT".

(3) Birds will find the top of the dike or the flat interior desirable nesting habitat. If construction activity ceases for any period of time, nesting may occur before work can resume. Any stoppage of activity could induce nesting, subsequently, construction could be altered or stopped to avoid impacting the birds. Areas which are potentially suitable for nesting can be altered to make the area undesirable. One approved method is the placement of stakes at 10- to 15-foot intervals and tie flagging between the stakes in a web fashion. This may dissuade bird nesting until construction can be resumed. In addition, the disposal area basin can be flooded prior to the beginning of nesting season to the elevation required for displacement from the disposal of excavated material in order to make the basin undesirable for bird nesting.

e. Bird Monitoring Qualifications: The Contractor's Environmental Protection Plan shall contain the qualifications of the bird monitor and the steps to be taken to construct the project in such a manner as not to impact migratory birds or induce their nesting. The qualifications of the bird monitor are a demonstrated ability to identify bird species, general and nesting behavior characteristics, nests and eggs, and a knowledge of habitat requirements. In addition, references must be provided to verify non-educational experience.

f. Work Delay: Delays in work due to the fault of 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 Clause SUSPENSION OF WORK of Section 00700 CONTRACT CLAUSES.

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 web sites:
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.

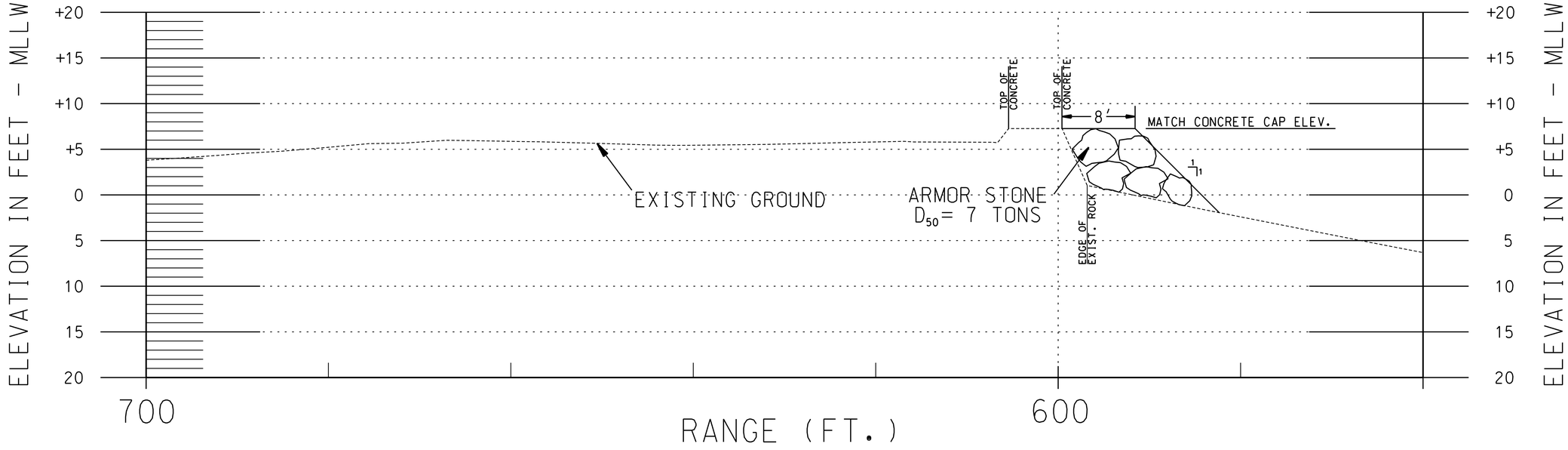
3.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES

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.

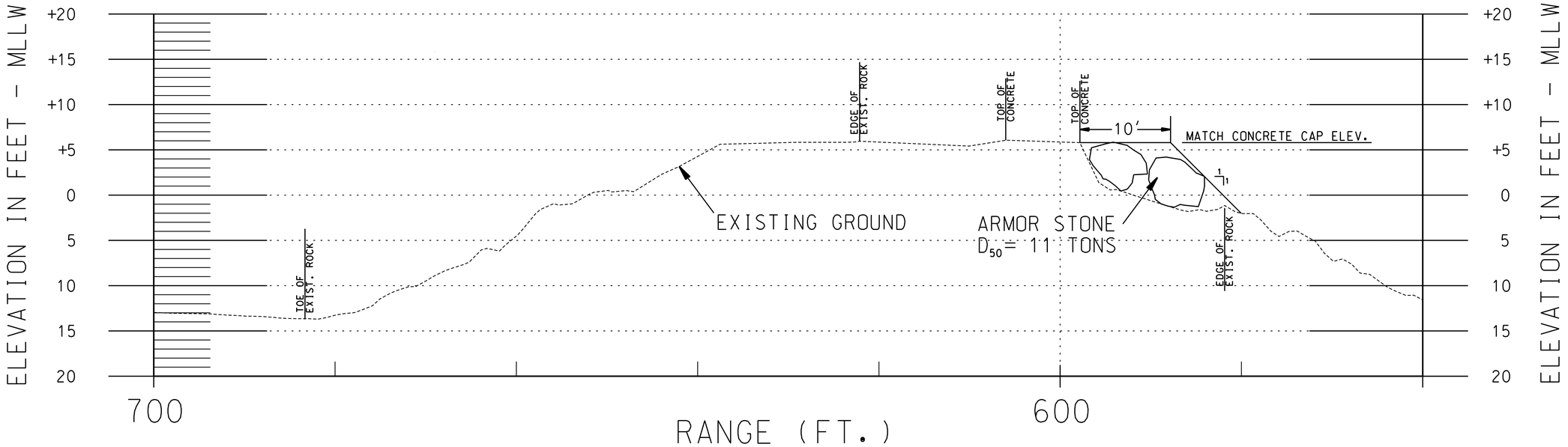
3.5 CONSTRUCTION FORMS AND DETAILS

From the Jacksonville District Home Page, click the links ORGANIZATIONS, ENGINEERING, then CONSTRUCTION FORMS AND DETAILS. See web site address www.saj.usace.army.mil/cadd/end/construction_forms_and_details.htm.

-- End of Section --



SOUTH JETTY REHABILITATION DETAILS - STA. 49+50 TO STA. 54+00



SOUTH JETTY REHABILITATION DETAILS - STA. 43+11 TO STA. 49+50

GRAPHIC SCALE:
5' 0 5' 10'

NOTES:
1. SEE DWG. NO. 1/2 FOR LEGEND, JETTY AND REVETMENT SURVEY NOTES, AND GENERAL NOTES.
2. SEE DWG. NO. 1/3 FOR CONTROL DATA.
3. SEE DWG. NO. 6/1 FOR SOUTH JETTY PROPERTY BOUNDARY SURVEY NOTES.
4. SEE THIS DWG. FOR JETTY REHABILITATION DETAILS. (A)

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved
1	A	H-1	REVISED TO ACCOMPANY AMENDMENT NO. 0001	

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Designed by: SRC
Drawn by: SRC
Ckd by: JWB
Soc No.
Dates:
Scale: AS SHOWN
Date: OCTOBER 2002
D.O.FILE NO. 16-38.352

File name: PALM3-12.DGN
Reference files: PALM-BRGR2.DGN

PALM BEACH HARBOR, FLORIDA
SOUTH JETTY SAND TIGHTENING & REHABILITATION AND NORTH JETTY & REVETMENT REHABILITATION
JETTY REHABILITATION
SOUTH JETTY REHABILITATION DETAILS

DRAWING NO.
3/12

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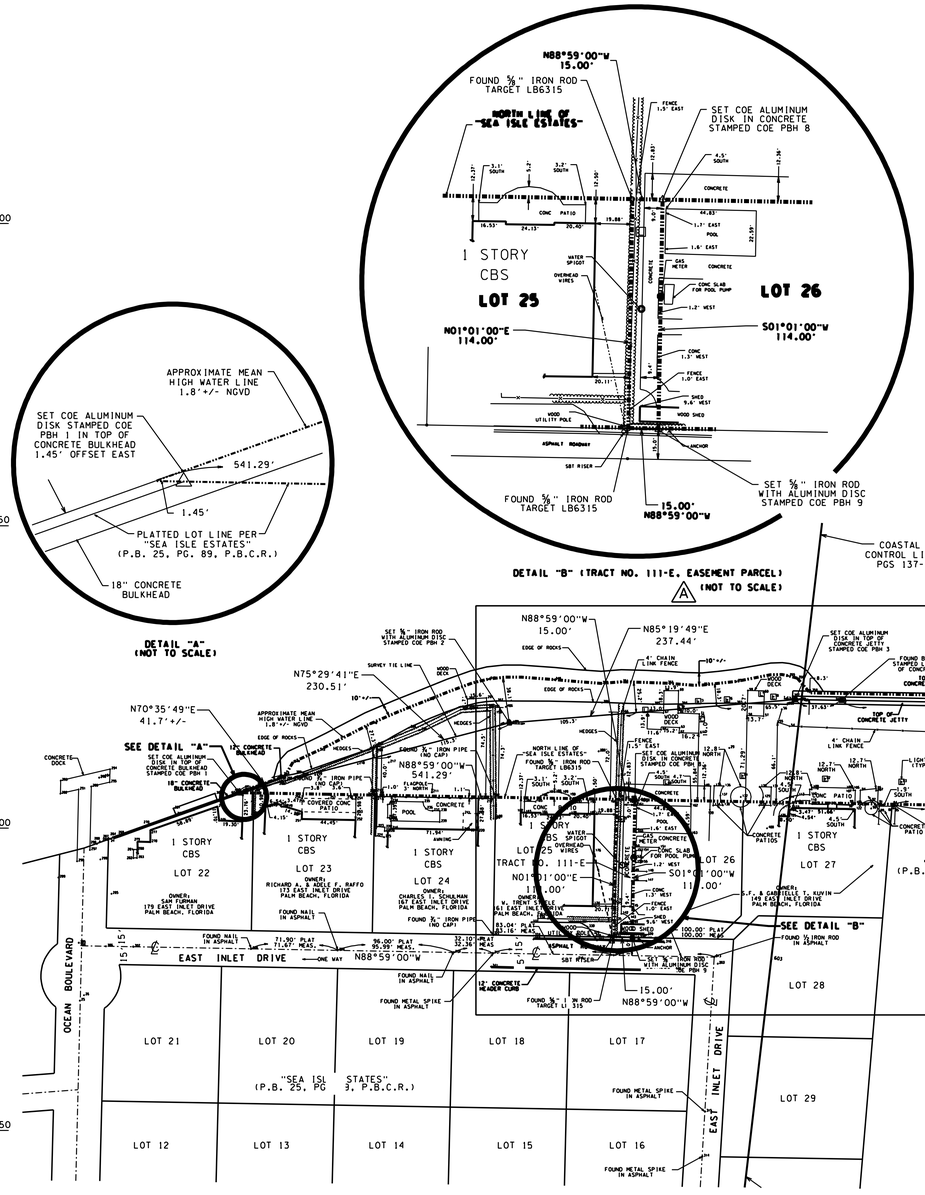


SURVEY NOTES

1. REFER TO USCOE SURVEY NUMBER 98-138.
2. THIS BOUNDARY SURVEY WAS CONDUCTED FROM AUGUST 10, 1998 TO AUGUST 19, 1998.
3. NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
4. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS OF WAY, EASEMENTS, OWNERSHIP, OR OTHER INSTRUMENTS OF RECORD.
5. BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE STATE OF FLORIDA, EAST ZONE (0901), NORTH AMERICAN DATUM (NAD) OF 1927. REFERENCE BEARING OF NORTH 88°59'00" WEST ALONG THE NORTH LINE OF "SEA ISLE ESTATES" (P.B. 25, PG. 89, P.B.C.R.)
6. THE LAND DESCRIPTION HEREON WAS PREPARED BY THE SURVEYOR.
7. UNDERGROUND AND SUBAQUEOUS IMPROVEMENTS AND/OR UTILITIES WERE NOT LOCATED OR SHOWN.
8. ELEVATIONS SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 AND SAID ELEVATIONS ARE BASED ON BENCHMARKS SUPPLIED BY THE PALM BEACH COUNTY ENGINEERING DEPARTMENT BENCHMARK NO. LWI-8 (BRASS DISC IN TOP OF CONCRETE JETTY ON THE SOUTH SIDE OF THE LAKE WORTH INLET). BENCHMARK ELEVATION = 6.42 FEET.
9. TREES, LANDSCAPING AND SPRINKLER HEADS NOT SHOWN.
10. APPROXIMATE MEAN HIGH WATER ELEVATION 1.8'+/- NGVD IS BASED ON TIDAL STATION NUMBER 2670, "LAKE WORTH PIER, ATLANTIC OCEAN". MEAN HIGH WATER ELEVATION = 1.84' NGVD.
11. REFER TO:
    A - FIELD BOOK NUMBER "PALM BEACH COUNTY 289"
    B - SURVEY REPORT OF "BOUNDARY SURVEY, PALM BEACH HARBOR PROJECT, TRACT NO'S A-102 AND 111-E, SOUTH JETTY AREA"

LAND DESCRIPTION:

A PORTION OF SECTION 34, TOWNSHIP 42 SOUTH, RANGE 43 EAST LYING IN PALM BEACH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHEAST CORNER OF LOT 27, "SEA ISLE ESTATES" ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 25, PAGE 89 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, THENCE NORTH 88°59'00" WEST, ALONG THE NORTH LINE OF SAID "SEA ISLE ESTATES", SAME BEING THE SOUTH LINE OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 515, PAGE 59 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, 541.29 FEET TO THE NORTHERLY FACE OF A CONCRETE BULKHEAD, SAME BEING THE MEAN HIGH WATER LINE OF THE SOUTHERLY WATERS OF THE LAKE WORTH INLET; THENCE NORTH 70°35'49" EAST ALONG SAID NORTHERLY FACE OF SAID CONCRETE BULKHEAD, SAME BEING THE MEAN HIGH WATER LINE OF THE SOUTHERLY WATERS OF LAKE WORTH INLET, 41.7 FEET, MORE OR LESS TO THE APPROXIMATE MEAN HIGH WATER LINE OF THE SOUTHERLY WATERS OF LAKE WORTH INLET; THENCE EASTERLY ALONG SAID APPROXIMATE MEAN HIGH WATER LINE, 1348 FEET, MORE OR LESS TO THE NORTHERLY PROLONGATION OF THE APPROXIMATE MEAN HIGH WATER LINE OF THE ATLANTIC OCEAN; THENCE SOUTHERLY ALONG SAID NORTHERLY PROLONGATION AND THE APPROXIMATE MEAN HIGH WATER LINE OF THE ATLANTIC OCEAN, 95 FEET, MORE OR LESS TO THE EASTERLY PROLONGATION OF THE AFORESAID NORTH LINE OF SAID "SEA ISLE ESTATES", SAME BEING THE AFORESAID SOUTH LINE OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 515, PAGE 59 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA; THENCE NORTH 88°59'00" WEST ALONG THE EASTERLY PROLONGATION OF THE AFORESAID NORTH LINE OF SAID "SEA ISLE ESTATES", SAME BEING THE AFORESAID SOUTH LINE OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 515, PAGE 59 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, 786 FEET, MORE OR LESS TO THE POINT OF BEGINNING.

TOGETHER WITH: TRACT 111-E (EASEMENT PARCEL)

THE WEST FIFTEEN (15) OF LOT 26 , "SEA ISLE ESTATES", ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 25, PAGE 69 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS LYING IN THE TOWN OF PALM BEACH, PALM BEACH COUNTY, FLORIDA.

ABBREVIATIONS

A or L	ARC LENGTH
BFP	BACKFLOW PREVENTOR
℄	CENTERLINE
CBS	CONCRETE BLOCK STRUCTURE
CONC.	CONCRETE
NGVD	NATIONAL GEODETIC VERTICAL DATUM
O.R.B	OFFICIAL RECORD BOOK
P.B.	PLAT BOOK
PG.	PAGE
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
P.B.C.R.	PALM BEACH COUNTY RECORDS
R	RADIUS
R/W	RIGHT-OF-WAY
R.P.B.	ROAD PLAT BOOK
SBT	SOUTHERN BELL TELEPHONE
SQ. FT.	SQUARE FEET

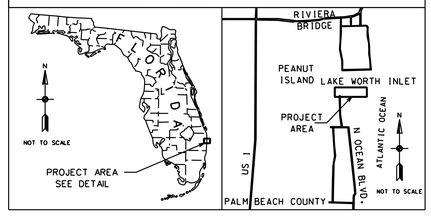
SURVEY LEGEND

	LIGHT POLE
	MANHOLE
	FIRE HYDRANT
W	GATE VALVE
	CATCH BASIN
	SIGN
	CONC POWER POLE
	WOOD POWER POLE
	SIAMESE CONNECTOR
△	DENOTES SET 5/8" IRON ROD WITH COE ALUMINUM DISK UNLESS NOTED OTHERWISE
G	GREASE TRAP
E	ELECTRIC BOX

SURVEY CONTROL

CONTROL POINT	STATE PLANE COORDINATES (NAD 27) EASTING (X) FEET	NORTHING (Y) FEET	EL. FEET (NGVD)
LWI-4	814,061.41	887,105.72	N/A
LWI-8	814,541.00	887,097.24	6.42
LWI-60	814,055.21	884,042.60	13.64
PBH 1	813,563.68	887,029.32	N/A
PBH 2	813,786.83	887,087.06	N/A
PBH 5	814,895.61	887,090.97	N/A
PBH 6	814,857.33	887,006.34	N/A
PBH 7	814,494.91	887,012.80	N/A
PBH 8	813,890.57	887,023.52	N/A
PBH 9	813,888.56	886,909.54	N/A

LOCATION MAP



CERTIFICATE

I HEREBY CERTIFY THAT THE ATTACHED BOUNDARY SURVEY OF THE HEREON DESCRIBED PROPERTY IS DEPICTED TO THE BEST OF MY KNOWLEDGE, BELIEF AND INFORMATION AS SURVEYED IN THE FIELD UNDER MY DIRECTION ON AUGUST 19, 1998. I FURTHER CERTIFY THAT THIS BOUNDARY SURVEY MEETS THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTE, SUBECT TO THE QUALIFICATIONS NOTED HEREON.

JON P. WEBER, P.S.M.
FLORIDA REGISTRATION NO.4323
SEA SYSTEMS CORPORATION, LB 5861

N

GRAPHIC SCALE
50' 0 50' 100'

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved
1	A	C-4	REVISED TO ACCOMPANY AMENDMENT NO. 0001	

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Designed by: SRC
Drawn by: SRC
Checked by: JWB
Scale: AS SHOWN
Dated: OCTOBER 2002
Sch. No.
D.O.FILE NO. 16-38.352

File name: PALM-01.DGN
Reference files: PALM-BRKPK2.DGN Z150BASE.DGN

PALM BEACH HARBOR, FLORIDA
SOUTH JETTY SAND TIGHTENING & REHABILITATION AND NORTH JETTY & REVETMENT REHABILITATION
ENCROACHMENTS
TRACT NO'S A-102 AND 111-E BOUNDARY SURVEY

DRAWING NO.
6/1

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