

SECTION 00010 Solicitation Contract Form

Description of Work:

\* Construction of 5.5 miles of levees along with adjacent seepage canals and with all associated clearing and grubbing. Construction of 11 water control structures. Degradation of existing primary drainage canals and adjacent berms. Demolition of 19 sites and removal of all remaining agricultural drainage facilities, includes pump stations. Demolition includes asbestos abatement and removal. Equipment expected to be utilized: large dump trucks, front-end loader, and bulldozers with be required to perform subject work. \*

## SECTION 00010

## SUPPLIES OR SERVICES AND PRICES/COSTS

C-51 STORMWATER TREATMENT AREA 1-EAST, CONTRACT 7  
CENTRAL AND SOUTHERN FLORIDA PROJECT FOR FLOOD CONTROL AND OTHER PURPOSES

LINE ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0001	ELECTRICAL POWER DISTRIBUTION (See Note 1)	1	LUMP SUM		\$ 186,000
0002	ENVIRONMENTAL PROTECTION	1	LUMP SUM		\$ _____
0003	DEMOLITION	1	LUMP SUM		\$ _____
0004	CLEARING	1	LUMP SUM		\$ _____
0005	GRUBBING	1	LUMP SUM		\$ _____
0006	WASTE EXCAVATION	97,470	CUBIC YARD	\$ _____	\$ _____
0007	LEVEE EMBANKMENT, SEGMENT 1	219,917	CUBIC YARD	\$ _____	\$ _____
0008	LEVEE EMBANKMENT, SEGMENT 2	98,372	CUBIC YARD	\$ _____	\$ _____
0009	LEVEE EMBANKMENT, SEGMENT 3	112,003	CUBIC YARD	\$ _____	\$ _____
0010	FILL EXISTING CANAL	45,315	CUBIC YARD	\$ _____	\$ _____
0011	EXCAVATION, DEWATERING, FILLING, AND BACKFILLING FOR CONTROL STRUCTURES (PER STRUCTURE)	11	EACH	\$ _____	\$ _____
0012	RIPRAP	1,263	CUBIC YARD	\$ _____	\$ _____
0013	BEDDING FOR RIPRAP	377	CUBIC YARD	\$ _____	\$ _____
*0014	CAST-IN-PLACE REINFORCED CONCRETE	2,020	CUBIC YARD	\$ _____	\$ _____
0015	8' X 8' PRECAST CONCRETE BOX CULVERT (PER STRUCTURE)	11	EACH	\$ _____	\$ _____
0016	EMBEDDED METAL ITEMS FOR CONTROL STRUCTURES (PER STRUCTURE)	11	EACH	\$ _____	\$ _____
0017	STRUCTURE HANDRAILING (PER STRUCTURE)	11	EACH	\$ _____	\$ _____
0018	FLOOR GRATING (PER STRUCTURE)	11	EACH	\$ _____	\$ _____
0019	PRECAST CONCRETE CONTROL BUILDING (PER STRUCTURE)	11	EACH	\$ _____	\$ _____
0020	96" X 96" ALUMINUM SLIDE GATE AND OPERATOR	11	EACH	\$ _____	\$ _____
0021	STILLING WELLS	6	EACH	\$ _____	\$ _____
0022	STAFF GAGES	3	EACH	\$ _____	\$ _____
0023	CONTROL STRUCTURE ELECTRICAL CONSTRUCTION (PER STRUCTURE)	11	EACH	\$ _____	\$ _____
0024	GRASSING	52	ACRE	\$ _____	\$ _____

**General Decision Number FL020032**

General Decision Number **FL020032**

Superseded General Decision No. FL010032

State: **Florida**

Construction Type:

HEAVY

County(ies):

BROWARD                      LEE                                      ST LUCIE

COLLIER                      MARTIN

DADE                              PALM BEACH

HEAVY CONSTRUCTION PROJECTS (Excluding Sewer & Water Lines)

Modification Number              Publication Date

0                                      03/01/2002

1                                      03/29/2002

2                                      05/10/2002

COUNTY(ies):

BROWARD                      LEE                                      ST LUCIE

COLLIER                      MARTIN

DADE                              PALM BEACH

\* CARP1026D 01/01/2002

	Rates	Fringes
PILEDRIVERMEN	19.00	5.70

ELEC0323C 09/05/1993

	Rates	Fringes
MARTIN, PALM BEACH, AND ST LUCIE COUNTIES		
ELECTRICIANS	15.88	21.5%

ELEC0349B 09/01/2001

	Rates	Fringes
DADE COUNTY		
ELECTRICIANS:		
Electrical contracts including materials that are less than \$2,000,000	20.50	3.10+8%
Electrical contracts including materials that are \$2,000,000 and over	22.96	3.10+8%

ELEC0728A 09/01/2001

	Rates	Fringes
BROWARD AND COLLIER COUNTIES		
ELECTRICIANS	22.96	3%+6.18

ELEC0915B 12/01/2000

	Rates	Fringes
LEE COUNTY		
ELECTRICIANS	20.09	27%+.25

ENGI0487B 10/01/2001

	Rates	Fringes
--	-------	---------

DADE COUNTY

POWER EQUIPMENT OPERATORS:

Backhoes, Bulldozers	18.30	3.40
Cranes	21.88	3.40
Oilers	16.15	3.40

-----  
ENGI0487C 07/01/2001

Rates Fringes  
BROWARD, COLLIER, LEE, MARTIN, PALM BEACH, AND ST LUCIE COUNTIES

POWER EQUIPMENT OPERATORS:

All Tower Cranes and all Cranes with boom length 150 ft and over	21.64	5.50
Cranes with boom length less than 150 ft, Backhoes, and Bulldozers	20.92	5.50
Oilers	17.69	5.50

-----  
PLUM0630A 01/01/2002

Rates Fringes  
LEE, MARTIN, PALM BEACH, AND ST LUCIE COUNTIES

PIPEFITTERS	25.91	5.66
-------------	-------	------

-----  
PLUM0725B 01/16/2001

Rates Fringes  
BROWARD AND DADE COUNTIES

PIPEFITTERS	23.10	5.90
-------------	-------	------

-----  
SUFL2016A 01/26/1990

Rates Fringes

CARPENTERS	12.71	2.71
CEMENT MASONS	10.50	
LABORERS	5.72	
POWER EQUIPMENT OPERATORS:		
Loaders	11.25	2.55

-----  
WELDERS - Receive rate prescribed for craft performing operation  
to which welding is incidental.

=====

Unlisted classifications needed for work not included within  
the scope of the classifications listed may be added after  
award only as provided in the labor standards contract clauses  
(29 CFR 5.5(a)(1)(v)).

-----

In the listing above, the "SU" designation means that rates  
listed under that identifier do not reflect collectively  
bargained wage and fringe benefit rates. Other designations  
indicate unions whose rates have been determined to be  
prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can  
be:

- \* an existing published wage determination
- \* a survey underlying a wage determination

- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

---

- 1.13.4 Transportation Facilities
    - 1.13.4.1 Major Highways, Airports, Port Facilities, and Rail Access
    - 1.13.4.2 Contractor Investigation
  - 1.13.5 Local Conditions - Water Stages
    - 1.13.5.1 Water Fluctuations
    - 1.13.5.2 Water Stages
    - 1.13.5.3 Historical Stage Graphs
  - 1.13.6 Subsurface Investigations
  - 1.14 LAYOUT OF WORK
    - 1.14.1 Established Monuments
    - 1.14.2 Layout
    - 1.14.3 Survey
    - 1.14.4 Levee and FPL Access Pad Embankment Cross Section Surveys
  - 1.15 STONE SOURCES (JAN 2000)
  - 1.16 RETESTING OF CONSTRUCTION MATERIALS
  - 1.17 CRITICAL LIFT PLAN OPERATION
    - 1.17.1 Definition of a Critical Lift
    - 1.17.2 Critical Lift Plan Submittal
  - 1.19 CONSTRUCTION PROJECT SIGNS
    - 1.19.1 Signage Removal
    - 1.19.2 Signage Costs
  - 1.20 WATER
  - 1.21 ELECTRICITY
  - 1.22 UNITS OF MEASURE
  - 1.23 HURRICANE AND SEVERE STORM PLAN
    - 1.23.1 Hurricane and Severe Storm Plan Contents
    - 1.23.2 Sample Plan
    - 1.23.3 Monitoring of Weather
  - 1.24 PRECONSTRUCTION CONFERENCE
    - 1.24.1 Preconstruction Conference Submittal Items
    - 1.24.2 Failure to Comply
    - 1.24.3 Contracting Officer Representative Responsibility
      - 1.24.3.1 Report Preparation Instruction
      - 1.24.3.2 Contractor Indoctrination
      - 1.24.3.3 Letter of Record
  - 1.25 NOTICE TO PROCEED
  - 1.26 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (31 OCT 1989)
    - 1.26.1 Schedule
    - 1.26.2 Contractor Responsibility
  - 1.27 HAUL ROADS
  - 1.28 CONSTRUCTION PROJECT SIGNS
  - 1.29 SAMPLE - HURRICANE AND SEVERE STORM PLAN
  - 1.30 SAMPLE - GUIDE FOR EMPLOYEE SAFETY AND OCCUPATIONAL HEALTH INDOCTRINATION
  - 1.31 CONTROL MONUMENT DESCRIPTIONS
  - 1.32 CORE BORING LOGS AND LABORATORY DATA
  - 1.33 INTERIM REGULATION SCHEDULE, WATER CONSERVATION AREA NO. 1
  - 1.34 HISTORICAL STAGE GRAPHS, S-5AE TAILWATER
- PART 2 PRODUCTS (NOT APPLICABLE)
- PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section Table of Contents --

~~1.18 ACCOMMODATIONS FOR GOVERNMENT PERSONNEL~~

~~1.18.1 General~~

~~The Contractor shall furnish and maintain an office trailer for the exclusive use of Government personnel throughout the contract period. The office trailer shall be independent of any building or trailer used by the Contractor. The trailer shall be set up and furnished as specified, ready for Government occupancy no later than 30 calendar days after receipt of the Notice to Proceed.~~

~~1.18.2 Office Trailer~~

~~The office trailer shall be of light, but weatherproof construction, with a minimum of 600 square feet, 7-1/2 feet of head room, and not less than 8 feet in width. The trailer shall be partitioned into two office spaces with space for conference area between and have two entrance doors. The walls and ceilings shall be insulated, and the interior walls shall be finished. The trailer shall have a restroom and shall be complete with flush toilet, lavatory, and medicine cabinet. A minimum of two double socket wall outlets and one ceiling light shall be provided in each separate room of the building. The trailer shall have a sufficient number of windows to admit ample working light, and windows shall be arranged to open and to be securely fastened from the inside. Glass panels in windows shall be equipped with bars or heavy mesh screens which will prevent easy access into the trailer through the windows. Insect screens shall be provided for windows and doors. The doors shall be of solid core construction and be equipped with butt hinges, and a padlock and heavy duty hasp bolted to the doors. The trailer shall be equipped with electric heat and air conditioning of sufficient capacity for the intended geographic location to maintain an ambient air temperature of 72 degrees F (winter) to 78 degrees F (summer) throughout the trailer. The office trailer shall be located at a site convenient to the work area and as approved by the Contracting Officer. It shall be leveled and set on blocks, and shall be secured by tie-down anchors sufficient to withstand hurricane force winds. The office trailer and furnished equipment will remain the property of the Contractor. Upon completion of all work under this contract, the office trailer shall be removed by the Contractor from the project site.~~

~~1.18.3 Office Equipment~~

~~The office trailer shall be equipped as follows:-~~

- ~~1 - Plan Table installed in one office (may be built in) with a minimum working surface of 4 feet by 6 feet, and draftsman stool~~
- ~~2 - Office desks with five lockable drawers (to inches x 30-inched, laminated top) and padded swivel chair for each (desks should be designed for use with PCs)~~
- ~~1 - Conference Table with eight chairs~~
- ~~1 - Fire resistant, five drawer, legal size lockable filing cabinet~~
- ~~2 - Five drawer, letter size lockable filing cabinets~~
- ~~Intercom connection to Contractor's secretarial station~~
- ~~Telephone answering machine with remote answering capability~~

~~and voice time/day stamp~~  
~~...1 - Table to support FAX and printer~~  
~~— Photo-static copy machine~~  
~~— 2 shelf sets - Four shelves high by 12 inches deep by 3 feet long (attachable to wall)~~  
~~— 2 - 3' x 6' Cork Bulletin Boards~~  
~~— 3 - 3' x 6' Dry Erase Boards~~  
~~— 1 - Vertical filing plan rack sufficient for contract drawings~~  
~~— 3 - Waste baskets~~  
~~— 1 - Seven cubic foot refrigerator with freezer~~  
~~— 1 - Water cooler/dispenser with minimum 3 gallon capacity~~  
~~— 1 - Microwave Oven~~

#### ~~1.18.4 Utilities~~

~~Potable water shall be connected to the trailer's toilet and lavatory. Sewage disposal facilities shall be provided and comply with all local regulations. The Contractor shall make the necessary arrangements to either obtain or generate electrical power and shall connect, provide, and bear the cost of the electrical service for the office trailer described above. Electric service shall be 120/240 volt, single phase, three wire, 60 hertz, sufficient to handle the required load (operation of air conditioning, heating, lights, appliances, electric calculators, etc.) and shall meet the current National Electric Code. The Contractor shall provide and maintain telephones and telephone service into the office trailer (one line, two extensions). Where an acceptable and reliable network is not available, cellular telephones may be provided in lieu of a regular telephone line. Monthly charges for long distance calls made by the Government shall be reimbursed to the Contractor.~~

#### ~~1.18.5 Janitorial Services~~

~~The Contractor shall furnish daily janitorial services for the office space on the project site and perform any required maintenance of facilities and grounds as deemed necessary by the Contracting Officer during the entire life of the contract. Toilet facilities shall be kept clean and sanitary at all times. Services shall be performed at such a time and in such a manner to least interfere with Government use of the trailer, but shall be accomplished only when Contracting Officer Representative's are present. Service shall be accomplished to the satisfaction of the Contracting Officer. The Contractor shall also provide daily trash collection and cleanup of the trailer and adjacent outside areas.~~

#### ~~1.18.6 Payment~~

~~No separate or direct payment will be made for furnishing and setting up the equipped office trailer and utilities, or for operation and maintenance costs, and all appropriate costs, including utilities, shall be considered a subsidiary obligation of the Contractor, in the same category as field supervision, and listed as an overhead item separately identifiable in the accounting system.~~

#### 1.19 CONSTRUCTION PROJECT SIGNS

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01410

ENVIRONMENT PROTECTION

PART 1 GENERAL

- 1.1 SCOPE
- 1.2 QUALITY CONTROL
- 1.3 PERMITS AND AUTHORIZATIONS
- 1.4 SUBMITTALS
- 1.5 SUBCONTRACTORS
- 1.6 NOTIFICATION
- 1.7 CONTRACTOR PERSONNEL QUALIFICATIONS IN POLLUTION CONTROL
- 1.8 PAYMENT

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

- 3.1 PROTECTION OF ENVIRONMENTAL RESOURCES
  - 3.1.1 General Project Environmental Design and Installation Criteria
    - 3.1.1.1 Petroleum-Based Systems Environmental Design and Installation Criteria
    - 3.1.1.2 Sewage-Based Systems Environmental Design and Installation Criteria
  - 3.1.2 Protection of Land Resources
    - 3.1.2.1 Unprotected Erodible Soils
    - 3.1.2.2 Disturbed Areas
    - 3.1.2.3 Contractor Facilities and Other Work Areas
    - 3.1.2.4 Solid Wastes
    - 3.1.2.5 Fuel, Oil, and Lubricants
    - 3.1.2.6 Hazardous Waste
    - 3.1.2.7 Hazardous Materials
    - 3.1.2.8 Disposal of Other Materials
  - 3.1.3 Preservation and Recovery of Historic, Archeological, and Cultural Resources
    - 3.1.3.1 Inadvertent Discoveries
    - 3.1.3.2 Claims for Downtime due to Inadvertent Discoveries
  - 3.1.4 Protection of Water Resources
    - 3.1.4.1 Washing and Curing Water
    - 3.1.4.2 Monitoring of Water Areas
    - 3.1.4.3 Turbidity
    - 3.1.4.4 Oil, Fuel, and Hazardous Substance Spill Prevention and Mitigation

- 3.1.5 Protection of Fish and Wildlife Resources
  - 3.1.5.1 Endangered Species Protection
  - 3.1.5.2 Protection of Migratory Bird Species
- 3.1.6 Protection of Air Resources
  - 3.1.6.1 Particulates
  - 3.1.6.2 Burning
  - 3.1.6.3 Odors
- 3.1.7 Protection of Sound Intrusions
- 3.2 POSTCONSTRUCTION CLEANUP
- 3.3 PRESERVATION AND RESTORATION OF LANDSCAPE DAMAGES
- 3.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES
- 3.5 SAMPLE - DAILY MANATEE REPORTING LOG
- 3.6 SAMPLE - MANATEE CAUTION SIGNS
- 3.7 DAILY MIGRATORY BIRD MONITORING REPORT
- 3.8 SAMPLE - BIRD MONITOR QUALIFICATION SHEET
- 3.9 PROJECT ENVIRONMENTAL SUMMARY SHEET

-- End of Section Table of Contents --

SECTION 01410

ENVIRONMENT 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, 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 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.

1.3 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.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" 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-08 Statements

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. Approval 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. Approval 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., 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. 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. Appendices (permits). A copy of all permits applicable to the project shall be attached as appendices to the Environmental Protection Plan.

#### SD-18 Records

Logs/Final Summary Report; FIO.

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

Project Environmental Summary Sheet; FIO.

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).

#### 1.5 SUBCONTRACTORS

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

#### 1.6 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 Authorized Contracting Officer's Representative (ACOR), 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.)

1.7 ~~TRAINING OF CONTRACTOR PERSONNEL~~ QUALIFICATIONS IN POLLUTION CONTROL

The Contractor's ~~shall train his personnel shall be qualified to perform in~~ all phases of environmental protection. ~~The training shall include,~~ 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 trained in the proper use of monitoring devices and abatement equipment,~~ and 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.

1.8 PAYMENT

Payment for environmental protection and endangered species monitoring will be made under the contract lump sum price for Line Item 0002 "Environmental Protection". This price shall constitute full compensation for all equipment, labor, materials and incidentals.

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

In all cases, Contractor 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.

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 Contractor's on-site fuel storage, distribution and delivery 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.

#### 3.1.2.1 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.

#### 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's Representative. 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.

#### 3.1.2.3 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. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State and local requirements for solid waste disposal.

#### 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 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, and constructed features other than those indicated. 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.

#### 3.1.3.2 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 banks of the C-51 (West Palm Beach) canal 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 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>. See Section 01411 TURBIDITY MONITORING.

#### 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 in the C-51 (West Palm Beach) canal and the need to avoid collisions with manatees.

a. Civil and Criminal Penalties. All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees 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 may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.

b. 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.

c. Vessel/Boat Operation. 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.

d. Manatee Sighting. 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.

e. 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" will 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.

f. Manatee Sighting Reports. Any collisions with a manatee or sighting of any injured or incapacitated manatee 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 Manatee Death or Injury

<u>Title</u>	<u>Telephone Number</u>	
	<u>Work Hours</u>	<u>After Hours</u>
Corps, Inspector	On site	Lodging Location
Area Engineer, John G. Cooper	561-626-5299	To be Provided
Kenneth R. Dugger, Acting Chief, Environmental Branch, Planning Division (CESAJ-PD-E)	904-232-1686	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

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 at 561-562-3909 for South Florida.

3.1.5.2 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 attached forms shall be conducted during the dawn or dusk time frames by a bird monitor approved by the Contracting Officer or the

Contracting Officer's Representative. (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. 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 or the Contracting Officer's Representative 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

<u>Title</u>	<u>Telephone Number</u>	
	<u>Work Hours</u>	<u>After Hours</u>
Corps, Inspector	On site	Lodging Location
Area Engineer, John G. Cooper	561-626-5299	To be Provided
Kenneth R. Dugger, Acting Chief, Environmental Branch, Planning Division (CESAJ-PD-E)	904-232-1686	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 unless the State of Florida and the U.S. Fish and Wildlife Service authorizes the interruption of nesting and/or destruction of the eggs. (NOTE: This authorization is highly unlikely.) 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.

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 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 DAMAGES

The Contractor shall restore all landscape features 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 - DAILY MANATEE REPORTING LOG

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

#### 3.6 SAMPLE - MANATEE CAUTION SIGNS

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

3.7 DAILY MIGRATORY BIRD MONITORING REPORT

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

3.8 SAMPLE - BIRD MONITOR QUALIFICATION SHEET

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

3.9 PROJECT ENVIRONMENTAL SUMMARY SHEET

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

-- End of Section --

slopes and walls, boils, uplift and heave in the excavations and to eliminate interference with the orderly progress of construction. French drains, sumps, ditches or trenches will not be permitted within 3 feet of the foundation of any structure other than with specific written approval, and then only after specific contractual provisions for restoration of the foundation area have been made.

#### 3.4 FILLING EXISTING DRAINAGE CANAL

Fills placed in the existing stairstep agricultural drainage canal that traverses Cells 6 and 7 along and immediately west of the Interior Levee 4 cell grading areas shall be deposited in horizontal layers not exceeding 12 inches in loose thickness. No minimum density is specified for such fills; the degree of compaction shall be that obtained by the controlled routing of hauling and spreading equipment over the surface of previously placed layers.

#### 3.5 BACKFILL

Backfill adjacent to any and all types of structures shall be placed and compacted to at least 90 percent laboratory maximum density for cohesive materials or 95 percent laboratory maximum density for cohesionless materials to prevent wedging action or eccentric loading upon or against the structure. Ground surface on which backfill is to be placed shall be prepared as specified in paragraph PREPARATION OF GROUND SURFACE FOR EMBANKMENTS. Compaction requirements for backfill materials shall also conform to the applicable portions of paragraph EMBANKMENTS. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment.

#### 3.6 PREPARATION OF GROUND SURFACE FOR EMBANKMENTS

Ground surface on which embankments for levees is to be placed shall be stripped of live, dead, or decayed vegetation, rubbish, debris, and other unsatisfactory material; plowed, disked, or otherwise broken up to a depth of four inches; pulverized; moistened or aerated as necessary; thoroughly mixed; and compacted to at least 90 percent laboratory maximum density for cohesive materials or 95 percent laboratory maximum density for cohesionless materials. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment. The prepared ground surface shall be scarified and moistened or aerated as required just prior to placement of embankment materials to assure adequate bond between embankment material and the prepared ground surface.

#### 3.7 EMBANKMENTS

Earth embankments for levees shall be constructed from satisfactory materials free of organic material and rocks with any dimension greater than 3 inches. The material shall be placed in successive horizontal layers of loose material not more than 12 inches in depth. Rocks shall be evenly distributed throughout the layer, exercising care to minimize direct rock-to-rock contact. Each layer shall be spread uniformly on a soil surface that has been moistened or aerated as necessary, and scarified or

otherwise broken up so that the fill will bond with the surface on which it is placed. After spreading, each layer shall be plowed, disked, or otherwise broken up; moistened or aerated as necessary; thoroughly mixed; and compacted to at least 95 percent of maximum density except for the top 12 inches which shall be compacted to at least 98 percent of maximum density. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment.

### 3.8 FINISHING

The surface of excavations, embankments, and fills shall be finished to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations shown and the requirements of paragraph TOLERANCES. Gutters and ditches shall be finished in a manner that will result in effective drainage. The surface of areas to be turfed shall be finished to a smoothness suitable for the application of turfing materials.

### 3.9 PLACING TOPSOIL

On areas to receive topsoil, the compacted subgrade soil shall be scarified to a 2 inch depth for bonding of topsoil with subsoil. Topsoil then shall be spread evenly to a thickness of 4 inches and graded to the elevations and slopes shown. Topsoil shall not be spread when excessively wet or dry.

### 3.10 TESTING

Testing shall be performed by an approved commercial testing laboratory or by the Contractor subject to approval. If the Contractor elects to establish testing facilities, no work requiring testing will be permitted until the Contractor's facilities have been inspected and approved by the Contracting Officer. Field in-place density shall be determined in accordance with ASTM D 1556, ASTM D 2167, or ASTM D 2922. When ASTM D 2922 is used, the calibration curves shall be checked and adjusted using only the sand cone method as described in ASTM D 1556. ASTM D 2922 results in a wet unit weight of soil and when using this method ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall also be checked along with density calibration checks as described in ASTM D 3017; the calibration checks of both the density and moisture gauges shall be made at the beginning of a job on each different type of material encountered and at intervals as directed by the Contracting Officer. When test results indicate, as determined by the Contracting Officer, that compaction is not as specified, the material shall be removed, replaced and recompacted to meet specification requirements. Tests on recompacted areas shall be performed to determine conformance with specification requirements. Inspections and test results shall be certified by a registered professional civil engineer. These certifications shall state that the tests and observations were performed by or under the direct supervision of the engineer and that the results are representative of the materials or conditions being certified by the tests. The following number of tests, if performed at the appropriate time, will be the minimum acceptable for each type operation.

#### 3.10.1 In-Place Densities