

**OLD PELICAN BAY CHANNEL MAINTENANCE DREDGING
TECHNICAL SPECIFICATIONS
JANUARY 3, 2024**

TS-1.0 SCOPE OF WORK

It is the primary intent of the excavation to restore navigable access to Old Pelican Bay Channel of uniform width and depth as shown on the Contract Plans.

The WORK covered by this section consists of furnishing all labor, equipment, supplies, materials, transportation, fuel, power and water, and performing all operations in connection with excavating, transporting, and placing approximately 3,400 cubic yards of sand, silt and shell from the Old Pelican Bay Channel to the adjacent upland disposal site and providing environmental protection measures to meet the requirements of the technical specifications and permits. The dredging is concentrated near the canal entrance between Station 33+50 and Station 45+00 (1,150 LF) and between Station 49+00 and Station 54+00 (500 LF).

The WORK areas are located within the residential canals of Old Pelican Bay, Class III waters and the access channel to the subdivision in San Carlos Bay, Class II waters, prohibited Shellfish Harvesting Area, Section 13, Township 46 South, Range 23 East, Lee County. Stringent turbidity avoidance and control requirements, outlined in the CONTRACT Plans and permits, shall be met.

This WORK must be completed according to the CONTRACT Documents within CONTRACT Time and within compliance with the conditions of the Federal, State and local permits. The CONTRACTOR is solely responsible for all construction means, methods, techniques, procedures, layout, and sequence of the WORK except as set forth in section "Order of Work".

The Old Pelican Bay Channel has been spot dredged multiple times. Most recently, in 2018 the channel was spot dredged between Station 32+00 and Station 39+00.

TS-2.0 SUBMITTALS

TS-2.1 Work Plan

Prior to commencement of WORK the CONTRACTOR shall submit to the COUNTY and ENGINEER for approval, a WORK plan to cover all specified operations. The WORK plan shall include, but not be limited to, the means and methods to be employed to accomplish: construction access and restoration, upland disposal site access and restoration, dredge methods, turbidity controls, quality control plan, storm emergency plan, environmental protection plan, and construction schedule.

TS-2.2 Administrative Records

TS-2.2.1 Notice of Intent to Dredge

Prior to commencement of WORK on this CONTRACT, the CONTRACTOR shall notify the Commander, Seventh Coast Guard District, of his intended operations to dredge and request that it be published in the Local Notice to Mariners. This notification must be given in sufficient time so that it appears in the Notice to Mariners at least seven days prior to the commencement of this dredging operation. A copy of the notification shall be provided to the COUNTY and ENGINEER.

TS-2.2.2 Relocation of Navigation Aids

Temporary removal of any navigation aids located within or near the areas required to be dredged or filled and material stockpile areas shall be coordinated by CONTRACTOR with the U.S. Coast Guard prior to removal. The CONTRACTOR shall not otherwise remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid to navigation. The CONTRACTOR shall notify the Commander, Seventh Coast Guard District, Miami, Florida, in writing, with a copy to the COUNTY and ENGINEER, seven days in advance of the time he plans to dredge or WORK adjacent to any aids which require relocation to facilitate the WORK. The CONTRACTOR shall contact the U.S. Coast Guard for information concerning the position to which the aids will be relocated. All costs associated with temporary removal and reinstallation of navigation aids shall be the responsibility of the CONTRACTOR.

TS-2.2.3 Dredging Aids

The CONTRACTOR shall obtain approval for all dredging aids required to conduct the WORK specified in this CONTRACT. The CONTRACTOR shall obtain a temporary permit from the U.S. Coast Guard for all buoys or dredging aid markers to be placed in the water prior to installation. The permit application shall state the position, color, date to be installed and removed for all dredging aid markers and be submitted to the U.S. Coast Guard. Dredging aid markers and lights shall not be colored or placed in a manner that they will obstruct or be confused with navigation aids. Copies of application and permit shall be submitted to the COUNTY and ENGINEER seven days prior to commencement of this dredging operation.

TS-2.2.4 Notification of Discovery of Historical Shipwreck Sites

The CONTRACTOR shall immediately notify the COUNTY and ENGINEER if any shipwreck, artifact, treasure trove, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered.

TS-2.2.5 Monthly Report of Operations

In addition to the Daily Reports required under the Supplementary Conditions, the CONTRACTOR shall prepare and submit a Monthly Report of Operations for each month's WORK to the COUNTY and ENGINEER. The monthly report shall be

submitted on or before the 7th of each month, consolidating the previous month's WORK. Upon completion of the job, the CONTRACTOR shall submit a consolidated job report, combining the monthly reports. The CONTRACTOR shall distribute one copy of each report to the COUNTY and ENGINEER. Information required in these reports shall include production volumes, rates, and totals; excavation areas completed; summary of downtime and reasons; summary of accessory WORK completed such as vegetation removal, channel markers, and dunes; summary of compliance with environmental protection measures; and summary of any permit violations and corrective measures taken to address same.

TS-3.0 ORDER OF WORK

In general, the Order of WORK shall be as follows. Any changes in the Order of WORK shall be approved by the COUNTY and ENGINEER prior to initiation of the specific WORK activity.

- (1) Mobilization
- (2) Upland Disposal Site Preparation
- (3) Install Turbidity Controls and Erosion Control Measures
- (4) Dredging
- (5) Upland Disposal Site Restoration
- (6) Remove Turbidity Controls and Erosion Control Measures
- (7) Demobilization

TS-4.0 PAYMENT

TS-4.1 Mobilization and Demobilization

Payment for the cost of mobilization and demobilization including construction access, construction access restoration, and Maintenance of Traffic is included in this CONTRACT. Payment shall be made in accordance with the CONTRACT, and all appropriate costs in connection therewith or incidental thereto shall be included in the CONTRACT price for Bid Item "Mobilization and Demobilization."

TS-4.2 Upland Disposal Site

Payment shall be made for materials and WORK specified in connection with site preparation and restoration; and all other appropriate costs in connection therewith or incidental thereto. Site preparation will be assumed to be 60% of this item and site restoration the remaining 40%. No payment will be made until the COUNTY has approved the site in accordance with the Technical Specifications. This WORK shall be included in the applicable CONTRACT lump sum price for Bid Item "Upland Disposal Site."

TS-4.3 Dredging

Payment shall be made for materials and WORK specified in connection with excavation and transport of sediments to the upland disposal site; removal, separation, and disposal of any debris encountered while dredging; and all other appropriate costs in connection therewith or incidental thereto; which shall also include all other items of cost required by the CONTRACT for which a separate payment is not provided for herein. This WORK shall be included in the applicable CONTRACT unit price for Bid Item "Dredging."

The COUNTY shall pay the sovereign land fees of \$2.25 per cubic yard, to Florida Department of Environmental Protection for the volume of sediment being removed from the state submerged lands.

TS-4.4 Environmental Protection Measures

Payment shall be made for materials and WORK specified in connection with installation and maintenance of turbidity controls; best management practices; turbidity monitoring; implementing state and federal endangered and threatened species protection conditions; implementing habitat and resource protection measures to include but not limited to Gopher Tortoise surveys, permits and protection measures; and environmental permit compliance; and all other appropriate costs in connection therewith or incidental thereto. This WORK shall be included in the applicable Contract lump sum price for Bid Item "Environmental Protection Measures."

TS-5.0 WORK AREA

TS-5.1 Limits of Construction

Access to the WORK via the water is through San Carlos Bay which contains sensitive environmental habitats such as seagrass beds, mangroves, and oyster beds. The CONTRACTOR shall avoid these habitats and is responsible for environmental protection. All WORK must be confined to the approximate limits of the channel and the upland disposal site.

TS-5.2 Security

The CONTRACTOR is permitted to exclude the public from the dredge WORK area as necessary to perform the WORK and to operate in accordance with local laws and the CONTRACT Documents. The CONTRACTOR shall exclude the public from access to the offload area, spoil areas and/or upland disposal site. Enforcement shall be the CONTRACTOR's responsibility at no additional cost to the COUNTY.

TS-5.3 Construction Access

The construction limits and dredge limits available to the CONTRACTOR for accomplishing the WORK are documented herein and/or are shown on the CONTRACT Plans. No COUNTY property is within reasonable distance to the project site for the

purpose of access, staging and off loading or spoiling of the dredge material. The CONTRACTOR shall be responsible for coordinating with property owners for these needs. A written/signed agreement must be made between each property owner and the CONTRACTOR for the use of the property in accordance with the Special Provisions. The CONTRACTOR shall submit a construction access plan and construction access restoration plan for each property.

The CONTRACTOR shall confine his plant, equipment and operations of personnel to areas permitted by law, ordinances, permits and the requirements of the CONTRACT Documents, and shall not unreasonably encumber the premises with plant or equipment. The CONTRACTOR must control noise and must control wind-blown sand, silt and dust while using the access. The CONTRACTOR is responsible for preparation and restoration of the access. The costs for, but not limited to, earthwork, grading, signage, fencing, walls, guardrails, curbing, paving, stairways, and vegetation removal and reinstallation, along with removal and installation of any other facilities are included in the lump sum price for Bid Item "Mobilization and Demobilization." Disposal of any cleared vegetation, debris and rubbish shall be in a manner acceptable to the COUNTY and ENGINEER. All construction areas shall be restored to pre-construction conditions, or better as part of demobilization. All permits or surveys necessary to render the construction access are solely the responsibility of the CONTRACTOR to obtain.

TS-6.0 BEST MANAGEMENT PRACTICES

TS-6.1 Erosion and Turbidity Controls

The CONTRACTOR shall implement the required best management practices for erosion and turbidity controls in accordance with the DEP Permit.

TS-6.2 Turbidity Monitoring

The CONTRACTOR shall conduct the required turbidity monitoring and reporting in accordance with the DEP Permit.

TS-6.3 Equipment and Materials Storage

No storage of equipment or materials shall take place outside of the areas of impact as authorized by this permit. The CONTRACTOR shall ensure that no impacts to wetlands or other surface waters occur during all ingress and egress activities.

TS-6.4 Protection of Structures

The CONTRACTOR shall conduct the WORK in a manner that will protect the existing structures within the project area. Care shall be taken not to come within fifteen (15) feet of any existing seawall or ten (10) feet of any existing dock, boatlift, pier or similar structure. In the event the CONTRACTOR damages a structure they shall immediately report it to the COUNTY and ENGINEER. Restoration, repair or replacement of the structure shall be at the CONTRACTOR's expense to the satisfaction of the COUNTY and ENGINEER.

TS-7.0 EXCAVATION AND DISPOSAL

TS-7.1 General

It is the primary intent of the excavation to restore navigable access within the Old Pelican Bay Channel of uniform width and depth as shown on the Contract Plans. The construction depth is permitted to -4.0 feet MLW (-5.64 feet NAVD88). The excavation is concentrated near the canal entrance between Station 33+50 and Station 45+00 and between 50+00 and Station 52+00. The dredge cut totals 1,350 feet long by 30 feet wide as shown on the CONTRACT Plans.

It is anticipated the WORK shall be done by a small floating dredge or excavator. All excavation shall be performed within the limits of the dredge cut shown on the CONTRACT Plans and permits. All excavation shall be performed within the WORK area as depicted on the CONTRACT Plans and Permits. All excavation shall be performed in a uniform and continuous manner so as to avoid creating multiple holes, valleys, or ridges within each WORK area. The CONTRACTOR may set markers which have been approved by the COUNTY and ENGINEER and will meet U.S. Coast Guard standards to delineate the limits of the portion of WORK area being utilized. Any damages to private or public property resulting from the CONTRACTOR's operations shall be repaired at the CONTRACTOR's expense. If any material is deposited other than in places designated or approved, the CONTRACTOR may be required to remove such misplaced material and redeposit it where directed by the COUNTY at the CONTRACTOR's expense. Should debris be encountered during excavation, the CONTRACTOR shall remove the debris and dispose of it in accordance with local, State and Federal regulations.

If a technique is used for the WORK that requires anchoring of barges within the CONTRACTOR's WORK area, either within the dredge footprint or at the upland disposal site, only barges using spud-type anchoring or anchoring to driven piles shall be allowed. Anchoring shall be in sandy areas only. No anchoring shall be allowed outside of the approved WORK area. If pilings are used for anchorage at the upland disposal site, the pilings shall be well marked and removed in their entirety upon completion of the CONTRACTOR's operations.

TS-7.3 Nonconforming WORK

No excavation shall occur below the permitted dredging depth or outside the permitted dredging limits defined in the CONTRACT Plans and Permits. This provision does not apply to the slopes of the dredge cut; that is, the CONTRACTOR will not be held responsible for sediment running from outside the dredging area when they are excavating at an edge of a dredging area. Material obtained from unpermitted areas will not be paid for under the COUNTY. Excavation in such an area is a violation of Permits for this WORK.

TS-7.4 Methodology

The method of transporting the sediments from the dredge sites to the upland spoil areas may be done by mechanical methods, hydraulic dredge and pipeline, or a

combination of mechanical dredging and hydraulically pumping the sediments out of the barges and into the containerized trucks.

If mechanical means are employed, the dredging shall be conducted utilizing a clamshell or excavator and a self-contained spoil storage bin. Excavation shall preclude segregation of coarse and fine materials, perforated buckets shall not be used. The disposal barges shall be constructed to preclude spillage and leakage. Barges shall be watertight to prevent return water during the transport process. A closed bucket shall transfer spoil over the seawall or canal bank, silt fence and berm into the upland disposal site cell. Any remaining spoil water shall be transferred to the site and not discharged into the waterway.

If hydraulic means are employed, the proposed locations of any pipelines must be approved by the OWNER and ENGINEER prior to installation. Pipelines shall be routed around natural resource areas including emergent shoals, seagrass beds and oyster beds, and the construction equipment shall avoid the natural resource areas. Floating pipelines shall be marked by the CONTRACTOR in compliance with Coast Guard regulations.

Loose rock located within the authorized footprint shall be removed; however solid rock layers or rock removal resulting in excavation below the authorized depth is not required.

An overdepth tolerance of 0.5 feet will be allowed, but the total yardage pay quantity will not exceed that shown on the bid sheet. Excavation will not occur closer than 15 feet to any seawall or 10 feet to any pile supported structure unless otherwise approved in writing by the COUNTY.

State and Federal turbidity and water quality standards shall be met. The disposal barges shall be so constructed as to preclude spillage and leakage. The development of a leak shall be promptly repaired and the dredge shall be shut down until completed repair has been made to the satisfaction of the ENGINEER. Failure to repair leaks or change the method of operations will result in suspension of dredging operations. The CONTRACTOR shall provide and maintain barricades, warning signals, and a flagman to insure public safety in the vicinity of the pumpout and disposal operations. Any damages to private or public property resulting from the CONTRACTOR's operations shall be repaired at the CONTRACTOR's expense.

All spoil material shall be properly contained on the construction equipment during operation within the project area as well as during transportation to the upland disposal site in a manner that prevents return of the spoil material to Waters of the State. The spoil material shall be deposited in a self-contained upland site (pursuant to 62-340 FAC) that prevents return of any water or material in to Waters of the State. The spoil shall be transported to the upland disposal site and disposed of in accordance with the Special Provisions and Technical Specifications.

TS-8.0 CLEARING AND GRUBBING

Clearing and grubbing of the applicable WORK sites shall consist of the complete removal and disposal of all timber, brush, stumps, roots, grass, weeds, rubbish and all other obstructions resting on or protruding through the ground surface. In cut areas, all stumps, roots, and other debris shall be removed. In areas outside the grading limits, stumps and roots may be cut flush with the ground in lieu of being removed.

All loose boulders and debris lying on the ground shall also be removed and disposed of by the CONTRACTOR.

All existing structures and property obstructions, whether noted on the CONTRACT Plans or not, are to remain in place, such as buildings, sewers, drains, water or gas pipes, conduits, poles, walls, posts, bridges, etc., and are to be carefully protected from damage and are not to be displaced except as might be directed by the COUNTY and ENGINEER for unusual cases.

Timber, stumps, brush, roots, rubbish, and other objectionable material resulting from clearing and grubbing shall be disposed of by the CONTRACTOR at an approved off-island site and by methods approved by the COUNTY and ENGINEER, subject to applicable laws, ordinances and/or regulations, and shall be done at locations where trees and shrubs outside the limits of clearing will not be injured. Burning of such materials is not permitted on this project. Waterways shall not be blocked by the disposal of debris.

TS-9.0 UPLAND DISPOSAL SITE

TS-9.1 General

The upland spoil area/disposal site shall be obtained by and at the expense of the CONTRACTOR. This includes restoring to the previous grades, sodding all barren areas and provisions and assurances for watering.

The upland spoil sites shown on the Contract Plans have been used during past dredge events. These properties are privately owned and their availability for this project is not guaranteed. It is the CONTRACTOR's responsibility to confirm availability and receive permission from the property owner prior to use.

In the event the CONTRACTOR elects to use an alternate site, or the historic spoil sites are not available for this project, the CONTRACTOR shall arrange for and receive all necessary local, state and federal authorizations for use of same, at their cost, and subject to review and approval of the COUNTY. Specifically, the CONTRACTOR shall obtain any and all permits (Temporary Fill, Gopher Tortoise, etc.) and surveys to clear, prep the property and place material on the upland disposal site.

The upland spoil area/disposal site shall be constructed as a self-contained upland disposal site as shown on the CONTRACT Plans and to the lines, grades and cross section specified herein. The temporary upland disposal site shall be cleared and

grubbed in accordance with the Technical Specifications. Any deviations from the temporary upland disposal site design specified herein must receive approval by the COUNTY and ENGINEER prior to starting the WORK. Material shall be mounded toward the center of the temporary upland disposal site. Upon completion of the WORK, the temporary upland disposal site shall be restored as specified herein. All permits, surveys and arrangements with property owners necessary to render upland disposal site usable is solely the responsibility of the CONTRACTOR to obtain.

Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site(s) where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased.

TS-9.2 Construction

Dike construction shall consist of excavating in-situ material or importing suitable material subject to review and approval by the COUNTY and ENGINEER to construct a perimeter dike along the location shown on the CONTRACT Plans. The dike shall be constructed starting as the toe of the outer slope of the dike, maintaining 1 vertical on 2 horizontal side slopes to crown elevation, then minimum 5 feet width crown, then maintaining 1 vertical on 2 horizontal side slope to the interior toe that provides a uniform dike around the entire perimeter of upland disposal site. The dike shall be stabilized as necessary to prevent breaches during construction. Staked silt fencing shall be placed landward of the toe of the bank.

The CONTRACTOR shall, immediately upon completion to the required section of the dikes, notify the COUNTY and ENGINEER so that field observation and acceptance can be made before any water or dredged material is placed in the upland disposal site. Upon acceptance of the dike to the required section, the CONTRACTOR may begin placing dredged material in the upland disposal site. As material is deposited, WORK shall be scheduled to insure that the berm will not be overtopped. If the containment cell approaches capacity, excavation shall be stopped as necessary to allow removal or reworking of material and cell dewatering.

TS-9.3 Maintenance

The CONTRACTOR shall maintain all dikes around the disposal area through the date they are no longer required for disposal operations and have been leveled to final site grades. The CONTRACTOR shall immediately repair these dikes as required to retain the spoil at all times. The CONTRACTOR shall take precautions necessary to prevent breaching or overtopping of the dike by dredged material and water, and shall be immediately and fully responsible for dike repairs and any delays or remedial measures necessary, should damage to the dike occur. Maintenance of dikes shall include repair for erosion and all other damages.

The project may be constructed during hurricane season. In the event of a major storm event, the CONTRACTOR is responsible for preparing the upland disposal site in accordance with their Quality Control Plan.

As indicated above, it is the CONTRACTOR's responsibility to maintain the dikes, prevent breaching of the dikes, and to prevent run-off into the adjacent lands and surrounding waters. Pre- and post-construction surveys may be performed by the COUNTY and ENGINEER to determine if any siltation occurred from the CONTRACTOR's operation. In the event it is determined by the COUNTY and ENGINEER that the CONTRACTOR failed to implement the Best Management Practices specified in the Technical Specifications, the CONTRACTOR shall restore the adjacent lands and surrounding waters at the CONTRACTOR's expense.

TS-9.4 Operations

The CONTRACTOR shall provide, install, and maintain internal weirs, culverts, risers, or other acceptable means of allowing transfer of dredge effluent from one internal spoil settling basin to another. It is the responsibility of the CONTRACTOR to maintain the integrity of the dike and effluent transfer system and prevent leakage of dredge effluent into State waters. The material contains organics and may or may not have odors. It is the responsibility of the CONTRACTOR to minimize or avoid odors by rapid dewatering and drying once dredge excavation has been curtailed for duration in excess of 48 hours. The CONTRACTOR shall use wicking, mixing with clean native material, or other techniques approved by the COUNTY and ENGINEER to speed dewatering and reduce odors. There shall be no return waters to the waters of the State of Florida.

TS-9.5 Site Restoration

Upon completion and acceptance of all the WORK areas and removal of all required materials to an approved spoil area, the CONTRACTOR shall restore the site in accordance with specifications herein.

The CONTRACTOR shall restore the offload area and spoil areas to a condition equal to or better than its condition prior to construction. All trees and/or shrubbery not authorized by the COUNTY for removal shall be replaced by the CONTRACTOR at the CONTRACTOR's expense. Any utilities damaged shall be replaced or repaired by the CONTRACTOR at the CONTRACTOR's expense.

The CONTRACTOR is responsible for stabilizing all cleared or disturbed areas for the upland disposal site. All dikes shall be leveled, and the material shall be evenly distribute across the site, smooth graded to eliminate ruts and humps, and create positive uniform run-off. The CONTRACTOR shall remove and properly dispose of the stabilization measures.

TS-10.0 TRUCKING

All dredged sediments shall become property of the CONTRACTOR. The CONTRACTOR shall bear all responsibilities of transfer, handling, hauling, and permanent legal disposal of the dredged sediments.

Material transported by vehicle must be substantially de-watered by the CONTRACTOR prior to transport to avoid spilling haul contents on roadways and vehicles. In the event

of a dispute regarding water content, the "paint filter" test will be used to determine whether material has been sufficiently de-watered. In all instances, trucks used to haul dredged sediments shall be sealed to prevent the escape of fugitive material during transport.

The CONTRACTOR that performs the WORK shall comply with legal load restrictions when hauling materials on roads beyond the project area. Special limits do not relieve the CONTRACTOR of liability for damages resulting from moving materials or equipment. The operation of equipment of such weight or so loaded as to cause damage to structures of the roadway or to any other type of construction is not permitted. The CONTRACTOR shall be responsible for repairing all damage done by loading and hauling equipment. No separate payment for trucking shall be made.

TS-11.0 ENVIRONMENTAL PROTECTION

TS-11.1 General

For the purpose of this specification, environmental protection is defined as the retention of the environment in its natural state to the greatest possible extent during project construction and to enhance the natural appearance in its final condition. Environmental protection requires consideration of air, water, and land, and involves noise, solid waste-management as well as other pollutants. In order to prevent any environmental pollution arising from the construction activities in the performance of this CONTRACT, the CONTRACTOR and their SUBCONTRACTORS shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.

TS-11.1.1 Subcontractors

Compliance with the provisions of this section by SUBCONTRACTORS will be the responsibility of the CONTRACTOR.

TS-11.1.2 Landscape Protection

The environmental resources within the project area and those affected outside the limits of permanent WORK under this CONTRACT shall be protected during the entire period of this CONTRACT. The CONTRACTOR shall confine their activities to areas defined by the CONTRACT Documents.

Prior to the beginning of any construction, the CONTRACTOR shall identify all land resources to be preserved within the CONTRACTOR's WORK area. The CONTRACTOR shall not remove, cut, deface, injure, or destroy land resources, including trees, shrubs, vines, grasses, topsoil, and landforms without special permission from the COUNTY and ENGINEER. Trees damaged beyond restoration shall be removed and disposed of by the CONTRACTOR in a manner approved by the COUNTY and ENGINEER. Trees that are to be removed because of damage shall be replaced at the CONTRACTOR's expense by nursery-grown trees of the same species or a species approved by the COUNTY and ENGINEER. The size and quality of

nursery-grown trees shall also be approved by the COUNTY and ENGINEER. 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 at all times provide effective protection for land and vegetation resources.

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 and protect tree roots from noxious materials in solution caused by run-off or spillage. No materials, trailers, or equipment shall be stored within the dripline of any protected tree. Monuments and markers shall be protected before construction operations commence. The CONTRACTOR shall convey to their personnel the purpose of marking and/or protection of all necessary objects.

Trees and their roots, shrubs, vines, grasses, landforms, and other landscape features indicated and defined on the CONTRACT Plans to be preserved shall be clearly identified and protected by fencing or any other approved techniques. The CONTRACTOR shall place tree protection fencing before excavation or grading is begun and maintain in place until construction is complete; remove branches of protected trees, if required, to clear for construction and extend pruning operation to restore the natural shape of the entire tree; cut branches or roots, if required, with sharp pruning instruments, (do not break or chop); and repair any damage to tree crowns or roots promptly after damage occurs.

TS-11.1.3 Location of Storage Facilities

The CONTRACTOR's storage areas required in the performance of the WORK shall be located upon existing cleared portions of the job site or areas to be cleared, and shall require written approval of the COUNTY and ENGINEER. The CONTRACTOR shall not store oil or fuel on-site, or equipment that is not required for the daily construction activities. A metal pan with sides a minimum of four (4) inches high shall be placed under the equipment or adjacent area during refueling. The pan shall have a capacity equal to the capacity of the gas cans used and catch any spills or leaks during the refueling activity. Fuel caught in the pan shall be contained and either transported off-site or used in the equipment. Under no condition shall the material be discharged on-site or into adjacent waters.

TS-11.1.4 Post-Construction Cleanup or Obliteration

The CONTRACTOR shall obliterate all signs of construction WORK areas, waste materials, or any other vestiges of construction as directed by COUNTY and ENGINEER. The WORK areas shall be restored by the CONTRACTOR to near natural conditions.

TS-11.1.5 Spillage

Special measures shall be taken by the CONTRACTOR to prevent bilge pumpage or effluent, chemicals, fuels, oils, greases, bituminous materials, waste washing, herbicides and insecticides, and concrete drainage from entering public waters.

TS-11.1.6 Disposal

Disposal of any materials, wastes, effluent, trash, garbage, oil, grease, chemicals, etc., in areas adjacent to streams or other waters of the State shall not be permitted. If any waste material is dumped in unauthorized areas, the CONTRACTOR shall remove the material and restore the area to the original condition before being disturbed. If necessary, contaminated ground shall be excavated, disposed of in an approved off-site facility, then replaced with suitable fill material, compacted and finished with topsoil and planted as required to re-establish vegetation by the CONTRACTOR at the CONTRACTOR's expense as directed by the COUNTY.

TS-11.2 Threatened and Endangered Species

In order to ensure that Threatened and Endangered Species are not adversely affected by the construction activities, the CONTRACTOR shall comply with the standard Protection Conditions for Construction as required by the DEP and USACE Permits. The CONTRACTOR is responsible for obtaining approval from the state and/or federal agencies for their observers prior to commencement of the Work.

TS-11.3 Gopher Tortoises

Some upland disposal sites may have Gopher Tortoises located on them. It is the responsibility of the CONTRACTOR to conduct surveys, obtain permits and apply protection measures prior to use, clearing, or construction if needed. A copy of any permits needed for use of upland disposal sites needs to be furnished to the COUNTY prior to implementation.

TS-12.0 MISPLACED MATERIAL

Should the CONTRACTOR, during the progress of the WORK, loose, dump, throw overboard, sink, or misplace any material, plant, or equipment, which in the opinion of the COUNTY and ENGINEER may be dangerous to, or obstruct navigation, the CONTRACTOR shall recover and remove the same with the utmost dispatch. The CONTRACTOR shall give immediate notice, with description and location of such obstructions, to the U.S. Coast Guard, COUNTY and ENGINEER and when required, shall mark or buoy such obstructions until the same are removed. In the event of refusal, neglect, or delay in compliance with the above requirements, such obstructions may be removed by the COUNTY, and the cost of such removal may be deducted from any money due or to become due to the CONTRACTOR or may be recovered under CONTRACTOR's bond.

TS-13.0 QUALITY CONTROL

The CONTRACTOR shall establish and maintain quality control for operations under this section to assure compliance with the Contract Documents and maintain records of this quality control for materials, equipment and construction operations including, but not limited to, the following:

TS-13.1 Pre-Construction Meeting

The CONTRACTOR and quality control personnel shall attend one (1) pre-construction meeting with the COUNTY, and one (1) pre-construction meeting with the Permit agencies and COUNTY if requested.

TS-13.2 Preparatory Review

(To be conducted prior to commencing Work)

- (a) Check location and conditions of the dredge and disposal sites.
- (b) Present plan of action.
- (c) See that all Plant and Equipment is approved and is in satisfactory working condition.
- (d) Check safety requirements and particularly, public safety.
- (e) Check the site for structures that could be susceptible to damage or which would have further damage caused by the contractor's activity. The CONTRACTOR shall video tape the structures to document their pre-construction conditions. A copy of the video shall be furnished to the COUNTY.
- (f) Gain permission from the USCG and other agencies for marking and placement of aids to navigation and inclusion in the Local Notice to Mariners.

TS-13.3 Initial Review

(To be conducted after a representative sample of the Work is complete)

- (a) Check for proper lines, grades, and elevations.
- (b) Check finished area for proper dressing and elimination of ruts, humps and depressions.
- (c) Check any structures in the Work Area for damage by CONTRACTOR's Equipment.

TS-13.4 Follow-Up Reviews

(To be conducted daily to assure compliance with results of initial review)

- (a) Check items mentioned in preparatory and initial review.
- (b) Damage or defects.

A copy of these records, as well as results of corrective action taken, shall be furnished to the COUNTY.