

# AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF	PAGES
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2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
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6. ISSUED BY <span style="float: right;">CODE</span>	7. ADMINISTERED BY (If other than Item 6) <span style="float: right;">CODE</span>
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8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)	(X)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 11)
CODE		FACILITY CODE

### 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

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

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

### 13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor  is not,  is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

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

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)
15B. CONTRACTOR/OFFEROR	16B. UNITED STATES OF AMERICA
(Signature of person authorized to sign)	(Signature of Contracting Officer)
15C. DATE SIGNED	16C. DATE SIGNED

1. The specifications and drawings for Invitation No. DACW64-03-B-0015, Emergency Dredging, Station 730+00 to Station 760+00 in Harris County, Texas, Houston Ship Channel, Texas, advertised 18 April 2003, and for which bids are to be opened on 28 April 2003, are hereby modified as follows:

**BID OPENING DATE IS HEREBY RESCHEDULED FOR 2:00 PM LOCAL TIME, ROOM 175, JADWIN BUILDING, 30 APRIL 2003.**

Specifications.

(1) BIDDING SCHEDULE, Pages 00010-1 and 00010-2. - The enclosed Bidding Schedule, Pages 00010-1 and 00010-2 supersedes that issued with this Invitation.

(2) Page 00100-1, PROVISION 52.1-4006 TECHNICAL INFORMATION DREDGING, Subparagraph (b). - In the second line, delete the word "not."

(3) SECTION 01330 SUBMITTAL PROCEDURES. - The enclosed new SECTION 01330 entitled SUBMITTAL PROCEDURES shall be added to and become part of this Invitation.

(4) Page 02482-5, Paragraph 2.1. - At the end of this Paragraph, add the following new Paragraph 2.2:

**"2.2 LOOKOUTS AND RADIO COMMUNICATIONS.** The Contractor shall have a lookout posted in the dredge control room at all times to visually monitor the movement of vessels around the dredge plant and to perform radio communications with company work boats and to deliver passing arrangements with other commercial, fishing, and recreational vessels. The lookout shall be competent in U. S. Coast Guard and Federal Communications Commissions radio communications procedures and requirements, and shall be trained in the Vessel Bridge to Bridge Radiotelephone Act. He shall maintain up to the minute information on the status of each company work boat as well as approaching vessels and will communicate this information as required to prevent collisions. Each company work boat shall check in with the lookout when arriving at the dredge and shall receive radio clearance from the lookout before departing the dredge. **FAILURE TO COMPLY WITH THIS REQUIREMENT WILL BE CONSIDERED A VIOLATION OF THE SAFETY PROTOCOL ESTABLISHED HEREIN. PURSUANT TO THE DIRECTION OF THE CONTRACTING OFFICER, THE CONTRACTOR MAY BE REQUIRED TO CEASE OPERATIONS UNTIL THIS PROVISION IS COMPLIED WITH. ANY SUSPENSION, DELAY, OR INTERRUPTION OF WORK ARISING FROM NON-COMPLIANCE OF THIS PROVISION SHALL NOT CONSTITUTE A BREACH OF THIS CONTRACT AND SHALL NOT ENTITLE THE CONTRACTOR TO ANY PRICE ADJUSTMENT UNDER THE COONTRACT CLAUSE ENTITLED SUSPENSION OF WORK OR ANY OTHER MANNER UNDER THIS CONTRACT."**

(5) SECTION 02483 PROTECTION OF SEA TURTLES. - The enclosed new SECTION 02483 entitled PROTECTION OF SEA TURTLES shall be added to and become part of this Invitation.

2. This amendment shall be attached to, and become a part of, the specifications.

3 Encls:

1. Bd Sched, Pgs 00010-1 & 00010-2
2. SECTION 01330
3. SECTION 02483

File 8420S

INVITATION NO. DACW64-03-B-0015

**HOUSTON SHIP CHANNEL, TEXAS,  
STATION 730+00 TO STATION  
760+00 IN HARRIS COUNTY,  
TEXAS, EMERGENCY DREDGING**

**BIDDING SCHEDULE  
(TO BE ATTACHED TO STANDARD FORM 1442)**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
<b><u>SCHEDULE NO. 1</u></b>					
0001	Mobilization and Demobilization	1	L.S.	\$ _____	\$ _____
0002	Dredging	95,400	C.Y.	\$ _____	\$ _____
0003	Pipelines	1	L.S.	\$ _____	\$ _____
0004	Sea Turtle Protection*	1	L.S.	\$ _____	\$ _____
<b>TOTAL SCHEDULE NO. 1</b>					\$ _____

\* Note: This Bid Item applies to Hopper Dredge only.

00010-1

(To Accompany Amendment No. 0002 to Invitation No. DACW64-03-B-0015)

**BIDDING SCHEDULE (Cont'd)**  
**(TO BE ATTACHED TO STANDARD FORM 1442)**

**1. ARITHMETIC DISCREPANCIES (JAN 1997) (EFARS 52.214-5000).**

(a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of bidding schedule as submitted by the bidder:

- (1) Obviously misplaced decimal points will be corrected;
- (2) Discrepancy between unit price and extended price, the unit price will govern;
- (3) Apparent errors in extension of unit prices will be corrected;
- (4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the Government will proceed on the assumption that the bidder intends his bid to be evaluated on the basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

**2. MODIFICATIONS (CESWG).** If a modification to a bid based on unit prices is submitted, which provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment of each unit price in the bid schedule must be stated. If it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.

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**SECTION 01330 - SUBMITTAL PROCEDURES**

**PART 1 - GENERAL**

**1.1 SUBMITTALS.** The submittals described below are those required and further described in other Sections of the specifications. Submittals required by the CONTRACT CLAUSES and other non-technical parts of the contract are not included in this Section.

1.1.1 SD-04 Drawings. Submittals that graphically show relationship of various components of the work, schematic diagrams of systems, details of fabrication, layouts of particular elements, connections, and other relational aspects of the work.

1.1.2 SD-18 Records. Documentation to record compliance with technical or administrative requirements.

**1.2 SUBMITTAL CLASSIFICATION.** Submittals are classified as follows.

1.2.1 Government Approved: (GA). Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the CONTRACT CLAUSE entitled SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are considered to be "shop drawings."

1.2.2 For Information Only: (FIO). Submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the CONTRACT CLAUSE referred to above.

**1.3 APPROVED SUBMITTALS.** The approval of submittals by the Contracting Officer shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control requirements of this contract is responsible for dimensions, the design of adequate connections and details, and satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

**1.4 DISAPPROVED SUBMITTALS.** The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers a correction indicated on the submittals to constitute a change to the contract, a notice

in accordance with the CONTRACT CLAUSE entitled CHANGES shall be given promptly to the Contracting Officer.

**1.5 WITHHOLDING OF PAYMENT.** Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

## **PART 2 - PRODUCTS (Not Applicable)**

### **PART 3 - EXECUTION**

**3.1 GENERAL.** The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those listed when deemed necessary to adequately describe the work covered in the respective Sections. Units of weights and measures used on submittals shall be the same used on the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control System Manager and each item shall be stamped, signed, and dated by the Contractor's Quality Control System Manager indicating the action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including, but not limited to, catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals including parts list; certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

**3.2 SUBMITTAL REGISTER (ENG FORM 4288).** At the end of this Section is one set of ENG Form 4288 listing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. Columns "d" through "r" have been completed by the Government; the Contractor shall complete columns "s" through "u" and return five (5) completed copies to the Contracting Officer for approval within 30 calendar days after Notice to Proceed. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of this contract. The submittal register and the progress schedules shall be coordinated.

**3.3 SCHEDULING.** Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time, usually a minimum of 15 calendar days exclusive of mailing time, shall be allowed and shown on the register for review and approval. No delays damages or time extensions will be allowed for time lost in late submittals.

**3.4 TRANSMITTAL FORM (ENG FORM 4025).** The sample transmittal form (ENG Form 4025) attached at the end of this Section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph or sheet number of the contract drawings pertinent to the data submitted for each item.

**3.5 SUBMITTAL PROCEDURE.** Submittals shall be made as follows:

3.5.1 Procedures. Five (5) copies of submittals shall be submitted.

3.5.2 Deviations. For submittals that include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for deviations and annotate these deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

**3.6 CONTROL OF SUBMITTALS.** The Contractor shall carefully control its procurement operations to ensure that each individual submittal is made on or before the Contractor-scheduled submittal date shown on the approved "Submittal Register."

**3.7 GOVERNMENT APPROVED SUBMITTALS.** Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated.

**3.8 INFORMATION ONLY SUBMITTALS.** Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work. This does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

**3.9 STAMPS** used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

<p style="text-align: center;"><b>CONTRACTOR</b></p> <p style="text-align: center;"><b>(Firm Name)</b></p> <p>_____ <b>Approved</b></p> <p>_____ <b>Approved with corrections as noted on submittal data and/or attached sheets(s).</b></p> <p><b>SIGNATURE:</b> _____</p> <p><b>TITLE:</b> _____</p> <p><b>DATE:</b> _____</p>
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## INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A --	Approved as submitted.	E --	Disapproved (See attached).
B --	Approved, except as noted on drawings.	F --	Receipt acknowledged.
C --	Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX --	Receipt acknowledged, does not comply as noted with contract requirements.
D --	Will be returned by separate correspondence.	G --	Other (Specify)
10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

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**SECTION 02483 - PROTECTION OF SEA TURTLES**

**PART 1 - GENERAL**

**1.1 SUBMITTALS.** Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with the SECTION entitled SUBMITTAL PROCEDURES.

1.1.1 SD-04 Drawings.

1.1.1.1 Turtle Deflector Device: GA. If the Contractor proposes to use a hopper dredge for this work, detailed shop drawings shall be submitted showing the proposed device and its attachment to the Contractor's equipment. Shop drawings to be submitted shall include the approach angle for any and all depths to be dredged during this contract. A copy of the approved drawings and calculations shall be available on the vessel during the life of this contract. No dredging work will be allowed to commence until approval of the turtle deflector device.

1.1.2 SD-18 Records.

1.1.2.1 Logs and Final Summary Report: GA. Contractor shall submit, as specified, logs and final summary report of sightings and incidents with endangered species as specified below.

**1.2 MEASUREMENT.** Turtle Deflector Device materials and other execution requirements specified in this Section will not be measured for payment.

**1.3 PAYMENT.**

1.3.1 Turtle Deflector Device. Payment for the fabrication of Turtle Deflector Device and the costs associated with the protection of sea turtles, including initial 5-day trawling requirement, as specified herein shall be included in the contract lump sum price for "Sea Turtle Protection."

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION**

**3.1 PROTECTION OF SEA TURTLES.** (NOTE: Applies to Hopper Dredges Only). During dredging, placement, or travel between the Channel and Placement Area, the Contractor shall observe the surrounding waters in the vicinity of its operations for the presence of sea turtles. If the Contractor encounters or observes sea turtles during

its operations, it shall cease operations and notify the Contracting Officer by the fastest available means. After investigation by the Contracting Officer, the Contractor will be instructed on further actions necessary.

3.1.1 Endangered Species Protection. The Contractor shall instruct the personnel associated with the project of the potential presence of sea turtles in the area and the need to avoid collisions with these animals. Construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing sea turtles which are protected under the Endangered Species Act of 1973. The Contractor shall be held responsible if a sea turtle is harmed, harassed, or killed as a result of construction activities.

**3.2 ENDANGERED SPECIES OBSERVER(S), HOPPER DREDGING.** During hopper dredging operations, observer(s) provided by the Contractor and approved by the National Marine Fisheries Service (NMFS) shall be aboard to monitor for the presence of sea turtles. The observer(s) shall be provided quarters and meals aboard the dredge at least equal to that of the dredge crew.

3.2.1 Monitoring. The observer(s) shall continuously monitor the hopper sampling screens or baskets and dragheads for turtles or turtle parts after each load cycle, 24 hours a day during the dredging mode. Observer(s) shall remove debris from the screens with the assistance of the ship's crew.

3.2.2 Recording. The results of the monitoring shall be recorded on the appropriate observation sheet. An observation sheet shall be completed for each day describing that day's monitoring. Furthermore, a log shall be kept, describing each load whether or not sea turtle or sea turtle parts are present. Sample observation sheets are appended to the end of this Section.

3.2.3 National Marine Fisheries Service-approved Firms shall provide and manage the endangered species observer(s) for hopper dredging. Observer(s) shall possess the appropriate State and Federal approvals and permits for handling endangered or threatened species. Evidence of such approval shall be provided. A list of acceptable firms can be obtained by contacting National Marine Fisheries Service (NMFS), Protected Species Branch, St. Petersburg, Florida at (727) 570-5312. A partial list is appended to the end of this Section.

3.2.4 Responsibilities. The observer(s) shall also be responsible for assuring that:

- (1) Temperatures in the waterway are taken, in degrees Celsius, at the surface and at the mid-depth from the surface to the water bottom. The readings shall be made each 8 hours for the duration of the dredging assignment. The waterway mileage and latitude/longitude shall be recorded, corresponding to each temperature reading.

- (2) During transit of the dredge to or from the Placement site, after dredging has ceased, the screen observer(s) shall assure that the hopper screens are cleaned of debris and correctly re-installed on the dredge for return to dredging mode. The observer(s) shall report damage to screens to the Contracting Officer immediately upon detection of such damage.
- (3) Complete turtle data reporting is made as required in Paragraph: REPORTING below.

**3.3 DISPOSITION OF TURTLES OR TURTLE PARTS.** Positively identified turtle parts shall be disposed at the dredged material Placement site. Turtle parts which cannot be positively identified on board the dredge shall be preserved by the observer(s), or color photographed using instant developing film. The photos shall be attached to respective reports for documentation and later identification. Observer(s) shall measure, weigh, tag, and release uninjured turtles incidentally taken by the dredge. Turtle handling and tagging methods shall be performed in accordance with NMFS-approved procedures. Observer(s), or their authorized representative(s), shall transport, as soon as possible, injured turtles to a rehabilitation facility. NMFS-approved turtle transporters shall be used for this purpose.

**3.4 NOTIFICATION.** The observer(s) shall notify the Contracting Officer as soon as possible, but no later than 24 hours after, of collisions, taking of injured or uninjured, or killing of sea turtles. The observer(s) or Contractor shall also transmit a FAX of this information, within 24 hours, to the NMFS Southeast Regional Office, (727) 570-5517; and Galveston District, ATTN: Mr. Rob Hauch, (409) 766-3064.

**3.5 REPORTING.** The Contractor shall maintain a log detailing all incidents, including sightings, collisions with, injuring, or killing of sea turtles occurring during the contract period. The monitoring data shall be recorded on copies of the observation sheets attached to the end of this Section. An observation sheet shall be completed for each day's operation whether or not turtle parts are detected on the screens. Within 10 calendar days of data collection, completed data reports shall be forwarded directly to:

USAED - Galveston  
CESWG-PE-PR  
ATTN: Mr. Rob Hauch  
P. O. Box 1229  
Galveston, Texas 77553-1229  
(409) 766-3913  
(409) 766-3064 (FAX)

Copies of the data shall also be submitted to the Contracting Officer.

3.5.1 Report. Following completion of dredging, a report summarizing the above incidents and sightings shall be submitted to: 1) Contracting Officer; 2) Mr. Rob Hauch; and 3) NMFS at the address given below. The report shall be submitted not later than thirty (30) calendar days after completion of dredging.

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

**3.6 HOPPER DREDGE EQUIPMENT.** Hopper dredge dragheads shall be equipped with rigid sea turtle deflectors which are rigidly attached. No dredging shall be performed by a hopper dredge without a turtle deflector device that has been approved. A conceptual design detail of a turtle deflector is appended at the end of this Section.

#### 3.6.1 Deflector Design.

3.6.1.1 The leading vee-shaped portion of the deflector shall have an included angle of less than 90 degrees. Internal reinforcement shall be installed in the deflector to prevent structural failure of the device. The leading edge of the deflector shall be designed to have a plowing effect of at least 6-inch depth when the draghead is being operated. Appropriate instrumentation or indicators shall be used and kept in proper calibration to ensure the critical “approach angle.”

**NOTE:** The design “approach angle” or the angle of lower draghead pipe relative to the average sediment plane is very important to the proper operation of a deflector. If the lower draghead pipe angle in actual dredging conditions varies tremendously from the design angle of approach used in the development of the deflector, the 6-inch plowing effect does not occur. Therefore, every effort should be made to insure this design “approach angle” is maintained with the lower drag pipe.

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

#### 3.6.3 Inflow Basket Design and Draghead Teeth.

3.6.3.1 The Contractor shall install baskets or screening over the hopper inflow(s) with no greater than 4-inch by 4-inch openings. The method of screening selected shall depend on the construction of the dredge used and shall be approved prior to commencement of dredging. The screening shall provide 100 percent sampling of the

hopper inflow(s). The screens and baskets shall remain in place for the duration of performance of the work.

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

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

#### 3.6.4 Hopper Dredge Operations.

3.6.4.1 The Contractor shall operate the hopper dredge to minimize the possibility of taking sea turtles and to comply with the requirements stated in the Incidental Take Statement provided by the National Marine Fisheries Service in their Biological Opinion.

3.6.4.2. When initiating dredging, suction through the dragheads shall be allowed just long enough to prime the pumps, then the dragheads shall be placed firmly on the bottom. When lifting the dragheads from the bottom, suction through the dragheads shall be allowed just long enough to clear the lines, and then shall cease. Pumping water through the dragheads shall cease while maneuvering or during travel to or from the Placement Area.

**NOTE:** Optimal suction pipe densities and velocities occur when the deflector is operated properly. If the required dredging section includes compacted fine sands or stiff clays, a properly configured arrangement of teeth may enhance dredge efficiency which reduces total dredging hours and “turtle takes.” The operation of a draghead with teeth shall be monitored for each dredged section to ensure that excessive material is not forced into the suction line. When excess high-density material enters the suction line, suction velocities drop to extremely low levels causing conditions for plugging of the suction pipe. Dredge operators shall configure and operate their equipment to eliminate low level suction velocities. Pipe plugging in the past was easily corrected by raising the draghead off the bottom when low suction velocities occurred. This practice places sea turtles at risk and is not recommended. Arrangements of teeth or the reconfiguration of teeth shall be made during the dredging process to optimize the suction velocities. Raising the draghead off the bottom to increase suction velocities is not acceptable. The primary adjustment for providing additional mixing water to the suction line shall be through water ports. To ensure the suction velocities do not drop below appropriate levels, the Contractor shall monitor production meters throughout the job and adjust primarily the number and opening sizes of water ports. Water port openings on top of the draghead or on raised stand pipes above the draghead shall be screened before they are utilized on the dredging project. If a dredge section includes sandy shoals on one (1) end of a tract line and mud

sediments on the other end of the tract line, the Contractor shall adjust the equipment to eliminate draghead pick-ups to clear the suction line.

3.6.4.3 Near the completion of each payment section, the Contractor shall perform sufficient surveys to accurately depict those portions of the acceptance section requiring clean-up. The Contractor shall keep the draghead buried a minimum of 6 inches in the sediment at all times. Although the overdepth prism is not the required dredging prism, the Contractor shall achieve the required prism by removing the material from the allowable overdepth prism.

3.6.4.4 During turning operations the pumps shall either be shut off or reduced in speed to the point where no suction velocity or vacuum exists.

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

3.6.4.6 The Contractor shall comply with the requirements of this Section and the Contractor's accepted Environmental Protection Plan. The contents of this Section and the Contractor's Environmental Protection Plan shall be shared with applicable crew members of the hopper dredge.

3.6.5 Recording Charts for Hopper Dredges. Hopper dredges shall be equipped with recording devices for each draghead that capture real time, draghead elevation, slurry density, and at least two of the following: pump(s) slurry velocity measured at the output side, pump(s) vacuum and pump(s) RPM. The Contractor shall record continuous real time positioning of the dredge, by plot or electronic means, during the entire dredging cycle including dredging area and Placement Area. Dredge location accuracy shall meet the requirements of the U.S. Army Corps of Engineers Engineering Manual (EM) 1110-2-1003, dated 28 February 1991, "Hydrographic Surveying." A copy of the EM will be available for review by prospective bidders during the bid period. The recording system shall be capable of capturing data at variable intervals but with a frequency of not less than every 60 seconds. Data shall be time correlated to a 24-hour clock and the recording system shall include a method of daily evaluation of the data collected. Data shall be submitted for each day's operation on a daily basis. A written plan of the method the Contractor intends to use to satisfy these requirements shall be included with the Contractor's Quality Control Plan.

3.6.6 Placement of Excavated Material. The Contractor shall be required to furnish an electronic surveillance feature of the movement and placement of the excavated material. The surveillance feature shall monitor the placement vessel by means of an automated (computer) system that will continuously track the horizontal location and draft condition of the placement vessel for the entire dredging cycle including dredging area and Placement Area. The required data shall be as follows:

- (1) Date.

- (2) Trip Identification.
- (3) Vessel name and name of vessel's captain.
- (4) Location and draft of placement vessel every 5 minutes, at least, during loading cycle and during travel to Placement Area and at least every minute or every 200 feet of travel, whichever is smaller, while in the vicinity (within 1,000 feet) of the Placement Area.
- (5) Horizontal location shall have an accuracy equal to or better than a standard Differential Global Positioning System, equal to or better than +/- 10 feet (horizontal repeatability). Vertical data (draft) shall have an accuracy of +/- 0.5 foot. Horizontal and vertical location data shall be collected in sets and each data set shall be referenced to local date and time, to the nearest minute, and shall be referenced to the same geographic reference system used for the survey(s) shown.
- (6) Data shall be collected and stored on 3-1/2-inch floppy disks in ASCII format. The data collected while the placement vessel is in the vicinity of the Placement Area shall be plotted in chart form, in 200-foot intervals, and use the Texas State Plane South Central Zone NAD 27 coordinate system to show the track and draft of the vessel approaching, within, and leaving the Placement Area. More than one (1) Placement Area trip may be stored on a single floppy disk as long as the data for each trip is indexed and clearly identifiable. The original floppy disks, when full or complete, shall be submitted within 24 hours. The plotted charts shall be organized and maintained at a central work location for inspection on a daily basis by the Contracting Officer. At the end of each week of operations the Contractor shall collate and bind the plotted charts and submit them for a permanent file record.

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PROJECT: \_\_\_\_\_

HOPPER DREDGE REPORTING LOG  
TURTLE OBSERVER NOTES

LOAD NUMBER: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

PORT BASKET CONTENTS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STARBOARD BASKET CONTENTS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TURTLE OR TURTLE PARTS PRESENT: YES \_\_\_\_\_ NO \_\_\_\_\_

COMMENTS AND OTHER OBSERVATIONS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

BRIDGE WATCH: TIME: \_\_\_\_\_ LOCATION: \_\_\_\_\_

NUMBER OF TURTLES SIGHTED: \_\_\_\_\_

\_\_\_\_\_  
OBSERVER'S NAME

PROJECT: \_\_\_\_\_

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INCIDENT REPORT OF SEA TURTLE MORTALITY AND DREDGING ACTIVITIES

Species: \_\_\_\_\_

Date: \_\_\_\_\_

Time: 24-hour clock: \_\_\_\_\_

Geographic Site: \_\_\_\_\_

Location: Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Vessel Name: \_\_\_\_\_

Type of Dredging Activity: \_\_\_\_\_

Load #: \_\_\_\_\_

Sampling Method: \_\_\_\_\_

Location Specimen Recovered: \_\_\_\_\_

Draghead Deflector? YES \_\_\_\_\_ NO \_\_\_\_\_

Condition of Deflector: \_\_\_\_\_

Weather Conditions: \_\_\_\_\_

Water temp: Surface: \_\_\_\_\_ Column \_\_\_\_\_

Head Width: \_\_\_\_\_

Plastron Length: \_\_\_\_\_

Carapace S.L. Length: \_\_\_\_\_

Carapace S.L. Width: \_\_\_\_\_

Carapace O.C. Length: \_\_\_\_\_

Carapace O.C. Width: \_\_\_\_\_

Condition of Specimen: \_\_\_\_\_

Turtle Tagged? YES \_\_\_\_\_ NO \_\_\_\_\_

Tag #: \_\_\_\_\_ Tag date: \_\_\_\_\_

Comments/Other: \_\_\_\_\_

Observer's Name: \_\_\_\_\_

## ENDANGERED SPECIES OBSERVER CONSULTANTS

A.I.S., Inc.  
(P.O.C. Arv Poshkus)  
19 Camden Street  
P. O. Box 421  
Stoughton, MA 02072-0421  
Telephone: 1-800-230-8032  
FAX: (781) 297-7669  
[ARVIDASI@juno.com](mailto:ARVIDASI@juno.com)

Mr. Richard Alboth,  
Tiny's Marine Environmental  
Services  
7 Rogers Street  
Randolph, MA 02368  
Cellular: (321) 431-6502  
[tintsvc@aol.com](mailto:tintsvc@aol.com)

Andrea Balla-Holden  
Marine & Marine Life Consulting  
5988 SE Kelsey Court  
Port Orchard, WA 98367  
Office: (360) 769-5934  
FAX: (360) 769-4195  
[MarineMarineLife@aol.com](mailto:MarineMarineLife@aol.com)

Trish Bargo  
REMSA, Inc.  
2829A Jefferson Avenue, Suite 108  
Newport News, VA 23608  
Office: (757) 723-2930  
FAX: (757) 723-2931  
Cellular: (757) 544-0295  
[pbargp@remsa.remsainc.com](mailto:pbargp@remsa.remsainc.com)

Mr. Brad Dawe  
474 Pompano Street  
Hitchcock, TX 77563  
Office: (409) 935-7736  
Cellular: (2104) 452-7890  
[marmam44@hotmail.com](mailto:marmam44@hotmail.com)

Dr. L. M. Ehrhart  
Dept. of Biological Science  
P. O. Box 25000  
Orlando, FL 32816  
Office: (407) 823-2970  
FAX: (407) 283-5769  
[lehrhart@pegasus.cc.ucf.edu](mailto:lehrhart@pegasus.cc.ucf.edu)

Mr. Gregg Gitschlag  
National Marine Fisheries Service  
Galveston Laboratory  
4700 Avenue U  
Galveston, Texas 77550  
Office: (409) 766-3517  
FAX: (409) 766-3508  
[gregg.giydchlag@noaa.gov](mailto:gregg.giydchlag@noaa.gov)

Mr. R. Eric Martin  
Ecological Associates, Incorporated  
P. O. Box 405  
Jensen Beach, Florida 34958  
Office: (561) 334-3729  
FAX: (561) 334-4925  
[eai@gate.net](mailto:eai@gate.net)

## **ENDANGERED SPECIES OBSERVER CONSULTANTS (Cont'd)**

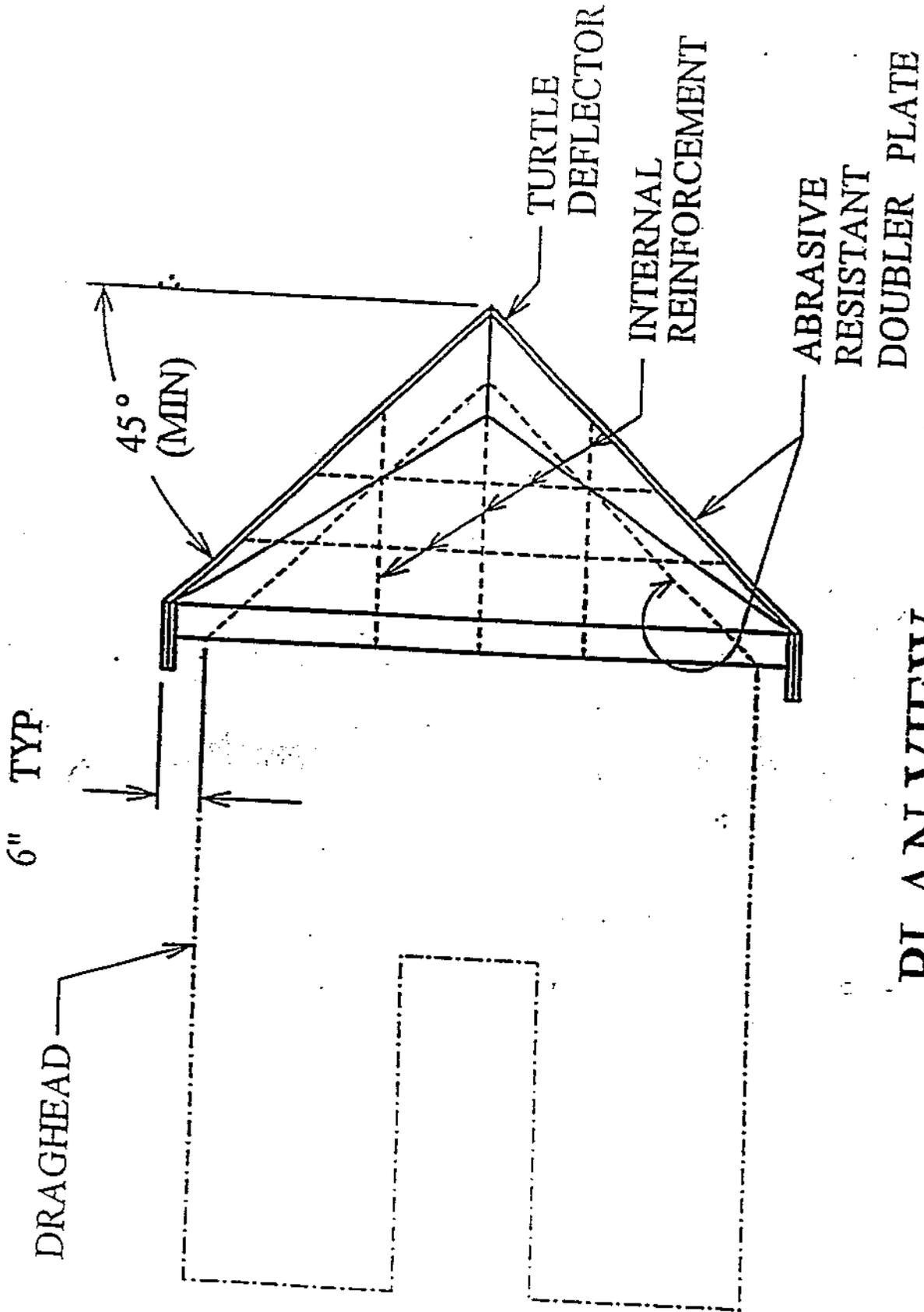
Ms. Mary Jo Barkazzi  
ECOES, Incorporated  
7341 Glenwood Road  
Cocoa, Florida 32927  
Office: (321) 635-8477  
FAX: (321) 635-8449  
[maryjo@eco.es.com](mailto:maryjo@eco.es.com)  
[www.ecoes.com](http://www.ecoes.com)

Ms. Jane Provancha  
Dynamac Corporation  
DYN-2  
Kenedy Space Center, FL 32899  
Office: (321) 853-6578  
FAX: (321) 853-6543  
[Jane.Provancha@esc.patrick.af.mil](mailto:Jane.Provancha@esc.patrick.af.mil)

Dr. James R. Richardson  
Institute of Ecology University of Georgia  
Room No. 103, Ecology Building  
Athens, Georgia 30602  
Office: (706) 542-2968  
FAX: (706) 542-6040  
[rainforestry@earthlink.net](mailto:rainforestry@earthlink.net)

Mr. Robert K. Metzger  
Relocation Trawling Biologist  
1327 N. Wheaton Drive  
St. Charles, MO 63301-6881  
Slaughton, Massachusetts  
Office/FAX: (636) 946-6464  
Cellular: (314) 265-4806  
[metzgerr@swbell.net](mailto:metzgerr@swbell.net)

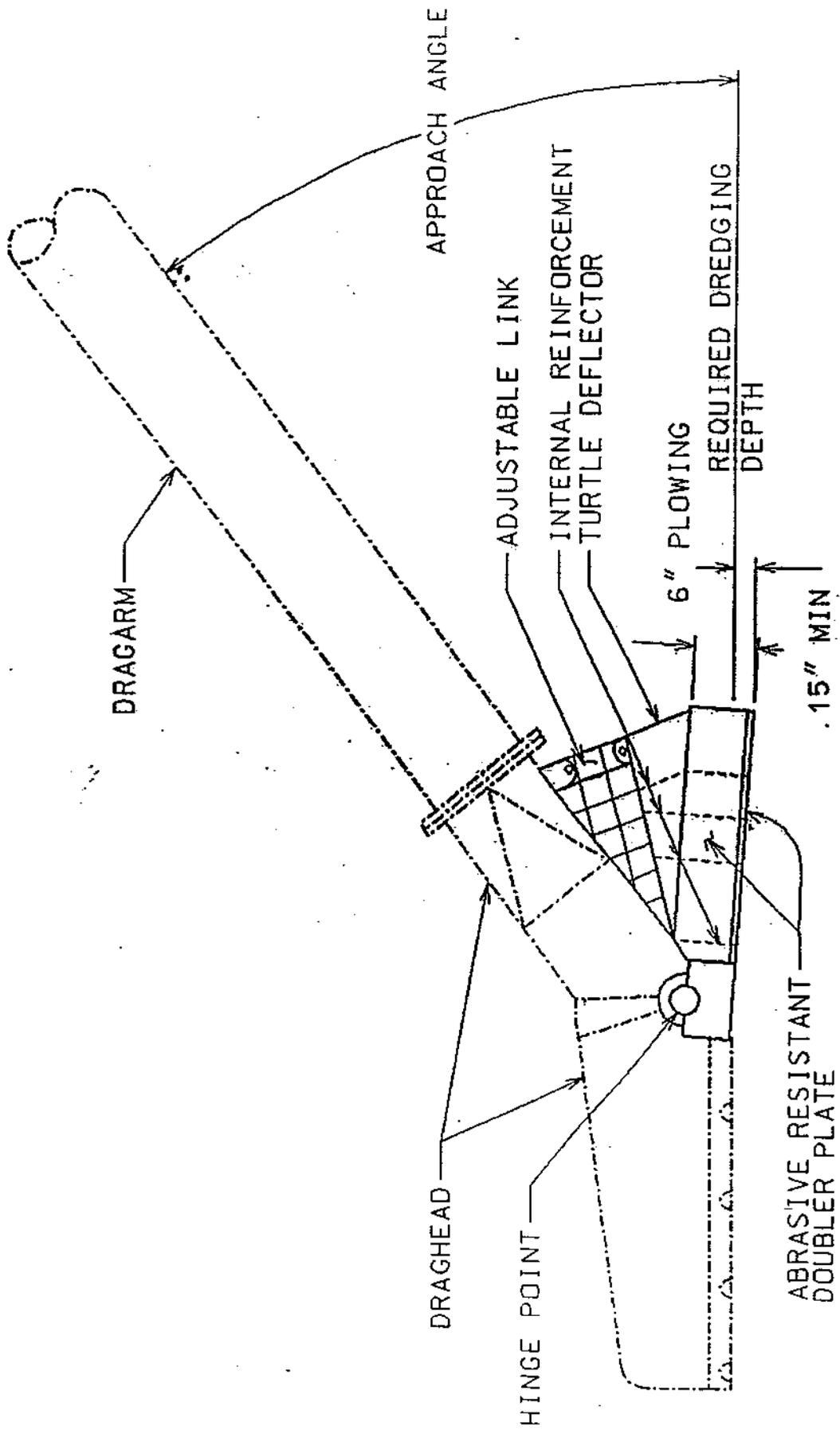
Mr. Christopher Slay, President  
Coastwise Consulting  
(Environmental Consultants-  
Land, Sea, Air)  
173 Virginia Avenue  
Athens, Georgia 30601  
Office: (706) 543-6859  
FAX:/Tel: (904) 261-8518  
[cslay@att.net](mailto:cslay@att.net)



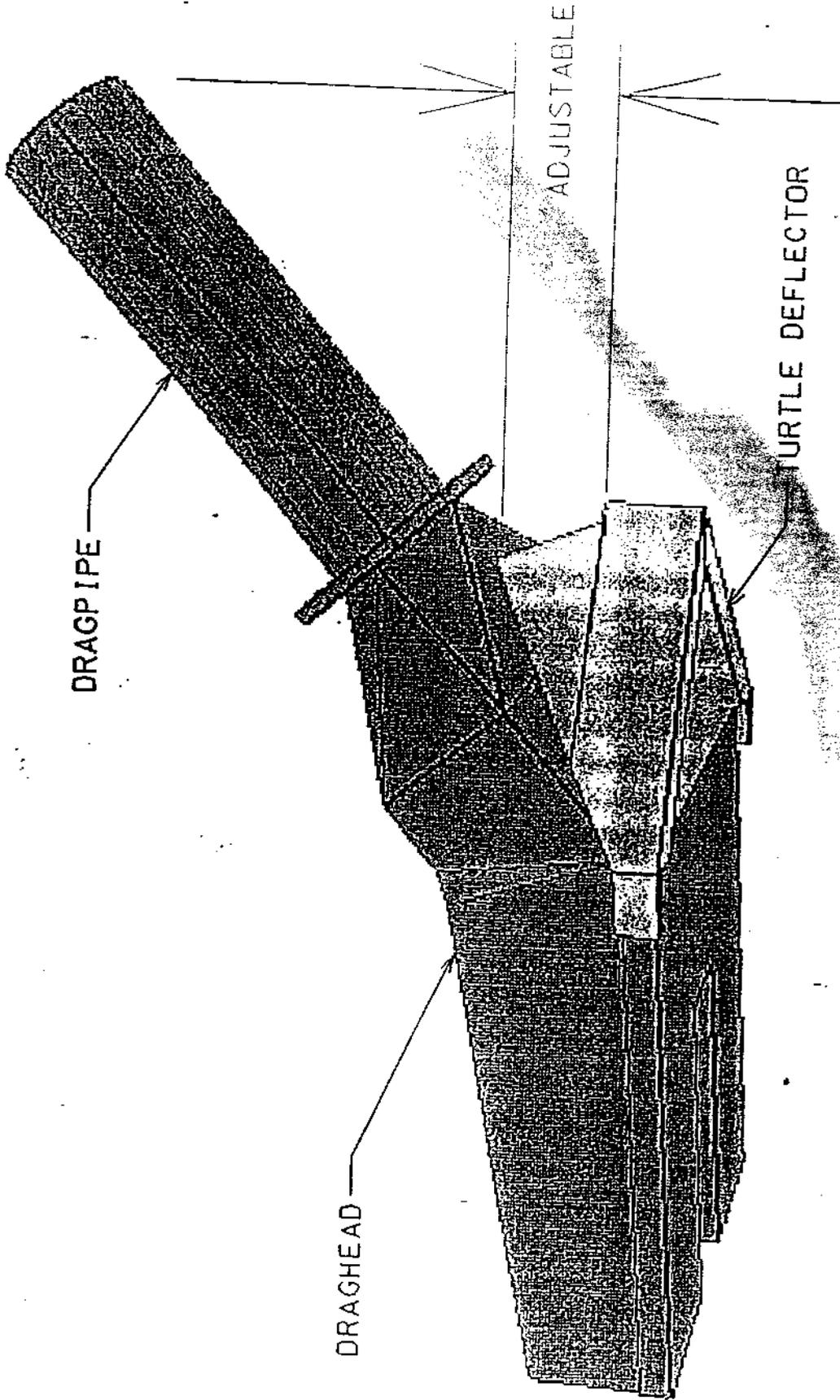
PLAN VIEW

RIGID TURTLE DEFLECTOR

SCALE: NONE



**ELEVATION**  
 RIGID ADJUSTABLE TURTLE DEFLECTOR  
 SCALE: NONE



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