

# 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
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### 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. DACW64-02-B-0035, Placement Area Rehabilitation, House Tract, Houston Ship Channel, Texas, advertised 26 July 2002, and for which bids were postponed, are hereby modified as follows:

**BID OPENING DATE IS HEREBY RESCHEDULED FOR 2:00 PM LOCAL TIME, ROOM 225, JADWIN BUILDING, 24 SEPTEMBER 2002.**

**THE FOLLOWING ARE QUESTIONS BY REPRESENTATIVES OF SEVERAL COMPANIES AFTER AMENDMENT NO. 0005 WAS ISSUED AND ANSWERS GIVEN BY U.S. ARMY CORPS OF ENGINEERS' REPRESENTATIVES:**

QUESTION 1: Item 6 Exterior Clearing. How is this measured i.e. are we paid for the theoretical area or for the area actually cleared. There are many bare areas on the site.

ANSWER 1: Exterior clearing is measured by the area actually cleared. Areas void of trees and brush are not included in total area to be cleared.

QUESTION 2: Does the fence described on drawing 15 get reinstalled? Is the storage onsite or offsite. Does the gov't provide the site or the contractor?

ANSWER 2: The existing fence does not get reinstalled; it becomes the property of the Contractor. See enclosures attached to this Amendment No. 0006.

QUESTION 3: Turfing is in item 5. Excavation and Repair of Slope. I can find no spec describing the Repair of Slope or Excavation. Is turfing the only work required for this item No.

ANSWER 3: Excavation and Repair of Slope are covered in SECTION 02319 entitled STRIPPING AND EXCAVATION enclosed with this Amendment No. 0006.

QUESTION 4: Item 2 & 3 appear to be the same work but have different quantities. Stripping is described as the removal of "humus, grass, weeds and vegetation," while clearing is "trees, down timber, snag, brush and rubbish." Will we be paid for both items. Actual stripping of topsoil does not seem to be required for this item but only for item 5 to generate topsoil for turfing. This is only required of the borrow area and may be obtained from offsite.

ANSWER 4: Yes, they are separate bid items and will be paid separately. See enclosures attached to this Amendment No. 0006.

QUESTION 5: Stripping is not required of bare areas. Are we paid on the theoretical area or the actual area stripped? Is the area between the levee toe and the edge of the borrow pit included in the measurements for items 2 and/or 3?

ANSWER 5: Payment is for actual area stripped. Limits of stripping of levee foundation areas are shown on TYPICAL SECTIONS. Limits of stripping of borrow areas are specified in the specifications.

QUESTION 6: Para 2319-3.1.3 describes stripped material as "stockpiled and used for turfing of new levee. This material is mostly "humus, grass, weeds and vegetation." Is this material suitable for topsoil or must additional material be stripped for Turfing.

ANSWER 6: The top 4 inches shall be stripped for topsoil. See enclosures attached to this Amendment No. 0006.

(a) Specifications.

(1) BIDDING SCHEDULE, Pages 00010-1 and 00010-2 (Issued with Amendment No. 0003). - The enclosed Bidding Schedule, Pages 00010-1 and 00010-2 shall supersede that issued with Amendment No. 0003 to this Invitation.

(2) SECTION 02231 CLEARING, GRUBBING, AND REMOVAL OF DEBRIS (Issued with Amendment No. 0001). - The enclosed SECTION 02231 entitled CLEARING, GRUBBING, AND REMOVAL OF DEBRIS shall supersede that issued with Amendment No. 0001 to this Invitation.

(3) SECTION 02319 STRIPPING AND EXCAVATION (Issued with Amendment No. 0001). - The enclosed SECTION 02319 entitled STRIPPING AND EXCAVATION shall supersede that issued with Amendment No. 0001 to this Invitation.

(4) SECTION 02329 EMBANKMENT CONSTRUCTION. - The enclosed SECTION 02329 entitled EMBANKMENT CONSTRUCTION shall supersede that issued with this Invitation.

(5) SECTION 02826 CHAIN-LINK FENCE. - The enclosed new SECTION 02826 entitled CHAIN-LINK FENCE shall be attached to and become a part of this Invitation.

(6) Page 02926-1, Paragraph 1.1 (Issued by Amendment No. 0003). - In the fourth line, after the words "seed bed," insert "place topsoil,".

(b) Drawings.

(1) Sheets 1 Through 26. - Renumber these sheets to read "Sheets 1 of 27" through "26 of 27."

(2) Sheet 2 of 27. - The enclosed Sheet 2 of 27 supersedes that issued with this Invitation.

(3) Sheet 3 of 27. - Delete the Note "SEMI-COMPACTED CLAY FILL" and substitute "SEMI-COMPACTED RANDOM FILL." Also, delete the borrow areas.

(4) Sheet 4 of 27. - Delete the Note "SEMI-COMPACTED CLAY FILL" and substitute "SEMI-COMPACTED RANDOM FILL." Also, at STATION 17+96 delete the borrow area.

(5) Sheets 5 of 27 Through 10 of 27. - Delete the Note "SEMI-COMPACTED CLAY FILL" and substitute "SEMI-COMPACTED RANDOM FILL."

(6) Sheet 11 of 27. - Delete the Note "SEMI-COMPACTED CLAY FILL" and substitute "SEMI-COMPACTED RANDOM FILL." Also, at STATION 144+77 delete the borrow area and the references thereto.

(7) Sheets 12 of 27 and 13 of 27. - Delete the Note "SEMI-COMPACTED CLAY FILL" and substitute "SEMI-COMPACTED RANDOM FILL." Also, delete the borrow areas and the references thereto.

(8) Sheets 14 of 27 Through 16 of 27. - Delete the Note "SEMI-COMPACTED CLAY FILL" and substitute "SEMI-COMPACTED RANDOM FILL." Also, delete the borrow areas and the references thereto.

(9) Sheet 15 of 27. - Remove the Note pertaining to removal of existing chain-link fence.

(10) Sheet 16 of 27. - Add the following Note:

"4. NO CLEARING SHALL OCCUR BETWEEN STATION 178+00 TO STATION 180+00 AND BETWEEN STATION 0+00 TO STATION 17+96."

(11) Sheet 17 of 27. - Delete the Note "SEMI-COMPACTED CLAY FILL" and substitute "SEMI-COMPACTED RANDOM FILL." Also, add the following Note:

"3. THE BORROW AREA PERTAINS TO THE LEVEE REACHES FROM STATION 125+00 TO STATION 135+00 AND FROM STATION 20+00 TO STATION 30+00."

(12) Sheet 19 of 27. - On BORING LOGS 87-15, 87-16, 87-17, and 87-18. Also, add the following Note: "DISREGARD THE INFORMATION ABOVE ELEVATION +35."

(13) Sheet 21 of 27. - Delete the BORING LOGS 87-48, 87-49, 87-50, and 87-51. The enclosed SKETCH NO. 1 shall be attached to this Sheet 21 of 27 and become a part of this Invitation.

(14) Sheet 22 of 27. - Delete the BORING LOGS 87-64, 87-65, and 87-66.

(15) Sheet 23 of 27. - Delete the BORING LOGS 87-67, 87-68, 87-69, 87-70, 87-71, and 87-72.

(16) Sheet 27 of 27. - The enclosed new Sheet 27 of 27 shall be attached to and become a part of this Invitation.

2. This Amendment shall be attached to and become a part of the Specifications.

6 Encls:

1. Bd Sched, Pgs 00010-1 & 00010-2
2. SECTION 02231
3. SECTION 02319
4. SECTION 02329
5. SECTION 02826
6. Sheet 2 of 27
7. SKETCH NO. 1
8. Sheet 27 of 27

File 7850S  
**HOUSTON SHIP CHANNEL, TEXAS  
HOUSE TRACT  
PLACEMENT AREA REHABILITATION**

**INVITATION NO. DACW64-02-B-0035**

**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	Environmental Protection/ EPA Storm Water Pollution Prevention Plan	1	L.S.	\$ _____	\$ _____
0002	Clearing, Grubbing, and Removal of Debris	200	ACRE	\$ _____	\$ _____
0003	Exterior Clearing	52	ACRE	\$ _____	\$ _____
0004	Stripping	500,000	S.Y.	\$ _____	\$ _____
0005	Borrow Excavation	1,470,000	C.Y.	\$ _____	\$ _____
0006	Excavation and Repair of Slope	1	L.S.	\$ _____	\$ _____
0007	Chain-link Fence	7,000	L.F.	\$ _____	\$ _____
<b>TOTAL SCHEDULE NO. 1</b>					\$ _____

00010-1

(To Accompany Amendment No. 0006 to Invitation No. DACW64-02-B-0035)

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

**1. ARITHMETIC DISCREPANCIES (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.

**3. SALES TAX EXEMPTION.** If you intend seeking a sales tax exemption on this contract, please contact the Comptroller of Public Accounts at 1 800-252-5555.

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**SECTION 02231 - CLEARING, GRUBBING, AND REMOVAL OF DEBRIS**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK.** The work covered in this Section consists of furnishing plant, labor, and equipment necessary to perform clearing, grubbing, and removal of trees, debris, timbers, and trash from the foundation; excavation; and borrow areas shown; and the satisfactory disposal of the cleared and removed materials.

**1.2 ACCESS ROAD.** Access to the project site shall be as shown.

**1.3 ORDER OF WORK.** Clearing, grubbing, and removal of debris shall be completed at least 500 feet in advance of the excavation and levee construction operations.

**1.4 MEASUREMENT.**

1.4.1 Foundation and Borrow Excavation Areas. Clearing, grubbing, and removal of debris from the levee foundation areas and areas to be excavated for borrow material shall be measured for payment by the acres of completed clearing and grubbing. The Contractor shall determine the area of completed clearing and grubbing based on surveys of area limits as specified herein. No separate measurement shall be made of disposed materials.

1.4.2 Exterior Clearing, as specified herein, shall be measured for payment of completed clearing based on surveys of the area limits as specified herein. No separate measurement shall be made of disposed materials.

**1.5 PAYMENT.**

1.5.1 Foundation and Borrow Excavation, Areas. Payment for clearing, grubbing, and removal of debris from levee foundation areas and areas to be, excavated for borrow material will be made at the contract unit price per acre for "Clearing, Grubbing, and Removal of Debris." Clearing of areas in the designated borrow area in excess of 10 acres above the area that is actually excavated for borrow material will not be included for payment.

1.5.2 Exterior Clearing. Payment for clearing and removal of debris from areas outside the Placement Area as shown, will be made at the contract unit price per acre for "Exterior Clearing."

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

### **PART 3 - EXECUTION**

#### **3.1 CLEARING.**

3.1.1 Levee Foundation Areas and areas to be excavated for borrow material shall consist of felling and cutting up trees and the satisfactory disposal of the trees, together with removal of pipe, downed timber, snags, brush, and rubbish occurring within the limits of foundation areas, as shown and within areas required to be excavated for borrow material. Areas that the Contractor anticipates will be excavated to obtain borrow material shall be cleared and grubbed, as specified, prior to borrow excavation. Additional clearing of areas may be required to determine suitability of areas and surface materials for borrow use. Clearing areas in excess of that required to obtain sufficient material to complete required earthwork will not be allowed without advance approval

3.1.2 Exterior Clearing, as specified herein and at areas shown on the outside of the leveed Placement area, with exception of the area where work is specified elsewhere in the Specifications as "Excavation and Repair of Slopes," shall include cutting trees flush at ground level and removal and disposal of felled trees, brush, trash, and other materials from the areas. No stripping or grubbing shall be performed within limits of exterior clearing on the ditch..

**3.2 GRUBBING** shall consist of the removal of stumps, roots, and other objectionable material from the borrow area. Tap roots or other projections over 1-1/2 inches in diameter shall be removed from the excavation and foundation areas.

**3.3 DISPOSAL.** Materials obtained from clearing and grubbing the areas specified in the Paragraphs: CLEARING and GRUBBING above, shall be disposed in abandoned portions of the borrow area as approved. Debris and vegetation placed within the borrow area that floats shall be covered with fill as directed.

**3.4 SURVEYS.** During surveys for initial site layout, the Contractor shall also perform surveys of the location of the edges of areas that will require clearing, or stripping, as specified. Upon completion, plots of these boundaries on an approved drawing shall be furnished for Government verification. Upon completion of required clearing or stripping, additional surveys shall be taken to identify limits of cleared areas for calculation of quantity of acres cleared. After completion of clearing and grubbing and satisfactory disposal of materials, and after completion of required stripping, the Contractor shall perform surveys of each of these areas to determine the location of the limits of the cleared and stripped areas, as directed. The Contractor shall ensure that after excavation surveys of the portion of borrow area to be used for disposal of cleared materials have been completed prior to commencing with disposal.

### **3.5 CONTRACTOR QUALITY CONTROL.**

3.5.1 Compliance Inspection. The Contractor shall inspect the project for compliance with the contract requirements and record the inspection of the operations, including but not limited to clearing, removal, and disposal of materials specified to be cleared.

3.5.2 Records. A copy of the records of inspections and corrective action taken, shall be submitted as directed.

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**SECTION 02319 - STRIPPING AND EXCAVATION**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK.** The work covered in this Section consists of furnishing plant, labor, and equipment necessary to perform the operations in connection with stripping of borrow and foundation areas and borrow excavation.

**1.2 RIGHT-OF-WAY AND BORROW AREAS.** The right-of-way and borrow areas for obtaining material for constructing the work will be furnished without cost to the Contractor at the locations shown. The logs of borings shown represent information that the Government has obtained at the site. Field notes; soil, field, and laboratory test results; and other data on which this information is based, are available at the Galveston District Office and access thereto may be obtained upon request.

**1.3 MEASUREMENT.**

1.3.1 Stripping of borrow areas and levee foundation areas shall be measured for payment by the square yard based on surveys of the limits of areas stripped.

1.3.2 Borrow Excavation shall be measured for payment by the cubic yard and quantities shall be determined by the average end area method. The basis for measurement will be cross sections of the areas to be excavated taken immediately after completion of clearing and stripping operations and again immediately after excavation of the areas that have been completed. Unsatisfactory materials excavated from the areas will not be included in the measurement for payment. The quantity of material placed more than 0.5-foot above the prescribed levee section and material placed for haul roads or turnouts that are outside the limits of required filling will not be included in the measurement. Material placed above the specified grade tolerance and material placed outside the limits of required filling shall be measured and deducted from the quantity of borrow excavation. Surveys shall be performed by the Contractor as specified herein. To determine excavation quantities for payment, no excess stripped or cleared unsatisfactory materials shall be disposed in a borrow area until completion of "after-excitation" surveys of the excavation limits

1.3.3 Excavation and Repair of Slopes. The excavation and repair of the slopes between Station 62+06.2 and Station 87+43 (TYPICAL LEVEE SECTION A) shall not be measured for payment

**1.4 PAYMENT.**

1.4.1 Stripping. Payment for stripping will be made at the contract unit price per square yard for "Stripping," which price includes the cost of labor, equipment, and incidentals necessary for stripping and disposal of material as specified. Stripped areas,

in excess of 20,000 square yards above the combined areas of required foundation area stripping and borrow area stripping, as specified, shall be subtracted from the area for payment.

1.4.2 Borrow Area Excavation. Payment for borrow area excavation, used for construction of the levee, will be made at the contract unit price per cubic yard for "Borrow Excavation," which price shall constitute full compensation for labor, equipment, tools, and incidentals necessary to complete construction of the levee embankment.

1.4.3 Excavation and Repair of Slope. Payment for excavation and repair of the slope between Station 67+06.2 and Station 87+43 will be made at the contract lump sum price for "Excavation and Repair of Slope," which shall include turfing for this area only.

## **PART 2 - PRODUCTS**

**2.1 EQUIPMENT.** Excavation shall be accomplished with draglines, backhoes, shovels, or other suitable excavating equipment. Trucks, scrapers, and other types of earth-hauling equipment, if used, shall be of approved types suitable for construction.

## **PART 3 - EXECUTION**

**3.1 STRIPPING.** The Contractor shall schedule stripping so that completion of stripping of a foundation or borrow area does not precede placement of fill material or excavation of borrow material by more than 60 days. Areas where this requirement is not met and that require additional stripping to remove re-growth shall be stripped as specified herein at no additional cost to the Government.

3.1.1 Borrow Area. Portions of the designated borrow area to be excavated for obtaining required borrow material shall be stripped to remove humus and vegetation.

3.1.2 Foundation Areas. Levee foundation areas shall be stripped to remove humus, grass, weeds, and vegetation before fill is placed thereon. Stripping shall be completed at least 500 feet in advance of filling operations. Stripping shall not be required in areas void of vegetation. Stripping shall be limited to those areas for which excavation is required to obtain sufficient borrow material for construction, and excessive, unapproved stripping shall not be included for payment, as specified.

3.1.3 Disposal of Stripped Materials. Stripped materials from the existing levee, from the foundation area of the new levees, and from borrow areas located within 200 feet of the new levee shall be stockpiled and used for turfing of new levees. Stripping of areas more than 200 feet from the new levees shall be disposed at approved locations within the Placement Area.

### **3.2 EXCAVATION OF BORROW AREA.**

3.2.1 General. Satisfactory borrow material for fill construction shall be obtained from the borrow area shown. Specific locations of borrow excavation within the borrow area shall be determined by the Contractor as required, to obtain sufficient quantities of material for construction of the levee as shown. Free draining sand, that meets the specified criteria for Satisfactory Random Fill, may be excavated wet and dried at the levee site prior to spreading and compacting at the required maximum lift thickness or may be drained prior to excavation by use of ditches, pumps, and sump pumps or other approved and effective methods. Borrow excavations used to obtain non-free draining materials, silt or clay, that meet the specified criteria for Satisfactory Random Fill, shall be kept continuously drained to allow these materials to be excavated in the dry.

3.2.2 Boring Information. Material presented on the boring logs in the borrow area, above approximate Elevation +35 feet, shall be considered likely to be dredged fill. Since material variations are frequent and random within dredged fill boring log information shall be interpreted to only effectively represent material at the drilling location and the immediate proximity. Interpolation or extrapolation of information is not advised and will be verified by independent investigation.. The material at locations in the south end of the borrow area is the result of the type of material that was discharged, the type of material being washed from the discharge and the topography of the area. Material can vary across the site from stiff clay to sand, to soft, wet muck in various layers, pockets, and mixtures.

**3.3 HAUL ROADS.** The crown of the existing levee under construction may be used as a haul road. After completion of the new levees, the haul road shall be graded smooth to drain toward the exterior of the area, compacted, and turfed as specified. Satisfactory materials obtained during required degrading of the existing levee can be used for new levee construction.

**3.4 SLOPE REPAIR.** Excavated slope shall be to finish grade, to elevation shown, and turfed as specified.

### **3.5 DISPOSITION OF MATERIALS.**

3.5.1 Disposition of Satisfactory Materials. Materials excavated from the borrow areas, that are satisfactory as specified in the SECTION entitled EMBANKMENT CONSTRUCTION, shall be used in the construction of the levee and other fills.

3.5.2 Disposition of Unsatisfactory Materials. Excavated materials obtained from the borrow areas that are unsatisfactory shall be disposed in approved areas within the borrow areas, prior to performing after-excavation surveys for measurement.

### **3.6 CONTRACTOR QUALITY CONTROL.**

3.6.1 Compliance Inspection. The Contractor shall inspect for compliance with the contract requirements and shall record the inspection of the operations, including but not limited to the following:

- (1) Stripping. Areas as specified and conformance with removal and disposal of vegetation.
- (2) Borrow Area Excavation. Interior elevation, side slopes, size, location, and dewatering.

3.6.2 Records. A copy of the records of inspections, as well as the records of corrective action taken, shall be submitted as directed.

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**SECTION 02329 - EMBANKMENT CONSTRUCTION**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK.** The work covered in this Section consists of furnishing plant, labor, and equipment and performing the operations to construct levees and berms for the Placement Area as shown.

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

American Society for Testing and Materials (ASTM) Publication.

D 2487-00

Classification of Soils for Engineering  
Purposes (Unified Soil Classification System).

**1.3 PROTECTION OF EXISTING SERVICE LINES AND UTILITY STRUCTURES.** Existing utility lines that are shown or the locations of which are made known to the Contractor prior to excavation shall be protected from damage during excavation and backfilling and if damaged, shall be repaired by and at the expense of the Contractor. If the Contractor damages existing utility lines that are not shown, or the locations of which are not known to the Contractor, report of the damage shall be made immediately to the Contracting Officer. If it is determined that repairs are to be made by the Contractor, the repairs will be made in accordance with the CONTRACT CLAUSE entitled CHANGES.

**1.4 MEASUREMENT.** Embankment Construction will not be measured for payment.

**1.5 PAYMENT.** No separate payment will be made for semi-compacted and uncompacted fill for embankment construction. Embankment construction specified herein will be considered a subsidiary obligation of the Contractor, the cost of which shall be included in the contract unit price for "Borrow Excavation."

**PART 2 - PRODUCTS**

**2.1 EQUIPMENT.**

2.1.1 Crawler-type Tractors used for spreading and compacting shall weigh not less than 30,000 pounds, shall exert a unit tread pressure of not less than 7 pounds per square inch, and shall be operated at a speed not to exceed 5 miles per hour.

2.1.2 Power-driven Tampers. Compaction of material in areas where it is impracticable to use a tractor shall be performed by the use of approved power-driven tampers of the rammer type having a static weight of at least 70 pounds or by hydraulic actuated tractor-mounted tampers as approved.

2.1.3 Sprinkling Equipment shall consist of tank trucks, pressure distributors, or other equipment designed to apply water uniformly and in controlled quantities to variable widths of surface.

2.1.4 Miscellaneous Equipment. Scarifiers, disks, spring-teeth or spike-teeth harrows, spreaders, and other equipment shall be of approved types, suitable for construction of embankments. Trucks and other types of earth hauling equipment, if used, shall be of approved types suitable for construction.

## **2.2 MATERIALS.**

2.2.1 Semi-compacted Random Fill. Satisfactory material for constructing the semi-compacted random fill portion of the levee embankments shall consist of sands, silty or clayey sands and medium, stiff or very stiff clays or sandy clays classified in ASTM D 2487 as SP, SW, SM, SC, SP-SM, SP-SC, SC, CL or CH. Clays or sandy clays that are soft may be used in the semi-compacted random fill zone provided they are dried to the extent that they can adequately support the construction equipment and then be satisfactorily compacted with the specified equipment.

## **PART 3 - EXECUTION**

**3.1 FOUNDATION PREPARATION.** Foundation areas shall be thoroughly scarified to a minimum depth of 6 inches prior to placement of the initial lift of fill material thereon.

**3.2 DRAINAGE.** Foundation areas to receive semi-compacted random fill and partially completed fill shall be kept continuously drained.

**3.3 EMBANKMENT MATERIALS.** The levee embankment and berms shall be constructed using specified satisfactory materials obtained from the borrow areas as shown.

### **3.4 EMBANKMENT CONSTRUCTION.**

3.4.1 Semi-compacted Random Fill. Satisfactory material, meeting the requirement for random fill zones of the embankment, shall be placed to the lines, grades, and in the reaches as shown. The material shall be placed and spread in layers not more than 2 feet in thickness prior to compaction. The embankment shall be secured by having the maximum density obtainable with the natural moisture content of the embankment material. If, in the opinion of the Contracting Officer, the material is too dry or too wet, the Contractor shall adjust the moisture content of the material to allow proper compaction. Material that is too wet shall be spread on the

embankment and permitted to dry assisted by disk harrowing, if necessary, until the moisture content is reduced. When the material is too dry the Contractor shall uniformly distribute sufficient moisture in each layer before tracking until the moisture content is increased to an amount sufficient to obtain proper compaction. Harrowing or other approved methods will be required to work the moisture into the material until a uniform distribution of moisture is obtained. When the moisture content of the fill material is satisfactory, each spread layer shall be compacted with a minimum of three (3) complete coverages of the tracks of a crawler-type tractor as specified in the Paragraph: EQUIPMENT above. In levee reaches "A", "B", and "C" all portions of the cross section can be brought up concurrently. In levee reach "D", the berm shall be brought up to full width and full height prior to commencement with construction of the upper portion of the embankment, above Elevation +50.

**3.5 GRADE TOLERANCES AND SHRINKAGE ALLOWANCES FOR LEVEE EMBANKMENT.** The embankment shall be constructed to the net grade and cross section shown without the addition of allowance for shrinkage of the fill. At all points a tolerance of 0.5 of 1-foot above the prescribed grade will be permitted in the final dressing, provided that excess material is so distributed that there are no abrupt humps or depressions in the sloped surfaces or bulges in the width of the crown.

**3.6 SLIDES.** If part of the levee slides during construction, or after completion but prior to acceptance, the Contractor shall, upon written direction from the Contracting Officer, rebuild that portion of the levee. If the slide is caused through fault of the Contractor, the foregoing operations shall be performed without cost to the Government. If the slide is due to no fault of the Contractor, the yardage replaced will be paid for as specified in the Paragraph: PAYMENT above, in addition to payment due the Contractor for materials previously placed. Where settlement of the embankment due to weak foundation conditions develops to an extent to make it inadvisable to continue the placement of additional materials, the Contracting Officer will have the right to omit further work in these portions of the embankment and to accept it as completed.

**3.7 CONTRACTOR QUALITY CONTROL.**

3.7.1 Compliance Inspection. The Contractor shall inspect for compliance with the contract requirements and shall record the inspection of the operations, including but not limited to, the following:

- (1) Fill Material - Classification and zone.
- (2) Embankment Construction - Placement, lift, thickness, moisture content, and compaction.

3.7.2 Records. A copy of the records of inspections and tests, as well as the records of corrective action taken, shall be submitted as directed.

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**SECTION 02826 - CHAIN-LINK FENCE**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK.** The work covered in this Section consists of removal of existing fence and installation of a permanent exclusion fence of approximately 7,000 feet along the west property line.

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

American Society for Testing and Materials (ASTM) Publications.

A 121-99                      Metallic-Coated Carbon-Steel Barbed Wire

C 94-00                      Ready-Mixed Concrete.  
(E-2001)

American Welding Society (AWS) Publication.

WZC-72                      Welding Zinc-Coated Steels.

Federal Specifications (Fed. Spec.).

RR-F-191K/GEN              Fencing, Wire and Post Metal (and Gates,  
Chain-Link Fence Fabric, and Accessories)

RR-F-191D/1                Fencing, Wire and Post, Metal (Chain-Link  
Fence Fabric)

RR-F-191D/3                Fencing, Wire and Post, Metal (Chain-Link  
Fence Posts, Top Rails and Braces)

RR-F-191D/4                Fencing, Wire and Post, Metal (Chain-Link  
Fence Accessories).

**1.3 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 as specified herein.

### 1.3.1 SD-01 Data.

1.3.1.1 Materials: GA. Manufacturer's data on materials for the chain-link fence based on the References above shall be submitted 2 weeks prior to installation.

**1.4 MEASUREMENT.** The quantity of chain-link fence installed shall be measured in linear feet.

**1.5 PAYMENT** for the quantity of chain-link fence will be made at the contract unit price per linear foot for "Chain-link Fence," which constitutes full compensation for furnishing materials, equipment, and labor necessary to remove the existing fence and complete the work specified herein.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS.**

2.1.1 Chain-link Fence shall conform to Fed. Spec. RR-F-191K/GEN.

2.1.1.1 Fabric shall conform to Fed. Spec. RR-F-191D/1, Type I, zinc-coated steel wire with minimum coating weight of 1.2 ounces of zinc per square foot of coated surface. Fabric shall be fabricated of 9-gage wire woven in 2-inch mesh. Fabric height shall be as shown. Fabric shall be twisted and barbed on the top selvage and knuckled on the bottom selvage.

2.1.1.2 Posts shall conform to Fed. Spec. RR-F-191D/3, zinc-coated; Class 1, Grade A, steel pipe. Sizes shall be as shown. Line posts and terminal (corner, gate, and pull) posts selected shall be of the same Class throughout the fence.

2.1.1.3 Braces and Top Rails shall conform to Fed. Spec. RR-F-191D/3, zinc-coated, Class 1, Grade A, steel pipe, Size SP1.

2.1.1.4 Accessories shall conform to Fed. Spec. RR-F-191D/4. Ferrous accessories shall be zinc- or aluminum-coated. Truss rods shall be furnished for each terminal post. Truss rods shall be provided with turnbuckles or other equivalent provisions for adjustment. Tie wire for attaching fabric to rails, braces, and posts shall be 9-gage steel wire.

2.1.1.5 Barbed Wire Supporting Arms shall be galvanized steel complete with provisions for anchorage to posts and for attaching three (3) rows of barbed wire to each arm. Supporting arms may either be attached to posts or integral with the post top weather cap. Arms shall be 45-degree for supporting three (3) strands of wire.

2.1.1.6 Concrete shall conform to ASTM C 94, using 3/4-inch maximum size aggregate, and having minimum compressive strength of 3,000 psi at 28 days.

2.1.1.7 Barbed Wire shall conform to ASTM A 121, two-strand, 12-1/2 Gage with 14 Gage 4 Point round barbs spaced at 5 inches on center.

## **PART 3 - EXECUTION**

**3.1 GENERAL.** The area on either side of the fence line shall be cleared to the extent indicated. Line posts shall be spaced equidistant at intervals not exceeding 10 feet. Terminal (corner and pull) posts shall be set at abrupt changes in vertical and horizontal alignment. Fabric shall be continuous between terminal posts; however, runs between terminal posts shall not exceed 500 feet. Damage to the galvanized surface due to welding shall be repaired with "repair sticks" of zinc-cadmium alloys or zinc-tin-lead alloys in accordance with AWS WZC. The start and end of the existing fence shall be marked prior to the existing fence removal and the new fence shall be installed in the existing fence location.

**3.2 POSTS** shall be set plumb, in alignment, and installed as shown.

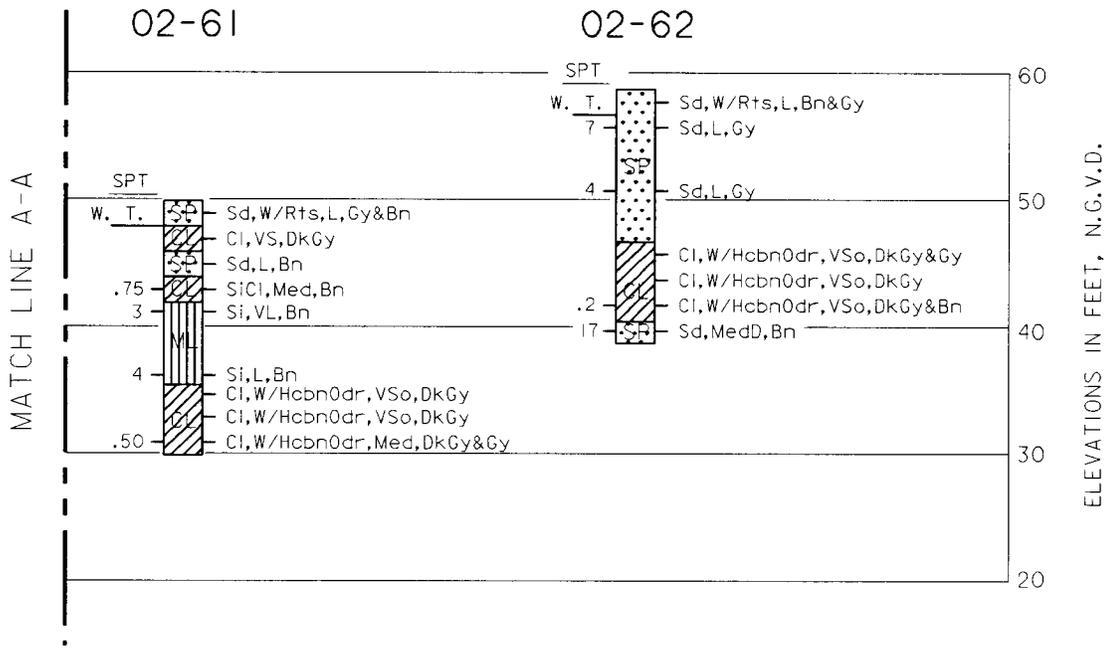
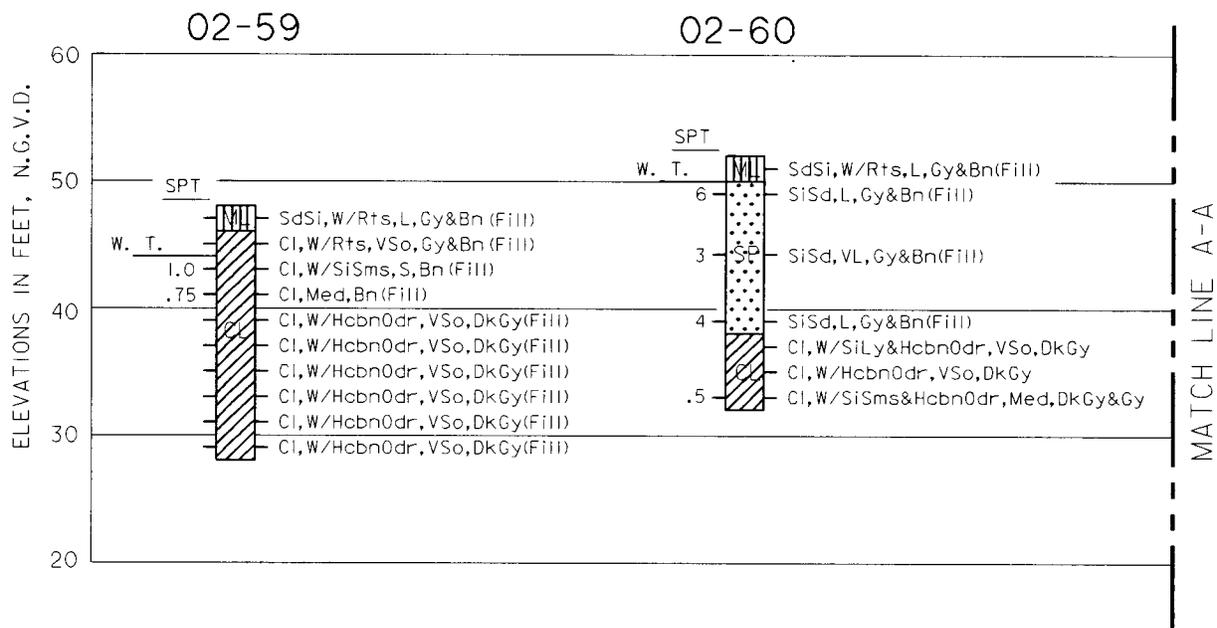
**3.3 TOP RAILS** shall be supported at each post to form a continuous brace between terminal posts. Where required, sections of top rail shall be joined using sleeves or couplings that will allow expansion or contraction of the rail.

**3.4 TENSION WIRES** shall be installed along the bottom of the fence line and attached to the terminal posts of each stretch of the fence. Bottom tension wire shall be installed within the bottom 6 inches of the installed fabric. Tension wire shall be pulled taut and shall be free of sag.

**3.5 CHAIN-LINK FABRIC** shall be installed on the side of the post indicated. Fabric shall be attached to terminal posts with stretcher bars and tension bands. Bands shall be spaced at approximately 15-inch intervals. The fabric shall be installed and pulled taut to provide a smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Fabric shall be fastened to line posts at approximately 15-inch intervals and fastened to rails and tension wires at approximately 12-inch and 24-inch intervals, respectively. Fabric shall be cut by untwisting and removing pickets. Splicing shall be accomplished by weaving a single picket into the ends of the rolls to be joined. The bottom of the installed fabric shall be 2 inches above ground. After the fabric installation is complete, the fabric shall be exercised by applying a 50-pound push-pull force at the center of the fabric between posts. The use of a 30-pound pull at the center of the panel shall cause fabric deflection of not more than 2.5 inches when pulling fabric from the post side of the fence. Every second fence panel shall meet this requirement. Failed panels shall be re-secured and retested at the Contractor's expense.

**3.6 BARBED WIRE SUPPORTING ARMS AND BARBED WIRE** shall be installed as indicated and as recommended by the manufacturer. Supporting arms shall be anchored to the posts to prevent easy removal with hand tools. Barbed wire shall be pulled taut and attached to the arms with clips or another method that will prevent easy removal.

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"TO BE ADDED TO DRAWING NO. 21."

"THIS SKETCH ACCOMPANIES  
 AMENDMENT NO. 0006 TO  
 INVITATION NO. DACW64-02-B-0035."