

|  |   |  |  |  |
|--|---|--|--|--|
| <b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>  |   |  | 1. CONTRACT ID CODE<br><b>J</b>                                    | PAGE OF PAGES<br><b>1</b>                                    |
| 2. AMENDMENT/MODIFICATION NO.<br><b>2</b>  | 3. EFFECTIVE DATE<br><b>09-Jul-2003</b> | 4. REQUISITION/PURCHASE REQ. NO.<br>W807PM-3093-4144 | 5. PROJECT NO.(If applicable)                                      |  |
| 6. ISSUED BY<br>CONSTRUCTION & A/E<br>4155 CLAY<br>VICKSBURG MS 39183-3435   |   | CODE<br><b>DACW38</b>                                | 7. ADMINISTERED BY (If other than item 6)<br><br><b>See Item 6</b> |  |
| 8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)  |   |  | X  | 9A. AMENDMENT OF SOLICITATION NO.<br><b>DACW38-03-B-0015</b> |
|  |   |  | X  | 9B. DATED (SEE ITEM 11)<br><b>01-May-2003</b>                |
|  |   |  |  | 10A. MOD. OF CONTRACT/ORDER NO.                              |
|  |   |  |  | 10B. DATED (SEE ITEM 13)                                     |
| CODE   |   | FACILITY CODE  |  |  |
| <b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>   |   |  |  |  |
| <input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input checked="" type="checkbox"/> is extended, <input type="checkbox"/> is not extended.  |   |  |  |  |
| Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:<br>(a) By completing Items 8 and 15, and returning <u>  1  </u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted;<br>or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified. |   |  |  |  |
| 12. ACCOUNTING AND APPROPRIATION DATA (If required)  |   |  |  |  |
| <b>13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.<br/>IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>  |   |  |  |  |
| 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 <input type="checkbox"/> is not, <input type="checkbox"/> 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.)<br>Reference Invitation for Bids (IFB) No. DACW38-03-B-0015 for FC/MR&T, East Bank Mississippi River Levees, Carlisle-Tallula, MS, Levee Enlargement and Berms, Item 488-L. Subject IFB, previously postponed indefinitely, is amended as follows:<br><br>See Page 2   |   |  |  |  |
| Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.   |   |  |  |  |
| 15A. NAME AND TITLE OF SIGNER (Type or print)  |   |  | 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)         |  |
|  |   |  | TEL: _____ EMAIL: _____  |  |
| 15B. CONTRACTOR/OFFEROR  | 15C. DATE SIGNED                        | 16B. UNITED STATES OF AMERICA                        |  | 16C. DATE SIGNED   |
| _____<br>(Signature of person authorized to sign)  |   | BY _____<br>(Signature of Contracting Officer)       |  | <b>09-Jul-2003</b>   |

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**BID OPENING DATE**

A new bid opening date and time of 14 August 2003, 1430 Hours is hereby established.

**WAGE RATES**

Section 00100, Instruction to Bidders, Wage Determinations, Pages 18 - 22: General Decision Number MS020020 (Heavy Construction) and General Decision Number MS020034 (Dredging) are replaced by General Decision Numbers MS030022 and MS030034.

**TECHNICAL SPECIFICATIONS**

Section 01000 GENERAL CONTRACT REQUIREMENTS is reissued in its entirety.

Section 02111 CLEARING AND GRUBBING is reissued in its entirety.

Section 02222 EXCAVATION is reissued in its entirety.

Section 02231 EMBANKMENTS is reissued in its entirety.

Section 02301 LEVEE SURFACING is reissued in its entirety.

**DRAWINGS**

Drawing No. 4, Make "pen and ink" change as follows: The last note under NOTES, beginning "THE CONTRACTOR SHALL NOTIFY---", shall be deleted in its entirety and replaced with the following note:

"SEE SECTION 01000 GENERAL CONTRACT REQUIREMENTS, PARAGRAPH "WORK ON OR ADJACENT TO FACILITIES AND PROPERTY OF TENNESSEEE GAS PIPELINE COMPANY", OF THE SPECIFICATIONS, FOR THE PERMITTING AND OTHER REQUIREMENTS FOR WORK TO BE DONE WITHIN 500 FEET OF EL PASO PIPELINE GROUP GAS PIPELINE."

**CROSS SECTIONS AND HYDROGRAPHIC SURVEYS  
(FOR INFORMATION ONLY)**

Cross sections and hydrographic surveys are provided with this amendment for information only.

Pages of technical specifications revised by this amendment have the notation "Revised by Amendment 0002" at the bottom of the page. Text added by this amendment is shown as underlined. Text deleted by this amendment is shown as overstruck.

Encls:

Section 00100, pages 18-22 General Decisions (Wage Rates) MS030022 and MS030034

Section 01000, pages 1 thru 23

Section 02111, pages 1 thru 6

Section 02222, pages 1 thru 7

Section 02231, pages 1 thru 13

Section 02301, pages 1 thru 10

**General Decision Number MS030022**

General Decision Number **MS030022**

Superseded General Decision No. MS020022

State: Mississippi

Construction Type:

FLOOD CONTROL

County(ies):

STATEWIDE

\*RIVER, HARBOR AND FLOOD CONTROL PROJECTS

FOR CONSTRUCTION OF ALL RIVER, HARBOR AND FLOOD CONTROL WORK

ON THE MISSISSIPPI RIVER AND TRIBUTARIES -(EXCLUDING ANY

CONTRACTS FOR ANY PHASE OF CONSTRUCTION OF A LOCK AND DAM)

MISSISSIPPI - EXCEPT THE METROPOLITAN AREAS OF GREENVILLE,

NATCHEZ AND VICKSBURG

Modification Number

0

Publication Date

06/13/2003

COUNTY(ies):

STATEWIDE

SUMS2056A 12/18/1991

|                                    | Rates | Fringes |
|------------------------------------|-------|---------|
| CARPENTERS                         | 5.80  |         |
| LABORERS:                          |       |         |
| UNSKILLED                          | 5.15  |         |
| REVTMENT & DIKES                   | 5.15  |         |
| CHAIN SAW OPERATOR OR FILER        | 5.15  |         |
| AIR TOOL OPERATOR                  | 5.15  |         |
| POWER EQUIPMENT OPERATOR:          |       |         |
| PILEDRIVER OPR., MECHANIC          |       |         |
| (HEAVY EQUIP.), CRANES,            |       |         |
| DERRICKS, DRAGLINES, WELDER,       |       |         |
| POWER SHOVELS & BACKHOES,          |       |         |
| MIXER (CONCRETE, 21 CU. FT. &      |       |         |
| OVER), ASPHALT PLANT OPR.,         |       |         |
| TRENCHING MACHINE (OVER 18")       | 7.75  | .05     |
| BULLDOZER (FINISHER, PUSH CAT &    |       |         |
| ON BARGES), MOTOR PATROL           |       |         |
| FINISHER, SCRAPER & LIKE EQUIP.,   |       |         |
| FRONT END LOADER, BACKHOE (TRACTOR |       |         |
| MOUNTED) ASPHALT FINISHER OR       |       |         |
| SPREADING MACHINE, WELL POINT      |       |         |
| SYSTEM OPR., SELF PROPELLED        |       |         |
| LOADER (CONVEYOR TYPE)             | 6.95  | .05     |
| FIREMAN (HEAVY CONSTRUCTION),      |       |         |
| PILEDRIVER, LEADSMAN, WINCHMAN     | 5.90  | .05     |
| ASPHALT PLANT DRYER OPR., ASPHALT  |       |         |
| DISTRIBUTOR, ASPHALT ROLLER, BULL- |       |         |
| DOZER (ROUGH, INCL. DISC, PLOW,    |       |         |
| OR ROLLER), MOTOR PATROL (HAUL     |       |         |
| ROADS), TRENCHING MACHINE (18"     |       |         |
| & UNDER), SELF-PROPELLED ROLLER    |       |         |
| (EXCEPT ASPHALT, END DUMP EQUIP.   |       |         |
| (OFF HIGHWAY), MIXER (CONCRETE     |       |         |
| UP TO 21 CU. FT.), BOTTOM DUMP     |       |         |
| EUCLIDS (AND LIKE EQUIPMENT)       | 5.35  | .05     |

|  |      |     |
|--|------|-----|
| OILER, PUMP, GREASER, TRACTOR<br>(FARM TYPE INCL. DISC, PLOW OR<br>ROLLER) | 5.15 | .05 |
| TRUCK DRIVERS:   |      |     |
| 1 1/2 TONS OR LESS   | 5.15 |     |
| OVER 1 1/2 TONS  | 5.15 |     |

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.  
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-----  
WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.  
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=====  
Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).  
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In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment

data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

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

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

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

END OF GENERAL DECISION

**General Decision Number MS030034**

General Decision Number **MS030034**

Superseded General Decision No. MS020034

State: Mississippi

Construction Type:

DREDGING

County(ies):

STATEWIDE

DREDGING PROJECTS ALONG THE MISSISSIPPI RIVER AND ITS  
TRIBUTARIES

|                     |                  |
|---------------------|------------------|
| Modification Number | Publication Date |
| 0                   | 06/13/2003       |

COUNTY(ies):

STATEWIDE

SUMS1071A 02/15/1990

|                           | Rates | Fringes |
|---------------------------|-------|---------|
| DREDGES 16" AND OVER:     |       |         |
| Leverman                  | 6.10  |         |
| Dredge Tender Operator    | 5.15  |         |
| First Assistant Engineer  | 6.06  |         |
| Second Assistant Engineer | 5.50  |         |
| Third Assistant Engineer  | 5.15  |         |
| Deckhand                  | 5.15  |         |
| Shoreman                  | 5.15  |         |
| Fireman                   | 5.15  |         |
| Oiler                     | 5.15  |         |
| Truck Driver              | 5.15  |         |
| Welder                    | 5.47  |         |
| DREDGES UNDER 16":        |       |         |
| Leverman                  | 5.15  |         |
| Dredge tender Operator    | 5.15  |         |
| Deckhand                  | 5.15  |         |
| Oiler                     | 5.15  |         |
| Welder                    | 5.15  |         |
| HYDRAULIC DREDGING:       |       |         |
| First Cook                | 5.15  |         |
| Second Cook               | 5.15  |         |
| Janitor - Cabin Person    | 5.15  |         |
| Handyman                  | 5.15  |         |
| DERRICK OPERATOR          | 5.38  |         |
| DOZER OPERATOR            | 5.53  |         |
| MARSH BUGGY DRAGLINE:     |       |         |
| Operator                  | 6.70  |         |
| Oiler                     | 6.33  |         |

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

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

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END OF GENERAL DECISION

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SECTION 01000  
GENERAL CONTRACT REQUIREMENTS

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- 1.3 RIGHTS-OF-WAY
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-- End of Section Table of Contents --

SECTION 01000

GENERAL CONTRACT REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

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

CODE OF FEDERAL REGULATIONS (CFR)

|              |  |
|--------------|--|
| 19 CFR 24.24 | Harbor Maintenance Fee                         |
| 33 CFR 156   | Oil and Hazardous Material Transfer Operations |

1.2 PARTNERING

To enhance the potential for success on this contract, the Government encourages formation of a project partnership among all stakeholders (Government, Contractor, Subcontractors, Suppliers and Customer as appropriate). Project partnering provides a structured management approach to facilitate teamwork across contractual boundaries. This proposed partnership would strive to develop a cooperative working relationship to jointly establish and effectively reach mutual project execution goals. Participation in such a partnership will be totally voluntary. The partnering process would normally include an initial offsite kickoff meeting and follow-on maintenance meetings as agreed by the partnership. Costs of such meetings would be shared between the Government and the contractor, based on a mutual agreement, without change to the contract price. The partnering process will in no way relax or stiffen the requirements of the contract, but will enhance the likelihood of success through improved working relationships.

1.3 RIGHTS-OF-WAY

a. The rights-of-way for the work to be constructed under this contract, within the limits indicated on the drawings, will be provided by the Government without cost to the Contractor. The right-of-way upstream of station 6999+00 will not be made available to the Contractor until ~~01 March 2004~~ 01 September 2003. If these rights-of-way are used by the Contractor, he shall, at his own expense, do all work necessary to make such rights-of-way suitable for traveling to and from the worksite. Upon completion of the Contractor's work, any such rights-of-way furnished by the Government shall be left in a condition satisfactory to the Contracting Officer.

b. When so directed by the Contracting Officer, the Contractor shall, without expense to the Government and at any time during the progress of the work when it is not being actively used for contract operations, promptly vacate and clean up any part of the Government grounds or rights-of-way that have been allotted to or have been in use by the Contractor.

c. The Contractor shall not obstruct any existing roads on lands controlled by the United States except with written permission of the Contracting Officer and shall maintain such roads in as good condition as exists at the time of commencement of work under this contract.

d. The Contractor shall procure, without expense to the Government, all additional lands, access roads, or rights-of-way necessary for his use in the performance of the work or as required by his method of operation. The Contractor shall submit written evidence to the Contracting Officer that he has obtained the rights-of-way from the property owners. The written evidence shall consist of an authenticated copy of the conveyance under which the Contractor acquired such rights-of-way, prepared and executed in accordance with the laws of the State in which the land is located. The Contractor shall also obtain from the owners a release for the Government for any damages which may result from his use of such rights-of-way. The written conveyance and release shall be provided to the Government prior to use of Contractor obtained additional lands, access roads, or rights-of-way. If temporary rights-of-way are obtained by the Contractor the period of time for those rights shall coincide with Section 00800 SPECIAL CONTRACT REQUIREMENTS, paragraph COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK, plus a reasonable time for any extension granted for the completion of the work. Any agreements or permits with levee boards, counties, parishes, municipalities, or other political subdivisions for moving material and equipment will be the responsibility of the Contractor and will be obtained at no expense to the Government. Any delays to the Contractor resulting from delays in procuring such additional lands, access roads, rights-of-way, or permits for moving material and equipment for his work under this contract will not be a basis for any claim for increase in the cost of this contract. The Contractor shall make his own investigations to determine the conditions, restrictions and difficulties which may be encountered in acquiring such rights-of-way and in the transportation of material and equipment. In addition, the Contractor shall be solely liable for any and all damages and claims of any nature whatsoever arising from or growing out of the acquisition and use of rights-of-way, etc., other than those furnished by the Government.

e. Notwithstanding any language or drawings to the contrary in this contract, the United States will not provide access or rights-of-way over any public lands and will not be responsible for acquiring such.

f. The Contractor shall repair at no expense to the Government, any and all damage to any existing roads when such damage is a result of his operations under this contract. (CEMVK-OC, 1989)

#### 1.4 PRECONSTRUCTION CONFERENCE

a. A preconstruction conference will be arranged by the Area Engineer as soon after contract award as possible, and the conference will be conducted before work is allowed to commence. The Area Engineer will notify the Contractor of the time, date, and location for the meeting. At this conference, the Contractor will be oriented with respect to contract administration procedures, lines of authority, and construction matters. All known subcontractors performing at least 20 percent of the contract are required to attend this conference. Additional conferences may be established by the Area Engineer for any major subcontractors unknown at the time of the initial conference.

b. Submission by the Contractor of the items listed below will determine the date of the conference. The following items shall be submitted to the Area Engineer for review at least seven (7) calendar days prior to the preconstruction conference:

- (1) Accident Prevention Plan
- (2) Environmental Protection Plan
- (3) Quality Control Plan

c. The Contractor shall bring to this conference, in completed form the following:

- (1) Letter of superintendent appointment and authority
- (2) List of subcontractors

d. The Contractor should bring to this conference, or at least be prepared to discuss, the following:

- (1) Submittal register
- (2) Progress chart or Network Analysis System (as applicable)

e. Minutes of this conference will be taken and prepared by the Area Engineer and sent to the Contractor for his concurrence and signature.

#### 1.5 SUBMITTAL OF SUBCONTRACTING PLAN

a. This paragraph does not apply to small business concerns.

b. After bid opening, and within 7 days, the apparent low bidder, upon telephone notification by the Small and Disadvantaged Business Utilization Specialist, shall submit a Small and Disadvantaged Business Subcontracting Plan. The plan shall be submitted in accordance with Contract Clauses UTILIZATION OF SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS CONCERNS and SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN - ALTERNATE 1, and the person responsible for administering the plan shall be named in paragraph AGENT FOR SUBMITTING SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN of the Representations and Certifications.

#### 1.6 NOTIFICATION OF AREA ENGINEER BEFORE BEGINNING WORK

At least 7 days before beginning work and at least one day before resuming work after a period of 7 days or more when no work has been performed, the Contractor shall notify U.S. Army Corps of Engineers, Ms. Stephanie L. Hall, Project Engineer, Greenville Project Office, P.O. Box 917, Greenville, MS, 38701-0917, telephone (662) 334-9072.

#### 1.7 ORDER OF WORK

The work shall be carried on in accordance with the Progress Chart (schedule) required by paragraph (a) of the Contract Clause SCHEDULES FOR CONSTRUCTION CONTRACTS. In preparing the Progress Chart (schedule), the Contractor shall give the following priorities to the work:

a. The Contractor shall continuously maintain access to Shipland Wildlife Management Area. Before obstructing the access to Shipland Wildlife Management Area at station 7233+00 from the Y-ramp at station 7175+00, the Contractor shall perform the following work:

(1) Remove and stockpile the existing roadway surfacing between the riverside ramp at station 7330+00 and the slough crossing. Construct a crossing, including a 36-inch corrugated metal pipe, in accordance with the details shown on the drawings. Replace and evenly distribute the stockpiled existing roadway surfacing. Place new surfacing material on the road, parking area and turn around area as indicated on the drawings and as directed by the Contracting Officer's representative. The crossing shall be maintained from 1 August through 30 April of each year during the life of the contract. The Contractor shall grade and repair the slough crossing and existing road, including repair and/or replacing the culvert, as necessary so as to maintain access during the specified periods for the life of the contract. Traffic controls and signage shall be in accordance with paragraph MAINTENANCE OF TRAFFIC AND ACCESS TO ADJACENT LANDS. No additional measurement or payment will be made for any work required for maintaining this access.

(2) Install a 24-inch culvert in the existing roadside ditch and construct and maintain a temporary road and Y-ramp (with levee surfacing as directed) landside at station 7420+00 until the permanent road and Y-ramp have been constructed to allow access to the riverside ramp at station 7330+00. This access shall be maintained until access to the riverside ramp at station 7233+00 from the Y-ramp at station 7175+00 is reopened.

b. The Contractor shall continuously maintain access to the riverside ramp at station 7029+00, via levee surfacing, from the upstream limit of work, or the landside ramp at station 7024+00, or the landside ramp at station 7170+00.

c. Excavation of the existing berm and 4 feet required excavation for borrow shall begin at the upstream limits as indicated in the tabulation and proceed continuously downstream as limited herein. The excavation of the existing berm and 4 feet required excavation for borrow shall be limited to no more than a 5,000 feet excavation reach. This 5,000 feet excavation reach shall progress downstream in 1,000 feet increments, but only after each progressive 1,000 feet increment of existing berm and 4 feet required excavation for borrow has been excavated full depth and full width and the retaining dikes for this increment have been completed to grade and section.

d. Embankment construction shall begin at the upstream limit and proceed continuously downstream until embankment construction has been completed. Levee embankment shall not be constructed to a grade higher than one foot below the existing levee crown until after the adjacent berms have been constructed to the required grade and section. The riverside slope of the levee where existing material above gross grade is shown to be used for borrow shall not be cleared until after the levee enlargement above one foot below the existing crown height for that reach is being constructed, and no more than 14 days prior to using this material for embankment.

- e. Ramps shall be constructed concurrently with adjacent levee embankment construction.
- f. Borrow Areas 1 and 2 shall be depleted of all borrow material prior to beginning any clearing, grubbing, or excavation operations in Borrow Area 3.
- g. Existing gravel and cattle guards shall be removed from the levee crown and ramps no less than 1,000 feet, but no more than 2,000 feet, in advance of embankment construction. No more than 10,000 feet of levee shall be without surfacing, either new or existing, at any time.
- h. Existing levee gravel shall be removed from the stockpile and placed on the new levee crown and ramps after each reach of levee embankment has been completed, and before levee embankment has been completed more than 2,000 feet in advance of the reach that has already received existing gravel.
- i. New surfacing material shall be placed on completed embankment so that the completed new surfacing shall be no less than 3,000 feet and no more than 5,000 feet behind the completion of the levee embankment. New cattle guards and bedding beams shall be installed after completion of new surfacing material.
- j. The existing levee crown shall not be used as a haul road until existing gravel has been removed as required in Section 02301 LEVEE SURFACING. Completed levee embankment (with or without surfacing material) shall not be used as a haul road.
- k. The right-of-way upstream of station 6999+00 will not be made available to the Contractor until ~~01 March 2004~~ 01 September 2003.
- l. The Contractor shall also note the restrictions to dredging and construction specified in Section 01354 ENVIRONMENTAL PROTECTION, paragraph RESTRICTIONS ON DREDGING AND/OR CONSTRUCTION.
- m. The Richard Gardner house, buildings and property on Baleshed Road (approx. sta. 7022) shall not be disturbed before October 1, 2003.

#### 1.8 PROGRESS CHART

The progress chart required by provisions of paragraph (a) of the Contract Clause SCHEDULES FOR CONSTRUCTION CONTRACTS shall be prepared on ENG FORM 2454, copies of which will be furnished to the Contractor by the Government. Three (3) copies of the schedule will be required. The Progress Chart shall be periodically updated.

#### 1.9 DESIGNATED BILLING OFFICE

The designated billing office for this contract shall be U.S. Army Corps of Engineers, Greenville Project Office, P.O. Box 917, Greenville, Mississippi 38701-0917.

#### 1.10 PAYMENT INVOICES

- a. The Federal Acquisition Regulation requires that the "REMIT TO" address on the invoice match the "REMIT TO" address on the contract or a proper notice of assignment. The Payment Office will verify a match

of the "REMIT TO" address in the contract and Contractor's invoice prior to payment. If the addresses do not match, the invoice will be determined improper and returned to the Contractor for correction and resubmission. If an invoice is improperly returned, the original invoice receipt date shall be used as the basis for determining interest to be paid in accordance with the PROMPT PAYMENT ACT.

b. Among other things, the Contract Clause PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS requires that a proper invoice for payment include substantiation of the amounts requested. As required in Office of Management and Budget, Circular A-125 (Rev.), PROMPT PAYMENT, dated December 12, 1989, substantiation of the amount requested for progress payments under construction contracts includes the following:

(1) An itemization of the amounts requested related to the various elements of work required by the contract covered by the payment request;

(2) A listing of the amount included for work performed by each subcontractor under the contract;

(3) A listing of the total amount of each subcontract under the contract;

(4) A listing of the amounts previously paid to each such subcontractor under the contract; and,

(5) Additional supporting data in a form and detail required by the contracting officer.

c. Failure to include the above information in a Contractor's invoice will result in the invoice being considered defective under the provisions of the PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS clause of the contract, and it will be returned to the Contractor for correction and resubmission. (CEMVK-OC, 1997)

#### 1.11 TEMPORARY PROJECT FENCING

Temporary project fencing as required by Section 4, "Temporary Facilities", paragraph 04.A.04 of EM 385-1-1, U.S. Army Corps of Engineers Safety and Health Requirements Manual, is not required on this project.

#### 1.12 AS-BUILT DRAWINGS

This paragraph supplements the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION.

a. As-Built Contract Drawings. The Contractor shall maintain two (2) half-size sets of blue-line prints of the contract drawings depicting in red a record of as-built conditions. These drawings shall be maintained in current condition at all times during the entire contract period. The blue-line drawings shall be updated daily by the Contractor showing all changes from the contract plans which are made in the work, additional information which might be uncovered in the course of construction, and information for future construction reference (such as debris disposed by burying). For levee and berm construction, the riverside toe of completed levee and berm sections shall be plotted on profiles of construction drawings. Levee and berm toe profiles shall depict elevations of newly constructed slope intersection with natural

ground and depressions which extend the toe line between routine section surveys. This information shall be recorded on the blue-line prints accurately and neatly by means of details and notes. Each month, prior to submitting a request for progress payment, the Contractor shall review the blue-line as-built drawings with the Contracting Officer, and the Contractor shall certify that the as-built drawings are accurate and up-to-date before progress payment is made. The Contractor shall deliver to the Contracting Officer two (2) complete sets of the as-built marked blue-line prints at the time of the final inspection of the project. In addition, the Contractor shall have the as-built marked prints scanned into full-size, 300 dpi TIFF (tagged image file format) black-and-white raster images and shall deliver to the Contracting Officer three (3) complete sets on CD-ROM at the time of final inspection. The as-built drawings shall be identified by entering the words "AS-BUILT DRAWINGS" in letters at least 3/16-inch high, placed in the lower right corner of each drawing.

b. As-Built Shop Drawings. Upon completion of individual features of work, the Contractor shall revise and resubmit any shop drawings for the feature as necessary to show as-built conditions. The notation "Revised to show as-built conditions" shall be placed in red in the lower right corner of each drawing, along with the initials of a responsible company representative. Each revised as-built shop drawing or catalog cut shall be resubmitted using ENG FORM 4025, enclosed at the end of Section 01330 SUBMITTAL PROCEDURES.

c. No separate measurement or payment will be made for providing as-built drawings, as-built shop drawings, electronic drawings and plates, or for any of the work required by this clause, and all costs therefor shall be included in the applicable contract prices contained in the Bidding Schedule.

#### 1.13 PROJECT SIGN (APR 1991)

The Contractor shall fabricate, erect and maintain one sign for project identification. The sign shall be displayed and positioned for reading by passing viewers. The exact location is subject to Contracting Officer's approval. Information for the right side of the project sign shall be as follows:

Title: CARLISLE-TALLULA, MS  
LEVEE ENLARGEMENT AND BERMS  
ITEM 488-L

Project: FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES  
EAST BANK MISSISSIPPI RIVER LEVEES

Contract No: DACW38-03-C-0XXX

Contractor: (Contractor's name and city)

The project identification sign shall meet the requirements specified in the U.S. Army Corps of Engineers Sign (USACES) Standards Manual, EP 310-1-6a and EP 310-1-6b. A copy of the sign standards manual is available for review at the office of the Vicksburg District Sign Program Manager and questions concerning manufacture and installation of the project identification sign may be addressed to:

Vicksburg District Sign Program Manager (Lawran Richter)

ATTN: CEMVK-OD-MN  
4155 Clay Street  
Vicksburg, MS 39183-3435  
Telephone: (601) 631-5287

#### 1.14 MINIMUM REQUIRED INSURANCE

The following paragraph is applicable if the services involved are performed on a Government Installation. Government Installation is defined as property where the Government holds by fee simple title, by construction rights-of-way, or perpetual easement, etc., an interest in real property. See Contract Clause INSURANCE-WORK ON A GOVERNMENT INSTALLATION.

a. Workmen's Compensation and Employer's Liability Insurance. The Contractor shall comply with all applicable workmen's compensation Statutes of the State of Mississippi and shall furnish evidence of Employer's Liability Insurance in an amount of not less than \$100,000.

b. General Liability Insurance. Bodily injury liability insurance in the minimum limits of \$500,000 per occurrence on the comprehensive form of policy.

c. Automobile Liability Insurance. Minimum limits of \$200,000 per person and \$500,000 per occurrence for bodily injury and \$20,000 per occurrence for property damage. This insurance shall be on the comprehensive form of policy and shall cover the operation of all automobiles used in performance of the contract.

d. Marine Insurance. Hull policy must be endorsed for towers liability (tow and cargo) and the amount of the policy must be supplemented by excess towers' liability in the minimum amount of \$1,000,000, and also by excess protection and indemnity insurance in an amount not less than \$1,000,000. All policies must be endorsed for navigation limits applicable to this contract. The United States Corps of Engineers, Vicksburg District, must be named as an additional insured on all policies, and the policies shall contain an endorsement waiving subrogation against the United States. In the event of material changes in coverage or of cancellation of any policy, written notice shall be given to the Contracting Officer at least 30 days prior to the effective date of such change or cancellation.

#### 1.15 WORK IN QUARANTINED AREA

The work called for by this contract involves activities in counties quarantined by the Department of Agriculture to prevent the spread of certain plant pests which may be present in the soil. The Contractor agrees that all construction equipment and tools to be moved from such counties shall be thoroughly cleaned of all soil residues at the construction site with water under pressure and that hand tools shall be thoroughly cleaned by brushing or other means to remove all soil. In addition, if this contract involves the identification, shipping, storage, testing, or disposal of soils from such quarantined area, the Contractor agrees to comply with the provisions of ER 1110-1-5, "Plant Pest Quarantined Areas and Foreign Soil Samples" attachments, a copy of which will be made available by the Contracting Officer upon request. The Contractor agrees to assure compliance with this obligation by all subcontractors.

#### 1.16 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of material with specification requirements shall be executed in accordance with Section 01330 SUBMITTAL PROCEDURES. Each certificate shall be signed by an official authorized to certify on behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.17 PROCESS FOR OBTAINING CURRENT REQUIREMENTS OF THE U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL (EM 385-1-1)

Contractors are required to comply with the latest version, and all posted changes, of the U.S. Army Corps of Engineers Safety and Health Requirements Manual in effect on the issue date of this solicitation. EM 385-1-1 and changes are available on the Internet at <http://www.hq.usace.army.mil> (at the HQ home page, select "Safety and Occupational Health", and then select "EM 385-1-1" for the manual, or "Changes to EM" for the most recent changes to the manual). Prior to making an offer, offerors should check the referenced website for the latest changes. No separate payment will be made for compliance with the requirements of this paragraph, or for compliance with other safety requirements of the contract.

1.18 SAFETY SIGN

The Contractor shall fabricate, erect and maintain a safety sign at the site, as located by the Contracting Officer. The sign shall be erected as soon as practicable, but not later than 15 calendar days after the date established for commencement of work. The data required shall be current. The safety sign shall meet the requirements specified in the U.S. Army Corps of Engineers Sign (USACES) Standards Manual, EP 310-1-6a and EP 310-1-6b. A copy of the sign standards manual is available for review at the office of the Vicksburg District Sign Program Manager and questions concerning manufacture and installation of the safety sign may be addressed to:

Vicksburg District Sign Program Manager (Lawran Richter)  
ATTN: CEMVK-OD-MN  
4155 Clay Street  
Vicksburg, MS 39183-3435  
Telephone: (601) 631-5287

1.19 ACCIDENT PREVENTION PLAN

Refer to Contract Clause ACCIDENT PREVENTION (Alternate I). Within 15 days after receipt of award of the contract, an Accident Prevention Plan shall be submitted to the Contracting Officer for review and acceptance. The plan shall be prepared in the following format:

- a. An executed MVD FORM 358-R, "Administrative Plan" (available upon request), see Appendix A, "Minimum Basic Outline for Accident Prevention Plan" of EM 385-1-1.
- b. An executed MVD FORM 359-R, "Activity Hazard Analysis" (available

upon request), see paragraph 01.A.09 and figure 1-1 of EM 385-1-1.

c. A copy of company policy statement regarding accident prevention.

d. When marine plant and equipment are in use under a contract, the method of fuel oil transfer shall be submitted on MVD Form 414R Fuel Oil Transfer, (available upon request). (Refer to 33 CFR 156.)

e. The Contractor shall not commence physical work at the site until the plan has been accepted by the Contracting Officer, or his authorized representative. At the Contracting Officer's discretion, the Contractor may submit his Activity Hazard Analysis only for the first phase of construction provided that it is accompanied by an outline of the remaining phases of construction. All remaining phases shall be submitted and accepted prior to the beginning of work in each phase. Also, refer to Section 1, "Program Management", paragraph 01.B, "Indoctrination and Training" of EM 385-1-1.

#### 1.20 DAILY INSPECTIONS

Refer to Section 01451 CONTRACTOR QUALITY CONTROL and Contract Clause INSPECTION OF CONSTRUCTION. The Contractor shall perform daily safety inspections and record them on the forms approved by the Contracting Officer. Reports of daily inspections shall be maintained at the job site. The reports shall be records of the daily inspections and resulting actions. As a minimum each report shall include the following:

a. Phase(s) of construction underway during the inspection

b. Locations or areas inspections were made.

c. Results of inspection, including nature of deficiencies observed and corrective actions taken, or to be taken, date, and signature of the person responsible for its contents.

#### 1.21 ACCIDENT INVESTIGATIONS AND REPORTING

Refer to EM 385-1-1, Section 1, "Program Management", paragraph 01.D, "Accident Reporting and Recordkeeping". Accidents shall be investigated and reports completed by the immediate supervisor of the employee(s) involved and reported in writing to the Contracting Officer or his representative within one working day after the accident occurs.

#### 1.22 ACCOMMODATIONS FOR GOVERNMENT REPRESENTATIVES

a. Accommodations. The Contractor shall furnish and maintain a temporary building for the exclusive use of the Government Representatives. The building shall be of light, but weatherproof construction, approximately 120 square feet in size with not less than 7 feet of headroom. It shall have a substantial workbench along one side and sufficient number of windows to admit ample working light. Windows shall be arranged to open and to be securely fastened from the inside. The door shall be of wood panel or solid core construction and be equipped with a padlock and heavy duty hasp bolted to the door. Insect screens shall be provided for windows. Glass panels in windows shall be equipped with bars or heavy mesh screens which will prevent easy access to the building through these panels. The Contractor shall heat the building by means of heaters and shall cool the building by means of an air conditioning unit. Electric current shall also be

provided for operation of lights, appliances, and electric calculators at 115 volts AC. Electric current may be provided by use of a portable generator. A minimum of two wall outlets and two ceiling drops shall be provided in the building. One office desk and a minimum of two chairs shall be provided in the building. Telephone service with two exclusive lines solely for Government use shall be furnished to the Government Representative building. Toilet facilities and potable water shall be provided within the building. Chilled bottled water will be allowed as an alternate to potable water. The building shall remain the property of the Contractor and upon completion of all work under the contract shall be removed as provided in the Contract Clause OPERATIONS AND STORAGE AREAS. An office trailer meeting the above requirements will be acceptable.

b. Janitor Services. The Contractor shall furnish daily janitorial services for the above office and perform any required maintenance of subject facility and adjacent grounds during the entire life of the contract. Toilet facilities shall be clean and sanitary at all times. Services shall be performed at such a time and in such a manner to least interfere with the operations but will be accomplished only when the office is in daily use. The Contractor shall also provide daily trash collection and cleanup of the building and adjacent outside areas, and shall dispose of all discarded debris in a manner approved.

c. No separate measurement or payment will be made for providing and maintaining the prescribed building, accommodations, utilities and janitor services, and all costs associated therewith shall be distributed throughout the existing bid items. Should the Contractor refuse, neglect, or delay compliance with the above requirements, the specific facilities may be furnished and maintained by the Contracting Officer, and the cost thereof will be deducted from any amount due or to become due the Contractor.

#### 1.23 MACHINERY AND MECHANIZED EQUIPMENT

Machinery and mechanized equipment used under this contract shall comply with the following:

a. When mechanized equipment is operated on floating plant, the Contractor shall provide positive and acceptable means of preventing this equipment from moving or falling into the water. The type of equipment addressed by this clause includes front-end loaders, bulldozers, trucks (both on- and off-road), backhoes, hydraulic excavators (track hoes), and similar equipment. If the Contractor plans to use such equipment on floating plant, an activity hazard analysis must be developed for this feature of work. The plan must include a detailed explanation of the type or types of physical barriers, curbs, structures, etc., which will be incorporated to protect the operator and prevent the equipment from entering the water. Nonstructural warning devices may be considered for situations where the use of structural barriers is determined to be impracticable. The activity hazard analysis must thoroughly address the procedure and be submitted to the Corps for review and acceptance prior to start of this feature of work.

b. The stability of crawler, truck, and wheel-mounted cranes shall be assured.

(1) The manufacturer's load-rating chart may be used to determine

the maximum allowable working load for each particular crane's boom angle provided a test load, with a boom angle of 20 degrees, confirms the manufacturer's load-rating table.

(2) Stability tests are required if:

(i) there is no manufacturer's load-rating chart securely fixed to the operator's cab;

(ii) there has been a change in boom or other structural member or,

(iii) there has been a change in the counterweight.

The test shall consist of lifting a load with the boom in the least stable undercarriage position and at an angle of 20 degrees above the horizontal. The test shall be conducted under close supervision on a firm, level surface. The load that tilts the machine shall be identified as the test load. The test load moment (in ft-lbs) shall then be calculated by multiplying the horizontal distance (in ft) from the center of rotation of the machine to the test load, times the test load (in lbs). Three-fourths of this test-load moment shall then be used to compute the maximum allowable operating loads for the boom at 20, 40, 60, and 80 degrees above horizontal. From these maximum allowable operating loads, curve shall be plotted and posted in the cab of the machine in sight of the operator. These values shall not be exceeded except in the performance test described below. The test load shall never exceed 100 percent of the manufacturer's maximum rated capacity.

(3) In lieu of the test and computations above, the crane may be load tested for stability at each of the four boom positions listed above.

c. Performance tests shall be performed in accordance with Section 16, "Machinery and Mechanized Equipment" of EM 385-1-1, U.S. Army Corps of Engineers Safety and Health Requirements Manual, except as specified below. Performance tests shall be conducted after each stability test, when the crane is placed in service on a project, and at least every 12 months.

(1) When conducting a performance load test which is required of a new crane or a crane in which load sustaining parts have been altered, replaced, or repaired (excluding replacement of the rope), the test load shall be as specified in ASME/ANSI B30 Series. That is, for overhead, gantry, portal, pillar, tower, monorail, and underhung cranes, the test load shall not exceed 125 percent of the manufacturer's load rating capacity chart at the configuration of the test; and for hammerhead tower, mobile, and floating cranes and boom trucks, the test load shall not exceed 110 percent of the manufacturer's load rating capacity chart at the configuration of the test.

(2) When conducting a performance load test which is required because a crane is reconfigured, or reassembled after disassembly, or because the crane requires an annual load test, the test loads shall not exceed 100 percent of the manufacturer's load rating capacity chart at the configuration of the test.

(3) All load tests are required to be conducted in accordance with the manufacturer's recommendations.

d. Inspections shall be made which will ensure a safe and economical operation of both cranes and draglines with inspection documented. Copies of the inspections and tests shall be available at the job site for review. All stability and performance tests on cranes and all complete dragline inspections shall be witnessed by the Contracting Officer or his authorized representative.

e. A complete dragline inspection shall be made:

(1) at least annually;

(2) prior to the dragline being placed in operation; and

(3) after the dragline has been out of service for more than 6 months.

f. All heavy equipment moved onto the worksite shall be inspected for compliance with this contract. Some MVD Inspection forms are attached at the end of this section. All completed forms, including abatement schedule of any violations, shall be maintained at the job site for continued review and update as needed.

#### 1.24 FLOATING PLANT AND MARINE ACTIVITIES

All of the Contractor's floating plant and marine activities shall be in accordance with the requirements of EM 385-1-1, Section 19, entitled "Floating Plant and Marine Activities".

#### 1.25 VEHICLE WEIGHT LIMITATIONS

Vehicle weight limitations for operation on rural roads and bridges may affect the prosecution of work in this contract. The Contractor will be responsible for obtaining all necessary licenses and permits in accordance with the Contract Clause PERMITS AND RESPONSIBILITIES. Current information regarding road and bridge weight limits may be obtained by contacting the Mississippi Department of Transportation and the president of the county Board of Supervisors for the counties through which equipment and materials will be transported as a result of this contract.

#### 1.26 PUBLIC AND PRIVATE UTILITIES

a. Unless otherwise specified, shown on the drawings, or stated in writing by the Contracting Officer, the Contractor shall not remove or disturb any public or private utilities. Such removals, alterations, and relocations, where necessary, will be made by others. The locations, if any, shown on the drawings for underground utilities are approximate only. The exact locations of such utilities shall be determined by the Contractor in the field prior to commencing construction operations in their vicinity.

b. The attention of the Contractor is directed to the possibility that he may encounter, within the right-of-way limits, utilities, some of which may be buried, and the existence of which is presently not known. Should any such utilities be encountered, the Contractor shall immediately notify the Contracting Officer so that he may determine

whether they shall be removed, relocated, or altered. After such determination is made, the Contractor shall, if so directed by the Contracting Officer, remove, relocate, or alter them as required, and an equitable adjustment will be made in accordance with the Contract Clause CHANGES. In event the Contracting Officer arranges for such removals, alterations, or relocations to be performed by others, the Contractor shall cooperate with such others during the latter's removal, alteration, or relocation operations in accordance with the Contract Clause OTHER CONTRACTS.

1.27 DAMAGE TO WORK

a. The responsibility for damage to any part of the permanent work shall be as set forth in the Contract Clause PERMITS AND RESPONSIBILITIES. However, if, in the judgement of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood (see Section 00800 SPECIAL CONTRACT REQUIREMENTS, paragraph PHYSICAL DATA, subparagraph FLOODS) or earthquake, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor shall make repairs as ordered by the Contracting Officer and full compensation for such repairs to permanent work will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, for any part of such damaged permanent work, there is no applicable contract unit or lump sum price, then an equitable adjustment pursuant to the Contract Clause CHANGES will be made as full compensation for the repairs for that part of the permanent work for which there is no applicable contract unit or lump sum price.

b. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment, and plant shall be repaired to the satisfaction of the Contracting Officer, at the Contractor's expense, regardless of the cause of such damage.

1.28 ENERGY CONSERVATION

The Contractor shall ensure that construction operations are conducted efficiently and with the minimum use of energy.

1.29 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

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

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

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

b. The following schedule of monthly anticipated adverse weather

delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY  
WORK DAYS BASED ON FIVE (5) DAY WORK WEEK

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC  
(6) (4) (4) (4) (4) (4) (4) (3) (3) (3) (4) (4)

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

1.30 CONTROL OF ACCESS TO CONSTRUCTION AREAS

a. This paragraph supplements the Contract Clauses PERMITS AND RESPONSIBILITIES and OPERATIONS AND STORAGE AREAS.

b. It shall be the responsibility of the Contractor to prevent possible injury to visitors to the project site. Except as specified in paragraph MAINTENANCE OF TRAFFIC AND ACCESS TO ADJACENT LANDS, below, only personnel engaged in contract work and others authorized by the Contracting Officer shall be permitted to enter into the construction areas. Suitable barriers, warning signs and directives shall be placed by the Contractor to direct persons not engaged in the work away from the areas of danger. The Contractor shall be responsible for effective enforcement of this paragraph during the period of this contract.

1.31 MAINTENANCE OF TRAFFIC AND ACCESS TO ADJACENT LANDS

a. The Contractor shall conduct his operations in such manner as to offer the least possible obstruction to the safe and satisfactory movement of traffic over the existing roads during the life of the contract. The Contractor shall continuously maintain access to Shipland Wildlife Management Area (WMA) (see paragraph ORDER OF WORK). For purposes of traffic control, the levee crown from newly constructed y-ramp at approx. station 7418 to the Shipland WMA access at approx. station 7330 shall be considered an area open to public access during which time traffic to Shipland WMA must be rerouted through this reach. Temporary signage, including Shipland WMA routing signs, and all necessary traffic controls, including flagmen, shall be provided at all intersections and other appropriate locations to direct traffic and

ensure safe passage of motorists. Signage as a minimum shall include speed limit signs, directional signs, warning signs, and other traffic control signage as necessary to ensure safety. Also, the Contractor shall continuously maintain access to the riverside ramp at station 7029+00 (see paragraph ORDER OF WORK). Signage and traffic controls shall be provided along the access as necessary to direct traffic and ensure safety. In addition to the access(s) provided for Shipland WMA and the riverside ramp at station 7029+00, other landowners and/or leaseholders will require access to private lands adjacent to the project site. The Contractor shall be accommodating to such occurrences and shall maintain reasonable access. At no additional cost to the Government, the Contractor shall limit construction operations to such length as necessary to meet the maintenance of traffic and access requirements of the contract and ensure safety.

b. The Contractor shall be responsible for providing, erecting, cleaning, repairing, maintaining, replacing as necessary, and removal of all traffic signs, barricades, and other traffic control devices necessary for maintenance of traffic and access to adjacent lands. See also paragraph entitled ACCIDENT PREVENTION PLAN and the Contract Clause entitled ACCIDENT PREVENTION.

c. All barricades, warning signs, lights, temporary signals, other devices, flagmen, and signaling devices shall meet or exceed the minimum requirements of Mississippi DOT, Standard Specifications for Road and Bridge Construction. (See EM 385-1-1, U.S. Army Corps of Engineers Safety and Health Manual, 3 Section 21, Paragraph 21.1.09.) The Contractor is responsible for the protection, cleaning, maintenance, and replacement of all existing signs, route markers, traffic control signals, and other traffic control features during the life of this contract.

d. Prior to the commencement of construction operations the Contractor shall submit for review and acceptance of the Contracting Officer, complete details of his proposed plans for the maintenance of traffic and access through the construction area, including all proposed temporary signage. Special emphasis shall be placed on the Contractor's plan for ensuring safety in those areas open to public access. Acceptance of the Contractor's plan is conditional and will be predicated on satisfactory performance during the construction. The Contractor is responsible for monitoring and maintaining the effectiveness of the plan. As the work progresses, and at no additional cost to the Government, the Contractor shall take all corrective action and/or make adjustments to the maintenance of traffic plan, traffic controls and signage as necessary to maintain satisfactory performance and ensure safety. Proposed changes shall be coordinated with and approved by the Contracting Officer.

e. No separate measurement or payment will be made for meeting the requirements of this paragraph.

#### 1.32 HARBOR MAINTENANCE FEE

a. Offerors or bidders contemplating use of U.S. ports in the performance of contract are subject to paying a harbor maintenance fee on cargo. Federal law establishes an ad valorem port use fee on commercial cargo imported into or exported from various U.S. ports. The fee is 0.125 percent (0.00125). Cargo to be used in performing work under contracts with the U.S. Government is not exempt from the

fee, although certain exemptions do exist. Offerors are responsible for ensuring that the applicable fee and associated costs are taken into consideration in the preparation of their offers. Failure to pay the harbor maintenance fee may result in assessment of penalties by the Customs Service.

b. The statute is at Title 26 U.S. Code section 4461 and 4462. Department of Treasury Customs Service regulations implementing the statute, including a list of ports subject to the fee, are found at 19 CFR 24.24, Harbor Maintenance Fee. Additional information may be obtained from local U.S. Customs Service Offices or by writing to the Director, Budget Division, Office of Finance, Room 6328, U.S. Customs Service, 1301 Constitution Avenue, N.W., Washington, D.C. 20229.

#### 1.33 MEANS OF ESCAPE FOR PERSONNEL QUARTERED OR WORKING ON FLOATING PLANT

Two means of escape shall be provided for assembly, sleeping, and messing areas on floating plants. For areas involving 10 or more persons, both means of egress shall be through standard size doors opening to different exit routes. Where nine or fewer persons are involved, one of the means of escape may be a window (minimum dimensions 24 inches by 36 inches) which leads to a different exit route. Refer to Section 19, "Floating Plant and Marine Activities" of EM 385-1-1, U.S. Army Corps of Engineers Safety and Health Requirements Manual.

#### 1.34 EMERGENCY ALARMS AND SIGNALS

a. Alarms. Emergency alarms shall be installed and maintained on all floating plant requiring a crew where it is possible for either a passenger or crewman to be out of sight or hearing from any other person. The alarm system shall be operated from the primary electrical system with standby batteries on trickle charge that will automatically furnish the required energy during an electrical-system failure. A sufficient number of signaling devices shall be placed on each deck so that the sound can be heard distinctly at any point above the usual background noise. All signaling devices shall be so interconnected that actuation can occur from at least one strategic point on each deck.

b. Signals.

(1) Fire Alarm Signals. The general fire alarm signal shall be in accordance with Paragraph 97.13-15b of the "Coast Guard Rules and Regulations for Cargo and Miscellaneous Vessels", Sub-Chapter 1, 1 Sep 77 (CG 257).

(2) Abandon Ship Signals. The signal for abandon ship shall be in accordance with Paragraph 97.13-15c of reference cited in paragraph "b(1)" above.

(3) Man-Overboard Signal. Hail and pass the word to the bridge. All personnel and vessels capable of rendering assistance shall respond.

#### 1.35 SIGNAL LIGHTS (JAN 1965)

The Contractor shall display signal lights and conduct his operations in accordance with the regulations of the Department of the Army and of the Coast Guard covering lights and day signals to be displayed, by towing vessels with tows on which no signals can be displayed, vessels working on

wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operation; lights to be displayed on dredge pipelines, and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by other vessels of floating plant working in navigable waters see for example, 33 CFR 84 through 89. (See also Contract Clause, PERMITS AND RESPONSIBILITIES.)

#### 1.36 COOPERATION WITH OTHER CONTRACTORS

This paragraph supplements the Contract Clause OTHER CONTRACTS.

The adjacent Items 496-L and 477-L will be under contract during this contract. There is an overlap of right-of-way between Item 488-L and both adjacent items. The Contractor shall fully cooperate with each of the other Contractors and with Government employees and carefully fit his work to such adjacent work as may be directed by the Contracting Officer. The Contractor shall not commit or permit any act which will interfere with the performance of work on adjacent items by the other Contractor or by Government employees. Any costs or delays associated with fully complying with the provisions of this paragraph shall not form the basis for a claim against the Government.

#### 1.37 ACCEPTANCE OF COMPLETED WORK

For the purpose of acceptance, the work to be done is divided into sections as follows:

- a. Sections of levee embankment 500 feet long continuously from the upper end of the item.
- b. Sections of berm embankment 500 feet long continuously from the upper end of the item.
- c. Sections of retaining dike embankment 500 feet long continuously from the upper end of the item.
- d. All remaining work.

#### 1.38 WORK ON OR ADJACENT TO FACILITIES AND PROPERTY OF TENNESSEE GAS PIPELINE COMPANY

(This clause supplements the the Contract Clause PERMITS AND RESPONSIBILITIES.

For all work within 500 feet of the existing gas pipelines identified on the contract drawings as "EL PASO PIPELINE GROUP GAS PIPELINE", the Contractor shall without any additional expense to the Government be responsible for obtaining a permit and license from Tennessee Gas Pipeline Company (Tennessee), and shall provide a signed copy of the permit and license to the Contracting Officer at least 14 days prior to performing any work on or adjacent to the existing gas pipeline corridor and property of Tennessee. The Contractor shall have the pipeline owner mark the location of each pipeline in the field, shall take all necessary safety precautions while performing work on or adjacent to the gas pipeline, and shall fully comply with the terms of the permit and license, including all crossing requirements. The Contractor shall at all times conduct his work with care so as to not damage the gas pipeline or property, or interfere with the operations of Tennessee. The terms of the permit and license (as provided

by Tennessee Gas Pipeline Company) will be as below:

PERMIT AND LICENSE

For the Construction of a Water Pipeline upon, over, and adjacent to the facilities and property of Tennessee Gas Pipeline Company

1. PERMITEE agrees that Tennessee, by consenting to the construction of the said water pipeline does not relinquish any of its property rights, titles, or interest in or over its existing property.
2. The PERMITEE agrees that any equipment, either wheeled or tracked, has the potential to damage Tennessee's underground pipelines and presents a danger to the public-at-large unless a substantial hard surface cover is placed and maintained over the pipelines. The PERMITEE therefore agrees to:
  - a. Maintain adequate surface cover over Tennessee's pipelines (as determined by the size, frequency, and loads exerted by equipment that are proposed to be stored or used in conjunction with the construction, use, maintenance, removal, or relocation of the proposed water pipeline); Equipment load limitations for safe crossings are as follows:
    - 1) Wheeled Equipment crossing over pipelines using only a wooden mat or mats over existing surface cover. Weight per axle shall not exceed 35,000 Lbs. To determine weight per axle, divide total weight of loaded vehicle by number of axles.
    - 2) Wheeled Equipment crossing over pipelines using an additional dirt ramp over existing surface cover; total cover over pipelines is equal to five (5) feet. Weight per axle shall not exceed 55,000 lbs. To determine weight per axle, divide total weight of loaded vehicle by number of axles.
    - 3) Tracked Equipment crossing over pipelines using only a wooden mat or mats over existing surface cover. Total weight of equipment shall not exceed 190,000 Lbs.
    - 4) Tracked Equipment crossing over pipelines using an additional dirt ramp over existing surface cover; total cover over pipelines is equal to five (5) feet. Total weight of equipment shall not exceed 115,000 Lbs.
    - 5) Vehicle weights exceeding the above four crossing scenarios will utilize a bridging method of crossing constructed using a combination of earthen ramps and wooden mats.
  - b. Avoid parking vehicles directly over any of Tennessee's pipelines (as can be practically accomplished) during the construction, maintenance, and use of the contemplated water pipeline;
  - c. Inform all equipment operators that move equipment within the confines of the construction easement area of the location of Tennessee's pipelines on this property and of the restrictions and limitations for crossing these facilities.
  - d. Allow Tennessee to inspect and evaluate all vehicle crossing points to determine the adequacy of such crossings. If at any time such crossings are determined to be inadequate to support the vehicle

traffic load, the PERMITEE will take action as is necessary to quickly remedy or correct such inadequate crossings to allow for the safe passage of equipment and personnel over Tennessee's high-pressure gas pipelines.

3. The PERMITEE agrees to indemnify, defend and hold Tennessee harmless from any loss, liability, claims or damages arising out of the construction, installation, operation, or maintenance of the proposed water line or vehicle crossing points, under this agreement, where such loss, liability, claim or damage is caused by the PERMITEE, its employees, contractors, or subcontractors through any act, omission, or negligence.

4. The PERMITEE acknowledges that Tennessee is required by federal regulations to maintain the integrity of its natural gas pipelines and understands that from time to time, Tennessee will excavate, inspect, remove, replace, or change the size of its facilities on this property to comply with such regulations. The PERMITEE therefore agrees that by installing its water pipeline over the herein mentioned easement area that the PERMITEE assumes all risks for construction delays (including loss of use) associated with Tennessee occupying the water pipeline easement area and complying with its obligations under such regulations, at any time during the term of this permit.

5. In the event of emergency repairs to Tennessee's facilities on the property, the PERMITEE agrees to remove that portion of the proposed water pipeline that impedes such repairs from within the limits of Tennessee's pipeline corridor within 10 days of proper written notice and/or to suspend water pipeline operations within 12 hours of emergency notification (whether delivered by verbal, personal, or written means).

6. The PERMITEE agrees to notify Tennessee's representative, Mr. Bailey Hankins, 272 Tennessee Gas Road, Greenville, Mississippi 71457 at telephone (662) 390-4522 at least three (3) business days prior to adding fill, removal of soil cover, or moving equipment (in excess of 60,000 lbs. gross vehicle weight) within Tennessee's pipeline corridor or over Tennessee's facilities.

7. The PERMITEE agrees that no additional encroachments (other than the water pipeline contemplated within this Permit) are permissible to be placed within Tennessee's property boundaries or easements or to cross Tennessee's high-pressure pipelines without the expressed written consent of Tennessee.

8. The Permit is personal to Tennessee and the PERMITEE and is not transferable or assignable without the expressed written consent of Tennessee. This Permit will expire 60 months from the below executed date, at which time the PERMITEE will peaceably remove its water pipeline and restore Tennessee's easement to an environmental condition comparable to that which existed prior to the proposed water pipeline construction.

9. A letter of acknowledgement and agreement concerning all of the above conditions of the Permit is required to be executed by the PERMITEE and to be sent to: Tennessee Gas Pipeline Company, Attn: Randy Keyes, 200 Worthey Road, West Monroe, LA 71291 prior to the PERMITEE conducting its operations over, upon, or on the property or facilities of Tennessee.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

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SECTION 02111

CLEARING AND GRUBBING

PART 1 GENERAL (Not Applicable)

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

All clearing and grubbing work, including vegetation removal, for levee embankment (including ramps and spur dike enlargement), berm embankment, slough crossing embankment, ditch dike embankment, retaining dike embankment, and hydraulic sand fill shall be completed at least 500 feet but no more than 1,000 feet in advance of construction. If regrowth of vegetation or trees occurs after clearing and grubbing and before placement of embankment or hydraulic sand fill, the Contractor will be required to clear and grub the area again prior to embankment and hydraulic sand fill construction, and no payment will be made for this additional clearing and grubbing. Clearing and grubbing shall also include complete removal of the existing buildings, barns, foundations, septic/sewage system, waterlines, gas lines, tanks, and other appurtenances as indicated on the drawings.

3.2 CLEARING

3.2.1 General

Clearing, unless otherwise specified, shall consist of the complete removal above the ground surface, except as indicated below, of all trees, stumps, down timber, snags, brush, vegetation, old piling, loose stone, abandoned structures, abandoned fencing, fencing, drift, trash, and similar debris. Growth standing in water in areas which are not drained in accordance with Section 02231 EMBANKMENTS, paragraph DRAINAGE, may be cut off so as not to protrude more than 2 feet above the existing water surface.

3.2.2 Merchantable Timber

The landowners have reserved the right to harvest timber (timber reservation) within the rights-of-way until 01 ~~July~~September 2003, on which date the timber reservation is to be considered fulfilled. The merchantable trees that existed within the areas that are required to be cleared and grubbed will likely be reduced to stumps, scattered downed tree tops, and related debris by the landowner's timber harvesting operations prior to issuance of Notice to Proceed. Deep ruts from logging equipment may exist. No payment will be made for any additional costs the Contractor may incur due to this timber harvesting operation, and all costs therefor shall be included in the lump sum contract price for "Clearing and Grubbing". Merchantable timber remaining within the areas required to be cleared and grubbed on or after the date of Notice to Proceed shall not become the property of the Contractor, and shall be satisfactorily disposed of in accordance with paragraph DISPOSAL OF DEBRIS. Notice to Proceed will not be issued prior to the date provided for the fulfillment of the timber reservation. The Contractor is precluded from making any claim for time extensions, costs, or damage to his operations by reason of the timber

harvesting operations, or by reason of the existence or nonexistence of timber, crops, debris, or stumps within the areas required to be cleared and grubbed after timber harvesting operations are complete.

### 3.2.3 Trees

Trees shall be felled in such a manner so as to avoid damage to trees to be left standing, to existing structures and installations, and to those under construction, and with due regard for the safety of employees and others.

### 3.2.4 Vegetation Removal

a. Landside Berm and 4 Foot Required Excavation - Where the existing berm and adjacent natural ground is used for borrow material, the vegetation to be removed shall consist of grass, bushes and weeds. The Contractor shall mow or clip this vegetation to a height not to exceed 4 inches, burn the clippings, and disk the area to a minimum depth of 6 inches. This top 6 inches of material shall then be used for borrow material to construct the landside retaining dikes and cross dikes.

b. Embankment Areas - Vegetation to be removed shall consist of crops, grass, bushes and weeds. Close-growing grass and other vegetation shall be removed from areas to receive semicompacted embankment and uncompacted retaining dike embankment to provide a completely bare earth surface immediately prior to foundation preparation. Vegetation on the existing levee slope shall be removed at least 10 feet but no more than 25 feet upslope from embankment construction. Acceptance of the vegetation removal operation shall precede the initiation of foundation preparation in the area from which vegetation has been removed.

c. Uncompacted Berm and Hydraulic Sand Fill - For areas to receive uncompacted fill and hydraulic sand fill, grass and other vegetation shall be mowed or clipped to a height not to exceed 4 inches above the ground surface or existing embankment, and the resulting grass and other vegetation cuttings shall be burned and/or removed prior to placing fill.

### 3.2.5 Buildings, Foundations, Appurtenances and Debris

The Contractor shall completely remove, excavate as necessary, and dispose the existing buildings, barns, foundations, septic/sewage system, waterlines, gas lines, tanks, and other appurtenances as indicated on the drawings.

### 3.2.6 Areas to be Cleared

#### 3.2.6.1 General

Unless otherwise required, the entire area to be occupied by the levee embankment (including ramps and spur dike enlargement), berm embankment, retaining dike embankment, slough crossing embankment, ditch dike embankment, and hydraulic sand fill, together with strips 5 feet wide contiguous to each of the above areas, road ramps, traverses, and ditches shall be cleared.

#### 3.2.6.2 Borrow Areas

All of Borrow Areas 1 & 2 shall be cleared. Clearing of Borrow Area 3

shall be performed in approved increments or reaches parallel to the centerline of the levee so that only that portion of the borrow area from which material is obtained will be cleared. All clearing shall be to the extent necessary to provide materials free from unsuitable matter as defined in Section 02231 EMBANKMENTS, paragraph UNSUITABLE MATERIALS. In Borrow Areas 2 and 3, certain stumps and areas containing masses of organic matter or other unsuitable material may be left in place upon approval of the Contracting Officer. All unsuitable material shall be removed from Borrow Area 1.

#### 3.2.6.3 Other Areas

Clearing of the area between the 5 foot strip contiguous to the required embankment, borrow areas, and traverses from borrow areas, shall be limited to the minimum required for construction operations.

### 3.3 GRUBBING

#### 3.3.1 General

Grubbing shall consist of the removal of all stumps, roots, buried logs, old piling, old paving, old foundations, pipes, drains, and other unsuitable matter as described in Section 02231 EMBANKMENTS, paragraph UNSUITABLE MATERIALS.

#### 3.3.2 Areas to be Grubbed

##### 3.3.2.1 Embankments

Unless otherwise required, grubbing shall be performed within the limits of the levee embankment (including ramps and spur dike enlargement), berm embankment, retaining dike embankment, ditch dike embankment, slough crossing embankment, and hydraulic sand fill, together with the 5 foot strips contiguous to each of the above areas. All roots and other projections over 1 1/2 inches in diameter shall be removed to a depth of 3 feet below the natural surface of the ground or surface of existing embankments and to a depth of 3 feet below the subgrade for the foundation of structures. The areas to be grubbed are those specific areas, within the limits specified herein, from which trees, stumps, down timber, snags, old piling, abandoned structures, and other projections have been removed. In the event the areas specified in Section 02231 EMBANKMENTS, paragraph DRAINAGE are not drained, and growth and projections standing in water are cut off as permitted in paragraph CLEARING, subparagraph GENERAL, grubbing within such areas will not be required.

##### 3.3.2.2 Ditches

All stumps and exposed roots and other obstructions shall be removed from within the limits of all ditches to be constructed.

#### 3.3.3 Borrow Areas

Only those portions of the borrow areas from which borrow material will actually be obtained under this contract shall be grubbed, and this grubbing shall be to the extent necessary to provide materials free from unsuitable matter as described in Section 02231 EMBANKMENTS, paragraph UNSUITABLE MATERIALS.

#### 3.3.4 Pipes and Drains

The Contractor shall inform the Contracting Officer of all pipes and drains not shown on the drawings which are encountered during grubbing. Such pipe and drains shall not be removed or disturbed until so directed by the Contracting Officer. Material excavated in the process of removing pipes and drains shall be disposed of as specified in Section 02222 EXCAVATION, paragraph DISPOSITION OF MATERIALS.

### 3.3.5 Filling of Holes

All holes caused by grubbing operations and removal of pipes and drains, excluding holes in borrow areas, shall be backfilled with suitable material in 12 inch layers to the elevation of the adjacent ground surface, and each layer compacted to a density at least equal to that of the adjoining undisturbed material.

## 3.4 DISPOSAL OF DEBRIS

### 3.4.1 General

The primary method of disposing of all debris resulting from clearing and grubbing operations, not including removal of existing buildings and appurtenances, shall be burning as specified in paragraph BURNING. The following additional methods will also be permitted: piling of debris as limited by paragraph DEBRIS PILES, burying in accordance with paragraph BURYING, or removal from the site in accordance with paragraph REMOVAL FROM SITE OF WORK. However, vegetation from vegetation removal operations may be stockpiled in approved locations and used for a top dressing after embankment is complete and prior to turving operations.

### 3.4.2 Burning

In accordance with the Contract Clause PERMITS AND RESPONSIBILITIES, the Contractor shall obtain any permit which may be required for burning. Subject to applicable Federal, State and local laws and burning restrictions, the Contractor may burn material within the contract area at any time within the contract period. The Contractor shall thoroughly burn clearing debris and continue burning until as much debris as practicable is completely reduced to ashes. Burning operations shall be conducted so as to prevent damage to standing timber or other flammable growth. The Contractor shall be responsible for any damage to life and property resulting from fires that are started by his employees or as a result of his operations. The Contractor shall furnish adequate fire fighting equipment at the site of burning operations to properly equip his personnel for fighting fires. Fires shall be guarded at all times and shall be under constant surveillance until they have been extinguished.

### 3.4.3 Debris Piles

The Contractor will be allowed to pile debris at approved locations and to approved heights within Borrow Area 2 only to the extent necessary, in the opinion of the Contracting Officer, to form sufficient aquatic habitat.

### 3.4.4 Burying

Upon approval, the Contractor will be allowed to bury debris that is unburnable and debris that has been thoroughly burned but cannot be further reduced to ashes. The Contracting Officer will determine which debris is unburnable and which debris cannot be further reduced to ashes. The area

available for burial will be adjacent to the riverside limit of excavation within Borrow Areas 2 and 3. Excavating below the required excavation depth of the borrow areas as shown will not be permitted. All material disposed of by burying shall be covered with a minimum of 24 inches of earth. No material shall be buried within 20 feet of any standing timber.

#### 3.4.5 Removal from Site of Work

The Contractor may elect to remove all or part of the debris from the site of the work, but the Contractor is prohibited from the sale of timber. Such disposal shall comply with all applicable Federal, State and local laws. All debris from removal of the existing buildings and appurtenances that cannot be burned shall be removed from the site of work. If debris from clearing operations is placed on adjacent property, the Contractor shall obtain, without cost to the Government, additional right-of-way for such purposes in accordance with Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph RIGHTS-OF-WAY. Such material shall be so placed as not to interfere with roads, drainage or other improvements and in such a manner as to eliminate the possibility of its entering into channels, ditches, or streams. The Contracting Officer reserves the right to approve or disapprove the use of Contractor-furnished disposal areas based on the location of the areas and a determination of the overall impact the proposed disposal areas will have on the environment or the integrity of the levee. Contractor-furnished disposal areas shall not be located in woodlands or wetlands. Disapproval by the Contracting Officer of Contractor-furnished disposal areas shall not form the basis of a claim against the Government.

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SECTION 02222

EXCAVATION

PART 1 GENERAL

1.1 MEASUREMENT AND PAYMENT

1.1.1 Measurement

1.1.1.1 Excavation

Excavation required by this section, including materials excavated in connection with excavating existing berms (including the four feet of required excavation below the existing berm as shown on the drawings), degrading retaining dikes, and all other required excavations will not be measured for payment, except for materials ordered wasted by the Contracting Officer.

1.1.1.2 Waste Materials

Materials ordered wasted by the Contracting Officer will be measured for payment by the cubic yard, and quantities will be determined by the Government. The basis of measurement will be a survey of the area taken by the Government prior to the excavation and a second survey of the same area after completion of the excavation.

1.1.2 Payment

1.1.2.1 Excavation

No separate payment will be made for excavation, except for materials ordered wasted by the Contracting Officer, and all costs for excavation shall be included in the applicable contract unit or lump sum prices for the required embankments that the excavated materials form a part.

1.1.2.2 Waste Materials

Payment for materials ordered wasted will be made by an equitable adjustment under the Contract Clause CHANGES.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 HAUL ROADS

As much as practicable, material suitable for embankment shall not be used to construct haul roads. Haul roads between borrow areas and fill areas shall meet the minimum requirements specified herein. At no additional cost to the Government, the Contractor shall increase the minimum specified requirements as necessary, due to job site conditions, to assure safe operations. Whenever practical, one-way haul roads shall be used. Haul roads used for this work shall comply with the following:

- (a) One-way haul roads for off-the-road haulage equipment; (e.g.,

belly dumps, scrapers, and off-the-road trucks) shall have a minimum usable width of 25 feet. One-way haul roads for over-the-road haulage equipment (e.g., dump trucks, etc.) shall have a minimum usable width of 15 feet.

When it is impractical to obtain the specified minimum widths for one-way haul roads (e.g., a road on top of a levee), a usable width of not less than 10 feet may be approved, provided a positive means of traffic control is implemented. Such positive means shall include signs, signals, or signalmen and an effective means of speed control.

(b) Two-way haul roads for off-the-road haulage equipment shall have a minimum usable width of 60 feet. Two-way haul roads for over-the-road haulage equipment shall have a minimum usable width of 30 feet.

(c) Haul roads shall be maintained to keep the surface free from potholes, ruts and similar conditions that could result in unsafe conditions. Haul roads shall be maintained free of all construction related debris, including loose riprap.

(d) Curves and changes in grade shall allow a minimum sight distance of 200 feet for one-way haul roads and 300 feet for two-way haul roads. Sight distance is defined as the centerline distance an equipment operator (4.5 feet above the road surface) can see an object 4.5 feet above the road surface. When conditions make it impractical to obtain the required minimum sight distances (e.g., ramps over levees), a positive means of traffic control shall be implemented.

(e) Dust abatement shall permit observation of objects on the roadway at a minimum distance of 300 feet.

(f) Haul roads shall have the edges of the usable portion marked with posts at intervals not greater than 50 feet on curves and not greater than 200 feet elsewhere. Such markers shall extend 6 feet above the road surface, and for nighttime haulage shall be provided with reflectors in both directions.

(g) Haul roads shall not block or impede drainage in or through the right-of-way. The Contractor is responsible for any damages resulting from haul roads blocking or impeding drainage. (See the Contract Clause PERMITS AND RESPONSIBILITIES.)

### 3.2 EXCAVATION IN BORROW AREAS

#### 3.2.1 General

Excavation shall be as specified herein and in accordance with the applicable provisions of Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph ORDER OF WORK. The rights-of-way and earth materials for constructing the work will be furnished without cost to the Contractor at locations specified herein and shown on the drawings. Contractor furnished borrow areas will not be permitted. Notwithstanding any other provision of this contract the Contractor is required to obtain all borrow material (except hydraulic sand fill) from Borrow Areas 1, 2 and 3, the existing berm required to be degraded or excavated, ditches, degrading of retaining dikes to the existing ground on which they were constructed, the portions of the existing riverside slope of the levee where material is above gross grade and shown to be removed, and other required excavations. The material shall be excavated to the limits shown on the drawings, within an

allowable tolerance of plus or minus 2/10 of one foot. The extreme tolerances provided herein shall not be continuous over an area greater than 1,000 square feet and abrupt changes from one extreme to the other will not be permitted.

#### 3.2.1.1 Equipment

The Contractor shall provide the types of equipment as necessary to perform the required excavation according to the in situ conditions of the borrow areas.

#### 3.2.2 Borrow Areas For All Material Except Hydraulic Sand Fill

Borrow areas for all material except hydraulic sand fill shall conform to requirements prescribed herein and as shown on the drawings. The material necessary for the construction of the embankments (not including hydraulic sand fill) shall be procured from borrow areas and the required excavations by haulage or otherwise. The required excavation depths or required excavation lines and grades in the borrow areas are indicated on the drawings, but the right is reserved in accordance with the Contract Clause CHANGES to modify the required depths in accordance with subsurface conditions determined as the work proceeds. Excavation to the required depths may require excavation below the ground water table. Abrupt changes in grade shall be avoided. Unsuitable material wasted in Borrow Areas 2 and 3 shall be sloped to drain. Excavation below the required depths shown or the required excavation lines and grades shown will not be permitted. Any excavation found to be below the depths and slopes specified herein, or shown on the drawings, shall be backfilled by the Contractor, at no cost to the Government, to the required depths or the required excavation lines with suitable embankment material placed and compacted in accordance with Section 02231 EMBANKMENTS, paragraph SEMICOMPACTED EMBANKMENT. The borrow areas excavated under this paragraph shall be drained of water regardless of its source, including subsurface water, and kept free of water during excavation, as excavation will not be permitted in water nor shall excavated material be scraped, dragged or otherwise moved through water. Drainage of borrow areas shall be accomplished by ditching, sump pumping or other approved methods. The borrow areas excavated under this contract and inundated from high stages shall be drained and allowed to dry to a workable condition as quickly as practicable after the high stage has passed. Rights-of-way will be furnished by the Government at the locations shown on the drawings. The Contractor, at his option, may use rights-of-way other than those furnished by the Government provided that no additional clearing is required, and their location and dimensions are approved by the Contracting Officer, and provided that the Contractor has obtained the rights-of-way in accordance with Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph RIGHTS-OF-WAY. To conserve arable land and make optimum use of available borrow, excavation in Borrow Areas 1, 2 and 3 shall be as follows:

- a. Excavation in Borrow Area 1 shall begin at the upstream leveeward limit, proceed continuously downstream at full width and full depth in reaches not more than 500 feet long, and all material in each reach shall be utilized before excavation may proceed downstream to the next 500 foot reach. Reaches in Borrow Area 1 shall be measured perpendicular to the levee centerline.
- b. Excavation in Borrow Area 2 shall begin at the upstream leveeward limit, proceed continuously downstream at full width and full depth in reaches not more than 500 feet long, and all available suitable

material in each reach (except for the traverse and portion of existing road shown to remain) shall be utilized before excavation may proceed downstream to the next 500 foot reach. Reaches in Borrow Area 2 shall be measured perpendicular to the levee centerline.

c. Excavation in Borrow Area 3 shall begin at the downstream leveeward limit, and proceed continuously riverward at full width and full depth, parallel to the levee centerline, only until enough suitable material is obtained to complete the required embankments.

The bottom of Borrow Areas 1, 2 and 3 excavated under this contract shall be dressed to the extent necessary to provide a reasonably smooth surface that can be readily traversed by a 50 to 60 horsepower farm tractor pulling a rotary type pasture mower. The Contractor shall submit an excavation plan for approval by the Contracting Officer and shall not begin excavation until the Contracting Officer's approval has been received. The plan shall contain, as a minimum, the following:

a. The Contractor's proposals for implementing Section 01354 ENVIRONMENTAL PROTECTION insofar as that section applies to borrow areas.

b. The Contractor's proposed methods for draining and keeping the borrow areas free of water during excavation under this contract.

c. The Contractor's proposed methods for draining borrow areas excavated under this paragraph which may be inundated by high stages.

d. A statement indicating whether the Contractor proposes to use:

(1) Government-furnished rights-of-way;

(2) Contractor-furnished rights-of-way; or

(3) A combination of Government-furnished and Contractor-furnished rights-of-way.

e. For Contractor-furnished rights-of-way, the plan shall contain all of the information required herein and the Contractor's proposals for implementing Section 01354 ENVIRONMENTAL PROTECTION, insofar as that section applies to rights-of-way.

f. The Contractor's proposals for conserving arable land and for making optimum use of available borrow, including the Contractor's proposed methods for smoothing the bottom of the borrow areas after having completed use of the borrow areas.

### 3.2.3 Borrow From Berms and Four Foot Required Excavation

The designated reaches of berms, and designated reaches of 4 foot required excavation are required excavations and all materials shown to be excavated shall be utilized for construction of the required embankments. The excavation of the existing landside berms and required 4 foot excavation for borrow material shall not be performed when the Mississippi River stage equals or exceeds a gage reading of 42.0 on the Greenville, Mississippi gage. Flooding of the excavated areas, if directed by the Contracting Officer, shall be as specified in Section 02231 EMBANKMENTS, paragraph FLOODING OF AREAS BETWEEN THE LEVEE AND SEMICOMPACTED RETAINING DIKES.

### 3.2.4 Borrow Areas for Obtaining Hydraulic Sand Fill

The material for construction of hydraulic sand fill shall be obtained from the Mississippi River from within the limits of the sand fill borrow areas shown on the drawings, unless otherwise approved. The Contractor shall not dredge within 500 feet of the toe of any stone dike. Continuous excavation to specified depths and slopes will not be required. Sand fill borrow areas are located within sandbars in the channel of the Mississippi River. Hydrographic surveys of these areas are available for review at the Vicksburg District Office. The successful bidder is expected to understand that the configurations and elevations of the sandbars within which the sandfill borrow areas are located may change because of the vagaries of nature that affect the river stages and the velocities of river flow. Such changes, should they occur, shall not form the basis for a claim against the Government. Hydrographic surveys are historical data. Historical stage hydrographs for the Mississippi River are provided in this contract.

### 3.2.5 Disposition of Materials

#### 3.2.5.1 Suitable Embankment Materials

Excavated materials which are suitable for incorporation in the embankments shall either be placed directly therein, or stockpiled and subsequently used in the embankments. Blending of materials is required and shall be in accordance with Section 02231 EMBANKMENTS, paragraph SUITABLE EMBANKMENT MATERIALS

#### 3.2.5.2 Unsuitable Materials

Materials from required excavations which, as defined in Section 02231 EMBANKMENTS, paragraph UNSUITABLE MATERIALS, are unsuitable for embankments, shall be disposed of in accordance with the provisions of Section 02111 CLEARING AND GRUBBING, paragraph DISPOSAL OF DEBRIS. Where possible, unsuitable materials in the Borrow Areas 2 and 3 shall not be removed.

### 3.3 EXCAVATION IN OTHER AREAS

#### 3.3.1 General

Excavation in other areas shall consist of removal of material in preparing the levee embankment, retaining dike embankment, and berm embankment foundations to the lines and grades shown on the drawings, removal of materials from ditches, and removal of unsuitable materials as defined in Section 02231 EMBANKMENTS, paragraph UNSUITABLE MATERIALS. Whenever unsuitable foundation material is encountered, the unsuitable material shall be removed to the depth directed by the Contracting Officer. Care shall be exercised by the Contractor in excavating to the lines and grades shown and in removing unsuitable materials so as not to excavate below the grades specified or depth directed. Excavation below the lines and grades specified or the depth directed shall be backfilled by the Contractor at no cost to the Government. Such backfill shall be brought to grade with suitable embankment material with each layer placed and compacted as specified in Section 02231 EMBANKMENTS, paragraph SEMICOMPACTED EMBANKMENT. Excavated materials shall be disposed of as specified in paragraph DISPOSITION OF MATERIALS.

#### 3.3.2 Drainage Ditches

#### 3.3.2.1 Excavation

Drainage ditches shall be excavated to the cross sections, lines, and grades shown on the drawings. Suitable embankment material excavated from these ditches shall be used in the embankments. Any excess material or material unsuitable for use in the embankments shall be wasted and shall be disposed of as specified in paragraph DISPOSITION OF MATERIAL. The right is reserved to require such other ditching as is deemed desirable and which can be performed without unreasonable difficulty by the equipment on the job. Suitable material excavated from such ditching may, at the option of the Contractor, be used in the embankment. Material not so used shall be wasted and shall be disposed of as stated above.

#### 3.3.3 Acceptance

Prior to the acceptance of the work, the Contractor shall excavate sediments from ditches as necessary to restore them to grade and section, at no additional cost to the Government. Disposal of such material shall be as directed by the Contracting Officer.

#### 3.4 UNAUTHORIZED EXCAVATION OF EXISTING LEVEE OR BERM

Excavation of any portion of the existing levee or berm without written authorization by the Contracting Officer, except as provided for elsewhere in this contract, is expressly prohibited. Should such unauthorized excavation occur, the Contractor will be required to cease construction operations and to restore the levee or berm to its original grade and section before further construction operations will be permitted. The restoration shall be made with suitable levee embankment material, placed and compacted as provided in Section 02231 EMBANKMENTS, paragraph SEMICOMPACTED EMBANKMENT, and by and at the expense of the Contractor.

#### 3.5 DEGRADING RETAINING DIKES

After a reach of hydraulic sand fill not less than 500 feet long has been constructed, and upon approval of the Contracting Officer, the retaining dikes shall be degraded to the ground on which it was constructed. Cross/end dikes shall be degraded to the borrow limits and depths indicated in the tabulations. The degraded material shall be used for constructing the levee enlargement and the one foot layer of uncompacted berm embankment that covers the hydraulic sand fill, as shown on the drawings.

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SECTION 02231

EMBANKMENTS

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

|             |  |
|-------------|--|
| ASTM D 698  | (2000a) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/cu. ft. (600 kN-m/cu. m.)) |
| ASTM D 2487 | (2000) Classification of Soils for Engineering Purposes (Unified Soil Classification System)                         |
| ASTM D 2922 | (1996e1) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)                              |
| ASTM D 3017 | (1996e1) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)                                  |

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Suitable Embankment Materials

All levee embankment (including ramps and spur dike enlargement), berm embankment (not including hydraulic sand fill), retaining dike embankment (including cross dikes), slough crossing embankment, and ditch dike embankment shall be constructed of earth obtained from Borrow Areas 1, 2 and 3, the existing berm shown to be excavated, the four foot required excavation for borrow, ditches, retaining dikes, and other required excavations as prescribed in Section 02222 EXCAVATION, and to the extent shown on the drawings. Contractor furnished borrow areas will not be permitted. The embankments shall be constructed of earth that is free from unsuitable and frozen materials as defined in paragraphs UNSUITABLE MATERIALS and FROZEN MATERIALS. Unless otherwise specified, all material available for borrow in each reach shall be excavated and used for constructing the required embankments. If a portion of the available borrow material (not including hydraulic sand fill), including required excavations, classifies in accordance with ASTM D 2487 as gravels (GW, GP, GM) or sands (SW, SP, SM), it shall be suitably blended with less pervious material to the extent that it no longer classifies as these materials, except that uncompacted berms may be constructed of material that classifies as gravels and sands if the top one foot of the uncompacted berms are constructed of material that classifies as clays (CH, CL) or silt

(ML). No additional payment will be made for blending of materials, and all costs associated therewith shall be included in the applicable contract prices for the required embankments into which the blended material is placed and forms a part.

#### 2.1.2 Unsuitable Materials

Materials which are classified as unsuitable for embankments, including hydraulic sand fill, are defined as masses of organic matter, sticks, branches, roots, and other debris. As earth from the designated borrow areas may contain excessive amounts of wood, isolated pieces of wood will not be considered objectionable in the embankment provided their length does not exceed 1 foot, their cross sectional area is less than 4 square inches, and they are distributed throughout the embankment. Not more than 1 percent (by volume) of objectionable material shall be contained in the earth material placed in each cubic yard of the embankment section. Pockets and/or zones of wood shall not be placed in the embankment, and objectionable pieces of wood and organic matter shall be removed from the hydraulic sand fill during placement in accordance with paragraph DEBRIS REMOVAL.

#### 2.1.3 Frozen Materials

Under no circumstances shall frozen earth, snow, or ice be placed in embankments. The Contracting Officer may require the wasting of frozen material in order that construction may proceed and such material wasted, if directed by written order of the Contracting Officer, will be paid for as specified in Section 02222 EXCAVATION, paragraph WASTE MATERIALS.

#### 2.1.4 Suitable Hydraulic Sand Fill Material

The dredged material for hydraulic sand fill shall be obtained from the sand fill borrow areas indicated on the drawings. The Government anticipates and assumes the responsibility that the material within the sand fill borrow areas will generally be suitable sand (SP) material classified in accordance with ASTM D 2487. However, the Government will perform quality assurance testing on the dredged material being placed. If the Government determines that the dredged material is not suitable, then the Contractor will be required to move the dredge excavation within the sand fill borrow area until suitable material is obtained, at no additional cost to the Government. Hydraulic sand fill shall be placed only within those areas identified on the drawings as "HYDRAULIC SAND FILL" and shall not be placed in any of the other required embankments.

### PART 3 EXECUTION

#### 3.1 EMBANKMENT FOUNDATION PREPARATION

##### 3.1.1 General

After clearing and grubbing and any required excavation of the levee embankment (including ramps and spur dike enlargement), retaining dike embankment, and berm embankment foundations, the entire earth surface on or against which any semicompacted embankment is to be placed, except areas as specified in paragraph DRAINAGE, shall be thoroughly broken to a depth of 6 inches. If for any cause, this broken surface becomes compacted in such a manner that, in the opinion of the Contracting Officer, a plane of seepage or weakness might be induced, it shall again be adequately scarified before depositing material thereon. For levee enlargement work, both the natural

surface of the ground and the surface of the existing levee to be occupied by the new work shall be prepared as specified above. All scarifying and breaking of ground surface shall be done parallel to the centerline of the embankment. All of the foregoing work shall be completed at least 200 feet in advance of the embankment construction.

### 3.1.2 Drainage

The foundation receiving embankment material and all partially completed embankment shall be kept thoroughly drained, except for placement of hydraulic sand fill. Existing borrow areas shall be drained only to the extent necessary to accommodate the foundation of the embankment. Drainage to areas outside the right-of-way limits will be allowed only after the Contractor has obtained rights-of-way for such drainage in accordance with Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph RIGHTS-OF-WAY. (See Section 02222 EXCAVATION, paragraph BORROW AREAS.)

### 3.1.3 Frozen Ground

No embankment material, including hydraulic sand fill, shall be placed upon frozen ground.

## 3.2 EMBANKMENT CONSTRUCTION (EXCEPT HYDRAULIC SAND FILL)

### 3.2.1 Semicompacted Embankment

#### 3.2.1.1 General

The location and extent of the semicompacted embankment shall be as shown on the drawings. Except as specified in paragraph CLOSURE, semicompacted embankment shall not be placed in water. The materials for semicompacted embankment shall be placed or spread in layers, the first layer not more than 6 inches in thickness and the succeeding layers not more than 12 inches in thickness prior to compaction. Layers shall be started full out to the slope stakes and shall be carried substantially horizontal and parallel to the levee centerline with sufficient crown or slope to provide satisfactory drainage during construction. Benching into the slope of the existing levee embankment is required in order to place and compact the material in horizontal layers. The vertical face of the existing embankment resulting from the benching operation shall be a minimum of 1 foot in height but shall not exceed 2 feet in height. When the surface of any compacted layer is too smooth to bond properly with the succeeding layer, it shall be adequately scarified before the next layer is placed thereon.

#### 3.2.1.2 Moisture Control for Semicompacted Embankment

The Contractor shall control the moisture content of the semicompacted embankment. The optimum moisture content shall be determined by the Contractor from representative samples of each type of material in accordance with ASTM D 698, with at least one optimum moisture test performed for each 100,000 cubic yards of embankment placed. Optimum moisture content test results shall be furnished to the Contracting Officer prior to placing material. Material placed in the embankment shall have a moisture content ranging between the following limits above and below the optimum moisture content:

| TYPE OF MATERIAL | MOISTURE CONTENT (IN PERCENT DRY DENSITY) |         |
|------------------|---|---------|
|                  | MAXIMUM                                   | MINIMUM |

|               |     |     |
|---------------|-----|-----|
| CLAY (CH, CL) | +6% | -6% |
| SILT (ML)     | +3% | -3% |

NOTE: See Unified Soil Classification Chart for explanation of symbols and Plasticity Chart for classification determination, both shown on the contract drawings.

The Contractor shall perform the necessary work in moisture control to bring the material to a moisture content within the range specified above in order that compaction requirements can be met. If the material is too wet, it shall either be stockpiled and allowed to drain before it is placed in the embankment cross sections and/or processed by discing and harrowing, if necessary, until the moisture content is reduced sufficiently. If the material is too dry, sufficient moisture shall be uniformly distributed in each layer before compacting.

### 3.2.1.3 Compaction for Semicompacted Embankment

When the moisture content and conditions of the spread layers are satisfactory, each layer of semicompacted embankment shall be compacted to a minimum of 90 percent of maximum dry density. The maximum dry density shall be determined by the Contractor from representative samples of each type of material in accordance with ASTM D 698, with at least one maximum dry density test performed for each 100,000 cubic yards of embankment placed. Maximum dry density test results shall be furnished to the Contracting Officer prior to placing material.

### 3.2.1.4 Closure

Where material for the semicompacted slough crossing embankment must be placed in water, it shall be dumped therein until it reaches an elevation not less than 1 foot above the water surface, or until it reaches an elevation at which a stable fill surface is obtained, before layer construction will be required. The embankment shall be construction beginning on one side of the slough and progressing continuously across to the opposite side. Placement of fill in the water will not be permitted when the water elevation exceeds 79.0 feet National Geodetic Vertical Datum (NGVD). The side slopes of the embankment shall be the natural angle of repose of the material. Fill material shall be deposited uniformly over the end of the embankment in such a manner as to ensure that any soft material in the foundation will be forced progressively outward from the section and not trapped within the base of the embankment. Operation of equipment on embankment area shall be controlled so as to avoid formation of ruts and to obtain the maximum degree of compaction of the embankment. If the stability of the embankment is threatened by excessive settlement or other causes, the Contracting Officer will designate such changes in the cross section, sequence of operation, or rate and areas of placement as in his opinion may be necessary to attain a stable embankment of adequate gross grade and cross section. The crown slopes of the berm constructed below the water surface shall be that slope necessary to support the prescribed berm crown necessary to support the prescribed berm crown slopes extending above the water surface and not steeper than 1V on 3H. After embankment has been constructed to one foot above the water elevation, the remainder of the embankment shall be constructed in layers as specified in paragraph SEMICOMPACTED EMBANKMENT. Each layer shall be started from the same bank of the slough and shall be placed progressively across the slough over the entire area of the fill within the limits of the cross section shown before commencing a succeeding layer.

### 3.2.2 Uncompacted Embankment

The location and extent of the uncompacted embankment shall be as shown on the drawings. Uncompacted embankment shall not be placed in water. Uncompacted embankment shall be placed in approximately horizontal layers not exceeding one foot in thickness. The layers shall be uniformly spread, distributed, and otherwise manipulated during placement to such an extent that individual loads of material deposited on the embankment will not remain intact, and large, open voids in the embankment will be eliminated. Layers shall be started full out to the slope stakes, and shall be carried in lifts approximately horizontal and parallel to the centerline with sufficient crown or slope to provide satisfactory drainage during construction. Lifts shall be placed in a manner which prevents shrinkage cracks and open voids from developing in previously placed lifts.

### 3.3 Runways

#### 3.3.1 Temporary Runways

Where material is hauled over an existing levee for construction, the Contractor at his expense will be permitted to construct temporary runways over the levee by the addition of material to the levee cross section. In the construction of runways, if the Contractor so desires, he may cut the existing levee, but not to exceed a depth of 10 feet below the crown, provided that the cut is made with side slopes not steeper than 1V on 1H, and not flatter than 1V on 3H, and with a minimum width of haul road of 25 feet for one-way traffic, and 60 feet for two-way traffic. Cutting into the existing levee at intervals of less than 500 linear feet for the 25 foot bottom widths or less than 1,000 linear feet for the 60 foot bottom widths will not be allowed, and no more than six runways shall be open at one time. The Contractor shall stockpile, as directed by the Contracting Officer, sufficient suitable levee embankment material to construct emergency closure of the cuts. As soon as any runway has served the purpose for which it was constructed, the levee shall be restored to the prescribed grade and section, the crown resurfaced in accordance with Section 02301 LEVEE SURFACING and the disturbed areas dressed, fertilized, and turfed as specified in Section 02933 EXISTING TURF MAINTENANCE AND NEW TURF ESTABLISHMENT, all at no additional cost to the Government. Just prior to such restoration, the bottom of any cut made in the levee shall be broken to a depth of 6 inches, and the side slopes thoroughly scarified. The restoration shall be made with suitable levee embankment material, placed and compacted as provided in paragraph SEMICOMPACTED FILL. In no case shall the material grade more impervious landward in the cross section. Material used in the construction of the approach ramps of the runways shall be removed and may be used for borrow, if suitable. If not used for borrow, the material shall be disposed of by placing in abandoned portions of Borrow Areas 2 or 3, at no additional cost to the Government. The areas on the levee slopes formerly covered by the ramps shall be returfed.

#### 3.3.2 Closure of Runways

Where runways have been cut through the levee, the Contracting Officer reserves the right to order their closure at no additional cost to the Government at any time that such runways may endanger the security of the levee. Runways may be directed to be closed when the river is predicted to reach a gage reading of 42.0 on the Greenville, Mississippi gage. Should the Contractor, after specific notification from the Contracting Officer, fail to close the runways without delay and in the manner specified herein,

the Contracting Officer shall have the right to utilize the Contractor's equipment and labor and to employ any other equipment and labor that may be needed to perform such work at no additional cost to the Government. Any damages or expenses occasioned by the refilling of the runways or by delays incidental thereto or by any operations necessary or incidental to the restoration of protection impaired by the Contractor, will not be a basis for a claim.

### 3.3.3 Reconstruction of Gravel Surfacing

The Contractor shall, at no expense to the Government, reconstruct the levee surfacing where it has been cut for runways through and/or over the existing levee and 100 feet on each side of the runway closure. The surfacing shall be reconstructed as directed with the reconstruction of the new levee surfacing conforming to the requirements of Section 02301 LEVEE SURFACING.

## 3.4 HYDRAULIC SAND FILL

### 3.4.1 General Requirements and Restrictions

The hydraulic sand fill shall be placed by hydraulic dredging methods; or at the Contractor's option shall be placed by hydraulic dredging methods in areas to receive hydraulic sand fill and then hauled by mechanical means and placed in other areas to receive hydraulic sand fill; all in accordance with the applicable provisions of the plans and specifications and a plan of operations prepared by the Contractor. The Contractor shall comply with all restrictions specified in Section 01354 ENVIRONMENTAL PROTECTION, paragraph RESTRICTIONS ON DREDGING AND/OR CONSTRUCTION. It is the responsibility of each prospective bidder to visit the areas as an aid in making his bid. Within 30 days after the issue date of the Notice to Proceed, and before any hydraulic dredging equipment is mobilized to the job site, the Contractor shall submit for review and acceptance, complete plans for dredging the hydraulic sand fill, including name and address of dredging subcontractor (if applicable), size of dredge(s) proposed, a listing of all attendant plant and equipment, pipeline layouts, complete plans for the location, design, construction, and maintenance of control structures, control weirs, and return pipeline. The Contractor shall furnish a hydraulic dredge and all attendant plant, pumps, boosters pipe line and appurtenances, and construct the required hydraulic sand fill as shown.

### 3.4.2 Protection of Existing Stabilization Work

The Contractor shall take such measures as necessary to prevent damage to existing revetments and dikes from any part of his plant. Any damage to stabilization work caused by the Contractor's equipment shall be repaired or restored promptly by and at the expense of the Contractor.

### 3.4.3 Flooding of Areas Between the Levee and Semicompacted Retaining Dikes

When river stages of 42.0 feet and higher on the Greenville, Mississippi gage are predicted, the Contracting Officer may direct flooding of all areas between the levee and the completed semicompacted retaining dikes. If flooding is directed by the Contracting Officer, retaining dikes and cross dikes will be directed to be constructed as necessary for the existing landside berm areas where borrow material has been obtained and where the retaining dikes and cross dikes have not been constructed to the extent that they will hold the required pool. Within 30 days after the

issue date of the Notice to Proceed, the Contractor shall submit for review and acceptance, his proposed plan for flooding and subsequent unwatering. The Contractor is required to maintain the capability to furnish all necessary plant, labor, pumps, and equipment, and commence flooding, if directed, within 24 hours and flood the areas described above with water at a rate that will at all times be equal to the water level riverside of the levee to a maximum elevation of 1 foot below the top of the dikes. The Contractor shall maintain the required pool elevations for the flood duration and shall maintain the dikes, including any necessary repairs due to wave wash, erosion, sliding, and seepage. If flooding is directed by the Contracting Officer, an equitable adjustment in contract time and price will be made in accordance with the Contract Clause CHANGES.

#### 3.4.4 Foundation Preparation for Hydraulic Sand Fill

No foundation preparation is required for landside berm embankment areas to receive hydraulic sand fill.

#### 3.4.5 Retaining Dikes

Retaining dikes (including cross dikes) shall be constructed of semicompacted and uncompacted embankment and shall be constructed to the grade and cross section, including allowable tolerances, as shown on the drawings before placement of hydraulic sand fill begins in a reach.

#### 3.4.6 Placement of Hydraulic Sand Fill

The location and extent of the hydraulic sand fill shall be as shown on the drawings. No compactive effort is required for hydraulic sand fill that is placed by hydraulic dredging methods. Hydraulic sand fill that is placed by hydraulic dredging methods and then, at the Contractor's option, hauled by mechanical means, shall be placed in horizontal layers not greater than 12 inches in thickness. No compaction is required.

#### 3.4.7 Shore Supervisor

At all times during placement of hydraulic sand fill by hydraulic dredging methods, the Contractor shall provide a supervisor on shore to control the discharge operations. The supervisor on shore shall be equipped with radio or telephone facilities to provide direct communication with the dredge operator.

#### 3.4.8 Dredged Effluent

The hydraulic sand fill material shall be transported in a pipeline and deposited into the hydraulic sand fill areas as shown on the drawings. The effluent from the placement of hydraulic sand fill shall be returned from the berm placement areas to the Mississippi River in a continuous pipeline. The return pipeline shall discharge below the water surface of the river. The effluent shall be contained so that no effluent leaves the rights-of-way as shown on the contract drawings. Pipeline leaks shall be closely controlled and the Contractor shall take all precautions to ensure that no damage will occur to growing crops, woodlands, wetlands, highways, levees, drainage systems, pipelines, utility lines, structures, or other improvements. At no time during construction shall the Contractor permit water to pool between the deposited material and the existing levee in excess of the elevation of the hydraulic sand fill line at the levee nor shall water be permitted to overtop the retaining dike.

#### 3.4.9 Rehandled Hydraulic Sand Fill

The hydraulic sand fill material placed by hydraulic dredging methods shall be rehandled as necessary to bring the fill to the grade and cross sections shown on the drawings within the tolerances specified in paragraph GRADE TOLERANCES.

#### 3.4.10 Splash Board

The Contractor shall place a splash board or other device at the discharge end of the pipe in order to prevent, as far as practicable, the forming of holes or craters and shall take all necessary precautions to prevent damage to either the existing embankments or the newly constructed levee embankment, berm embankment or retaining dike embankment.

#### 3.4.11 Debris Removal

The Contractor shall remove all sticks, branches, roots, masses of organic matter, and other debris from the hydraulic sand fill promptly and before such objectionable material sinks or is covered. Such debris shall be disposed of as specified in Section 02111 CLEARING AND GRUBBING, paragraph DISPOSAL OF DEBRIS.

#### 3.5 DRESSING

The hydraulic sand fill areas shall be brought to not less than the prescribed cross section, within allowable tolerance, at all points prior to degrading the retaining dike for use as borrow. All other embankments shall be brought to not less than the prescribed gross cross section, within allowable tolerance, at all points. Unreasonable roughness of surface shall be dressed out to permit turving operations.

#### 3.6 CROSS SECTIONS AND ZONING OF MATERIALS

##### 3.6.1 Levee Embankment Sections

Unless otherwise specified, the dimensions and slopes shall conform to the applicable gross grade and cross sections shown on the drawings, within allowable tolerance.

##### 3.6.2 Zoning of Materials for Levee Construction

In general, the levee section, including berm embankment, shall be homogeneous; however, where materials of varying permeabilities are encountered in the borrow areas, the more impervious material shall be placed toward the riverside slope, and the more pervious material toward the landside slope.

#### 3.7 ACCESS ROADS, RAMPS AND DETOURS

##### 3.7.1 Access Roads

The Contractor's access roads shall be maintained in good condition throughout the contract period. No separate payment will be made for this work.

##### 3.7.2 Ramps

###### 3.7.2.1 General

Ramps shall be constructed at the locations shown on the drawings by placement of suitable embankment material as specified in paragraph SEMICOMPACTED EMBANKMENT. Ramps shall be constructed only by adding material to the levee slopes. Ramps shall have a 18 foot crown width, 1V on 4H side slopes and a 10 percent grade. Ramps shall be constructed within the specified tolerances; however, ramp crowns shall be shaped and bladed to drain away from the levee centerline. Payment for materials used for ramp construction will be made at the contract unit price for "Levee Embankment, Semicompacted".

#### 3.7.2.2 Changes in Ramp Dimensions or Locations

The Contracting Officer reserves the right to modify the dimensions and shift the locations of the ramps, to eliminate ramp construction, and to order the construction of additional ramps at other locations, all without change in the contract prices, subject to the provisions of the Contract Clause VARIATION IN ESTIMATED QUANTITIES.

#### 3.8 GRADE TOLERANCES

Grade tolerances shall be as follows: (1) Plus  $3/10$  or minus  $2/10$  of one foot for semicompacted levee embankment (including ramps and spur dike enlargement), (2) Plus or minus  $3/10$  of one foot for semicompacted retaining dike embankment and hydraulic sand fill, and (3) Plus or minus  $2/10$  of one foot for uncompacted berm embankment, semicompacted slough crossing embankment, uncompacted ditch dike embankment, and semicompacted berm embankment. These tolerances are referenced to the prescribed final dressing of the gross grade and cross section shown on the drawings. These tolerances will be permitted provided that the surface drains, there are no abrupt humps or depressions in surfaces or bulges in the width of the crown, and the side slopes are uniform. Neither extreme of the tolerances provided herein shall be continuous over an area greater than 1,000 square feet, and abrupt changes from one extreme to the other will not be permitted. Any partial embankment or temporarily stockpiled material placed above the gross section shall not exceed the gross grade or gross slopes of the embankment by more than 2 feet, and shall have side slopes not steeper than 1V on 3H.

#### 3.9 SETTLEMENT OF FOUNDATION

##### 3.9.1 Settlement Gages

Should the Contractor desire payment for placing additional levee embankment material due to foundation settlement during construction, he shall furnish and install settlement gages for determination of such settlement. Prior to placing of embankment material, each gage shall be installed on the prepared foundation at the location shown on the applicable typical cross section at intervals not to exceed 300 feet, and shall be maintained during construction. Settlement gages at each end of the work shall be placed within 150 feet of the upper and lower limits of the work. Each gage shall be set on a smooth level surface on undisturbed ground. Leveling of gage beds shall be accomplished by removing the minimum amount of earth necessary to produce an even foundation and in such manner that the density of gage beds will remain at the same density as the undisturbed adjacent ground. Leveling of gage beds by the addition of embankment material will not be permitted. The gages shall be steel plates with minimum dimensions of 2 feet by 2 feet by  $1/4$  inch thick. The Contractor shall determine elevations of the gages prior to placing of

embankment material, and again within 72 hours after final cross sections have been taken over the completed embankment at the sites of the gages to determine settlement of the foundation. The 72 hour requirement is an absolute pre-condition for payment for settlement of the foundation. The initial and final elevation of the gages will be verified by the Contracting Officer's representative at the site. Measurement of additional embankment material placed by reason of settlement of the foundation will be as stated in Section 01270 MEASUREMENT AND PAYMENT, paragraph UNIT PRICE ITEMS. Installation of and measurement on gages shall be at the option and expense of the Contractor. When the settlement gage is located by boring with a rotary drill, the drill hole shall be backfilled with embankment material and tamped throughout. At the Contractor's option, the drill hole may be filled with a neat cement grout tremied from the bottom of the drill hole to the top of the drill hole.

### 3.9.2 Sudden Failure

In clearly established cases of sudden failure of the foundation, either where no provision has been made for the measurement of settlement or where settlement measuring devices have been installed, but the nature of settlement is such as to destroy their utility, the method of correction will be determined by the Contracting Officer. In case the sudden settlement is caused through the fault or negligence of the Contractor, the prescribed corrective operations shall be performed at no additional cost to the Government. In case the sudden settlement is not caused through the fault or negligence of the Contractor the corrective operations will be paid for in accordance with the Contract Clause CHANGES.

### 3.10 SLIDES

Should sliding occur in any part of the embankment during its construction, or after its completion, but prior to its acceptance, the Contractor shall upon written order of the Contracting Officer, either cut out and remove the slide from the embankment and then rebuild that portion of the embankment, or construct a stability berm of such dimensions, and placed in such, manner as the Contracting Officer shall prescribe. In case the slide is caused through the fault or negligence of the Contractor, the foregoing operations shall be performed at no additional cost to the Government. In case the slide is not caused through the fault or negligence of the Contractor, the material ordered removed will be paid for as specified in Section 02222 EXCAVATION, paragraph WASTE MATERIALS, and the material replaced. Slide corrections will be paid for in accordance with the Contract Clause CHANGES in addition to any payment due the Contractor for materials previously placed. The method of slide correction will be determined by the Contracting Officer.

### 3.11 FIELD TESTING CONTROL

Testing shall be the responsibility of the Contractor and shall be performed by an approved commercial testing laboratory or by the Contractor subject to approval. The on site Government representative shall be notified of each test and given the opportunity to witness each test. Field density and moisture content tests shall be performed on every 1,000 cubic yards of semicompacted material placed. Field in-place density and moisture shall be determined in accordance with ASTM D 2922 and ASTM D 3017 respectively. The calibration checks of both the density and moisture gages shall be made at the beginning of a job on each different type of material encountered and at intervals as directed. The Contractor shall submit three copies daily of control tests and reports as well as records

of corrective action taken in accordance with Section 01451 CONTRACTOR  
QUALITY CONTROL.

-- End of Section --

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DIVISION 02 - SITE WORK

SECTION 02301

LEVEE SURFACING

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SECTION 02301

LEVEE SURFACING

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
(AASHTO)

AASHTO T 27 (1993) Sieve Analysis of Fine and Coarse Aggregates

AASHTO T 96 (1994) Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 127 (2001) Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate

ASTM C 131 (1996) Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

ASTM C 295 (1998) Petrographic Examination of Aggregates for Concrete

ASTM C 535 (1996e1) Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

ASTM D 3740 (2001) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM D 4318 (2000) Liquid Limit, Plastic Limit, and Plasticity Index of Soils

ASTM D 4992 (1994e1) Evaluation of Rock to be Used for Erosion Control

ASTM E 548 (1994e1) General Criteria Used for Evaluating Laboratory Competence

CORPS OF ENGINEERS (COE)

COE CRD-C 148 (1969) Testing Stone for Expansive

## Breakdown on Soaking in Ethylene Glycol

### 1.2 SUBMITTALS

Government approval is required for all submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

#### SD-06 Test Reports

##### Testing

Required testing and reporting shall be in accordance with paragraph TESTING.

##### Evaluation Tests

Quality tests on the crushed stone material in accordance with paragraph EVALUATION TESTING shall be the responsibility of the Contractor and submitted prior to delivery of such material to the worksite.

#### SD-07 Certificates

##### Sand-Clay-Gravel

##### Crushed Stone

##### Laboratory

Certificates of compliance attesting that the surfacing materials meet specification requirements shall be submitted to the Contracting Officer.

A copy of the testing laboratory's certification and inspection report shall be submitted along with actions taken to correct deficiencies.

### 1.3 LOCATIONS AND DIMENSIONS

The locations and dimensions of the sand-clay-gravel or crushed stone surfacing shall be as shown on the drawings.

## PART 2 PRODUCTS

### 2.1 MATERIALS

#### 2.1.1 General

The Contractor shall provide only the type of surfacing material that he optioned to bid under the item "Levee Surfacing" contained in the Bidding Schedule, and as specified herein. (See also the "Notes" to the Bidding Schedule.)

#### 2.1.2 Sand-Clay-Gravel

The new sand-clay-gravel material shall be composed of a natural mixture of

hard, durable particles of gravel mixed with sand and clay and shall meet the following gradation requirements:

| U.S. STD. SQUARE MESH<br>SIEVE DESIGNATIONS | PERCENTAGE BY WEIGHT PASSING<br>(AASHTO T 27 METHOD OF TEST) |
|---|--|
| 2 inch                                      | 100  |
| 1 1/2 inch                                  | 95 - 100   |
| 1 inch                                      | 75 - 100   |
| 1/2 inch                                    | 45 - 90  |
| No. 4                                       | 30 - 65  |
| No. 10                                      | 20 - 50  |
| No. 40                                      | 10 - 30  |
| No. 200                                     | 5 - 15   |

The fraction of the material passing the No. 200 sieve shall be less than one-half that of the fraction passing the No. 40 sieve. The portion of the binder material passing the No. 40 sieve shall have a liquid limit of not more than 30 and a plasticity index of not more than 15 nor less than 5 as determined by ASTM D 4318. Any material that does not meet these requirements shall be stabilized with either sand, sand-clay, or gravel; in such proportions that the finished surface course will meet the requirements of the specified gradation. The coarse aggregate shall have a percentage of wear not to exceed 50 after 500 revolutions of testing via the Los Angeles Testing Machine in accordance with AASHTO T 96. If material from the source has previously met this wear test, it need not be repeated. All points on the individual grading curves obtained from representative samples of material shall lie between the boundary limits as defined by smooth curves drawn through the tabulated gradation limits plotted on ENG Form 2087 (Exhibit A) or similar form. The individual gradation curves within these limits shall not exhibit abrupt changes in slope denoting either skip grading or scalping of certain sizes or other irregularities which would be detrimental to the proper functioning of the material.

#### 2.1.2.1 Filler for Blending

In addition to the filler material that is naturally present in the surface course material, the filler material, that is necessary for meeting the requirements or for satisfactory binding of the material, shall be uniformly blended with the surface course material before it is delivered to the job site. The material for such purpose shall be approved by the Contracting Officer, shall be free from hard lumps and shall not contain more than 15 percent of material retained on a No. 4 sieve.

#### 2.1.3 Crushed Stone

##### 2.1.3.1 Gradation

All crushed stone shall conform to the following gradation:

| U.S. STD. SQUARE MESH<br>SIEVE DESIGNATIONS | PERCENTAGE BY WEIGHT PASSING<br>(AASHTO T 27) |
|---|---|
| 1 1/2 inch                                  | 100   |
| 3/4 inch                                    | 50 - 95                                       |
| 1/2 inch                                    | 42 - 85                                       |
| No. 4                                       | 25 - 65                                       |
| No. 40                                      | 10 - 32                                       |

U.S. STD. SQUARE MESH  
SIEVE DESIGNATIONS

PERCENTAGE BY WEIGHT PASSING  
(AASHTO T 27)

No. 200

3 - 12

The fraction of crushed stone passing the No. 40 sieve shall conform to the following requirements:

|                         |    |
|-------------------------|----|
| Liquid Limit (Max.)     | 30 |
| Plasticity Index (Max.) | 6  |

The crushed stone shall be well graded between the limits shown. All points on the individual grading curves obtained from representative samples of material shall lie between the boundary limits as defined by smooth curves drawn through the tabulated gradation limits plotted on ENG Form 2087 (Exhibit A) or similar form. The individual gradation curves within these limits shall not exhibit abrupt changes in slope denoting either skip grading or scalping of certain sizes or other irregularities which would be detrimental to the proper functioning of the material.

#### 2.1.3.2 Crushed Stone Sources

Crushed stone meeting the requirements of this contract has been produced in the past from the sources shown at the end of this section. Crushed stone may be supplied from any of these sources or from another source subject to the conditions described below. However, by listing these sources the Government neither warrants that crushed stone from these sources will necessarily meet the requirements of this contract nor provides any immunity from the testing of crushed stone proposed to be furnished from these sources.

#### 2.1.3.3 Crushed Stone From Sources Not Listed

If the Contractor proposes to furnish crushed stone from a source not listed at the end of this section, then, prior to beginning any deliveries, the crushed stone shall be subject to the testing requirements contained in paragraph EVALUATION TESTING OF STONE, as directed by the Contracting Officer and at no additional cost to the Government.

#### 2.1.3.4 Evaluation Testing of Stone

If the Contractor proposes to furnish stone from an unlisted crushed stone source, the Contractor shall have evaluation tests performed on stone samples collected from the proposed source. A registered geologist or registered engineer shall perform the quarry investigation. The tests to which the stone shall be subjected include petrographic examination (ASTM C 295), bulk specific gravity (SSD), unit weight, absorption (ASTM C 127), Los Angeles Abrasion Test (ASTM C 131 or ASTM C 535).

The laboratory to perform the required testing shall be validated based on compliance with ASTM E 548 and relevant paragraphs of ASTM D 3740, and no work requiring testing shall be permitted until the laboratory has been inspected and validated. The first inspection of the facilities shall be at the expense of the Government and any subsequent inspections required because of failure of the first inspection shall be at the expense of the Contractor.

a. Unit Weight and Absorption. Stone shall weigh more than 155 pounds per cubic foot and have a bulk specific gravity, saturated surface dry,

greater than 2.48. The stone shall have an absorption less than 2 percent unless other tests and service records show that the stone is satisfactory. The method of test for unit weight and absorption shall be ASTM C 127, except the unit weight shall be calculated in accordance with Note No. 5 using bulk specific gravity, saturated surface dry.

b. Petrographic Examination. Stone shall be evaluated in accordance with ASTM C 295, which shall include information required by ASTM D 4992, paragraphs 4, 5, 7 and 10. COE CRD-C 148 shall be used to perform Ethylene glycol tests required on rocks containing smectite as specified in ASTM D 4992 and on samples identified to contain swelling clays.

c. Los Angeles Abrasion Test. Crushed stone shall be evaluated in accordance with either ASTM C 131 or ASTM C 535. The crushed stone shall have a percentage of wear less than 40 percent.

## 2.2 EQUIPMENT

The new sand-clay-gravel or crushed stone shall be delivered in vehicles approved by the Contracting Officer. Vehicles for this purpose may be of any size or type, provided the body is of such shape that the actual delivered contents may be readily and accurately determined and will remain constant. Unless all approved vehicles on the work area are of uniform capacity, each vehicle shall bear a plainly legible identification mark indicating its specific approved capacity. All vehicles shall be loaded to a sufficient level to ensure water level loads when the vehicles arrive at the point of delivery.

## PART 3 EXECUTION

### 3.1 PREPARATION

The crown of the levee, ramps and other required locations shall be bladed and shaped prior to the placement of the sand-clay-gravel or crushed stone surfacing. The centerline of the levee crown roadway shall be approximately 4 inches higher than the outer edge of the roadway crown and the crown shall be heeled to each side into a windrow that can be dressed against the new surfacing to hold it in place. The crown of the levee ramps shall be shaped and bladed to drain away from the levee centerline and to not create a "ditch effect" between the ramp and the levee slope.

### 3.2 EXISTING SURFACING

All existing sand-clay-gravel surfacing on the existing levee, ramps, access roads, and spur dike as indicated shall be salvaged in accordance with Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph ORDER OF WORK and stockpiled within the rights-of-way as directed. The stockpiled existing surfacing material shall be evenly distributed for the entire length of this project on the completed levee crown, spread to the specified width, and compacted as specified for new surfacing material in paragraph PLACING NEW SURFACING MATERIAL and in accordance with Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph ORDER OF WORK.

### 3.3 PLACING NEW SURFACING MATERIAL

A surfacing course of new sand-clay-gravel material (only if Option A - Sand-Clay-Gravel is bid), or new crushed stone material (only if Option B - Crushed Stone is bid) shall be placed and spread uniformly on the crown of

the levee, ramps, access roads, and spur dike as indicated after the existing gravel surfacing has been replaced for each reach. Either sand-clay-gravel material shall be used for the entire project, or crushed stone material shall be used for the entire project. A combination of both types of surfacing material will not be acceptable. The Contractor shall not dump any load until it has been inspected and measured by an authorized Government representative. Unless otherwise specified or directed, the new surfacing shall be placed in one 9 inch loose measure layer of sand-clay-gravel, or one 7 inch loose measure layer of crushed stone, at the widths shown on the drawings. The edge of the surfacing on the leveeward side of ramps shall be placed to meet the levee slope for the full length of the ramp so as to not create a "ditch effect" between the ramp surfacing and the levee slope. The surfacing shall not be placed on a wet surface. The surface course shall be compacted as evenly and densely as practicable by the controlled movement of the hauling equipment over the entire area. After the new surfacing material has been placed and compacted, it shall be dressed with a motor grader or similar equipment to present a uniform appearance and a smooth riding surface, without sharp breaks or depressions which will collect or hold water. Any damage to the finished surfacing caused by the Contractor's hauling operations or other construction operations shall be repaired at the Contractor's expense by adding levee surfacing material, compacting, and blading as necessary to obtain the required roadway section.

### 3.4 TESTING

#### 3.4.1 Sand-Clay-Gravel

The Contractor shall determine the percentage of wear, gradation, liquid limit, and plasticity index of the sand-clay-gravel material. As a minimum for each pit or quarry, providing sand-clay-gravel, the material shall be tested once before delivery begins and once for each 700 tons delivered. Once delivery has begun, samples for tests shall be taken from material that has been delivered to the jobsite. The on-site Government representative shall be notified when a sample is to be taken for each test and shall be given the opportunity to witness the taking of each sample. The Contractor shall accomplish the testing within two working days after the sample is taken and shall provide the original and one copy of all test results to the Government representative within three working days after the test is taken. A laboratory that has been approved by the Contracting Officer shall perform the tests.

#### 3.4.2 Crushed Stone

The Contractor shall determine the percentage of wear, gradation, liquid limit, and plasticity index of the crushed stone material. As a minimum for each quarry providing crushed stone, the material shall be tested once before delivery begins and once for each 1500 tons delivered up to a required quantity of 15,000 tons, and thereafter, a minimum of once for every additional 7,500 tons delivered. Once delivery has begun, samples for tests shall be taken from material that has been delivered to the jobsite. The on-site Government representative shall be notified when a sample is to be taken for each test and shall be given the opportunity to witness the taking of each sample. The Contractor shall accomplish the testing within two working days after the sample is taken and shall provide the original and one copy of all test results to the Government representative within three working days after the test is taken. A laboratory that has been approved by the Contracting Officer shall perform the tests. Any additional sampling and testing shall be performed as part

of the quality control testing program at the quarry and certified test reports shall be furnished to the Contracting Officer. The quarry laboratory shall provide documentation that they have been validated and/or certified under the requirements of ASTM or ASSHTO Standards for Evaluation of Testing Facilities (based on compliance with ASTM E 548 and relevant paragraphs of ASTM D 3740).

**STONE SOURCES**

| LAT/LONG<br>(TESTED)  | QUARRY LOCATION, ADDRESS<br>AND TELEPHONE NUMBER                             | MAIN OFFICE ADDRESS<br>AND TELEPHONE NUMBER  |
|-----------------------|--|--|
| <b><u>ALABAMA</u></b> |  |  |
| 34/88/11<br>(1999)    | Pride Quarry is located N. side of U.S. Hwy 72, Pride, Alabama               | Vulcan Materials Co.<br>Southern Division<br>P.O. Box 385016<br>Birmingham, AL 35238-5016<br>(205)298-3701 |
|                       | Vulcan Materials Co.<br>18055 Hwy 72<br>Tuscumbia, AL 35674<br>(256)381-0012 |  |

**ARKANSAS**

|                      |   |  |
|----------------------|---|--|
| 34/92/5&14<br>(2000) | Big Rock Quarry is located off AR Hwy 367, 0.5 mile north of junction with 65th Street, Little Rock, AR   | Souter Construction Co.<br>P.O. Box 876<br>Conway, AR 72032<br>(501)354-0137<br>Fax -2521                  |
| 34/95/10<br>(2000)   | River Mountain Quarry- from intersection of AR Hwys 7 and 22 in Dardanelle, AR, go west to Delaware, AR and turn left onto River Mountain Road, and go 4.0 miles entrance to quarry at ARK River Mile 218.5 | Pine Bluff Sand and Gravel<br>P.O. Box 7008<br>Pine Bluff, AR 71611-7008<br>(870)534-7120<br>(800)850-2300 |
|                      | Pine Bluff Sand & Gravel<br>P.O. Box 96<br>Delaware, AR 72835-0096<br>(501)938-7018   |  |

**ILLINOIS**

|                 |  |  |
|-----------------|--|--|
| 37/88<br>(2000) | Cave-In-Rock Quarry is located approx 5 miles east of Cave-in-Rock, IL. From the flashing light on Illinois Highway 1, for the ferry across the Ohio River, head east past Cave-in-Rock State Park to intersection with next road and turn south toward river. | Martin Marietta Aggregates<br>125 Augusta Place, Suite C<br>Paducah, KY 42003<br>(270)554-0884 |
|-----------------|--|--|

**STONE SOURCES**

| LAT/LONG<br>(TESTED) | QUARRY LOCATION, ADDRESS<br>AND TELEPHONE NUMBER                     | MAIN OFFICE ADDRESS<br>AND TELEPHONE NUMBER |
|----------------------|--|---|
|                      | Quarry is on right 0.25 miles from<br>intersection.<br>(618)289-3262 |   |

**KENTUCKY**

|                    |  |  |
|--------------------|--|--|
| 37/88/29<br>(2000) | Three Rivers Quarry is located<br>7 miles northeast of Smithland,<br>KY, off Hwy 60 (Cumberland Road)<br>From I-24, exit 31 and go north on<br>KY Hwy 453 to intersection with U.S.<br>Hwy 60 and turn right and go over<br>Cumberland River. Quarry is on the<br>right 4.5 miles from the bridge. | Martin Marietta Aggregates<br>830 Three Rivers Quarry Rd.<br>Smithland, KY 42081<br>(270) 928-2141 |
|--------------------|--|--|

|                    |   |   |
|--------------------|---|---|
| 37/88/11<br>(2000) | Gilbertsville Quarry is located on<br>U.S. Hwy 62 "Between the Dams",<br>Lake City, KY. From KY Hwy 453<br>to ramp for U.S. Hwy 62/641 and go<br>west to quarry office on left. | Vulcan Materials Co.<br>Reed Quarry<br>947 U.S. Hwy 62<br>Grand Rivers, KY 42045<br>(270)362-4265 |
|--------------------|---|---|

**MISSOURI**

|                    |  |   |
|--------------------|--|---|
| 38/90/29<br>(2000) | Old Menefee Quarry - Take I-55, 4<br>mi. north of Bloomsdale, MO and<br>take exit for State Rds DD & OO<br>and turn east and go 1 mile to<br>Hwy 61, continue straight ahead<br>thru intersection on Brickeys Rd<br>to quarry at MRM 136.8 above the<br>mouth of the Ohio River. (Formerly<br>Brickeys Stone LLC.) | APAC<br>13588 Brickeys Rd.<br>Bloomsdale, MO 63627<br>(573)483-3475 |
|--------------------|--|---|

|                    |   |  |
|--------------------|---|--|
| 37/89/18<br>(2000) | Gray's Point Quarry is located at<br>MRM 46.2, above the mouth of the<br>Ohio River. Take Exit 91 of I-55<br>on Rd. AB at Scott City, MO, and<br>east 4 east to quarry. | Tower Rock Stone Co.<br>P.O. Box 50<br>Columbia, IL 62236<br>(618)281-4106 |
|                    | Tower Rock Stone Co.<br>P.O. Box 4248<br>Scott City, MO 63780<br>(573) 264-3800   |  |

|                       |  |  |
|-----------------------|--|--|
| 38/90/40&51<br>(2000) | Bussen Quarry is located 5 miles<br>north of St. Genevieve, MO, MRM<br>127.6, above the mouth of the Ohio<br>River, 19829 Lower Frenchman Rd | Tower Rock Stone Co.<br>P.O. Box 50<br>Columbia, IL 62236<br>(618)281-4106 |
|                       | Tower Rock Stone Co.<br>P.O. Box 111<br>St. Genevieve, MO 63670<br>(573)883-7415   |  |

STONE SOURCES

| LAT/LONG<br>(TESTED) | QUARRY LOCATION, ADDRESS<br>AND TELEPHONE NUMBER  | MAIN OFFICE ADDRESS<br>AND TELEPHONE NUMBER  |
|----------------------|---|--|
|                      | <u>TENNESSEE</u>  |  |
| 35/87                | Clifton Quarry - on the Ten Tom Waterway, located west of Clifton, TN off TN State Secondary 128, 5.5 miles from intersection of TN State Secondaries 114 and 128 (NW of Waynesboro, TN)(or 1.5 miles North of intersection of TN State Sec 128 and 278 on west side of 128). (931)676-3598 | Vulcan Materials Co.<br>Southern Division<br>P.O. Box 385016<br>Birmingham, AL 35238-5016<br>(205)298-3701 |

-- End of Section --