

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE J	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 15-Jul-2002	4. REQUISITION/PURCHASE REQ. NO. W807PM-2141-0835	5. PROJECT NO.(If applicable)		
6. ISSUED BY VBURG CONSOL CONTRACTING OFC 4155 CLAY ST VICKSBURG MS 39183-3435	CODE DACW38	7. ADMINISTERED BY (If other than item 6)		CODE	
		See Item 6			
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				X	9A. AMENDMENT OF SOLICITATION NO. DACW38-02-B-0034
				X	9B. DATED (SEE ITEM 11) 24-Jun-2002
					10A. MOD. OF CONTRACT/ORDER NO.
					10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<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: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment 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)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
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.) Reference Solicitation No. DACW38-02-B-0034, FC/MR&T Demonstration Erosion Control Project, Tate County, Mississippi, Beartail Creek Palestine Road Embankment Protection, EP-01-01 scheduled for bids to open on 25 July 2002 at 1400 hours is hereby amended as follows: (Continued on 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)		
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 16-Jul-2002	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SPECIFICATIONS

SECTION 00010 Solicitation Contract Form (Bidding Schedule) is revised and replaced.

Section 01270 MEASUREMENT AND PAYMENT is revised.

Section 02052 DEMOLITION AND REMOVAL WORK is revised.

Section 02456 STEEL H-PILES is revised.

Section 02552 HOT BITUMINOUS PAVEMENT is revised.

Section 03426 PRECAST-PRESTRESSED CONCRETE BRIDGE GIRDERS is revised.

Deletions are indicated as strikethrough and additions are indicated as bold and underlined and noted as REVISED BY AMENDMENT 0001.

The date and time on which bids are to be opened is changed from 25 July 2002 at 1400 hours to 30 July 2002 at 1400 hours.

Enclosures: Bid Schedule

Section 01270

Section 02052

Section 02456

Section 02552

Section 03426

FC/MR&T
DEMONSTRATION EROSION CONTROL PROJECT
TATE COUNTY, MISSISSIPPI
BEARTAIL CREEK-PALESTINE ROAD
EMBANKMENT PROTECTION, EP-01-01

SECTION 00010 Solicitation Contract Form

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	MOBILIZATION AND DEMOBILIZATION	1.00	Lump Sum	FOR	\$ _____
0002	PALESTINE ROAD EMBANKMENT AND BRIDGES	1.00	Lump Sum	FOR	\$ _____

TOTAL FOR ITEMS 1& 2 \$ _____

Lack of registration in the CCR database will make an offeror ineligible for award. SEE CONTRACT CLAUSE 252.204-7004 ENTITLED "REQUIRED CENTRAL CONTRACTOR REGISTRATION.

THE SF 1442, BIDDING SCHEDULE, AND SECTION 00600 (REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF BIDDERS) MUST BE ACCURATELY COMPLETED AND RETURNED WITH YOUR BID OR IT MAY BE REJECTED AS NONRESPONSIVE

NOTES:

- (a) Bidders shall furnish unit prices for all items listed on the schedule of bid items which require unit prices. If the bidder fails to insert a unit price in the appropriate blank for required items, but does furnish an extended total or an estimated amount for such items, the Government will deem his unit price to be the quotient obtained by dividing the extended estimated amount for that line item by the quantity. IF THE BIDDER OMITTS BOTH THE UNIT PRICE AND THE EXTENDED ESTIMATED AMOUNT FOR ANY ITEM, HIS BID WILL BE DECLARED NONRESPONSIVE.
- b) Award will be made as a whole to the lowest responsive responsible bidder as may be in the best interest of the Government.

REVISED BY AMENDMENT 0001

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 LUMP SUM PAYMENT ITEMS

1.1.1 General

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, submittal procedures, environmental protection, storm water pollution prevention, meeting safety requirements, tests and reports, providing as-built drawings, and for performing all work required for which separate payment is not otherwise provided.

1.1.2 Lump Sum Items

a. "Mobilization and Demobilization"

(1) Payment will be made for all costs associated with mobilization and demobilization, as defined in Section 00800 SPECIAL CONTRACT REQUIREMENTS, paragraph PAYMENT FOR MOBILIZATION AND DEMOBILIZATION.

(2) Unit of measure: lump sum.

~~b. "Demolition"~~

~~(1) Payment will be made for all costs associated with performing demolition as required, including removal of existing pavement where required; removal of existing culverts; removal of existing fencing; demolition and removal from government right of way of the existing bridges at sites 1, 2, and 3; and all work incidental thereto.~~

~~c. "Clearing and Grubbing"~~

~~(1) Payment will be made for all costs associated with performing the required clearing and grubbing (including vegetation removal) for excavation areas, fill and backfill areas, embankment areas, stone protection areas, culverts, new fence areas, and all other areas where required; for disposing of all cleared and grubbed materials; and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~d. "Slope Preparation and Engineering Fabric"~~

~~(1) Payment will be made for all costs associated with furnishing, placing and maintaining the engineering fabric, including grading, excavation and fill as required for slope preparation at the three bridge site locations, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~e. "Excavation, Fill, Backfill and Embankment for Roadway"~~

~~(1) Payment will be made for all costs associated with the preparation of the existing roadbed and embankment to receive fill and backfill; pulverizing, mixing and re-compacting the existing pavement where required; excavating, transporting, shaping, and compacting material for new embankment; all other earthwork associated with roadway construction; final grading and shaping of the Government furnished borrow area (including constructing dikes as shown); restoration of the haul route(s); and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~f. "Stone Protection"~~

~~(1) Payment will be made for all costs associated with furnishing and placing riprap for stone protection at the three bridge site locations, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~g. "Steel H Piles"~~

~~(1) Payment will be made for all costs associated with the furnishing and constructing the steel H piles at the three bridge site locations, including all costs for test piles, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~h. "Granular Courses"~~

~~(1) Payment will be made for all costs associated with furnishing, spreading, and compacting the granular base and shoulder courses, including all required testing, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~i. "Hot Bituminous Pavement"~~

~~(1) Payment will be made for all costs associated with constructing the hot bituminous pavement, including furnishing, spreading, and compacting the hot bituminous pavement material, including all required testing, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~j. "Corrugated Polyethylene Pipe"~~

~~(1) Payment will be made for all costs associated with constructing the corrugated polyethylene pipe culverts, including removing the existing culverts where shown, excavation, furnishing and placing new polyethylene pipe, fill and backfill, control of water, all required testing, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~k. "Pavement Markings"~~

~~(1) Payment will be made for all costs associated with furnishing materials and placing pavement striping and raised reflective markings, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~l. "Guardrail"~~

~~(1) Payment will be made for all costs associated with the furnishing and constructing the guardrail at the three bridge sites, including all appurtenances, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~m. "Erosion Control"~~

~~(1) Payment will be made for all costs associated with the furnishing materials and performing erosion control, including grading and dressing, fertilizing, seeding, mulching, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~n. "Bridge No. 1"~~

~~(1) Payment will be made for all costs associated with the furnishing and constructing the pre fabricated bridge at site 1, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~o. "Bridge No. 2"~~

~~(1) Payment will be made for all costs associated with furnishing and constructing the pre fabricated bridge at site 2, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~p. "Bridge No. 3"~~

~~(1) Payment will be made for all costs associated with the furnishing and constructing the pre fabricated bridge at site 3, and all work incidental thereto.~~

~~(2) Unit of measure: lump sum.~~

~~q. "Fencing"~~

~~(1) Payment will be made for all costs associated with the furnishing and constructing the new fencing, and all work incidental thereto. All costs for removal of existing fencing shall be included in the contract lump sum price for "Demolition".~~

~~(2) Unit of measure: lump sum.~~

b. "Palestine Road Embankment And Bridges"

(1) Payment will be made for all costs associated with the construction of the Palestine Road Embankment as required, including demolition and removal work; clearing and grubbing; slope preparation and engineering fabric; excavation, fill, backfill and embankment for roadway; stone protection; steel H-piles; granular courses; hot bituminous pavement; corrugated polyethylene pipe; pavement markings; barbed wire fencing; erosion control; guardrail; bridge no. 1; bridge no. 2; bridge no. 3; environmental protection; storm water pollution prevention; and all work incidental thereto.

(2) Unit of measure; lump sum

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION 02052

DEMOLITION AND REMOVAL WORK

PART 1 GENERAL

1.1 SYSTEM DESCRIPTION

Structure removal consists of demolishing and removing the three existing bridges with concrete decks and steel piling and appurtenant structures, removing the existing culverts, removing the existing fence where required, removing the existing pavement where required, and all work incidental thereto, all as shown on the drawings and specified herein.

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-01 Preconstruction Submittals

Road Closure; G

Submit written request for interruption of services.

SD-07 Certificates

Demolition Plan

The Contractor shall prepare and submit a detailed plan for acceptance before beginning demolition or removal work.

1.3 ROAD CLOSURE

Written approval shall be obtained at least 48 hours prior to closing Palestine Road for bridge removal.

1.4 DEMOLITION PLAN

The Contractor shall prepare and submit a detailed Demolition Plan of the work procedures and safety precautions to be used in the identification, excavation, demolition, handling, removal, transportation, reclamation or disposal of removed materials, backfill and erosion control. The Contractor shall meet with the Contracting Officer, prior to beginning work to discuss in detail the Demolition Plan.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 DEMOLITION AND REMOVAL WORK

3.1.1 Existing Bridges

The existing bridges as shown on the drawings shall be disassembled or broken up and removed from the right-of-way. Bridge pilings shall be removed or cut off to a depth of not less than 12 inches below the existing ground surface, or 24 inches below new construction to be completed by this contract, whichever is deeper.

3.1.1.1 Existing Bridge 1

Existing Bridge 1 is of precast concrete unit construction manufactured by Choctaw, Inc. and mounted on timber piles. Precast concrete caps are doweled to the piles and the deck units are doweled and grouted to the caps. The bridge deck consists of four 19-foot spans with a clear roadway width of approximately 23 feet. Each span consists of two 3'-6" wide outside curb units and five 3'-6" wide interior units. The bridge railing consists of metal guardrail on precast concrete posts. Precast concrete wings are mounted at each corner. All deck, railing, and wing components are bolted together. The deck top surface has been coated with an asphalt chip seal. No approach slabs are present.

Mississippi Office of State Aid Road Construction pile driving records are as follows.

<u>Existing Bridge 1</u>		
<u>BENT</u>	<u>PILE</u>	<u>LENGTH</u>
	<u>No.</u>	<u>IN PLACE</u>
1	1	44.00
	2	44.25
	3	44.25
	5	40.53
	4	40.50
2	6	
	7	41.00
	8	
	9	33.75
3	10	31.49
	11	
	12	40.00
	13	45.00
4	14	
	15	33.00
	16	45.00
	17	37.00
5	?	

3.1.1.2 Existing Bridge 2

Existing Bridge 2 is of precast concrete unit construction manufactured by Choctaw, Inc. mounted on steel piles. Piling is H 8x36 and on the intermediate bents is encased in a 12-inch by 12-inch concrete casing from approximately 3 feet below ground to 2.5 feet above ground. Precast concrete caps are welded to the piles via imbedded plates and the deck units are doweled and grouted to the caps. The bridge deck consists of three 31-foot spans with a clear roadway width of approximately 26.5 feet. Each span consists of two 3'-6" wide outside curb units and six 3'-6" wide interior

units. The bridge railing consists of metal guardrail on precast concrete posts. Precast concrete wings are mounted at each corner. All deck, railing, and wing components are bolted together. The deck top surface has been coated with an asphalt chip seal. No approach slabs are present.

Mississippi Office of State Aid Road Construction pile driving records are as follows.

<u>Existing Bridge 2</u>		
<u>BENT</u>	<u>PILE</u>	<u>LENGTH</u>
<u>No.</u>		<u>IN PLACE</u>
1	5	
	4	3.65
	3	
	2	
	1	
2	9	
	8	
	7	
	6	47.00
3	12	45.42
	11	
	13	
	10	
4	14	
	15	
	16	
	17	
	18	45.53

3.1.1.3 Existing Bridge 3

Existing Bridge 3 is of precast beam, poured in place deck construction mounted on steel piling. This bridge was constructed in 2 phases. The 3 northern spans (totaling approximately 120 feet) was the initial construction with an independent 40-foot span added at the south end at a later date. The 13 piles under the south span are HP 10x42. The piling under the northern three spans was not measured. Intermediate bent piling are encased in concrete from approximately 3 feet below to 2.5 feet above ground level. The bridge railing is steel guardrail mounted to precast concrete posts that are bolted to the concrete deck. Some of the concrete posts have been replaced with steel square tubing posts. Clear deck width is approximately 23 feet. No approach slabs are present.

Mississippi Office of State Aid Road Construction pile driving records are as follows.

<u>Existing Bridge 3</u>		
<u>BENT</u>	<u>PILE</u>	<u>LENGTH</u>
<u>No.</u>		<u>IN PLACE</u>
1	1	40.00
	2	40.00
	3	40.00
	4	40.00
	5	40.00

	6	40.00
	7	40.00
	8	40.00
	9	40.00
2	10	70.00
	11	70.00
	TEST	
	13	70.00
3	1	
	2	40.50
	3	40.25
	4	41.25
	5	
	6	45.00
	7	32.58
4	8	45.50
	9	
	10	41.50
	11	
	12	45.00
5	13	45.00
	14	
	15	37.50
	16	
	17	37.67
6	?	

3.1.2 Existing Pavement

The existing pavement designated to be removed shall be broken up and removed from the rights-of-way.

3.1.3 Existing Culverts

The existing culverts as shown on the drawings shall be excavated and removed from the rights-of-way. Materials from excavation suitable for pipe fill and backfill shall be stockpiled and used in accordance with Section 02719 CORRUGATED POLYETHYLENE PIPE.

3.1.4 Existing Fence

The existing fence as shown on the drawings shall be dismantled and removed from the rights-of-way. Care shall be exercised to not drop, lose or leave existing nails and fence staples. Post holes shall be backfilled with suitable material in 6 inch layers. Compaction shall be accomplished with hand tampers or other approved equipment.

3.1.5 Salvageable Materials

Salvaged materials from demolition and removal operations shall become the property of the Contractor, and shall be removed from the site as it accumulates.

3.1.6 Scrap Metal

Scrap metal shall become the Contractor's property and shall be removed from the site as it accumulates.

3.2 DISPOSAL OF REMOVED MATERIALS

All materials to be removed, including debris, rubbish, scrap, and other non-salvageable materials resulting from demolition and removal operations shall be disposed of by placing in the Government furnished debris disposal area shown on the drawings. Materials to be salvaged shall not be stored on the project site.

-- End of Section --

SECTION 02456

STEEL H-PILES

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 A 36/A 36M (2001) Carbon Structural Steel

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1 (1998) Structural Welding Code - Steel

1.2 SUBMITTALS

Government approval is required for 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-02 Shop Drawings

Pile Driving; G

A complete and accurate record of each driven pile, within 3 days of completion of driving. The record shall indicate the pile location (as driven), size, driven length, embedded length, final elevations of tip and top, pile weight, number of splices and locations, blows required for each foot of penetration throughout the entire length of the pile and for the final 6 inches of penetration, and the total driving time. The record shall also include the type and size of the hammer used, the rate of operation, and the type and dimensions of driving helmet and cushion block used. Any unusual conditions encountered during pile installation shall be recorded and immediately reported to the Contracting Officer.

SD-03 Product Data

Equipment; G

Description of pile driving equipment to be employed in the work, prior to commencement of pile installations; including details of the pile hammer, power plant, leads, cushion material, and helmet.

SD-06 Test Reports

Field Tests and Inspections; G

A complete report on the load test, including, but not limited to, a description of the pile driving equipment, driving records for both test piles and reaction piles, complete test data, analysis of test data, and recommended allowable design loads based on the load test results, within 7 days of completion of load test. The report shall be prepared by or under the direct supervision of a registered professional engineer experienced in pile load testing and load test analysis.

SD-07 Certificates

Materials; G

Certified copies of mill test reports for structural steel prior to commencement of pile installations.

1.3 REGULATORY REQUIREMENTS

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

MISSISSIPPI DIVISION OF STATE AID ROAD CONSTRUCTION

MS OSARC (1993) Standard Specifications for Highway Construction

Section S-803 Bearing Piles

1.4 EXPERIENCE

The work shall be performed by a general contractor or a specialty subcontractor specializing in the specified foundation system and having at least 5 years of experience installing the specified foundation system under similar subsurface conditions.

1.5 SUBSURFACE DATA

Subsurface soil data logs are shown on the drawings.

PART 2 PRODUCTS

2.1 MATERIALS

Piles shall be of sections, sizes, materials, and weights indicated. Pile tips as driven shall be square and blunt as received from the mill. Pile tip reinforcements or cast steel points occasionally may be required to obtain the required penetration. Steel shall conform to ASTM A 36/A 36M. Test piles shall be identical to those used elsewhere in the project.

2.2 EQUIPMENT

Equipment shall comply with the requirements of MS OSARC, Section 803.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Pile Driving

The method of driving shall conform to the requirements of MS OSARC, Section S-803.05.

3.1.2 Splices

Field splices shall be avoided for lengths under 60 feet. When authorized by the Contracting Officer, splices shall be of the full penetration butt-weld type. Unless otherwise authorized by the Contracting Officer, only one splice will be permitted per length of pile. Splices shall be designed and constructed to maintain the true alignment and position of the pile sections. Splices shall develop the full strength of the pile in both bearing and bending. Proprietary prefabricated splicer sleeves may be used upon prior approval by the Contracting Officer.

3.1.3 Welding

Shop and field welding, qualification of welding procedures, welders, and welding operators shall be in accordance with AWS D1.1.

3.1.4 Tolerances in Driving

Top of pile at elevation of cut off shall be within 6 inches of the location indicated. Manipulation of piles to force them into position will not be permitted. Piles will be checked for heave. Piles found to have heaved shall be redriven to the required point elevation. Piles damaged or driven outside the above tolerances shall be replaced or additional piles driven at locations specified by the Contracting Officer at no expense to the Government.

3.1.5 Cutting of Piles

Piles shall be cut off at the elevations indicated by a method approved by the Contracting Officer.

3.1.6 Protection

Where indicated, the steel H-piles shall be provided with concrete encasement.

3.2 FIELD TESTS AND INSPECTIONS

3.2.1 Test Piles

Test piles shall be driven in the manner specified elsewhere in this section. The Government will use test pile data, as well as test reports on soil samples, to determine "calculated" pile tip elevations and the necessary driving resistance. Test piles that are located within the tolerances indicated and that provide a safe design capacity, as determined by the results of a satisfactory load test, may be used in the finished work. The Contractor shall drive test piles at each bridge site as indicated. If jetting is permitted, it will be permitted by the Contracting Officer only when test piles validate its use. Test piles shall be driven to the tip elevation specified or indicated for bidding lengths. No separate measurement or payment will be made for test piles, and all costs therefor shall be included in the contract lump sum price for ~~"Steel H Piles"~~ **"Palestine Road Embankment and Bridges"**.

3.2.2 Load Tests

Load tests shall be in accordance with MS OSARC Section S-803.07.1. The load tests at locations shown or directed shall be made on test piles placed to the tip elevation used for establishing lengths of piles for bidding, except as otherwise directed by the Contracting Officer. Loading, testing, and recording of data shall be under the direct supervision of a registered professional engineer. A report shall be submitted in accordance with paragraph SUBMITTALS. The installation of contract piles shall not proceed in a new area with substantially different subsurface conditions until a satisfactory load test has been performed in that area and the results approved by the Contracting Officer. A minimum of 14 days from submission of the report shall be allowed for approval.

-- End of Section --

SECTION 02552

HOT BITUMINOUS PAVEMENT

PART 1 GENERAL

1.1 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-03 Product Data

Admixtures

Submit manufacturer's catalog data for admixtures.

Bituminous Materials

Submit mill test reports for bituminous materials.

SD-06 Test Reports

Job-Mix Formula; G

Submit materials test results for asphalt content design.

SD-07 Certificates

Hot Bituminous Mix; G

Submit manufacturer's certification that mix meets job-mix specification.

1.2 REGULATORY REQUIREMENTS

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

MISSISSIPPI STATE HIGHWAY DEPARTMENT (MS SHD)

MS SHD-01 (1990; Suppl 1991) Standard Specifications
for Roads and Bridge Construction

1.3 PREPARATION, STORAGE, AND TRANSPORTATION OF BITUMINOUS MIXTURE

The bituminous mixture shall be prepared, stored, and transported as specified in MS SHD-01, Section 401, "Plant Mix Pavements-General".

1.4 WEATHER LIMITATIONS

Weather limitations for the construction of hot bituminous pavements shall be as specified in MS SHD-01, Section 401, "Plant Mix Pavement-General".

PART 2 PRODUCTS

2.1 HOT BITUMINOUS PAVEMENT

Hot bituminous pavement shall consist of coarse aggregate, fine aggregate, mineral filler, bituminous material, and approved additives of the qualities and in the proportions specified in MS SHD-01, Section 401, "Plant Mix Pavement-General".

2.1.1 Aggregates

Aggregates shall meet the requirements as specified in MS SHD-01, Section 703, "Aggregates", paragraph 703.09, "Aggregate for Flexible Pavements". Aggregate gradation shall be as specified for Mix Number SC-1.

2.1.2 Bituminous Material

Bituminous material shall meet the requirements specified by MS SHD-01, Section 702, "Bituminous Material" for asphalt cement, Grade AC-30.

2.2 PROPORTIONING OF MIXTURE

2.2.1 Job-Mix Formula

The Contractor shall determine the job-mix formula as specified in MS SHD-01, Section 401, "Plant Mix Pavements-General", paragraph 401.02.3.2, "Job Mix Formula" to the Contracting Officer for approval at least 30 days prior to the time of proposed use. Samples are not required. Full manufacturers' data for any admixtures and mill test reports for bituminous materials are required to be submitted.

Tentative approval of the proposed job-mix formula will be made in writing. The job-mix formula will remain tentative until satisfactory performance of the mix is determined by construction on the job.

2.2.2 Test Properties of Bituminous Mixtures

The finished mixture shall meet the requirements as specified by MS SHD-01, Section 401, "Plant Mix Pavement-General", paragraph 401.02.2 "Specific Requirements".

2.3 ACCEPTABILITY OF HOT BITUMINOUS MIX

The Contractor shall furnish written certification that all hot bituminous mix used on the job meets the specifications of the job-mix formula within the tolerances allowed by MS SHD-01, Section 703, "Aggregates".

PART 3 EXECUTION

3.1 PLANT, EQUIPMENT, MACHINES, AND TOOLS

Plant, equipment, machines, and tools for the manufacture and construction of hot bituminous pavements shall be as specified in MS SHD-01, Section 401, "Plant Mix Pavements-General".

3.2 ACCESS TO PLANT AND EQUIPMENT

The Contracting Officer shall have access at all times to all parts of the

paving plant for checking the adequacy of the equipment in use; inspecting operation of the plant; verifying weights, proportions, and character of materials; and checking temperatures maintained in the preparation of the bituminous hot mix.

3.3 GRADE CONTROL

Lines and grades shall be established and maintained by means of line and grade control stakes placed at the site by the Contractor.

3.4 GRADE AND SURFACE SMOOTHNESS REQUIREMENTS

Grade and surface smoothness requirements shall be as specified in MS SHD-01, Section 403, "Hot Bituminous Pavement", paragraph 403.03.2, "Surface Tolerances", except that Profile Index requirements do not apply.

3.5 BASE COURSE CONDITIONING

The base course shall be inspected for adequate compaction and compliance with surface tolerances as specified in MS SHD-01, Section 304, "Granular Courses" prior to construction of the hot bituminous pavement. Unsatisfactory areas will be corrected.

3.6 PRIME COATING

The surface of previously constructed granular base course shall be prime coated with a coat of bituminous material as specified in MS SHD-01, Section 408, paragraph Prime Coat. The vertical surface of any adjoining pavement shall also be coated with a light prime coat.

3.7 PLACEMENT AND COMPACTION OF HOT BITUMINOUS PAVEMENT

Placement and compaction of the hot bituminous pavement shall be as specified in MS SHD-01, Section 403, "Hot Bituminous Pavement".

3.8 PROTECTION OF PAVEMENT

After final rolling, no vehicular traffic of any kind shall be permitted on the pavement until the pavement has cooled to a temperature of 140 degrees F.

3.9 SAMPLING AND TESTING

The Contractor shall be responsible for all check and assurance testing. This includes the Contractor performing tests that MS SHD-01 indicate will be performed by the "Department" or "Engineer". The Contractor shall perform a sufficient number of each of the required tests to demonstrate to the Contracting Officer that the specifications have been complied with. Testing procedures and frequency shall be in accordance with the appropriate section of MS SHD-01. The Government reserves the right to perform independent tests and checks.

3.10 ACCEPTABILITY OF WORK

3.10.1 Density

The ~~average~~**acceptable** mat density shall meet the requirements of ~~—~~
~~Adjustments to payment for the work with densities falling outside these~~
~~limits will be made as specified in MS SHD-01, Section 401, "Plant Mix~~
~~Pavement-General", paragraph 401.05~~**401.03.1.4, "Density".**~~—Basis of—~~

~~Payment" with the pay factor being applied to the lump sum bid for hot bituminous pavement.~~ **Any section of pavement falling outside these limits shall be removed and replaced at the Contractor's expense.**

3.10.2 Thickness

Thickness requirements shall be as specified in MS SHD-01, Section 403, "Hot Bituminous Pavement", paragraph 403.03.3, "Thickness Requirements".

3.10.3 Surface Tolerances

Surface tolerances shall be as specified in MS SHD-01, Section 403, "Hot Bituminous Pavement", paragraph 403.03.2, "Surface Tolerances". Out of tolerance work shall be corrected as specified in MS SHD-01, Section 403, paragraph 403.03.4, "Surface Corrections".

-- End of Section --

SECTION 03426

PRECAST-PRESTRESSED CONCRETE BRIDGE GIRDERS

PART 1 GENERAL

1.1 MEASUREMENT AND PAYMENT

No separate measurement and payment will be made for precast-prestressed concrete bridge girders, and all costs therefor shall be included in the applicable contract lump sum price for ~~"Bridge No. 1", "Bridge No. 2", and "Bridge No. 3"~~ **"Palestine Road Embankment and Bridges"**.

1.2 REFERENCES

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

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO HB-16 (1996) Standard Specifications for Highway Bridges

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 31/C 31M (2000) Making and Curing Concrete Test Specimens in the Field

PRECAST/PRESTRESSED CONCRETE INSTITUTE (PCI)

PCI MNL-116 (1999) Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products

1.3 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-02 Shop Drawings

Precast-Prestressed Concrete Bridge Girders; G

Complete shop drawings for all prestressed concrete work shall be submitted for approval in accordance with this paragraph and other applicable paragraphs of the TECHNICAL SPECIFICATIONS, including Section 01330 SUBMITTAL PROCEDURES and the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION. The shop drawings shall show complete details, including formwork, inserts, reinforcing steel, size and type of tensioning elements and anchorages, sequence of stressing, method of curing, quality of concrete, camber erection details and methods, and complete

stressing calculations.

SD-06 Test Reports

Cement, aggregates, water and admixtures

Reinforcing Steel

Prestressed Steel

Threaded Inserts; G

Certified test reports of required material tests conforming to the applicable provisions of related work sections shall be submitted by the Contractor prior to the use of the materials in the work. Reports shall be furnished for each shipment and shall be identified with special lots.

Concrete Cylinder Tests

Complete records of cylinder test as described or referred to in paragraph PLACING AND CURING shall be submitted by the Contractor prior to use of girders on the project.

Pretensioning and Detensioning

Complete records of pretensioning and detensioning conforming to the requirements of paragraph PRETENSIONING AND DETENSIONING shall be submitted by the Contractor prior to use of girders on the project.

SD-07 Certificates

Load/Stress Measuring Devices; G

Prior to the start of the tensioning operations, submit descriptions of tensioning jacks, gages, dynamometers, load cells or other devices for measuring stressing load, certified calibration records for each set of jacking equipment, and testing curves for stress measurement gages which show that gages have been calibrated for the jacks for which they are used.

SD-11 Closeout Submittals

Disposition Records

Submit a system identifying the disposition of specific lots of approved tested materials in the work.

1.4 REGULATORY REQUIREMENTS

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

MISSISSIPPI STATE HIGHWAY DEPARTMENT DIVISION OF STATE AID ROAD
CONSTRUCTION

MS OSARC

(1989) Standard Specifications for State Aid

Road and Bridge Construction

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Cement, Aggregate, Water, Admixtures, and Reinforcing Steel

Cement, aggregates, water and admixtures shall conform to the applicable requirements of MS OSARC Sections S-804.02 Material and S-804.26 Precast-Prestressed Concrete Bridge Members.

2.2 FABRICATION

Fabrication of precast-prestressed concrete bridge girders shall follow the applicable provisions of PCI MNL-116 and AASHTO HB-16 except as specified. Shop drawings must be approved before any fabrication is begun. Unless otherwise shown, the following dimensional tolerances of members will govern:

Length of girder	+1/8 inch per 10 feet but not greater than 3/4 inch
Width (Flange and Fillets)	+3/8 inch; -1/4 inch
Depths (Over-all)	+1/2 inch; -1/4 inch
Width (Web)	+3/8 inch; -1/4 inch
Depth (Flange, Web, and Fillets)	+1/4 inch
Horizontal Alignment: (Deviation from a Straight Line Parallel to Centerline of Members)	3/4 inch
Camber, Deviation from Design Differential for Camber (At time of release)	+1/8 inch per 10 feet but not greater than 1/2 inch
Camber, Differential Between Adjacent Girders	1/8 inch per 10 feet of span but . . . not greater than 1 inch
Stirrup Bars Projection above Top of Girder	+3/4 inch
Tendon Position	+1/4 inch CG of strand group and individual tendons
Position of Deflection Points for Deflected Strands	+6 inches
Position of Handling Devices	+6 inches
Side Inserts (Centerline to Centerline and Centerline to End)	+1/2 inches
Exposed Beam Ends Deviation from Square or Designated	Horizontal +1/4 inch per foot Vertical +1/8 inch per foot girder

Skew	height
Bearing Area Deviation from Plane	+1/8 inch
Stirrup Bars-Longitudinal Spacing	+1 inch

2.2.1 Formwork

Forms and formed surfaces shall conform to the applicable portions of MS OSARC Section S-804.26. Forms for pretensioned members shall be constructed to permit movement of the member without damage during release of the pretensioning force. Forms shall remain in place until the girders are removed from the casting beds. The use of the steel forms on concrete founded casting beds is required. Forms shall be made and maintained true to the grade, alignment and dimensions shown. Form joints shall be smooth and tight. Beds and forms shall be thoroughly cleaned before reuse.

2.2.2 Pretensioning and Detensioning

Load/stress measuring devices shall be used for pretensioning and detensioning. Strand tendons may be tensioned by jacking of groups of strands or may be tensioned individually by means of a single-strand jack, as stated in MS OSARC Section S-804.26.2.3 Stressing Procedure.

2.2.3 Placing and Curing

The placing and curing of concrete shall meet the requirements of MS OSARC Section S-804.26.3.4. During the time of casting of each concrete girder, the Contractor shall make a minimum of nine standard 6 inch by 12 inch concrete cylinder tests in accordance with the provisions of ASTM C 31/C 31M.

A minimum of three test cylinders shall be made at three times during each placement; the first time early in the placement, the second time in the middle of the placement and the third time near the end of the placement. The use of special embedded or attached lifting devices shall be subject to approval.

2.2.4 Marking

All precast units shall be plainly marked and identified for ready correlation with corresponding test specimens. Pickup points shall be plainly marked on all units. Units shall be marked to show the number, size and location of reinforcement bars and to identify the top face and the position on the placement drawings. Units designed specifically to be erected adjacent to other units with which they are to function, shall be adequately match-marked before removal from the casting bed.

PART 3 EXECUTION

3.1 ERECTION

Points of support used in handling, transportation, storage and erection of members shall be as close as practical to the final points of bearing. All erection details including shoring and bracing shall be clearly shown on the shop drawings. Extreme care shall be taken during the storage, hoisting and handling to prevent cracking and damage. Members damaged during handling, storage or erection shall be replaced by the Contractor at his expense. Shoring is required in the erection of the AASHTO HB-16, Type

III girders as specified.

3.2 INSPECTION

The Contractor's facilities shall be open for inspection by the Contracting Officer at any time. The Contractor shall maintain full and accurate disposition records of all materials incorporated into prestressed concrete. Manufacturer's test reports shall be submitted on all tendon steels and anchor assemblies, reinforcing steels, cement admixtures, and curing materials. All concrete and cement testing shall be as provided as stated. Complete tensioning records shall be maintained and furnished to the Contracting Officer prior to erection, as specified in PCI MNL-116.

-- End of Section --