

Joe McGee Construction Co. Inc.

6609 Steve Lee Drive

Lake, Mississippi 39092

Board of Supervisors of Bolivar County, Mississippi

Rosedale Court House

Rosedale, Mississippi

BID for: the construction of 0.125 miles of BRIDGE & APPROACHES on the Beulah-Pace in Bolivar County, Mississippi.

Project No. ERBR-06(04)

JMC COR#: 07743-MC

BID DATE: 06/17/2024 @ 9:30 AM

BOLIVAR COUNTY BOARD OF SUPERVISORS, MISSISSIPPI

ERRR-06(04)

PROJECT NO. 23-141

REQUEST FOR INFORMATION NO. 1

June 13, 2024

I. QUESTIONS

Q1: The plans states Pay Item S-630-C is Reflectorized Traffic Object Marker (Encap. Lens) (Type 3) but in the proposal states that Pay Item S-630-A is Reflectorized Traffic Warning Sign (Encap. Lens) (Type 3). Which one is correct?

AI: *There was a grammatical error in the proposal, and it should state in the proposal that Pay Item S-630-A is Reflectorized Traffic Warning Sign (Encap. Lens) (Type 3).*



CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

ERBR-06(04)
Bolivar County

Project documents obtained from www.CentralBidding.com
17-Jun-2024 08:03:23 AM

MISSISSIPPI

INFRASTRUCTURE MODERNIZATION ACT OF 2018 EMERGENCY ROAD AND BRIDGE REPAIR FUND PROJECT

and

BOARD OF SUPERVISORS

BOLIVAR _____ County

PROPOSAL AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

ERBRF PROJECT NO. ERBR-06(04)

Being a Section of County Road in BEULAH-PACE ROAD

BOLIVAR County, Mississippi

TYPE OF CONSTRUCTION BRIDGE AND APPROACHES

BRIDGE NUMBER(S) #176

Net Length 0.125 Miles

Gross Length 0.125 Miles Contract Time 180 Working Days

By _____

Address _____

Surety _____



Note

5-6-24

Standard Specifications for State Aid Road and Bridge Construction currently approved by the Office of State Aid Road Construction and the Federal Highway Administration are made a part hereof fully and completely as if attached hereto, except where superseded by the Special Provisions, or amended by revisions.

OFFICE OF STATE AID ROAD CONSTRUCTION
STATE AID PROJECT NO. ERBR- 06(04)
BOLIVAR COUNTY

MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE
CONSTRUCTION, 2004 EDITION

TABLE OF CONTENTS

01	Section 900	
02	Special Notice to Bidders	Notice of Advertisement
03	Notice To Bidders No. 1	Construction Safety & Health Standards
04	Notice To Bidders No. 2	Bidding Requirements and Conditions
05	Notice To Bidders No. 3	High Voltage Overhead Lines
06	Notice To Bidders No. 5	Specialty Items
07	Notice To Bidders No. 7	Status of Utility Adjustments And Right-of-Way Acquisition
08	Notice To Bidders No. 8	Payments To Subcontractors
	(Rev. 04-07-2022)	Errata and Modifications to the 2004 Edition of the Standard
09	Notice To Bidders No. 10	Specifications for State Aid Road and Bridge Construction
10	Notice To Bidders No. 11	Monthly Estimate Retainage
11	Notice To Bidders No. 16	Certification of 100% of Payment To Subcontractor
12	SS 901-S-102-1	Safety Apparel
13	SS 901-S-103-1	Bid Bond Agent
14	SS 901-S-104-1	Contract Bond Agent or Liability Insurance Agent
15	SS 901-S-107-2	Removal and Disposal of Structures and Obstructions
16	SS 901-S-107-3	Material Pits and Quarries
17	SP 901-S-618-1	Permits, Licenses and Taxes
18	SS 901-S-701-2	Supplement to Traffic Control Plan
19	SS 901-S-708-1	Portland Cement
20	SS 901-S-714-1	Non-Metal Drainage Structures
21	SS 901-S-714-2	Geotextile Certification
22	SS 901-S-803-1	Miscellaneous Materials
23	SS 901-S-804-1	LRFD Driven Pile Specifications
24	Form SAA-1	Concrete Bridges And Structures
25	EEV Certification (Rev. 06-12)	Non-Collusion Affidavit
26	Section 902	Mississippi Employment Protection Act Compliance
27	Section 903 (Rev. 03-11-2010)	Proposal
28	Section 904 (Rev. 03-11-2010)	Contract
		Contract Bond





OFFICE OF STATE AID ROAD CONSTRUCTION
AND
COUNTY BOARD OF SUPERVISORS

SECTION 900

NOTICE TO CONTRACTORS:

Sealed bids will be received by the Board of Supervisors of Bolivar County Mississippi at the Rosedale Court House, Rosedale, Mississippi, until 9:30 AM on the 17th day of June 2024 and shortly thereafter publicly opened for the construction of 0.125 miles of BRIDGE & APPROACHES on the Beulah-Pace being known as Project No. ERBR-06(04) in Bolivar County Mississippi.

PRINCIPAL ITEMS OF WORK ARE APPROXIMATELY AS FOLLOWS

<u>ROADWAY ITEMS:</u>	QUANTITY	UNIT
MOBILIZATION	1.000	LS
CLEARING AND GRUBBING	1.000	LS
REMOVAL OF PRECAST BRIDGE @ STA. 41+96.06	1.000	UN
REMOVAL OF PIPE (ALL SIZES)	128.000	LF
UNCLASSIFIED EXCAVATION (FM)	279.000	CY
EXCESS EXCAVATION (FM)	648.000	CY
CRUSHED STONE	940.000	TON
HOT MIX ASPHALT, (ST 9.5mm)	145.000	TON
HOT MIX ASPHALT, (ST 19mm)	266.000	TON
18" REINFORCED CONCRETE PIPE, CLASS III	120.000	LF
36" REINFORCED CONCRETE PIPE, CLASS III	56.000	LF
GUARD RAIL, W-BEAM	425.000	LF
GUARD RAIL, BRIDGE END SECTION, TYPE "I" THRIE BEAM	4.000	EA
GUARD RAIL, TERMINAL END SECTION	4.000	EA
MAINTENANCE OF TRAFFIC	1.000	LS
ADDITIONAL CONSTRUCTION SIGNS	0.000	SF
4" WIDE THERMOPLASTIC EDGE STRIPE (CONTINUOUS WHITE) (60 MILS)	0.249	MI
4" WIDE THERMOPLASTIC TRAFFIC STRIPE (CONTINUOUS YELLOW) (90 MILS)	0.125	LF
TWO-WAY YELLOW REFLECTIVE HIGH PERFORMANCE RAISED MARKERS	8.000	EA
REFLECTORIZED TRAFFIC WARNING SIGN (ENCAPSULATED LENS)	4.000	EA
 <u>EROSION CONTROL ITEMS:</u>		
COMMERCIAL FERTILIZER (13:13:13)	0.431	TON
SEEDING	1.149	AC
VEGETATIVE MATERIALS FOR MULCH	2.298	TON
TEMPORARY SILT FENCE (TYPE II) (AOS 0.15-0.84)	1,325.000	LF
WATTLES, 20" DIAMETER	120.000	LF
LOOSE RIPRAP, 300 LB.	302.000	TON
GEOTEXTILE UNDER RIPRAP, TYPE V, AOS 0.21 - 0.43	479.000	SY

BRIDGE ITEMS:

TEST PILE			
CONVENTIONAL STATIC PILE LOAD TEST	2.000	EA	EA
18 " PRESTRESSED CONCRETE PILING	0.000	EA	EA
BRIDGE CONCRETE, CLASS A	1,155.000	LF	LF
REINFORCEMENT	60.400	CY	CY
31 ' PRECAST CONCRETE SLAB UNIT, 3.5' INTERIOR	11,429.000	LB	LB
31 ' PRECAST CONCRETE SLAB UNIT, 4.5' INTERIOR	8.000	EA	EA
40 ' PRECAST CONCRETE SLAB UNIT, 3.5" INTERIOR	4.000	EA	EA
40 ' PRECAST CONCRETE SLAB UNIT, 4.5' INTERIOR	8.000	EA	EA
31 ' PRECAST CONCRETE SLAB UNIT, 3.5' EXTERIOR	4.000	EA	EA
40 ' PRECAST CONCRETE SLAB UNIT, 3.5' EXTERIOR	4.000	EA	EA
PRECAST CONCRETE BARRIER RAIL	284.000	LF	LF
LOOSE RIPRAP, 300 LB.	51.000	TON	TON
GEOTEXTILE UNDER RIPRAP, TYPE V, AOS 0.21 - 0.43	80.000	SY	SY

PROJECT NO. ERBR-06(04)
Bolivar COUNTY

NOTICE TO CONTRACTORS:

CONTRACT TIME: 180 Working Days

The award, if made, will be made to the lowest qualified bidder on the basis of published quantities.

The Board of Supervisors hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement; minority business enterprise will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

PLANS AND SPECIFICATIONS are on file in the Office of the Chancery Clerk of Bolivar County, Ron Hill, the LSBP Engineer's office and the Office of the State Aid Engineer, 412 E. Woodrow Wilson Avenue, Jackson, Mississippi. This project shall be constructed in accordance with the latest edition of the Mississippi Standard Specifications for State Aid Road and Bridge Construction.

PLANT AND PROPOSALS may be secured from Central Bidding at 225-810-4814.

Certified check or bid bond for five percent (5%) of the total bid, made payable to Bolivar County and the State of Mississippi must accompany each proposal.

Bidders are hereby notified that any proposal accompanied by letters qualifying in any manner the condition under which the proposal is tendered will be considered an irregular bid and such proposal will not be considered in making the award.

For electronic delivery, Bids must be submitted at www.centralbidding.com. All electronic bids must be submitted in portable electronic format (PDF) and must contain the same information, forms and Bid Security as required for paper bids. For any questions relating to the electronic bidding process, please call Central Bidding at 225-810-4814.

Larry L. King, Board President
Bolivar County Board of Supervisors

Published: May 8, 2024
May 15, 2024

SPECIAL NOTICE TO BIDDERS

CONSTRUCTION SAFETY AND HEALTH STANDARDS

It is a condition of this contract, and shall be make a condition of each subcontract entered into pursuant to this contract, that the contractor and any subcontractor shall not require any laborer or mechanic employed in performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under the following Federal regulations:

1. (a) Occupational Safety and Health Standards, Department of Labor,
Occupational Safety and Health Administration, Federal Register or October 18,
1972, pages 22102 to 22356.
(b) General Industry Guide for Applying Safety and Health Standards, OSHA
Publication No. 2072, U. S. Department of Labor, Occupational Safety and Health
Administration.
2. Safety and Health Regulations for Construction, Department of Labor,
Occupational Safety and Health Administration, Federal Register of December 16,
1972, pages 27503 to 27600.
3. Safety and Health Standards for Maritime Employment, Department of Labor,
Occupational Safety and Health Administration, Federal Register of October 19,
1972, pages 22458 to 22564.

**OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

NOTICE TO BIDDERS NO. 1

DATE: July 1, 2005

SUBJECT: BIDDING REQUIREMENTS AND CONDITIONS

REFERENCE: Section S-102.02 of 2004 Edition of the Standard
Specifications for Road and Bridge Construction

NOTICE TO BIDDERS
(ALL PROJECTS)

The current (2004) Edition of the Mississippi Standard Specifications for State Aid Road and Bridge Construction adopted by this Office on July 1, 2005, and approved by the Federal Highway Administration on July 1, 2005 is made a part hereof fully and completely as if it were attached hereto, except where superseded by special provisions, or amended by revisions of the Specifications contained herein. Copies of the specification book may be purchased from the Office of State Aid Road Construction.

A reference in any contract document to controlling requirements in another portion of the contract documents shall be understood to apply equally to any revision or amendment thereof included in the contract.

In the event the plans or proposal inadvertently contain references to the 1982 or 1989 Edition of the Mississippi Standard Specifications for State Aid Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 2004 Edition of the Standard Specifications.

NOTICE TO BIDDERS
(FEDERAL AID PROJECTS)

The Contractor and sub-contractors shall submit one copy each of FORMS CAD-880, "Weekly Summary of Wage Rates" and CAD-881, "Weekly Statement of Compliance" each week to the State Aid Engineer and to the County Engineer. The Contractor and sub-contractors may at their discretion, submit two (2) copies of each form to the County Engineer, who in turn, shall forward one copy to State Aid. The forms may be obtained from:

Office Supervisor
Office of State Aid Road Construction
P. O. Box 1850
Jackson, Mississippi 39215-1850

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

NOTICE TO BIDDERS NO. 2

DATE: July 1, 2004

SUBJECT: HIGH VOLTAGE OVERHEAD LINES

NOTICE OF WORK TO BE PERFORMED
IN PROXIMITY OF HIGH VOLTAGE POWER LINES

In accordance with Section 45-15-1, et seq., Mississippi Code of 1972 (as amended effective July 1, 1988), _____ (herein after referred to as "Applicant") (Supervisor in Charge: _____), whose address is _____, and whose telephone number is _____, hereby gives notice to the electric utility (hereinafter referred to as "Utility") that Applicant will be performing functions or activities at the location of _____ and that _____ the estimated starting date of this work is _____. This work could reasonably be expected to cause persons, equipment or parts of tools or materials to be brought within ten (10) feet of Utility's high voltage lines at the proposed work area. Applicant hereby requests the Utility to confer with Applicant or his representative at the work site to ascertain the type of work activity that will take place and if further safety measures need to be taken by either the Applicant or the Utility. The Utility will give the Applicant a written cost estimate for safety arrangements to deter contact with on-site power lines. Applicant agrees not to perform such functions or activities until mutually satisfactory arrangements as provided by Section 45-15-9 have been made to deter contact with Utility's line.

Nothing contained in this Notice shall diminish or affect the obligation imposed upon the Utility under Section 45-15-1, et seq., or under existing laws or be construed as a waiver of the Applicant's or the Utility's rights under the law.

NOTICE GIVEN THIS, the _____ day of _____, _____.

APPLICANT

BY: _____

(Title)

Notice received by the Utility this the _____ day of _____, _____.

**OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

NOTICE TO BIDDERS NO. 3

DATE: MAY 6, 2024

SUBJECT: SPECIALTY ITEMS

PROJECT: ERBR-06(04) COUNTY BOLIVAR

Pursuant to the provisions of Section S-108 of the Mississippi Standard Specifications for State Aid Road and Bridge Construction, 2004 Edition, the following work items are hereby designated as "Specialty Items" for this contract.

<u>Pay Item No.</u>	<u>Description</u>
<u>S-606-D</u>	<u>Guard Rail, Bridge End Section, Type "1" Thrie Beam</u>
<u>S-606-E</u>	<u>Guard Rail, Terminal End Section</u>
<u>S-607-A</u>	<u>Roadway Construction Signs</u>
<u>S-618-A</u>	<u>Maintenance of Traffic</u>
<u>S-618-B</u>	<u>Additional Construction Signs</u>
<u>S-621-C</u>	<u>4" Thermoplastic Edge Stripe (Continuous White)</u>
<u>S-621-D</u>	<u>4" Thermoplastic Traffic Stripe (Skip Yellow)</u>
<u>S-630-C</u>	<u>Refactorized Traffic Object Marker (Encapsulated Lens)</u>
<u>S-212-B</u>	<u>Commercial Fertilizer (13:13:13)</u>
<u>S-214-A</u>	<u>Seeding</u>

(7-01-2004)

**OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

NOTICE TO BIDDERS NO. 3

DATE: MAY 6, 2024

SUBJECT: SPECIALTY ITEMS

PROJECT: ERBR-06(04) COUNTY BOLIVAR

Pursuant to the provisions of Section S-108 of the Mississippi Standard Specifications for State Aid Road and Bridge Construction, 2004 Edition, the following work items are hereby designated as "Specialty Items" for this contract.

<u>Pay Item No.</u>	<u>Description</u>
<u>S-815-E</u>	<u>Geotextile Fabric Under Riprap</u>
<u>S-215-A</u>	<u>Vegetative Materials for Mulch</u>
<u>S-233-A</u>	<u>Temporary Silt Fence (Type II)(AOS 0.15-0.84)</u>
<u>S-815-A</u>	<u>Loose Riprap, 300 Lb.</u>
<u>S-815-E</u>	<u>Geotextile Under Riprap, Type V, AOS 0.21-0.43</u>
<u> </u>	<u> </u>

**OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

NOTICE TO BIDDERS NO. 7

DATE: January 10, 2020

SUBJECT: PAYMENTS TO SUBCONTRACTORS

Bidders are hereby advised that each month, the Contractor will submit to the County/LSBP Engineer form OCR-484-SA certifying payments to all subcontractors. Form OCR-484-SA can be obtained from the Office Of State Aid Road Construction, MDOT Lab Building, 412 Woodrow Wilson Avenue, Jackson, MS, or on the State Aid website (<https://www.osarc.ms.gov>) under Documents->Contract Documents.

**OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

NOTICE TO BIDDERS NO. 8

DATE: April 07, 2022

SUBJECT: Errata and Modifications to the 2004 Edition of the Standard Specifications for State Aid Road and Bridge Construction

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
1-21	S-103.02	In the third line of the last paragraph, change "contracts in the same" to "contracts, financed wholly with State funds, in the same".
1-42	S-105.17	In line (b) of the third paragraph, add "claim." at the end of the sentence.
1-47	S-106.04	In the next to last paragraph, change "TMD-22-0100-000" to "TMD-22-01-00-000" and change "TMD-21-0100-000" to "TMD-21-01-00-000".
1-84	S-109.06.2	In the eleventh line of the second paragraph, change "of material invoices" to "of paid material invoices".
1-85	S-109.08	Replace 4 th paragraph in it's entirety with "The established base prices for bituminous products and fuels shall be the prices for the month prior to the month of the bid date and are available on the State Aid Website."
1-87	S-109.08	On page 1-87, insert the following after item (A6) and before the paragraph in the middle of the page: "(A7) Asphalt for Fog Seal Mixture -- One half pay quantity in gallons."
1-87	S-109.08	Delete the last paragraph on the page in toto.
1-88	S-109.08	Under ADJUSTMENTS, change paragraph 5 to read as follows: No adjustment will be made for items of work accomplished after the expiration of Contract Time except for cases involving natural or manmade disasters or other reasons not inherent to the construction industry. The contractor will submit documentation for the adjustment to the Engineer for approval/disapproval. If approved, the Engineer will prepare a supplemental agreement explaining the adjustment and submit the proper number of copies of the agreement to the Board of Supervisors for their consideration and action. If approved by the Board, all copies will be forwarded to the State Aid Engineer for concurrence. Upon concurrence, the State Aid Engineer will, if necessary, forward the agreement to any other involved parties for their action. A copy of the approved agreement will be furnished to all parties by the State Aid Engineer.

2-7 S-202.07 In the first sentence of the first paragraph, change "S-202" To "S-202-A". In the first sentence of the second paragraph, delete "S-202-A".

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
3-7	S-304.10	Change S-304-D: from "Crushed Stone" to "Crushed Stone _____" (Size)
3-30	S-308.15	In the third pay item, change "per square yard**" to "per square yard". In the fourth pay item, change "S-308-B-1" to "S-308-B-2".
4-8	S-401.02.4	At the end of the third sentence, delete the "." and add "and as a base course."
4-8	S-401.02.4	In the table at the end of the Subsection, for the 19 mm, change "2 1/4" to "2 1/2" in the Minimum and change "3" to "3 1/2" in the Maximum; for the 12.5 mm, change "2" to "2 1/2" in the Maximum; for the 9.5 mm, change "1 1/2" to "2" in the Maximum; and for the 4.75 mm, change "3/4" to "1 1/4" in the Maximum.
4-23	S-401.03.1.4	In the first paragraph, change "92.0 percent" to "the specified percentage (92.0 or 93.0)".
4-32	S-403.03.3	In the first sentence of the second paragraph, change "acceptance and pavement" to "acceptance and pavement".
4-45	S-409.02.2	Change "PG 64-22" to "PG 67-22".
6-2	S-601.06	In the first sentence, change "S-804.03" to "S-804.03.5".
6-7	S-602.05	Change the subsection reference for Bending from "S-805.05" to "S-805.03.2".
6-9	S-603.02	Change the subsection reference for Joint Mortar from "707.02" to "714.11".
6-15	S-603.09	After second sentence, add "All lift holes shall be filled and/or sealed to the satisfaction of the Engineer."
6-78	S-620.06	Change the first sentence of the second paragraph, from "Legend will be measured by the square foot.", to "Legend will be measured by the linear foot or square foot, as applicable."
6-78	S-620.07	In the sixth pay item, change "S-620-E-1" to "S-620-E-2".
7-17	S-702.12	In TABLE I, under the heading of Test, in the second line change "140°F, poises" to "275°F, Cs".
7-20	S-703.02.1	In line (1) of the first paragraph, change "set-out" to "set out".
7-25	S-703.04.2	In the fifth paragraph, delete "S-703.04.3 and".
7-52	S-708.02.1.2	In the first sentence change "20 percent" to "25%".
7-104	S-714.13.1	Delete the fourth paragraph.
7-154	S-721.02.3.7	Delete Subsection S-721.02.3.7--Ground Plates in toto.
8-37	S-803.03.2.6	In the first sentence of the second paragraph, change "S-803.03.1.5.1" to "S-803.03.2.5".
8-45	S-803.04.1	Delete the second paragraph and replace with the following: Test piles which require extensions or building up will not be measured for additional

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
8-50	S-803	payment. Splices required for the extensions will not be measured for payment. No measurement for payment will be made for cut-off of a test pile.
8-60	S-804.02.11	Under COMPENSATION. In the seventh pay item, change " <u>S-803-G: Blank</u> " to " <u>S-803-G: Concrete Piling Cut-off, Size</u> - per each "
8-64	S-804.02.13	In the last sentence of the first paragraph, change "automatically" to "automatic".
8-66	S-804.02.13.1.3	In the second line of paragraph (c), place a period after psi and delete "provided both the QC and QA test results are equal to or exceed the minimum compressive strength requirements."
8-67	S-804.02.13.1.5	In the last sentence change, "S-804.02.13.1" to "S-804.02.12".
8-91	S-804.03.19.7.1	Change the equation for % Reduction to: $\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c} \times 100$
8-121	S-806.04	Change " <u>Belt finish.</u> " To " <u>Belt or Broom finish.</u> "
8-121	S-806.08	In the first sentence of the third paragraph, change "by the unit (one unit consists of one wing on each side and end of the abutment cap)" to "per each".
8-122	S-806.08	Change " <u>S-806.08--Basis of Payment</u> " to " <u>S-806.05--Basis of Payment</u> ".
8-122	S-806.08	In the first pay item, change " Interior" to " ____ Interior".
8-122	S-806.08	On pay item S-806-H, add "or Steel Posts"

**OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

NOTICE TO BIDDERS NO. 10

DATE: July 1, 2005

SUBJECT: MONTHLY ESTIMATE RETAINAGE

The monthly retainage for this project shall be two and one half (2-1/2) percent (%) subject to the provisions found in Subsection ~~S-109.06.3--Retainage~~ on page 1-84 of the 2004 Edition of the Mississippi Standard Specifications for State Aid Road and Bridge Construction.

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

NOTICE TO BIDDERS NO. 11

DATE: November 19, 2009

SUBJECT: CERTIFICATION OF 100 % PAYMENT TO SUBCONTRACTORS

Bidders are hereby advised that within thirty (30) days of any Subcontractor completing 100% of any subcontracted work, the Prime Contractor shall make full payment to the Subcontractor (including retainage), complete the following certification, attach it to form OCR-484-S or OCR-484-SA, as applicable, and submit it to the County/LSBP Engineer. Retainage on the subcontract will then be released to the Prime Contractor on a subsequent estimate.

CERTIFICATION OF 100% OF PAYMENT TO SUBCONTRACTOR

Date: _____

Project No.: _____

County: _____

Prime Contractor: _____

Subcontractor: _____

I, _____, hereby certify
(Printed or typed name of Subcontractor)

that I have been paid 100% (including retainage) of the amount of work subcontracted on the above mentioned project in the amount of _____ and that I was paid within thirty (30) Days of when I completed said work.

(Signature of Subcontractor)

(Signature of Prime Contractor)

Falsification of this Certification is subject to prosecution.

**OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

NOTICE TO BIDDERS NO. 16

DATE: November 3, 2008

SUBJECT: Safety Apparel

Bidders are advised that the Code of Federal Regulations CFR 23 Part 634 final rule was adopted November 24, 2006 with an effective date of November 24, 2008. This rule requires that " All workers within the right of way of a Federal-Aid Highway who are exposed either to traffic (vehicles using the highway for the purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel". High-visibility safety apparel is defined in the CFR as "personnel protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage, and that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2004 publication entitled American Nation Standard for High-Visibility Safety Apparel and Headwear". All workers on County right-of-way shall comply with the Federal Regulation. Workers are defined by the CFR as "people on foot whose duties place them within the right-of-way of a Federal-Aid Highway, such as highway construction and maintenance forces, survey crews, utility crews, responders to incidents within the highway right-of-way, and law enforcement personnel when directing traffic, investigating crashes, and handling lane closures, obstructed roadways, and disasters within the right-of-way of a Federal-Aid Highway".

You can access this final rule at the following link:

<http://a257.g.akamaitech.net/7/257/2422/01an20061800/edocket.access.gpo.gov/2006/pdf/E6-19910.pdf>

Supplemental Specification
901-S-102-1
Bidding Requirements and
Conditions

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: March 11, 2010

SUBJECT: Bid Bond Agent

Delete the first sentence of the second paragraph of S-102.08 on page 1-19, and substitute the following:

If a bid bond is offered as guaranty, the bond must be on a form approved by the State Aid Engineer, made by a Surety, and must be acceptable to the Board and the State Aid Engineer and signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent and the bidder.

Supplemental Specification
901-S-103-1
Award and Execution of Contract

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: March 11, 2010

SUBJECT: Contract Bond Agent or Liability Insurance Agent

Delete the last sentence of the paragraph of S-103.05 on page 1-22, and substitute the following:

The bond or bonds shall be negotiated for, procured from, signed or countersigned by, and the premium paid to a Mississippi Agent or Qualified Nonresident Agent of the Surety.

Delete the last sentence of the first paragraph of S-103.06.1 on page 1-22, and substitute the following:

Each policy shall be signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent of the insurance company.

Delete the last sentence of the second paragraph of S-103.06.1 on page 1-23, and substitute the following:

Each policy shall be signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent of the insurance company.

Supplemental Specification
901-S-104-1
Removal and Disposal of Structures
and Obstructions

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: July 1, 2005

SUBJECT: Changes in Character of Work and Changed Physical Conditions and Removal and Disposal of Structures and Obstructions:

Section S-104 - SCOPE OF WORK: of the MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

901-S-104.02.1--Changes in Character of the Work and Changed Physical Conditions: Delete the last sentence of the first paragraph and add the following paragraphs:

Upon written notification, the Engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor, in writing, of the determination whether or not an adjustment of the contract is warranted.

No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.

In the second paragraph, after the words " cannot be reached," delete "the State Aid Engineer" and insert "the Board, with the approval of the State Engineer". Then delete the words "which the State Aid Engineer has" and insert "which the Board and the State Aid Engineer have".

901-S-104.05--Removal and Disposal of Structures and Obstructions: After the last paragraph on page 1-27, add the following paragraph:

The Contractor shall also furnish the Engineer a certified letter stating that the area of disposal is not in a wetland.

901-S-104.06--Rights in and Use of Materials Found on the Work: After the first sentence of the third paragraph insert the following sentence:

The Contractor shall also furnish the Engineer a certified letter stating that the area of disposal is not in a wetland.

Supplemental Specification
901-S-107-2
Material Pits and Quarries

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: July 01, 2005

SUBJECT: Material Pits:

Section S-107-LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC; of the MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

901-S-107.23--Material Pits: Delete the first and second paragraph on page 1-66 and replace with the following paragraphs:

Before a pit (quarry) is opened(area cleared or overburden disturbed), furnish to the County Engineer a letter from the Executive Director of the Department of Archives and History, P. O. Box 571, Jackson, Mississippi 39205 (telephone number 601/576-6850), stating that the pit site is satisfactory from an archaeological and historical standpoint. Additionally, the contractor will furnish the Engineer either a copy of the " Notification of Exempt Operations" or a copy of the (permanent or temporary) Class II Permit approval from the Mississippi Department of Environmental Quality, Office of Geology.

For material pits located in Clarke, Covington, Forrest, George, Greene, Hancock, Harrison, Jackson, Jones, Lamar, Pearl River, Perry, Stone and Wayne Counties, the Contractor will be required to make special considerations regarding gopher tortoises. In addition to the normal required documentation associated with material pits, the Contractor shall, for each site used to obtain or dispose of materials associated with material pits located in these Counties, provide the Engineer with a letter from a qualified biologist certifying that the site was inspected prior to any clearing of vegetation or disposal of project materials and that the site is not inhabited by gopher tortoises, or appropriate avoidance measures have been installed. No individual lacking the proper State or Federal license shall touch or otherwise harass a gopher tortoise.

All costs involved in obtaining letters of clearance shall be born by the Contractor

Supplemental Specification
901-S-107-3
Permits, Licenses and Taxes

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: May 10, 2006

SUBJECT: Permits, Licenses and Taxes:

Section S-107-LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC; of the MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

901-S-107.02-Permits, Licenses and Taxes. Delete in toto Subsection 107.02 on page 1-50, and substitute the following:

Except as provided in S-107.09, and S-107.22, the Contractor or Subcontractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work. At any time during the life of this contract, State Aid may audit the Contractor's or Subcontractor's compliance with the requirements of this section.

The Contractor or Subcontractor is advised that the "Mississippi Special Fuel Tax Law", Section 27-55-501, et seq, and the Mississippi Use Tax Law, Section 27-67-1, et seq., Mississippi Code of 1972, Annotated, and their requirements and penalties apply to any contract or subcontract for construction, reconstruction, maintenance or repairs, for contracts or subcontracts entered into with the State of Mississippi, any political subdivision of the State of Mississippi, or any Department, Agency, Institute of the State of Mississippi or any political subdivision thereof.

The Mississippi State Tax Commission will be notified of the name and address of Contractors or any Subcontractors that are awarded State Aid contracts. The Contractor or Subcontractor will be subject one or more audits during the life of this contract to make certain that all applicable fuel taxes are being paid promptly as outlined in Section 27-55-501, et seq., Mississippi Code of 1972, Annotated, and any sales and/or use taxes, as outlined in Section 27-67-1, et seq., Mississippi Code of 1972, Annotated are being paid in compliance with the law.

SPECIAL PROVISION NO. 901-S-618-1
PROJECT NO: ERBR-06(04)
COUNTY: BOLIVAR

DATE: May 2, 2024

SUBJECT: SUPPLEMENTAL TO TRAFFIC CONTROL PLAN

This project consists of construction of a new road, bridge, grading, and drainage of a portion of the Beulah-Pace Road in Bolivar County, Mississippi.

The entire project shall be closed to all traffic during construction. Traffic may detour around the project by way of various county roads during construction of the project. The necessary signs, barricades and other traffic control devices for the project are also shown on the Traffic Control Plan, sheet 2-D of the Contract Plans.

There shall be no trucks or equipment parked or stored within close proximity of a traveled lane in use by the public. The specific requirements of the contractor's responsibility are as indicated in Subsections S-104.04, S-105.15, S-107.07 and S-107.10, Sheet No. 3 of the plans, and part VI of the MUTCD, Latest Edition. The requirements of this Special Provision do not alter or in any way change the requirements of the above mentioned provisions of the contract or any other provision of the contract except as specifically stated herein as an alteration or change.

Josh F. McPherson, P.E., Bolivar County Engineer, is hereby designated as the responsible person to insure the Contractor constructs, installs, and maintains the devices called for on the Traffic control Plan. An inspection of the traffic control signs and devices shall be performed at periods not exceeding one week, regardless of construction activity within the project. The contractor will be required to immediately rectify any noted deficiencies.

The contractor shall provide access of local traffic to properties fronting on the roadway at all times from one end of the construction area or the other.

Supplemental Specification
 901-S-701-2
 Portland Cement

OFFICE OF STATE AID ROAD CONSTRUCTION
 MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: May 10, 2006

SUBJECT: Portland Cement

Section S-701 - HYDRAULIC CEMENT; of the MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

901-S-701.01--Portland Cement. Delete the third paragraph and table in Subsection 701.01 on page 7-9, and substitute the following:

When Portland cement concrete or cement for soil stabilization is exposed to moderate or severe soluble sulfates, or to seawater, cement types and replacement of cement by Class F fly ash (FA), ground granulated blast furnace slag (GGBFS), or metakaolin shall be as follows:

Cementitious Materials for Soluble Sulfate Conditions

Sulfate Exposure	Water-soluble sulfate (SO ₄) in soil, % by mass	Sulfate (SO ₄) in water, ppm	Cementitious material required
Negligible	0.00 - 0.10	0.0 - 150	- - -
Moderate and Seawater	0.10 - 0.20	150 - 1500	Type II*** cement, or Type I cement with one of the following replacements of cement: 25% Class F, FA, or 50% GGBFS, or 10% metakaolin
Severe	0.20 - 2.00	1500 - 10,000	Type II* cement with one of the following replacements of cement: 25% Class F, FA, or 50% GGBFS, or 10% metakaolin

* Type I cement with a maximum 8% tricalcium aluminate may be used in lieu of Type II Cement.

** Class F, FA or GGBFS may be added as a replacement for Portland cement in accordance with the proportions as listed in this table.

Class C fly ash shall not be used as a replacement for Portland cement in any of the sulfate exposure conditions listed above.

Supplemental Specification
901-S-708-1
Non-Metal Drainage Structures

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: May 10, 2006

SUBJECT: **Non-Metal Drainage Structures:**

Section S-708 - NON-METAL STRUCTURES AND CATTLEPASSES, of the MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

901-S-708.02.3.2--Marking: Delete the second sentence of Subsection 708.02.3.2 on page 7-53, and substitute the following:

Machine made Pipe shall be marked in accordance with one of the following methods: 1) the pipe shall be inscribed on the outside of the pipe and stenciled on the inside of the pipe, or 2) the pipe shall be inscribed on the inside of the pipe, only. All other pipe may be stenciled.

901-S-708.22.2--Exceptions to AASHTO: Delete the sixth paragraph of Subsection 708.22.2 on page 7-61.

Supplemental Specification
901-S-714-1
Geotextile Certification

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: July 1, 2005

SUBJECT: Geotextile Certification:

Section S-714 - MISCELLANEOUS MATERIALS; of the MISSISSIPPI STANDARD SPECIFICATION FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

901-S-714.13.10--Acceptance By Certification. After the second sentence of Subsection S-714.13.10 on page 7-105 insert the following:

Additionally, at least one certified test report, as per S-700.05.2, for each manufacturer's lot shall be furnished to the Engineer by the Contractor at no additional cost to the project.

Supplemental Specification
901-S-714-2
Miscellaneous Materials
OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: May 10, 2006

SUBJECT: Miscellaneous Materials:

Section ~~S-714-MISCELLANEOUS MATERIALS~~, of the MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

Delete Subsection 714.07 on page 7-92 and substitute the following:

901-S-714.07--Other Cementitious Materials:

901-S-714.07.1--Metakaolin:

901-S-714.07.1.1--Metakaolin--General: Metakaolin shall only be used to bring the cementitious materials in Portland cement concrete and cement for soil stabilization into compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. The approval of each metakaolin source shall be on a case by case basis as determined by the MDOT State Materials Engineer. Source approval will be based on, but not limited to, review of the proposed source's quality control program, production history, certified test reports, certification of shipment from the supplier, and job control sampling and testing requirements.

The Contractor shall provide suitable means for storing and protecting the metakaolin against dampness and contamination Metakaolin which has become partially set, caked, or contains lumps shall not be used.

The MDOT State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the metakaolin during production.

Metakaolin from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. In addition to these requirements, metakaolin shall meet the following specific requirements.

901-S-714.07.1.2--Specific Requirements: Metakaolin shall meet the requirements of AASHTO Designation: M 295 Class N with the following modifications:

1. The sum of $\text{SiO}_2 + \text{Al}_2\text{O}_3 + \text{Fe}_2\text{O}_3$ Shall be at least 85%. The Material Safety Data Sheet shall indicate the amount of crystalline silica, as measure by National Institute of Occupation Safety and Health (NIOSH) 7500 method, after removal of the mica interference, is less than 1.0%.
2. The loss on ignition shall be less than 3.0%.
3. The available alkalis, as equivalent Na_2O , shall not exceed 1.0%.
4. The amount of material retained on the No. 325 Mesh sieve shall not exceed 1.0%.
5. The strength activity index at seven (7) days shall be at least 85%.

Supplemental Specification
901-S-803-1
LFRD Driven Pile
Specifications.

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: May 24, 2010

SUBJECT: LFRD Driven Pile Specifications

Delete subsections S-803.01 to S-803.03.1.11 on pages 8-8 to 8-20, and replace with the following:

S-803.01--General.

S-803.01.1--Description. This work consists of furnishing and installing deep foundations in accordance with these specifications and in reasonable conformance with the lines, elevations, and spacing's shown on the plans. It shall also consist of furnishing all required labor, tools, and equipment to determine the bearing value of the deep foundation according to Load and Resistance Factor Design (LFRD) by static load testing, by dynamic load testing, and/or by driving of the specified test piles.

S-803.01.2--Order Lists for Deep Foundations. Lengths found in the plans are estimated lengths for bid purposes. Unless otherwise specified or authorized in writing by the Engineer, with the concurrence of the State Aid Bridge Engineer, all permanent deep foundations shall be installed within the prescribed tolerances specified herein and to the depths and/or lengths indicated on the itemized Order List furnished by the Engineer. The Order List shall be furnished after bearing has been verified either through static load testing, dynamic load testing, and/or driving of the specified test piles.

In general the penetration for any pile shall be: not less than five feet in hard material, not less than one-third the length of the pile, or less than twenty (20) feet in soft material. For foundation work, no piling shall be used to penetrate a very soft upper stratum overlying a hard stratum unless the piles penetrate the hard material a sufficient distance to rigidly fix the ends. If scour is predicted then the Engineer shall account for the potential loss of skin friction over the area of the pile in the scour zone.

The Contractor shall furnish or install driven piles and/or drilled shafts in accordance with an itemized list furnished by the Engineer. The Order List will show the required length of the piles or drilled shafts for each bridge bent or footing.

S-803.02--Materials. All materials shall conform to the applicable requirements set forth in S-710, S-711, S-719, S-804, and S-814.

Driven piles shall conform to all applicable requirements set forth in S-719 and the plans. Paint for steel piles or steel shells shall conform to the applicable requirements of S-710 and S-814.

Drilled shaft concrete shall conform to the requirements of S-804 for Class "DS" concrete. All reinforcing steel shall conform to the requirements of S-711 of the Specifications.

S-803.03--Construction Requirement. This work shall consist of furnishing all labor, materials, equipment and services necessary to install driven piles of the prescribed type in accordance with these specifications and in conformance with the lines, elevations, and spacing's shown on the plans.

This work shall also consist of furnishing all labor, materials, equipment and services necessary to perform all operations to complete the drilled shaft installations in accordance with these specifications and with the details and dimensions shown on the plans. Drilled shafts shall consist of reinforced or nonreinforced concrete with or without concrete bell footings.

S-803.03.1--Driven Piles.

S-803.03.1.1--General. Unless otherwise specified or authorized by the Engineer, all permanent production piles shall be driven in a continuous operation, to the full lengths indicated on the itemized order list furnished by the Engineer, with the concurrence of the State Aid Bridge Engineer.

S-803.03.1.2--Accuracy of Installation. Driven piles in trestle bents shall be driven to within a tolerance of 1/4 inch per foot from the vertical or from the batter shown on the plans. Piles to be incorporated into a cap or footing shall not be out of the position shown on the plans by more than six inches. In all cases, piles shall be driven so that they will not be excessively stressed to place them in the proper location in the cap or footing. Excessive manipulation of the piles will not be permitted, and the Contractor shall redrive or use other satisfactory methods to avoid such manipulations. No shimming on tops of piles will be permitted.

S-803.03.1.3--Extensions, Build-ups and Splices. If determined by the Engineer to be necessary, production piles that are extended below cut-off shall be extended, built-up, or spliced in accordance with the plans to the extent established by the Engineer, with the concurrence of the State Aid Bridge Engineer. Extensions or build-ups will not be measured for payment as such, but will be included in the total length of piling in the finished structure.

S-803.03.1.4--Cut-Offs. If it is determined by the Engineer, with the concurrence of the State Aid Bridge Engineer, that the pile has reached practical refusal above pile cut-off elevation but

below the prescribed minimum tip elevation shown in the plans then the Contractor will be allowed to cut off the pile at the cut-off elevation.

S-803.03.1.5--Driven Pile Types. Driven piles shall be of the type listed below unless otherwise specified in the plans.

S-803.03.1.5.1--Concrete Piles. Concrete piles shall be the size and shape specified. Reinforcement, unless otherwise designated, shall have a clear distance of at least two inches from the face of the pile. When the piles are for use in salt water or alkali soils this clear distance shall be at least three inches.

S-803.03.1.5.2--Steel Piles. Full-length piles shall be used unless splicing is approved in writing by the Engineer, with the concurrence of the State Aid Bridge Engineer. When permitted, splicing shall be in accordance with the notes and details shown on the plans. When authorized, splices will be paid for in accordance with S-803.05.8.

S-803.03.1.5.3--Timber Piles. Timber piles shall only be used for temporary construction and shall meet the requirements set forth in S-820.

S-803.03.1.5.4--Special Piles. Piles not of the type specified above, but called for in the plans or additional specifications shall meet the general requirements contained therein.

S-803.03.1.6--Preparation for Driving.

S-803.03.1.6.1--Excavation. When a pile cap is located below the ground line, piles shall not be driven until the required excavation is completed. All material forced up between the piles shall be removed to the correct elevation at the Contractor's expense before concrete for the foundation is placed.

S-803.03.1.6.2--Pile Cushions. Suitable cushioning material shall be used between the driving helmet and the top of the pile. This is especially critical for concrete piles. The Contractor should submit the type material, cross-sectional area and total thickness of the pile cushion. This information shall be submitted to the Engineer for approval prior to driving piling. The pile cushion shall be approved with the pile driving system and is subject to satisfactory field performance.

S-803.03.1.7--Method of Installation and Driving System.

S-803.03.1.7.1--General. The pile driving system shall be defined as all equipment necessary to install the specified piles to the required minimum tip elevations specified in the plans. The pile driving system shall include the pile hammer, hammer leads, followers, water jets, drilling equipment for pre-formed pile holes, and templates, if necessary.

S-803.03.1.7.2--Submittal of Pile Driving System Data. The Contractor shall submit to the Engineer all technical specifications and operating instructions relating to the pile driving system that is to be used to drive the piling. The Contractor shall submit this data to the Engineer at the pre-construction conference or no later than 14 days prior to the anticipated driving date. The Engineer shall use the data to assess the ability of the proposed driving system to install the piles to the desired penetration without unwarranted damage to the pile in accordance with LRFD. If a drivability analysis is not conducted, design stress shall be limited as prescribed in LRFD. The Contractor will not be allowed to install any piling until the driving system has been approved by the Engineer.

The Engineer will notify the Contractor of any additional information required and/or changes that may be necessary to meet the project requirements. Any parts of the driving system that are unacceptable will be rejected and the Contractor will submit changes. Review of these changes will be completed within seven (7) days and the Contractor notified of their acceptance or rejection.

All production piles shall be driven with the hammer bearing the same Serial Number originally submitted to the Engineer and used to drive the test piles. In the event multiple hammers of differing type are used on the same bridge, the Contractor shall submit to the Engineer for approval, data for each hammer and specify the bridge bents in which each hammer will be used. This will allow the Engineer the opportunity to develop appropriate driving and acceptance criteria specific to each hammer.

A different pile driving system, modifications to the existing system, or different pile installation procedures shall be proposed by the Contractor if the Engineer determines the system does not conform to LRFD or if problems in driving the piling are encountered. All approvals are conditional and subject to trial and satisfactory performance in the field. Unless otherwise permitted by the Engineer in writing, test piles and permanent piles shall be driven with the approved driving system.

S-803.03.1.7.3--Pile Hammers. Piles may be driven with an approved single-acting or double-acting pile hammer in combination with water jets or pre-formed pile holes. The pile driving system shall be constructed so as to afford freedom of movement of the pile hammer and to drive the piles to the required depth within the tolerances specified without undue injury to the piles.

The pile hammer shall be in good working condition and produce the energy required to install piles to the depth or penetration required in the plans. Single or double-acting Steam/Air, Diesel/Internal Combustion, or Hydraulic hammers may be submitted for review and approval.

In no case shall a gravity or drop hammer be used to drive concrete piles. A drop hammer may be used to install steel or temporary timber piles when approved by the Engineer.

S-803.03.1.7.4--Driving Appurtenances.

S-803.03.1.7.4.1--Pile Hammer Leads. Either fixed leads or swinging leads may be used. Swinging leads shall be used in combination with rigid templates approved by the Engineer. Battered piles shall be driven in inclined leads or multiple rigid templates capable of holding the pile in the proper position during driving.

S-803.03.1.7.4.2--Pile Cushions. Suitable cushioning material shall be used between the driving cap and the top of the pile. The cushion material shall protect the pile top during driving and shall be constructed such that the hammer energy is uniformly distributed to the pile top. If the cushion material becomes highly compressed, or chars or burns during the driving operations or damage occurs at the pile top, it shall be replaced.

S-803.03.1.7.4.3--Water Jets. When required by the Engineer, water jets will be used in conjunction with the pile hammer to install piles to the required depth or penetration called for in the plans. The use of water jets, where the stability of embankments or other improvements would be endangered, will not be permitted. When water jets are used, the number of jets and the volume and pressure of water shall be sufficient to adequately facilitate driving without undue damage to the pile or the soil adjacent to or below the pile. Unless otherwise specified, water jets shall not be used within five feet of the final tip elevation of the pile. In addition, it shall be the Contractor's responsibility to withdraw the water jets sufficiently above the five foot requirement to obtain the specified bearing at the required cut off elevation.

In the event a jetted pile fails to obtain the specified bearing at the required penetration and a determination is made by the Engineer that the Contractor has failed to properly control the jetting operation, the Contractor should submit detailed corrective measures for founding the pile to the Engineer for approval. Any required corrective measures to the pile due to the Contractor's operation shall be performed at no additional cost to the Project.

S-803.03.1.7.4.4--Followers. Followers are considered to be part of the driving system and should be included for approval with the pile driving system data.

S-803.03.1.7.4.5--Pre-formed Pile Holes. The Engineer, with the concurrence of the State Aid Bridge Engineer will make all determinations as to the necessity for pre-formed pile holes and the size and maximum depth of each hole required or permitted.

If it is determined from the Geotechnical Investigation or from the site survey that pre-formed pile holes are necessary, a pay item and estimated quantities will be included on the plans, and the Engineer will furnish the Contractor with an itemized list showing the location, size and bottom elevation of each hole.

If the plans do not specify pre-formed pile holes and the Engineer, with the concurrence of the State Aid Bridge Engineer, determines during construction that subsurface conditions are encountered that necessitate pre-formed pile holes, at certain locations, an adjustment in the contract unit price for furnishing and driving piling at these locations may be made under the provisions of S-104.02.

If in the judgment of the Engineer pre-formed pile holes are not required and the Contractor desires to use them, the Contractor may be permitted to do so under conditions prescribed by the Engineer, with the concurrence of the State Aid Bridge Engineer, and at no additional cost to the Project.

S-803.03.1.7.4.6--Additional Equipment When a minimum penetration is indicated on the plans and is not obtained by the use of an approved hammer, the Contractor shall provide, with the approval of the Engineer, a heavier hammer or resort to jeting at no additional cost to the Project.

S-803.03.1.8--Defective Piles Prior to driving, piles shall not be subjected to handling that causes damage either through bending, crushing or spalling of concrete, or deformation of the steel. All piles damaged because of internal defects or by improper driving, driven out of the proper location or driven below the specified elevation shall be corrected at the Contractor's expense by one of the following methods approved by the Engineer, with the concurrence of the State Aid Bridge Engineer for the pile in question:

- (1) The pile shall be withdrawn and replaced by a new and, if necessary, a longer pile.
- (2) A second pile shall be driven adjacent to the defective or low pile.
- (3) The pile shall be spliced or built up or a sufficient portion of the footing shall be extended to properly embed the pile. All piles pushed up by the driving of adjacent piles or by any other cause shall be driven down to grade.

S-803.03.1.9--Determination of Bearing Value of Piling.

S-803.03.1.9.1--General. The ability of the pile to transfer load to the ground will be determined to the satisfaction of the Engineer. Such determination will be made using a Geotechnical investigation, load tests and/or test piles and LRFD methodologies.

S-803.03.1.9.2--Determination of Bearing Value by Pile Hammer Formulas. The safe bearing values will be determined using one of the LRFD approaches outlined herein. If an alternate approach to determine safe bearing values is used, it must comply with LRFD and be approved by the Engineer, with the concurrence of the State Aid Bridge Engineer.

The determination of bearing values shall be documented by the Engineer. Documentation shall include but not be limited to: drivability information, location of test piles or load tests, results of test piles or load tests, supporting calculations, the itemized Order List furnished by the Engineer and any other items determined necessary by the Engineer.

S-803.03.1.9.2.1--Dynamic Formulas. Dynamic formulas shall not be used when the required nominal resistance exceeds 600,000 lbs. The required nominal resistance shall be taken as the LRFD factored load divided by the LRFD resistance factor as determined by the Engineer. If scour or liquefaction is predicted at the bridge location, the Engineer shall account for potential loss of skin friction over the area of pile.

The formulas described herein are applicable for the following conditions only:

- (a) The hammer has a free fall.
- (b) The pile head is not crushed.
- (c) The penetration is reasonably quick and uniform.
- (d) There is no appreciable bounce after the blow.
- (e) A follower is not used.

When using single-acting steam/air hammers and open cylinder diesel hammers where ram velocity on the hammer is not measured, developed hammer energy shall be calculated as follows:

$$E_d = WH$$

Where W = weight, in lbs, of striking parts of hammer
 H = height of fall in feet.

Where there is appreciable bounce of the hammer, twice the height of the bounce shall be deducted from "H" to determine its value in the formula.

For all other hammer types, the developed hammer energy shall be determined by the Engineer and based on information provided by the Contractor and any further information provided by the manufacturer.

When water jets and dynamic formulas are used in combination, the bearing value shall be determined from the results of driving after the jets have been withdrawn, or a static or dynamic load test has been conducted.

Formulas for pile hammers not covered herein must be approved by the State Aid Bridge Engineer before the hammer is used.

S-803.03.1.9.2.2--FHWA Gates Formula. The FHWA Gates Formula shall be used in LRFD applications. The nominal pile resistance as measured during driving using this method shall be taken as:

$$R = 1.75 \sqrt{E_d} \log_{10} (10N_b) - 100$$

Where R = nominal pile resistance measured during pile driving in kips
 E_d = developed hammer energy in foot-lbs

N_b = Number of hammer blows for 1.0 inch of pile penetration.

S-803.03.1.9.2.3--Resistance Factor. The Engineer shall use a resistance factor of 0.40 with the FHWA Gates Formula. This resistance factor shall be applied to the nominal pile resistance determined by the Engineer using the results of the pile driving formula.

803.03.1.9.3--Determination of Bearing Value by PDA Monitoring (Dynamic Load Testing).

803.03.1.9.3.1--Description. This work consists of furnishing all labor, materials, equipment and services necessary to perform all operations to complete the determination of the bearing value of piling using a Pile Driving Analyzer (PDA) and associated equipment. The dynamic load testing measurements will be performed in accordance with the plans, Engineers direction and the requirements herein.

803.03.1.9.3.2--Resistance Factors and Number of Dynamic Test Piles. The Engineer shall use a resistance factor of 0.65 when the driving criteria are established by a dynamic test with signal matching. This resistance factor shall be applied to the nominal pile resistance determined by the Engineer using the results of PDA and the wave equation.

If scour is predicted during design flood and/or liquefaction is predicted during the design seismic event, the Engineer shall account for the potential loss of skin friction over the area of pile when determining bearing resistance.

The location and number of test piles shall be indicated on the plans or directed by the Engineer. Depending upon the conditions encountered in the field, the Engineer may increase the number of test piles required.

803.03.1.9.3.3--Scope and Sequence of Construction. The dynamic measurements shall be performed on the piles as detailed below for the purpose of obtaining pile bearing capacity, pile lengths, pile driving stresses, pile integrity, and the pile driving system efficiency. Unless otherwise directed in the plans, the sequence of construction outlined below shall not be deviated from unless an alternate sequence of construction is approved in writing by the Engineer.

- 1) When called for in the plans or directed by the Engineer, Conventional Static Load Testing will be performed. Piles to be load tested shall be driven at location shown in the plans or directed by the Engineer, with PDA monitoring under initial drive, and have restrikes performed.
- 2) When called for in the plans or directed by the Engineer, PDA Test Piles will be driven with PDA monitoring under initial drive and have restrikes performed as detailed below. The test piles will be used as production piles and be incorporated into the bridge structure.

3) The Engineer can require PDA monitoring or PDA restrikes to any production pile.

4) For Quality Control purposes, PDA testing shall be performed on 10% of the production piles when PDA testing is set up by the plans.

803.03.1.9.3.4 --PDA Monitored Driving and/or Restrike of Piling.

803.03.1.9.3.4.1--General. When called for in the plans or directed by the Engineer, a PDA and instrumentation will be used to obtain dynamic measurements during pile driving and pile restrikes. The analysis of the monitoring will be the responsibility of the Engineer.

803.03.1.9.3.4.2--Contractor Requirements. The Contractor shall be responsible for the following:

1. A power supply providing at least 1800 watts of 115-volt AC power with a frequency of 60 Hz at the driving site.
2. Prepare the driving site.
3. Supply the labor necessary for attaching the dynamic monitoring instrumentation to the piles. The Contractor shall make one of their personnel available to place the transducers on the piles after the piles have been placed in the leads.
4. Notice to the Engineer at least 14 calendar days before the scheduled date of driving piles to be monitored and confirmation of the driving date 3 calendar days prior to the scheduled driving date.
5. Access to the pile prior to driving for drilling and tapping of holes that are necessary for attachment of instrumentation.
6. Reasonable care when working with piles and installed instrumentation.
7. Drive the piles as directed by the Engineer.

The Contractor shall replace any damaged piles, instruments or PDA related equipment caused by Contractor error at no additional cost to the Project.

803.03.1.9.3.4.3--Driving Requirements. Piles to be used in the determination of pile bearing by PDA monitoring shall be driven with PDA instrumentation attached to the pile and shall have a PDA monitored 1-day and 7-day restrike performed after the initial pile driving. When a static load test is to be performed, the 7-day restrike should be eliminated and a PDA monitored restrike done within 24 hours of completion of the static load test. When determined by the Engineer, waiting periods that are required before the restrikes are performed shall be adjusted.

When deemed necessary by the Engineer, permanent piles may have PDA monitored restrikes performed to confirm or supplement design requirements.

Restrikes shall be performed with a warm hammer operating at normal efficiency. A warm hammer is defined as a hammer that has applied a minimum of 20 blows to another pile or a dummy block immediately before being used in a restrike. The restrike shall consist of striking the pile for 50 blows or until the pile penetrates an additional three inches, whichever occurs first. In the event the pile movement is less than one inch after 15 blows during the restrike, the restrike may be terminated.

S-803.03.1.9.4--Determination of Bearing Value by Static Load Testing.

S-803.03.1.9.4.1--General. When called for in the plans or directed by the Engineer, static load testing will be conducted to determine the ultimate bearing capacity of piles. Depending upon the conditions encountered in the field, the Engineer with the concurrence of the State Aid Bridge Engineer may increase or decrease the number of static load tests required.

In the event the number of loading tests are increased from that indicated in the contract, consideration will be given for delays, if any, in the applicable controlling phase of work caused solely by the seven-day or other waiting period required by the Engineer. Any adjustments will be in accordance with S-108.06.

S-803.03.1.9.4.2--Static Load Test Resistance Factors. When using static load testing, the Engineer shall determine the resistance factor according to LRFD. Factors range from 0.55-0.90 and shall consider the number of static load tests performed and soil variability at the project site as defined in LRFD. If site variability cannot be determined, a "High" site variability shall be used.

S-803.03.1.9.4.3--Methods and Equipment. Apparatus for measuring the behavior of the pile during the test shall consist of a measuring frame and two approved dial gage type measuring devices attached to the pile. Each gage shall be actuated by its stem or by a stem attachment resting on the beam of the measuring frame. Supports for the measuring frame shall be placed the maximum practical distance from the test pile and the anchor piles. Each dial gage shall be capable of providing measurements to an accuracy of 0.001 inch throughout a movement range of four inches and shall be sensitive to a force of one pound or less. At least one approved standby gage of each type used shall be provided at all times. The Contractor shall furnish a certification of the sensitivity and accuracy of each dial gage through the required range of use. The Engineer may require recertification of a gage at any time there is an indication of inaccuracy. The Contractor shall provide adequate protection from the elements or from other damage to gages and other specified measuring devices during handling, transportation, and use so that inaccurate measurements or delays will not result because of such damage.

S-803.03.1.9.4.4--Hydraulic Method. The Contractor shall furnish a hydraulic jacking system complete with gages and charts. The system shall include one or more hydraulic jacks in good condition without leaks. The jacks shall be capable of applying the required load and shall have adequate piston travel to compensate for the yield of the reaction facilities and the vertical displacement of the pile being tested.

The pressure gages shall accurately reflect the fluid pressure in the system within plus or minus one percent throughout the system capacity. The gage shall be such that the applied load can be read directly in increments of two percent or less, or shall be such that when read to the exact graduation and referred to a certified calibration chart will provide a determination of the load being applied within plus or minus one percent. Each gage shall contain a capacity for recalibration to zero at zero pressure.

The complete hydraulic jacking system and gages shall be calibrated in accordance with AASHTO Designation: T 67, ASTM Designation: E-4, at least once, and pressure gages shall be calibrated within one year preceding the time of use and whenever there is a reason to doubt the accuracy of the results. If the laboratory performing the calibration uses a hydraulic testing machine in lieu of the methods specified in AASHTO Designation: T 67 to apply the test load, the testing machine used to apply this load shall be calibrated in accordance with ASTM Method E 74, and the report shall state that the testing machine had been calibrated by this method. Calibration shall include loading and unloading with the jacking system to determine the hysteresis losses in the system. The calibration and certificate shall be made by a qualified testing laboratory approved by State Aid, and the Engineer shall be furnished a report and certificate of each calibration.

Systems containing two or more jacking pistons shall be approved by the Engineer before use and shall be subject to periodic calibration as determined by the Engineer.

S-803.03.1.9.4.5--Preparation for Loading. The Contractor shall provide means for preventing eccentricity in the pile during loading, and shall be fully responsible for all loss or damage caused by loading an eccentric pile or one which becomes eccentric during loading.

The pile to be load tested shall be installed as indicated on the plans to the specified tip elevation, or as directed. After the pile is in place, all loading devices shall be assembled in their proper position. Before load is applied to the pile, the measuring frame shall be assembled and positioned with gages properly installed.

The head of the pile shall be normal to the longitudinal axis or shall be capped in such a manner as to produce a plane bearing surface normal to the longitudinal axis. When cut-off is necessary, the head of the pile shall be normal to the longitudinal axis or capped as above. A one-inch steel plate of the pile size or larger shall be set on top of the pile.

The jacking system shall include a reaction member of sufficient strength and support to withstand required loads. The reaction member shall be attached to anchor piles. Anchor piles

shall not be closer to the test pile than five times the greatest dimension of the largest pile driven; except for 18-inch or larger piles the Engineer with the concurrence of the State Aid Bridge Engineer may authorize in writing reaction piles at a closer interval, subject to the conditions included in the authorization. The Contractor shall provide reaction facilities capable of withstanding at least two and one-half times the design load. All reaction facilities shall be subject to the approval of the Engineer with respect to possible adverse influence upon the behavior of the test pile.

S-803.03.1.9.4.6--Application of Loads. Unless otherwise directed by the Engineer, a time period of at least seven days shall elapse from the time the test pile and anchor piles, if used, are installed before the loading test is performed. During the required time lapse period, no other driving operations shall be performed within a 30-foot radius of the test pile, or a new seven-day period shall begin at the ending of the last pile driven within the 30-foot radius.

During the entire period that the test load or any portion thereof is on the pile, no pile driving operations, operation of heavy equipment, or any other operations shall be carried on within a distance, as determined by the Engineer, from the load test which might affect the behavior of the loaded pile. In the event of such occurrence, or in the event of failure of the reaction facilities or other loading and measuring equipment, the load test may be considered as defective and unacceptable, and in the case of driven piles only an additional seven-day waiting period shall elapse before the loading test is resumed.

Loads shall be applied in increments of 25 percent of the LRFD factored load until the Engineer determines an adequate test load has been reached or failure of the pile has occurred. The test load shall be taken as 1 1/2 times the LRFD factored load divided by the appropriate LRFD resistance factor in accordance with S-803.03.1.9.4.2.

If scour is predicted during design flood and/or liquefaction is predicted during the design seismic event, the Engineer shall increase the test load to account for calculated loss of skin friction over the area of pile.

A guide for determining whether the pile has failed is as follows:

- (A) For lengths of driven and cast-in-place concrete piles and timber piles up to 50 feet, a total top settlement of 1.0 inch and for lengths in excess of 50 feet, a total top settlement of 1.5 inches. However, for cast-in-place piles, when skin friction is broken there may be some settlement due to compression of relatively loose or bulked soil under the point of the pile, therefore the test must not be suspended until this possibility has been fully considered. Any special effort by the Contractor in the drilling and casting the test pile to prevent possible settlement from such cause shall be duplicated to the satisfaction of the Engineer for all piles represented by the load test.

- (B) For steel piles and steel pile shells not filled with concrete up to 60 feet in length, a total top settlement of 1.5 inches and for lengths in excess of 60 feet, a total top settlement of 2.0 inches.

Each of the following loading conditions shall be applicable until the loading is completed or unless the Engineer has suspended the loading because of obvious failure of the pile:

- a. Each loading increment, including the final increment, shall be maintained for a 15-minute period and for as many additional 15-minute periods, not to exceed two hours total time, as necessary to satisfy the conditions stated herein.
- b. During the entire loading, readings are to be made at each five-minute increment of each 15-minute period and are to be made to the nearest 0.001 inch.
- c. When the settlement rate for the pile in the last five-minute increment of a 15-minute period, averages less than 0.001 inch per minute, the next increment of load shall be applied.
- d. When at the end of a 15-minute period, the settlement rate in the last five-minute increment averages more than 0.001 inch per minute, the load increment shall remain applied for the necessary successive 15-minute periods up to a total of two hours, after which the next increment of load shall be applied.
- e. The total load shall be maintained on the pile for two hours unless directed otherwise directed by the Engineer.
- f. The pile shall be unloaded in accordance with S-803.03.1.9.4.2.7.

S-803.03.1.9.4.7--Unloading and Measuring. Unless the loading has been suspended by the Engineer, the pile shall be unloaded in decrements of 50 percent of the design load. Each decrement shall be maintained for a minimum of 15 minutes with settlement readings taken immediately before and after its removal and at five-minute intervals. The final settlement reading shall be taken two hours after the removal of the last decrement of load and shall mark the conclusion of the loading test.

S-803.03.1.10--Pile Acceptance. The safe allowable load for each type and size of pile will be as shown on the plans or as determined by the Engineer with the concurrence of the State Aid Bridge Engineer. Acceptance criteria for the length of permanent production piles will be based on the recommended lengths as determined by the Engineer with the concurrence of the State Aid Bridge Engineer from the test pile reports.

S-803.03.1.11--Test Piles. The Contractor shall furnish and install test piles of the sizes and types at the locations shown on the plans. It is the Contractor's responsibility to furnish test piles of sufficient length to obtain the minimum tip elevation and required bearing. This requirement

may necessitate test pile lengths in excess of that required to reach minimum tip elevation. The number of test piles may be increased or decreased by the Engineer with the concurrence of the State Aid Bridge Engineer as field conditions warrant. If determined by the Engineer with the concurrence of the State Aid Bridge Engineer to be necessary, test piles shall be extended, built-up, or spliced and in the case of steel piles driven further. Similarly, the Contractor may be required to drive test piles below cut-off and extended as necessary.

Supplemental Specification
901-S-804-1
Concrete Bridges And Structures

OFFICE OF STATE AID ROAD CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: May 5, 2006

SUBJECT: Concrete Bridges And Structures:

Section S-804 - CONCRETE BRIDGES AND STRUCTURES; of the MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

901-S-804.02.1--General. Add the following materials to the list of materials in Subsection 804.02.01 on page 8-51.

Ground Granulated Blast Furnace Slag (GGBFS) S-714.06
Metakaolin 901-S-714.07.01

901-S-804.02.10--Portland Cement Concrete Mix Design. Change Note ***** of Subsection S-804.02.10 on page 8-56 as follows:

***** Class DS Concrete for drilled shafts shall have an 8± 1-inch slump. In the event of free fall method of concrete placement is used, the slump shall be 6± 1 inch.

Delete the last paragraph of Subsection S-804.02.10 on page 8-57 and substitute the following:

Either Type A, D, F, G or mid-range chemical admixture shall be used in all classes of concrete. Any combination of water reducing admixtures shall be approved by the Engineer before their use.

901-S-804.05--Basis of Payment. Add "901" prefix to the pay items listed on page 8-108.