PROPOSAL AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

(NON EXEMPT)

Construction on approximately 14 km of U.S. 84 from Lawrence County Line to east of Prentiss, know as Federal Aid Project No. NH-0015-02(078)PH2 / 101173, in the County of Jefferson Davis, State of Mississippi.

Completion Date: September 12, 2005

NOTICE

BIDDERS MUST PURCHASE A BOUND PROPOSAL FROM MDOT CONTRACT ADMINISTRATION DIVISION TO BID ON THIS PROJECT.

Electronic addendum updates will be posted on www.goMDOT.com

SECTION 900

OF THE CURRENT
(1996) STANDARD SPECIFICATIONS
FOR ROAD AND BRIDGE CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

JACKSON, MISSISSIPPI

BIDDER CHECK LIST
(FOR INFORMATION ONLY)

_____ All unit prices and item totals have been entered in accordance with Subsection 102.06 of the Mississippi Standard Specifications for Road and Bridge Construction.

_____ If the bid sheets were prepared using MDOT's Electronic Bid System, proposal sheets have been stapled and inserted into the proposal package.

_____ First sheet of SECTION 905--PROPOSAL has been completed.

_____ Second sheet of SECTION 905--PROPOSAL has been completed and signed.

_____ Addenda, if any, have been acknowledged. Second sheet of Section 905 listing the addendum number has been substituted for the original second sheet of Section 905. Substituted second sheet of Section 905 has been properly completed, signed, and added to the proposal.

_____ DBE/WBE percentage, when required by contract, has been entered on last sheet of the bid sheets of SECTION 905 - PROPOSAL.

_____ Form OCR-485, when required by contract, has been completed and signed.

_____ The last sheet of the bid sheets of SECTION 905--PROPOSAL has been signed.

_____ Combination Bid Proposal of SECTION 905--PROPOSAL has been completed for each project which is to be considered in combination (See Special Provision No. 907-102-1).

_____ Equal Opportunity Clause Certification, when included in contract, has been completed and signed.

_____ Subcontract Certificate, when included in contract, has been completed and signed.

_____ The Certification regarding Non-Collusion, Debarment and Suspension, etc. has been executed in duplicate.

_____ A Certified check, cashier's check or bid bond payable to the State of Mississippi in the principal amount of 5% of the bid has been included. Bid bond has been signed by the bidder and has also been signed or countersigned by a Mississippi Resident Agent for the Surety with Power of Attorney attached or on file with the Department's Contract Administration Engineer.

_____ Non-resident Bidders: ON STATE FUNDED PROJECTS ONLY, a copy of the current laws regarding any preference for local Contractors from State wherein domiciled has been included. See Subsection 103.01, Mississippi Standard Specifications for Road and Bridge Construction, and Section 31-7-47, MCA, 1972 regarding this matter.

Return the proposal and contract documents in its entirety in a sealed envelope. DO NOT remove any part of the contract documents; exception - an addendum requires substitution of second sheet of Section 905. A stripped proposal is considered as an irregular bid and will be rejected.

Failure to complete any or all of the applicable requirements will be cause for the proposal to be considered irregular.

(10/2003)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET OF SECTION 905 AS ADDENDA)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 901 - ADVERTISEMENT

Sealed bids will be received by the Mississippi Transportation Commission in the Office of the Contract Administration Engineer, Room 1013, Mississippi Department of Transportation Administration Building, 401 North West Street, Jackson, Mississippi, until 9:30 o'clock A.M., Tuesday, January 27, 2004; thereafter bids will be received in the First Floor Auditorium of the Mississippi Department of Transportation Administration Building, Jackson, Mississippi, until 10:00 o'clock A.M., Tuesday, January 27, 2004, and shortly thereafter publicly opened for

Construction on approximately 14 km of U.S. 84 From Lawrence County Line to East of Prentiss, known as Federal Aid Project No. NH-0015-02(078)PH2 / 101173, in the County of Jefferson Davis, State of Mississippi.

The attention of bidders is directed to the Contract Provisions governing selection and employment of labor. Minimum wage rates have been predetermined by the Secretary of Labor and are subject to Public Law 87-581, Work Hours Act of 1962, as set forth in the Contract Provisions.

The Mississippi Department of Transportation hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises 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, sex, religion or national origin in consideration for an award.

The award of this contract will be contingent upon the Contractor satisfying the DBE requirements.

Plans and specifications are on file in the offices of the Mississippi Department of Transportation.

Bid proposals must be acquired from the MDOT Contract Administration Division, Room 1013, MDOT Administration Building, 401 North West Street, Jackson, Mississippi, 39201, Telephone (601) 359-7744 or Fax (601) 359-7940. These proposals are available at a cost of Ten Dollars ($10.00) per proposal. Specimen proposals are also available at the MDOT Contract Administration Division at a cost of Ten Dollars ($10.00) per proposal, or can be viewed or downloaded at no cost at www.gomdot.com.

Plans may be acquired on a cost per sheet basis from MDOT PLANS PRINT SHOP, RM. 1100, Administration Building, 401 North West Street, Jackson, Mississippi, 39201, Telephone (601) 359-7460 OR E-Mail plans@mdot.state.ms.us OR FAX NO. (601) 359-7461.

Plans will be shipped upon receipt of payment.

Bid bond, signed or countersigned by a Mississippi Resident Agent, with Power of Attorney attached or on file with the Contract Administration Engineer of the Department, a Cashier's check or Certified Check for five (5%) percent of bid, payable to STATE OF MISSISSIPPI, must accompany each proposal.

The attention of bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.

LARRY L. 'BUTCH' BROWN
EXECUTIVE DIRECTOR

(**FAP**)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1M **CODE: (IS)**

DATE: **1/2/96**

SUBJECT: **Governing Specifications**

The current l996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction adopted by the Mississippi Transportation Commission 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 Construction Division.

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.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3M **CODE: (IS)**

DATE: **1/2/96**

SUBJECT: **Restriction On Tricalcium Aluminate Content And Source Of Fly Ash**

All references to the term "Portland Cement Concrete" in the Mississippi Standard Specifications for Road and Bridge Construction, contract plans and documents, and the Department's Standard Operating Procedures shall be deemed to mean a concrete mixture composed of cementitious materials, water, fine and coarse aggregates, and admixtures when specified or permitted.

The Department has substantiated that for technical reasons concrete mixtures used in certain classes of application must have restrictions on the tricalcium aluminate content and source of fly ash used for replacement of portland cement. The need for the restrictions set forth herein have been documented.

In the event of a written request by interested persons, the documentation will be made available for review at the Department's Central Laboratory located at 412 East Woodrow Wilson Avenue, Jackson.

Except for those classes of application which are excluded herein, the tricalcium aluminate content of the portland cement portion of cementitious materials used in stabilization and concrete mixtures shall not exceed eight percent (based on aluminum or aluminum oxide content). At the Contractor's option, the cementitious material may be portland cement (Type I or II), portland cement (Type III when permitted), blended hydraulic cement (Type IP), portland cement combined with ground granulated blast furnace slag or portland cement combined with fly ash.

The addition of fly ash as a replacement for cement will not be permitted in blended hydraulic cement (Type IP), portland cement combined with ground granulated blast furnace slag or portland cement (Type III) when specified in the contract.

The restrictions on tricalcium aluminate content and source of fly ash are not applicable for the following classes of application:

a) manufacture of prestressed structure members, concrete pipe, post and right-of-way markers and

b) construction of bridge decks, curbs, rails and intermediate caps.

The replacement of portland cement with fly ash shall not exceed 20 percent and the replacement rate (by mass) shall be one part fly ash for one part cement. The scales for determining the mass of fly ash shall meet the requirements of cement scales as set forth in Subsection 501.03.2.3.

When blended hydraulic cement (Type IP) is incorporated in the work or when portland cement is replaced with ground granulated blast furnace slag or fly ash, cylinder tests shall be used as a guide for the removal of falsework and forms as set forth in Column B of Subsections 601.03.6.3 and 804.03.15; and concrete pavement shall not be opened to traffic until cylinder tests have attained a compressive strength of 25 MPa or may be opened after a curing period of 28 days.

In addition to meeting the requirements set forth in Subsection 714.05, the source of fly ash must have been approved for listing in the Department's "List of Approved Sources of Fly Ash for Concrete Mixtures in Sulfate Areas" prior to its use.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4M **CODE: (IS)**

DATE: **1/2/96**

SUBJECT: **Use of Ground Granulated Blast Furnace Slag (GGBFS)**

Subject to the conditions set forth herein and at the Contractor's option, GGBFS may be used as a replacement for portland cement as the cementitious material in concrete mixtures and in cement-soil or cement-soil-aggregate mixtures. The replacement of portland cement with GGBFS shall not exceed 50 percent by mass of the total cementitious material and the replacement rate (by mass) shall be one part GGBFS for one part portland cement. Only one mineral admixture will be allowed for portland cement replacement in any mixture.

The addition of GGBFS as a replacement for portland cement will not be permitted in blended hydraulic cement, portland cement combined with fly ash or portland cement (Type III), when specified in the contract.

In addition to meeting the requirements set forth in Subsection 907-714.06, the source of GGBFS must have been approved for listing in the Department's "List of Approved Suppliers of Grade 120 - Ground Granulated Blast-Furnace Slag".

Concrete mixtures containing portland cement combined with GGBFS shall not be mixed or used alternately with concrete mixtures containing other cementitious materials in any structure or part thereof that, in its permanent position, will be visible above the ground.

When GGBFS is proposed to be used in concrete mixtures, the Contractor shall furnish the concrete mixture design with documentation of performance characteristics (based on trial batching or plant produced mixtures) to the Engineer for review prior to use. The approval of the mixture design will be based on verification of performance at the beginning of production.

When GGBFS is used for replacement of portland cement in concrete mixtures, cylinder tests shall be used as a guide for the removal of falsework and forms as set forth in Column B of Subsections 601.03.6.3 and 804.03.15 and concrete pavement shall not be opened to traffic until cylinder tests have attained a compressive strength of 25 MPa or may be opened after a curing period of 28 days.

Scales for determining the mass of GGBFS shall meet the requirements of cement scales as set forth in Subsection 501.03.2.3.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6M **CODE: (IS)**

DATE: **1/2/96**

SUBJECT: **Status of Right-of-Way, Utility Adjustments and Potentially Contaminated Sites**

Although it is desirable to have acquired all rights-of-way and completed all utility adjustments and work to be performed by others prior to receipt of bids, it is not considered to be in the public interest to wait until each and every such clearance has been obtained. The bidder is hereby advised of unacquired rights-of-way, relocatees and utilities which have not been completed.

The status of right-of-way and utility adjustments and potentially contaminated sites are set forth in attachments entitled "Status of Right-of-Way", "Status of Utility Adjustments" and "Status of Potentially Contaminated Sites."

In the event right of entry is not available to ALL parcels of right-of-way and all work complete that is to be accomplished by others on the date set forth in the contract for the Notice to Proceed, the Department will issue a restricted Notice to Proceed upon written request of the Contractor.

STATUS OF RIGHT-OF-WAY
NH-0015-02(078)PH2
101173/301000
JEFFERSON DAVIS COUNTY
September 9, 2003

All necessary rights of way and legal rights of entry have been acquired, **except**:

NONE.

ASBESTOS CONTAMINATION STATUS OF BUILDINGS
TO BE REMOVED BY THE CONTRACTOR
101173/301000
NH-0015-02(078)PH2
JEFFERSON DAVIS COUNTY
August 18, 2003

Reference is made to notices to bidders entitled "Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP)" and "Removal of Obstructions".

For information purposes, the following pertinent information is furnished concerning asbestos containing materials (ACMs), if any, found in buildings to be removed by the contractor, subject to acquisition of title, and completion of relocation.

Station 7+695/L 4m
Parcel #132-0-00-W
Results: This parcel includes a one-story frame residence.

This building was inspected by the Department. Of the suspect materials tested, none were found to contain ACMs in quantities greater than one percent. Demolition may be conducted without the use of asbestos control measures. Proper notification forms must be submitted to the MDEQ prior to demolition.

Station 13+608/L 72m
Parcel #178-0-00-W
Results: This parcel includes concrete saddles.

Due to the nature of the improvement, an asbestos inspection was not required for the concrete saddles. Demolition may be performed without the use of asbestos control measures. Notification of the MDEQ is not required prior to demolition.

Station 13+650/L 65m
Parcel #197-0-00-W
Results: This parcel includes a one-story metal building.

This building was inspected by the Department. Of the suspect materials tested, none were found to contain ACMs in quantities greater than one percent. Demolition may be conducted without the use of asbestos control measures. Proper notification forms must be submitted to the MDEQ prior to demolition.

STATUS OF POTENTIALLY CONTAMINATED SITES
101173/301000
NH-0015-02(078)PH2
JEFFERSON DAVIS COUNTY
August 18, 2003

This project has been inspected and there was no visible indication of potentially contaminated sites except for the following:

Parcel #016-0-00-W
Watts Junk Yard
Sta. approx. 2+475/L
USTs: 0
Status: This site was an active scrap metal yard. Environmental testing conducted in 1996 did not reveal any evidence of contamination in excess of regulatory limits. No further actions should be required. MDOT should be notified if any suspect hazardous wastes, e.g. drums, barrels, highly discolored soils, etc., are encountered during construction activities, so that these materials may be tested to determine proper disposal methods.

Parcel #019-0-00-W
Laird Funeral Home
Sta. 2+525/L 105'
USTs: 0
Status: This site was an active funeral home. A concrete waste pit/septic tank was identified by the property owner. Environmental testing conducted in 1996 and 2002 did not reveal any evidence of contamination in excess of regulatory limits. No further actions should be required. MDOT should be notified if any suspect hazardous wastes, e.g. drums, barrels, highly discolored soils, etc., are encountered during construction activities, so that these materials may be tested to determine proper disposal methods.

Parcel #023-0-00-W
Produce Market
Sta. 2+650/R 100'
USTs: 0
Status: This site was an inactive service station. Environmental testing conducted in 1996 did not reveal any evidence of contamination in excess of regulatory limits. The USTs were removed from this site, under separate contract to the MDOT, in November of 2001. No further actions should be required. MDOT should be notified if any suspect hazardous wastes, e.g. drums, barrels, highly discolored soils, etc., are encountered during construction activities, so that these materials may be tested to determine proper disposal methods.

Parcel #031-0-00-W
Price Upholstery
Sta. 3+100/R 130'
USTs: 0
Status: This site was an inactive service station. Environmental testing conducted in 1996 did not reveal any evidence of contamination in excess of regulatory limits. The USTs were removed from this site, under separate contract to the MDOT, in November of 2001. No further actions should be required. MDOT should be notified if any suspect hazardous wastes, e.g. drums, barrels, highly discolored soils, etc., are encountered during construction activities, so that these materials may be tested to determine proper disposal methods.

Parcel #117-0-00-W
Dimple's Place
Sta. 7+125/L 75'
USTs: 0
Status: This site was an inactive service station. Environmental testing conducted in 1996 did not reveal any evidence of contamination in excess of regulatory limits. The USTs were removed from this site, under separate contract to the MDOT, in November of 2001. Soil samples collected following the UST removal indicated petroleum contamination in excess of regulatory limits. However, the contamination was deemed by the MDEQ to be limited in extent, and should not pose a threat to human health or the environment. No further actions are required. MDOT should be notified if any suspect hazardous wastes, e.g. drums, barrels, highly discolored soils, etc., are encountered during construction activities, so that these materials may be tested to determine proper disposal methods.

UTILITY STATUS REPORT

NH-0015-02(078)PH2 / 101173

JEFFERSON DAVIS

SEPTEMBER 18, 2003

Listed below are the utility statuses of the utility adjustments that are in conflict with the highway construction, on the above referenced:

Termini: U.S. Hwy 84 from Lawrence CL to East of Prentiss

1. AIM PIPELINE aka DUKE ENERGY: Work completed
2. GALAXY CABLEVISON: 80% Complete. All work completed by 9-30-03.
3. SOUTHERN NATURAL GAS: Work Completed.
4. KOCH GATEWAY: Work Completed.
5. SOUTHERN PINE ELECTRIC POWER ASSOCIATION: Work completed.
6. ENTERGY: Work completed.
7. BELL SOUTH: Work completed.
8. DOUBLE POND WATER ASSOCIATION: Work completed.
9. ENTEX METERING STATION: Work completed.
10. ENTEX GAS MAINS: Work completed.
11. ALLTEL: Work completed.
12. TOWN OF PRENTISS (Water & Sewer): Work completed.
13. LILLY ROSE WATER ASSOCATION: Work completed.
14. SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION: Work completed.

If any additional information is required, please advise.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 9M **Code: (SP)**

DATE: **1/2/96**

SUBJECT: **Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP)**

Relative to the Federal Clean Air Act requirements concerning emission standards for hazardous air pollutants, the Contractor is reminded of the asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR Part 61).

The Mississippi Department of Transportation has surveyed the buildings on this project for asbestos containing materials, conducted laboratory testing as required and issued asbestos inspection reports intended to identify the absence or presence of asbestos in building components on this project. Copies of the asbestos inspection reports, including those for the buildings to be removed by the Contractor, are on file with the Department.

The Department has properly disposed of all buildings on the project except for those listed in a notice to bidders entitled "Removal of Obstructions". The disposition of the buildings so listed becomes the responsibility of the Contractor.

Regulated asbestos containing materials have been removed from these buildings by the Department under separate contract.

The Contractor will be advised of the absence or presence of remaining asbestos containing materials in these buildings along with other pertinent information in a notice to bidders entitled, "Status of Right-of-Way, Utility Adjustments and Potentially Contaminated Sites".

The demolition, handling, loading, transporting and disposal of materials from these buildings shall be in accordance with applicable codes, regulations and standards, including but not limited to asbestos NESHAP regulations. Questions or problems concerning applicable regulations should be directed to the Mississippi Department of Environmental Quality, Office of Pollution Control, Air Toxic Branch, Jackson, Mississippi.

All applicable codes, regulations and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies were contained herein.

The successful bidder will be furnished a partially completed Mississippi Office of Pollution Control Demolition/Renovation Notification Form for each building to be removed. The Contractor must complete and submit the forms to Mississippi Department of Environmental Quality, Office of Pollution Control, Air Toxic Branch, P.O. Box 10385, Jackson, Ms. 39289-0385, Telephone No. (601) 961-5171, from whom blank forms can also be obtained, at least ten (10) working days (where working days are Monday through Friday) prior to commencement of demolition activity. Copies of the completed demolition/renovation notification forms and letters of transmittal shall be furnished the Project Engineer as proof of the required notification to the Office of Pollution Control.

Copies of any and all other documents required to be furnished by the Contractor or obtained by the Contractor from other agencies in complying with applicable local, State and Federal regulations, including but not limited to asbestos NESHAP regulations, shall also be furnished the Project Engineer.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 29M **CODE: (IS)**

DATE: **4/9/96**

SUBJECT: **Selection of Optional Items**

Bidders are hereby advised that, because of a change by the Department in classifying "Optional" items, the bid schedule for this project lists as "Optional" items that formally have been listed as "Alternate".

The summary of quantities sheet(s) in construction plans printed prior to the effective date of this change may list as "Alternate" items that are listed as "Optional" in the bid proposal.

When this contradiction occurs, the listing in the bid schedule is correct and bidders are to disregard the contradicting listing on the summary of quantities sheet(s) in the construction plans.

Bidders should pay close attention to the items classified in the bid schedule as "Optional" items.

With the change by the Department in classifying optional items, a change will be required of the Contractor in the selection of optional items. (Refer to 907-101-2, 907-102-4 and Section 905)

WHEN THE BID SCHEDULE LISTS OPTIONAL ITEMS, THE CONTRACTOR'S SELECTION MAY, BUT IS NOT REQUIRED TO, BE MADE AT THE TIME OF BIDDING. FOR OPTIONAL ITEMS NOT PRE-SELECTED, THE CONTRACTOR'S SELECTION SHALL BE MADE PRIOR TO OR AT THE TIME OF EXECUTION OF THE CONTRACT.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 32M **CODE: (IS)**

DATE: **5/8/96**

SUBJECT: **Soft Metric Reinforcing Steel**

Anywhere in the plans, proposal or specifications reference is made to Grade 400 or Grade 500 reinforcing steel, it shall be understood that Grade 420 and Grade 520 reinforcing steel are the correct grades.

Anywhere in the plans, proposal or specifications reference is made to AASHTO Designation: M 31M, it shall be understood that AASHTO Designation: M 31M, as amended by special provision, shall apply.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 33M **CODE: (IS)**

DATE: **5/8/96**

SUBJECT: **ASTM or AASHTO Designation**

Whenever in the specifications reference is made to an ASTM or AASHTO Designation No., the metric edition in effect on the date of advertisement for bids shall apply, provided a metric version exists, regardless of whether or not the Designation No. shown in the specifications carries a "M" to signify metric version.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 37M **CODE: (SP)**

DATE: **6/21/96**

SUBJECT: **Substitution of Reinforcing Steel - Soft Metric to Imperial**

PROJECT:

Bidders are hereby advised that, at their option, imperial (inch-pound) reinforcing steel for cast-in-place or pre-cast concrete structures may be substituted for soft metric reinforcing steel in accordance with the following table. The spacing or total number of bars will remain as shown on the contract plans.

Soft Metric Bar Designation No.	Imperial Bar Designation No.
13	4
16	5
19	6
22	7
25	8
29	9
32	10
36	11

Computation of quantities for final payment will be based on approved order lists.

The basis of payment will be in metric units. The conversion factor to use in the conversion to and from metric is as follows:

1 pound = 0.4536 kilogram

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 74M **CODE: (IS)**

DATE: **3/31/97**

SUBJECT: **Plant Pest Quarantines Information**

AT THE REQUEST OF THE U. S. DEPARTMENT OF AGRICULTURE, PLANT PEST CONTROL INFORMATION CONCERNING DOMESTIC QUARANTINES IS CITED AS FOLLOWS:

The entire state of Mississippi has been quarantined for the Imported Fire Ants. Soil and soil-moving equipment operating in the state will be subject to plant quarantine regulations. In general, these regulations provide for cleaning soil from equipment before it is moved from the state. Complete information may be secured from the State of Mississippi Department of Agriculture and Commerce, Bureau of Plant Industry, P. O. Box 5207, Mississippi State, Mississippi 39762-5207 -- Telephone 325-3390.

IMPORTED FIRE ANT QUARANTINES

THE FOLLOWING REGULATED ARTICLES REQUIRE A CERTIFICATE OR PERMIT FOR MOVEMENT:

1. Soil, separately or with other things, except soil samples shipped to approved laboratories*. Potting soil is exempt, if commercially prepared, packaged and shipped in original containers.

2. Plants with roots with soil attached, except houseplants maintained indoors and not for sale.

3. Grass sod.

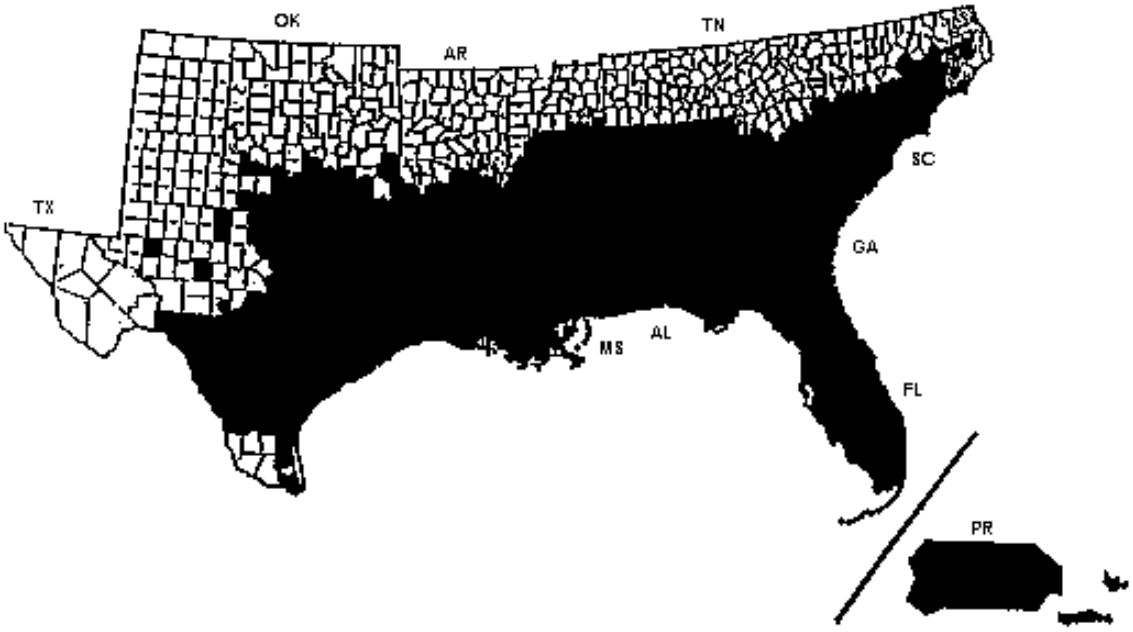
4. Baled hay and straw that have been stored in contact with the soil.

5. Used soil-moving equipment.

6. Any other products, articles, or means of conveyance of any character whatsoever not covered by the above, when it is determined by an inspector that they present a hazard of spread of the imported fire ant and the person in possession thereof has been so notified.

* Information as to designated laboratories, facilities, gins, oil mills, and processing plants may be obtained from an inspector.

Imported Fire Ant Quarantines



Conditions of Movement.

Counties entirely colored are completely regulated; Counties partially colored are partially regulated.

Regulated Area.

Restrictions are imposed on the movement of regulated articles as follows:
From colored areas into or through white areas.

Consult your State or Federal plant protection inspector or your County Agent for assistance regarding exact areas under regulation and requirements for moving regulated articles. For detailed information, see 7 CFR 301.81 for quarantine and regulations.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 166M **CODE: (SP)**

DATE: **3/2/98**

SUBJECT: **Bridge Deck and Bridge End Slab Final Surface Texture**

All references in the plans and contract documents to transverse tine finish as the required final surface texture of the bridge decks and bridge end slabs shall be **disregarded** and it is understood that a transverse grooved finish is the required final surface texture.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 223M **CODE: (SP)**

DATE: **5/20/98**

SUBJECT: **Quantity for Fillet Concrete**

Bidders are hereby advised that the following note is shown on the span detail sheets in the bridge plans:

> "The Volume Of Concrete In The Fillets Between The Bottom Of Nominal Slab And Top Of The Beams Has Been Estimated By Using One Half (1/2) Of The Fillet Height At The Bearing Times The Top Flange Width For The Full Length Of The Beam. This Volume Shall Be Used For Final Pay Quantity."

The purpose of this note is to show the method that is used to determine the final pay quantity of fillet concrete. The calculated volume of concrete may or may not be equal to the actual volume of concrete that is placed in the fillet. The volume of fillet concrete used for final pay quantity is based upon the plan fillet height at bearing and a zero millimeter (0 mm) plan fillet height at midspan.

If bidders feel that variations from these dimensions will be encountered, they should adjust their bid accordingly.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 405M **CODE: (SP)**

DATE: **9/29/98**

SUBJECT: **Mowing**

Current specifications require that the Contractor mow certain locations within the right-of-way. In most cases, these mowing operations are to be performed at no additional cost to the State. Changes to our standard specifications by special provision have allowed payment for mowing operations in certain cases. When a pay item is provided in the contract, and when directed by the Engineer, mowing will be measured and payment made at the fixed price per hectare included in the contract, with the exception of the mowing operations required during re-fertilization of existing vegetation. Subsection 213.03 of the standard specifications require that "when fertilizer is to be applied to existing vegetation, incorporation shall be accomplished immediately after the application by mowing the vegetation to a height of approximately 100 millimeters". Costs associated with mowing operations during re-fertilization shall continue to be included in the payment for re-fertilization, pay item 213-C: Superphosphate and no separate payment will be made.

Bidders are hereby advised that costs for the mowing operations associated with re-fertilization of existing vegetation, as set out in Subsection 213, will NOT be measured for separate payment and will be included in the bid price for Superphosphate (Pay Item 213-C). When a pay item is provided in the contract, and when directed by the Engineer, mowing operations will be measured and payment made at the fixed price per hectare included in the contract.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 506M **CODE: (IS)**

DATE: **9/30/99**

SUBJECT: **Prompt Payment**

Bidders are hereby advised that the Prime Contractor must pay their subcontractor(s) for satisfactory performance of their contracts no later than a specific number of days from receipt of payment from the Department.

Therefore, Prime Contractors are hereby advised of the following:

(a) Within 15 calendar days after receiving payment from the Department for work satisfactorily performed, the Prime Contractor shall make prompt payment to all sub-contractors or material suppliers for all monies due.

(b) Within 15 calendar days after receiving payment from the Department for work satisfactorily completed, the Prime Contractor shall promptly return all retainage monies due to all sub-contractors or material suppliers.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 526M **CODE: (IS)**

DATE: **6/11/99**

SUBJECT: **Alterations In Bidding Process**

Bidders are hereby advised that they may either use the traditional method of entering their bid information by hand on Section 905--Proposal, or may insert printed information obtained from the available Electronic Bid System (EBS).

It is the responsibility of every bidder to check for any addendum or modification to the contract document(s) for which they intend to submit a response. It shall be the bidder's responsibility to be sure they are in receipt of all addenda, pre-bid conference information, and/or questions and answers provided at, or subsequent to, the pre-bid conference, if any are issued.

The Mississippi Transportation Commission assumes no responsibility for defects, irregularities or other problems caused by the use of electronic media. Operation of this electronic media is done at the sole risk of the user.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 546M **CODE: (SP)**

DATE: **10/20/99**

SUBJECT: **SUBGRADE CROSS SLOPE CORRECTION**

For the condition(s) shown below, bidders are hereby advised that in accordance with a change in policy by the Department, the subgrade cross slopes shown on the typical sections of the plans are incorrect. The plan sheets show a subgrade cross slope of three percent (3%); the correct subgrade cross slope shall be two percent (2%).

CONDITION "A" - SUBGRADE GRADED UNDER PREVIOUS CONTRACT.
Bidders are advised to change the subgrade cross slope to two percent (2%) during the in-grade preparation and/or chemical treatment of the subgrade. Payment for this work will not be made by separate payment but will be included in other items bid.

CONDITION "B" - GRADING OF SUBGRADE REQUIRED THIS CONTRACT.
The grade elevations shown on the profile sheets and the quantities shown on the summary of quantities sheets were calculated using a subgrade cross slope of three percent (3%). Bidders are advised to use grade elevations resulting from the corrected subgrade cross slope of two percent (2%) when calculating any subgrade elevations or determining any cut or fill requirements.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 575M **CODE: (IS)**

DATE: **2/24/2000**

SUBJECT: **ON-THE-JOB TRAINING PROGRAM**

Bidders are hereby advised that the Department's policy for administering On-The-Job Training has been changed. Affective in the March 2000 letting, payment for training hours will be handled as outlined in Special Provision 906-4. A pay item for trainees will no longer be included in individual construction projects. Payment for training individuals will be processed in accordance with the conditions in MDOT's ON-THE-JOB TRAINING PROGRAM (Special Provision 906-4).

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 664M **CODE: (IS)**

DATE: **5/02/2001**

SUBJECT: **ERRATA AND MODIFICATIONS TO 1996 STANDARD SPECIFICATIONS BOOK**

Page	Subsection	Change
101-4	101.02	In the fourth line change the word “six” to “6.1”.
104-4	104.02.3	Change the unit of pay item 104-A from “lump um” to “lump sum”.
105-4	105.06	In the sixth line of the third paragraph change "Contractor’s” to “Contractor”.
714-9	714.13.12	In Note 3 of Table I, change “EOS” to “AOS”.
721-3	721.03	In the first line of the second paragraph change "banks” to “blanks”.
721-3	721.03	In the first line of the third paragraph change "banks” to “blanks”.

SUPPLEMENT TO NOTICE TO BIDDERS NO. 724M

DATE: 12/10/2001

The goal is 0 percent for the Disadvantaged Business Enterprise.

The bidder's execution of the signature portion of the proposal shall constitute execution of the following assurance:

> The bidder hereby gives assurance pursuant to the applicable requirements of "Transportation Equity Act for the 21st Century -- TEA-21" and "Part 26, Title 49, Code of Federal Regulation" that the bidder has made a good faith effort to meet the contract goal for DBE participation for which this proposal is submitted.

A pre-bid meeting will be held in the first floor auditorium of the Mississippi Department of Transportation Administration Building, 405 North West Street, Jackson, Mississippi at 2:00 P.M. on the day preceding the date of the bid opening.

This meeting is to inform DBE firms of subcontracting and material supply opportunities. Attendance at this meeting is considered of prime importance in demonstrating good faith effort to meet the contract goal.

SUPPLEMENT TO NOTICE TO BIDDERS NO. 724M

DATE: 10/10/2002

Delete subparagraph (3) on page 5 under the heading AWARD, and substitute the following:

(3) Bidder must submit **with the bid proposal** a list of all firms that submitted quotes for material supplies or items to be subcontracted. This information must be submitted on form OCR-485 in the back of the contract proposal.

Delete the first sentence of subparagraph (2) on page 6 under the heading DBE REPORTS, and substitute the following:

At the conclusion of the project the Contractor will submit to the Project Engineer for verification of quantities and further handling Form OCR-482 whereby the Contractor certifies to the amounts of payments made to each Contractor/Supplier.

Delete subparagraph (5) on page 6 under the heading DBE REPORTS, and substitute the following:

(5) OCR-485: The bidder must submit **with the bid proposal** a list of all firms that submitted quotes for material supplies or items to be subcontracted.

(6) OCR-487: Only used by Prime Contractors that are certified DBE firms. This form is used in determining the exact percentage of DBE credit for the specified project. It should be returned to MDOT with the OCR-481 form, or can also be returned with the Permission to Subcontract forms (CAD -720 or CAD-725).

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 724M **CODE: (IS)**

DATE: **12/10/2001**

SUBJECT: DISADVANTAGED BUSINESS ENTERPRISES IN FEDERAL-AID HIGHWAY CONSTRUCTION

This contract is subject to the "Transportation Equity act for the 21st Century -- TEA-21" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations." Portions of the Act are set forth in this Notice as applicable to compliance by the Contractor and all of the Act, and the MDOT DBE Program, is incorporated by reference herein.

The Department has developed a Disadvantaged Business Enterprise Program that is applicable to this contract and is made a part thereof by reference.

Copies of the program may be obtained from:

Office of Civil Rights
Mississippi Department of Transportation
P. O. Box 1850
Jackson, Mississippi 39215-1850

POLICY

It is the policy of the Mississippi Department of Transportation to provide a level playing field, to foster equal opportunity in all federally assisted contracts, to improve the flexibility of the DBE Program, to reduce the burdens on small businesses, and to achieve that amount of participation that would be obtained in a non-discriminatory market place. In doing so, it is the policy of MDOT that there will be no discrimination in the award and performance of federally assisted contracts on the basis of race, color, sex, age, religion, national origin, or any handicap.

ASSURANCES THAT CONTRACTORS MUST TAKE:

MDOT will require that each contract which MDOT signs with a subrecipient or a contractor (and each subcontract the prime contractor signs with a subcontractor) includes the following assurances:

> "The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MDOT deems appropriate."

DEFINITIONS

For purposes of this provision the following definitions will apply:

"Disadvantaged Business" means a small business concern: (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individual(s) or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individual(s); and (b) whose management and daily business operations

are controlled by one or more of the socially and economically disadvantaged individual(s) who own it. It is important to note that the business owners themselves must control the operations of the business. Absentee ownership or title ownership by an individual who does not take an active role in controlling the business is not consistent with eligibility as a DBE under CFR 49 Part 26.71.

CONTRACTOR'S OBLIGATION

The Contractor and all subcontractors shall take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of a portion of the work in this contract and shall not discriminate on the basis of race, color, national origin, religion or sex. Failure on the part of the Contractor to carry out the DBE requirements of this contract constitutes a breach of contract and after proper notification the Department may terminate the contract or take other appropriate action as determined by the Department.

When a contract requires a zero percent (0%) DBE goal, the Contractor still has the responsibility to take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of the work in the contract. All work performed by a certified DBE firm is considered to be a "race neutral" measure and the Department will receive DBE credit towards the overall State goals when the DBE firm is paid for their work. If the Prime Contractor is a certified DBE firm, the Department can receive DBE credit only for the work performed by the Prime Contractor's work force or any work subcontracted to another DBE firm. Work performance by a non-DBE subcontractor is not eligible for DBE credit. DBE credit is received when the DBE firm is paid.

CONTRACT GOAL

The goal for participation by DBEs is established for this contract in the attached Supplement. The Contractor shall exercise all necessary and reasonable steps to ensure that participation is equal to or exceeds the contract goal.

The percentage of the contract that is proposed for DBEs shall be so stated on the last bid sheet of the proposal.

The apparent lowest responsive bidder shall submit to the Contract Administration Division OCR Form 481, signed by the Prime Contractor and the DBE Subcontractors, no later than the 10th day after opening of the bids.

FORMS ARE AVAILABLE FROM THE CONTRACT ADMINISTRATION DIVISION

The OCR-481 Form must contain the following information:

The name and address of each certified DBE Contractor / supplier;

The Reference Number, percent of work and the dollar amount of each item. If a portion of an item is subcontracted, a breakdown of that item (including quantities and unit price) must be attached, detailing what part of the item the DBE firm is to perform and who will perform the remainder of the item.

If the DBE Commitment shown on the last bid sheet of the proposal, does not equal or exceed the contract goal, the bidder must submit, with the proposal, information to satisfy the Department that adequate good faith efforts have been made to meet the contract goal.

Failure of the lowest bidder to furnish acceptable proof of good faith efforts, submitted with the bid proposal, shall be just cause for rejection of the proposal. Award may then be made to the next lowest responsive bidder or the work may be readvertised.

The following factors are illustrative of matters the Department will consider in judging whether or not the bidder has made adequate good faith effort to satisfy the contract goal.

(1) Whether the bidder attended the pre-bid meeting that was scheduled by the Department to inform DBEs of subcontracting opportunities;

(2) whether the bidder advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;

(3) whether the bidder provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;

(4) whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested;

(5) whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goal;

(6) whether the bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;

(7) whether the bidder negotiated in good faith with interested DBEs and did not reject them as unqualified without sound reasons based on a thorough investigation of their capabilities; and

(8) whether the bidder made efforts to assist interested DBEs in obtaining any required bonding or insurance.

DIRECTORY

Included with this Bid Proposal is a list of "Certified DBE Contractors" which have been certified as such by the Mississippi Department of Transportation.

To count toward meeting the goal, the DBE firm must be on the Department's list of "Certified DBE Contractors" that is attached to this proposal. DBE credit is received only when the DBE firm has been paid for the work performed on this project.

REPLACEMENT

If a DBE Subcontractor cannot perform satisfactorily, and this causes the OCR-481 commitment to fall below the contract goal, the Contractor shall take all necessary reasonable steps to replace the DBE with another certified DBE Subcontractor or submit information to satisfy the Mississippi Department of Transportation that adequate good faith efforts have been made to replace the DBE. All DBE replacements must be approved by the Department.

Under no circumstances shall the prime or any subcontractor perform the DBE's work (as shown on the OCR-481) without prior written approval from the Department. See "Sanctions" on Page 6 for penalties for performing DBE's work.

When a Contractor proposes to substitute/replace/terminate a DBE that was originally named on the OCR-481, the Contractor must obtain a release (in writing) from the named DBE explaining why the

DBE Subcontractor cannot perform the work. A copy of the original DBE's release must be attached to the Contractor's written request to substitute/replace/terminate along with appropriate Subcontract Forms for the substitute/replacement/terminated Subcontractor, all of which must be submitted to the DBE Coordinator and approved, in advance, by MDOT.

GOOD FAITH EFFORTS

To demonstrate good faith efforts to replace any DBE that is unable to perform successfully, the Contractor must document steps taken to subcontract with another certified DBE Contractor. Such documentation shall include no less than the following:

(a) Proof of written notification to certified DBE Contractors by certified mail that their interest is solicited in subcontracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.

(b) Efforts to negotiate with certified DBE Contractors for specific items shall include as a minimum:

(1) The name, address, and telephone number of each DBE contacted;

(2) A description of the information provided about the plans and specifications for those portions of the work to be subcontracted; and

(3) A statement of why agreements were not reached.

(c) For each DBE contacted that was rejected as unqualified, the reasons for such conclusion.

(d) Efforts made to assist each DBE that needed assistance in obtaining bonding or insurance required by the Contractor.

Failure of the Contractor to demonstrate good faith efforts to replace a DBE Subcontractor that cannot perform as intended with another DBE Subcontractor, when required, shall be a breach of contract and may be just cause to be disqualified from further bidding for a period of up to 12 months after notification by certified mail.

PARTICIPATION / DBE CREDIT

Participation shall be counted toward meeting the goal in this contract as follows:

(1) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.

(2) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.

(3) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture. The joint venturer must submit a Joint Venture Eligibility Form provided by the Mississippi Department of Transportation.

(4) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is

responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.

(5) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count 60 percent of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.

(6) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.

(7) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

AWARD

Award of this contract to the low bidder will be contingent upon the following conditions:

(1) Concurrence from Federal Highway Administration, when applicable.

(2) Bidder must submit to the Contract Administration Division for approval, Form OCR-481 (DBE Commitment) no later than the 10th day after opening of the bids, or submit information with the bid proposal to satisfy the Department and that adequate good faith efforts have been made to meet the contract goal.

(3) Bidder must submit to Contract Administration Division a list of all firms that submitted quotes for material supplies or items to be subcontracted no later than 10 days after opening of the bids. This information must be submitted on form OCR-485.

Prior to the start of any work, the bidder must notify the Project Engineer, in writing, of the name of the designated "DBE Liaison Officer" for this project. This notification must be posted on the bulletin board at the project site.

DEFAULT

In the event the Contractor defaults on this project and the Surety Company is called upon to complete the contract, the DBEs named on the original OCR-481 Forms must be given the opportunity to perform the work subcontracted to them by the original contractor unless the DBE requests, in writing, to be released. The DBE commitment percentage entered on the last bid sheet of the proposal shall remain in force as a provision of the contract, but only the contract goal established by MDOT in this proposal must be met or exceeded to fulfill the terms of the contract. The Contractor may list DBE Subcontractors and items that exceed MDOT's contract goal, but should unforeseen problems arise that would prevent a DBE from completing its total commitment percentage, the Contractor will meet the terms of the contract as long as it meets or exceeds MDOT's Contract Goal. For additional information, refer to "Replacement" section of this Notice.

DBE REPORTS

(1) OCR-481: Refer to "CONTRACT GOAL" section on page no. 2 of this Notice to Bidders for information regarding this form.

(2) OCR-482: At the conclusion of the project the Contractor will submit to the Project Engineer for verification of quantities and further handling Form OCR-482 whereby the Contractor certifies to the amounts of payments made to each DBE Contractor/Supplier to satisfy the contract goal. The Project Engineer shall submit the completed Form OCR-482 to the DBE Coordinator (Office of Civil Rights). Final acceptance of the project is dependent upon Contract Administration Division's receipt of completed Form OCR-482 which they will receive from the Office of Civil Rights.

(3) OCR-483: The Project Engineer/Inspector will complete Form OCR-483, the Commercially Useful Function (CUF) Performance Report, in accordance with MDOT S.O.P. No. OCR-03-09-01-483. Evaluations reported on this form are used to determine whether or not the DBE firm is performing a CUF. The Prime Contractor should take corrective action when the report contains any negative evaluations. DBE credit may be disallowed and/or other sanctions imposed if it is determined the DBE firm is not performing a CUF. This form should also be completed and returned to the DBE Coordinator (Office of Civil Rights).

(4) OCR-484: Each month, the Contractor will submit to the Project Engineer OCR-484 certifying payments to all subcontractors.

(5) OCR-485: The Contractor (apparent low bidder) will submit to Contract Administration Division within 10 days from the opening of the bids, a list of all firms that submitted quotes for material supplies or items to be subcontracted.

SANCTIONS

The Department has the option to enforce any of the following penalties for failure of the prime Contractor to fulfill the DBE goal as stated on the OCR-481 Form or any violations of the DBE program guidelines:

(1) Disallow credit towards the DBE goal

(2) Withhold progress estimate payments

(3) Deduct from the final estimate an amount equal to the unmet portion of the DBE goal

(4) Recover an amount equal to the unmet contract goal

(5) Debar the Contractor involved from bidding on Mississippi Department of Transportation projects.

(6) Deduct from the Contractor's final estimate all or any combination of the following.

Offense	Percentage of the monetary amount disallowed from (1) above	Lump Sum
# 1	10%	$ 5,000 or both
# 2	20%	$ 10,000 or both
# 3	40%	$ 20,000 & debarment

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 726M **CODE: (IS)**

DATE: **12/10/2001**

SUBJECT: **DBE Goals**

Bidders are hereby advised that the participation of a DBE Firm can not be counted towards the Prime Contractor's DBE goal until the amount being counted towards the goal has been paid to the DBE.

Form OCR-484 has been developed to comply with this requirement. Prime Contractors will submit this form to the Project Engineer no later than the 20th of each month. This form should be submitted monthly showing all firms even if the Contractor has paid no monies to the firm during that estimate period (negative report). The Project Engineer will attach this form to the monthly estimate before forwarding the estimate to the Contract Administration Division for processing.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 741M **CODE: (IS)**

DATE: **02/27/2002**

SUBJECT: **Work In Proximity Of High Voltage Power Lines**

Bidders are hereby advised of Section 45-15-1, et seq., Mississippi Code of 1972, regarding the performance of work in the proximity of high voltage overhead power lines. It is the Contractor's responsibility to comply with those statutory requirements.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 777M **CODE: (IS)**

DATE: **05/22/2002**

SUBJECT: **Payments to Subcontractors**

Bidders are hereby advised that each month, the Contractor will submit to the Project Engineer form OCR-484 certifying payments to all subcontractors. Form OCR-484 can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at the MDOT website under the *Business Section, Construction Contracts and Bidding, Disadvantaged Business Enterprise (DBE), Applications and Forms for the DBE Program*.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 779M **CODE: (IS)**

DATE: **06/07/2002**

SUBJECT: **Contract Overpayment(s)**

Bidders are hereby advised that by the execution of the contract for this project, the Contractor agrees that it has the duty to and will immediately reimburse the Mississippi Transportation Commission, without any demand therefore, for any overpayment(s) of which it has knowledge, or through due diligence, should have knowledge.

By the execution of the contract for this project, the Contractor also agrees that if the Mississippi Transportation Commission has made any overpayment(s) to the Contractor on any previously executed contract(s), the Mississippi Transportation Commission may notify the Contractor in writing of the nature and the amount of the overpayment(s). If the Contractor fails to remit the overpayment(s) to the Mississippi Transportation Commission within sixty (60) calendar days from the date of such notice, interest shall accrue from the date of such notification until payment is made in full at the rate of one percent (1%) per month until fully paid.

By the execution of the contract for this project, the Contractor also agrees that the Mississippi Transportation Commission may offset and withhold a sum equal to any overpayment(s) on any previously executed contract(s), plus interest, where applicable, against any sums due the Contractor under the terms of this contract or any other active contract(s).

By the execution of the contract for this project, the Contractor also agrees that if any overpayment(s) are made by the Mississippi Transportation Commission to the Contractor under the terms of this contract the Mississippi Transportation Commission shall have the right to offset and withhold that amount, plus interest, where applicable, from any sums which the Mississippi Transportation Commission might owe the Contractor on any other active contract(s) or any contract(s) executed subsequent to the execution of this contract.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 803M **CODE: (IS)**

DATE: **09/17/2002**

SUBJECT: **Federal Bridge Formula**

Bidders are hereby advised that Federal Highway Administration Publication No. FHWA-MC-94-007, **BRIDGE FORMULA WEIGHTS**, dated January 1994, is made a part of this contract when applicable.

Prior to the preconstruction conference, the Contractor shall advise the Engineer, in writing, what materials, if any, will be delivered to the jobsite via Interstate route(s).

Copies of the **BRIDGE FORMULA WEIGHTS** publication may be obtained by contacting:

Federal Highway Administration
400 7th Street, SW
Washington, DC 20590
(202) 366-2212

or

http://ops.fhwa.dot.gov/freight/regulate/sw/

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 804M **CODE: (IS)**

DATE: **09/26/2002**

SUBJECT: **Certification of Traffic Control Devices**

Category 1 Traffic Control Devices

Category 1 traffic control devices are defined as low-mass, single-piece traffic cones, tubular markers, single-piece drums, and delineators.

The Contractor shall certify to the Project Engineer by a letter ONLY stating that the Category 1 traffic control devices, furnished and used, either meet the requirements of NCHRP Report 350 or were purchased prior to October 1, 1998.

All documentation supporting the certification is to be kept on file by the Contractor subject to review by the Department at any time. Support documentation shall be kept on file for two years after the completion of the project.

The Contractor may self-certify Category 1 Traffic Control Devices. In order to make the self-certification, the Contractor shall have as a minimum the following support documentation regarding the certification.

1. A title, e.g., "Certification of Crashworthiness";
2. Name and address of vendor making the certification;
3. Unique identification of the certificate (such as serial number) with numbered pages and the total number of pages;
4. Description and unambiguous identification of the item tested;
5. Identification of the basis for self-certification process used and to what test level of NCHRP Report 350. This basis as crash test experience with similar devices or years of demonstrably safe operational performance;
6. A signature and title, or an equivalent identification of the person(s) accepting responsibility for the content of the certification, however produced, and the date of issue;
7. A statement that the certification shall not be reproduced except in full.

All documentation supporting the self-certification is to be kept on file by the Contractor subject to review by the Department at any time. Support documentation shall be kept on file for two years after the completion of the project.

The Contractor's letter to the Project Engineer shall state that all Category 1 traffic control devices, furnished and used, were purchased after October 1, 1998 and met the requirements of NCHRP Report 350, or that the Category 1 traffic control devices, furnished and used, were purchased prior to October 1, 1998.

Category 2 Traffic Control Devices

Category 2 traffic control devices are defined as barricades, intrusion detectors, vertical panel assemblies, portable sign supports, drums with warning lights, and cones with warning lights.

The Contractor shall certify to the Project Engineer by a letter ONLY stating that the Category 2 traffic control devices, furnished and used, either meet the requirements of NCHRP Report 350 or were purchased prior to October 1, 2000. The Contractor's letter shall state that all Category 2 traffic control devices, furnished and used, were purchased after October 1, 2000 and met the requirements of NCHRP Report 350, or that the Category 2 traffic control devices, furnished and used, were purchased prior to October 1, 2000.

Category 3 Traffic Control Devices

Category 3 Traffic Control Devices are items similar to Category 2 but have a mass of more than 45 kilograms. Category 3 Traffic Control Devices include concrete barrier, truck mounted attenuators (TMAs), workzone crash cushions, and fixed sign supports.

Concrete barrier and fixed sign supports, furnished and used, and purchased after October 1, 2002 must meet the requirements of Report 350.

The Contractor shall furnish a letter ONLY certifying that all concrete barrier and fixed sign supports purchased after October 1, 2002 meets the requirements of NCHRP Report 350. Concrete barrier and fixed sign supports purchased prior to October 1, 2002 may be used without written certification until they complete their normal service life.

Work zone crash cushions and truck mounted attenuators (TMAs), furnished and used, and purchased after October 1, 1998 must meet the requirements of Report 350.

The Contractor shall furnish a letter certifying that all work zone crash cushions and TMAs purchased after October 1, 1998 meets the requirements of NCHRP Report 350. Work zone crash cushions and TMAs purchased prior to October 1, 1998 may be used without written certification until they complete their normal service life.

Contractor's Letter to the Project Engineer

The following is an example of a letter to the Project Engineer.

"I, *(Contractor's name)*, certify that the Category 1 traffic control devices used on this project and purchased after October 1, 1998 meet the requirements of NCHRP Report 350 and all Category 1 traffic control devices used on this project not meeting NCHRP Report 350 were purchased prior to October 1, 1998.

I also certify that the Category 2 traffic control devices used on this project and purchased after October 1, 2000 meet the requirements on NCHRP Report 350 and all Category 2 traffic control devices used on this project not meeting NCHRP Report 350 were purchased prior to October 1, 2000.

I also certify that except for concrete median barrier, all of the Category 3 traffic control devices crash cushions and truck mounted attenuators used on this project and purchased after October 1, 1998 meet the requirements on NCHRP Report 350 and all Category 3 crash cushions and truck mounted attenuators used on this project not meeting NCHRP Report 350 were purchased prior to October 1, 1998."

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 812M **CODE: (SP)**

DATE: **10/23/2002**

SUBJECT: **Submission of Form OCR-485**

Bidders are hereby advised that prior to the November 2002 letting, Form OCR-485 was completed by the apparent low bidder and submitted 10 days after opening of the bids. Beginning with the November 2002 letting, Form OCR-485 will be completed by **ALL BIDDERS** submitting a bid proposal and **must be included in the bid proposal package**. Failure to include Form OCR-485 in the bid proposal package will cause the Contractor's bid to be considered **irregular**.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO.840M **CODE: (SP)**

DATE: **03/19/2003**

SUBJECT: **Storm Water Discharge Associated with Construction Activity (= 2.0 Hectares)**

PROJECT: **NH-0015-02(078)PH2 / 101173 – JEFFERSON DAVIS COUNTY**

A Construction Storm Water General NPDES Permit to discharge storm water associated with construction activity is required.

The Department has acquired Certificate of Permit Coverage MSR-101347 under the Mississippi Department of Environmental Quality's (MDEQ) Storm Water Construction General Permit. Projects issued a certificate of permit coverage are granted permission to discharge treated storm water associated with construction activity into State waters. Copies of said permit, completed Construction Notice of Intent (CNOI), and Storm Water Pollution Prevention Plan (SWPPP) are on file with the Department.

Prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director an original signed copy of the completed Prime Contractor Certification (Form No. 1).

Failure of the bidder to execute and file the completed Prime Contractor Certification (Form No. 1) shall be just cause for the cancellation of the award.

The executed Prime Contractor Certification (Form No. 1) shall be prima facie evidence that the bidder has examined the permit, is satisfied as to the terms and conditions contained therein, and that the bidder assumes the responsibility for meeting all permit terms and conditions and for performing permit requirements including, but not limited to, the inspection and reporting requirements of Part IV. For this project, the Contractor shall furnish, set up and read, as needed, an on-site rain gauge.

In accordance with Part IV.B, the Contractor shall display proof of coverage at a conspicuous place accessible by the public on or at the edge of the construction site.

The Contractor shall make inspections in accordance with Part IV.D and shall furnish the Project Engineer with the results of each weekly inspection as soon as possible following the date of inspection. A copy of the form provided in Part VII with the inspection portion completed shall be sufficient. The weekly inspections must be documented on the Monthly Inspection Report and Certification Form. The Contractor's representative and the Project Engineer shall jointly review and discuss the results of the inspections so that corrective action can be taken. The Project Engineer shall retain copies of the inspection reports.

An amount equal to 25 percent (25%) of the total estimated value of the work performed during each period in which the Contractor fails to submit the completed Monthly Inspection

Report and Certification Form to the Project Engineer will be withheld from the Contractor's earned work. Thereafter, on subsequent successive estimate periods, the percentage withheld will be increased at the rate of 25 percent per estimate period in which the non-conformance with this specification continues. Monies withheld for this non-conformance will be released for payment on the next monthly estimate for partial payment following the date the submittal of the completed Monthly Inspection Report and Certification Form is brought back into compliance with this specification.

Upon successful completion of all permanent erosion and sediment controls for a covered project, accepted and documented by the Engineer, a completed Notice of Termination (NOT) of Coverage form (provided in Part VIII.) shall be submitted to the Office of Pollution Control. All the monthly inspection forms will be submitted at this time with the Notice of Termination (NOT) of Coverage form. If no sediment and erosion control problems are identified, the prime contractor will receive a termination letter from the Office of Pollution Control.

In summary, prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director an original signed copy of the completed Prime Contractor Certification (Form No. 1). Also, prior to the commencement of construction on the project, the Contractor shall transmit by letter an original signed copy of the completed Prime Contractor Certification (Form No. 2) to the Office of Pollution Control, P.O. Box 10385, Jackson, Mississippi 39289-0385. Copies of the completed Prime Contractor Certification (Form No. 2) and letter of transmittal shall be furnished the Project Engineer as proof of the required filing with the Office of Pollution Control. At project completion, when accepted and documented by the Engineer, a Notice of Termination of Coverage will be submitted to the Office of Pollution Control along with all monthly inspection forms.

Securing a permit (s) for storm water discharge associated with the Contractor's activity on any other regulated area the Contractor occupies, shall be the responsibility of the Contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 853M **CODE: (SP)**

DATE: **05/12/2003**

SUBJECT: **Removal of Construction Signs**

Bidders are hereby advised that upon receipt of the Final or Partial Maintenance Release, as documented in writing by the State Construction Engineer, the Contractor shall have fifteen (15) calendar days in which to remove all construction signs on the project. It is agreed that if the signs are not removed within the fifteen (15) calendar days the signs shall be considered abandoned and shall become the property of the Mississippi Transportation Commission which may remove, use, and/or dispose of such signs as it sees fit.

The Contractor shall place and maintain appropriate construction signs for any additional work on the project after the Maintenance Release has been issued. These construction signs will not be measured for separate payment. Payment for these signs shall be included in Pay Item No. 618-A, Maintenance of Traffic.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 881M **CODE (SP)**

DATE: **9/12/2003**

SUBJECT: **CONTRACT TIME**

PROJECT: **NH-0015-02(078)PH2 / 101173 – JEFFERSON DAVIS COUNTY**

The calendar date for completion of work to be performed by the Contractor for this project shall be September 12, 2005 which date or extended date as provided in Subsection 108.06 shall be the end of contract time. Except as therein provided, it is anticipated that the Notice to Proceed will be issued by not later than March 1, 2004 and the date for beginning of contract time will be March 11, 2004.

Allowable Time Units will be 250.

The Specified Completion Date has been based on Column "A" of the Table of Time Units, in Subsection 108.06.

Bidders are hereby advised that the contract scheduled completion date established by the Department is predicated upon the Contractor having multiple construction work forces and operations underway simultaneously, and the need for multiple operations is reflected in the State's progress schedule. Time charges on the project will be made as provided in the specifications and as shown on the approved progress schedule.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 882M **CODE: (SP)**

DATE: 08/26/2003

SUBJECT: Specialty Items

PROJECT: NH-0015-02(078)PH2 / 101173--JEFFERSON DAVIS COUNTY(IES)

Pursuant to the provisions of Section 108, the following work items are hereby designated as "Specialty Items" for this contract. Bidders are reminded that these items must be subcontracted in order to be considered as specialty items.

CATEGORY: EROSION CONTROL

Ref No	Pay Item	Description
140	212-B	Standard Ground Preparation
150	907-213-A	Agricultural Limestone
160	213-B	Combination Fertilizer (13-13-13)
180	214-A	Seeding (Bermudagrass)
190	214-A	Seeding (Bahiagrass)
200	214-A	Seeding (Tall Fescue)
210	214-A	Seeding (Sericea Lespedeza)
220	214-A	Seeding (Crimson Clover)

CATEGORY: TRAFFIC CONTROL

Ref No	Pay Item	Description
710	619-D1	Standard Roadside Construction Signs (less than 0.9 square meter)
720	619-D2	Standard Roadside Construction Signs (0.9 square meter or more)
730	619-G4	Barricades (Type III) (Single Faced)
740	619-G4	Barricades (Type III) (Double Faced)
750	619-G5	Free Standing Plastic Drums

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 883M **CODE (SP)**

DATE: **08/26/2003**

SUBJECT: **Placement of Fill Material in Federally Regulated Areas**

PROJECT: **NH-0015-02(078)PH2 / 101173 – JEFFERSON DAVIS COUNTY**

A Permit (404, General, Nationwide, etc.) for placing fill material federally regulated sites is required.

The Department has acquired the following permit(s) for permanently filling at regulated sites that are identified during project development:

Nationwide Permit No. 14 (Waters of U.S.) -- All sites with area less than 0.10 acre

General Permit No. 46-68 (Wetlands & Waters of U.S.) --- Site No. 1

Copies of said permit(s) are on file with the Department.

Securing a permit(s) for the filling of any other regulated site, the purpose of which is temporary construction for the convenience of the Contractor, shall be the responsibility of the Contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 886M **CODE: (SP)**

DATE: **9/15/03**

SUBJECT: **Construction Equipment Height**

PROJECT: **NH-0015-02(078)PH2/101173** **Jefferson Davis County**

Bidders are hereby advised that if a crane which is used during construction exceeds 112 feet in height, then the contractor must notify the FAA Air Traffic Division in Atlanta, GA. This notification must be done using FAA Form 7460-1. This form is available on the internet at the following address: http://www2.faa.gov/ats/ata/ata400/7460-1f.rtf .

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 887M **CODE: (SP)**

DATE: **09/17/2003**

SUBJECT: **Removal of Obstructions**

PROJECT: **NH-0015-02(078)PH2 / 101173 Jefferson Davis County**

The bidder is hereby advised of the potential for the buildings listed below to contain materials contaminated with asbestos, a hazardous air pollutant.

The bidder's attention is called to notices to bidders entitled "Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP)" and "Status of Right-of-Way, Utility Adjustments and Potentially Contaminated Sites" for pertinent information concerning asbestos, if any, contained in the buildings listed below to be removed by the Contractor.

The Contractor shall remove the following obstructions in accordance with Section 202, Removal of Structures and Obstructions, and Subsection 107.25, Hazardous and/or Toxic Waste Procedures, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction. Payment for removal and disposal of the obstruction(s) listed herein, including demolition, handling, loading, transporting and disposal of any asbestos containing materials, shall be made under the applicable subsection of the Basis of Payment portion of Section 201 - Clearing and Grubbing:

One - (1) one story dilapidated frame residence, approximately 800 square feet, located approximately 4 meters left of centerline of survey at Station 7+695.

Concrete saddles, located approximately 72 meters left of centerline of survey at Station 13+608.

One - (1) one story metal building, approximately 200 square feet, located approximately 65 meters left of centerline of survey at Station 13+650.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 896M **CODE: (IS)**

DATE: **10/20/2003**

SUBJECT: **Fuel Tax Applicability to Bidders and Contractors**

Bidders are hereby advised that the "Mississippi Special Fuel Tax Law", Section 27-55-501, et seq. and it's requirements and penalties apply to any contract for construction, reconstruction, maintenance or repairs, for contracts 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 the Contractor that is awarded this contract. The Contractor will be subject to an audit during the life of this contract to make certain that all applicable fuel taxes are being paid promply as outlined in Section 27-55-501, et seq.

In addition to any audits performed by the Mississippi State Tax Commission, the Department also reserves the right to audit the Contractor's records during the life of this contract to make certain that all applicable fuel taxes are being paid promply as outlined in Section 27-55-501, et seq.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 898M **CODE: (SP)**

DATE: **11/10/2003**

SUBJECT: **Petroleum Products Base Prices For Contracts Let In December, 2003**

REFERENCE: **Subsection 907-109.07**

The following base prices are to be used for adjustment in compensation due to changes in costs of petroleum products:

FUELS

	Per Gallon	Per Liter
Gasoline	$1.2291	$0.3247
Diesel	$1.2550	$0.3316

MATERIAL OF CONSTRUCTION

Asphalt Cements**	Per Gallon	Per Ton	Per Liter	Per Metric Ton
Viscosity Grade AC-5	$0.8079	$191.67	$0.2134	$211.28
Viscosity Grade AC-10	$0.7882	$187.00	$0.2082	$206.13
Viscosity Grade AC-20	$0.7762	$184.14	$0.2051	$202.98
Viscosity Grade AC-30	$0.7762	$184.14	$0.2051	$202.98
Grade PG-58-28	$0.8043	$190.83	$0.2125	$210.35
Grade PG 64-22	$0.7828	$185.71	$0.2068	$204.71
Grade PG 67-22	$0.7882	$187.00	$0.2082	$206.13
Grade PG 76-22	$1.1528	$273.50	$0.3045	$301.48
Grade PG 82-22	$1.3016	$308.80	$0.3438	$340.39

Emulsified Asphalts

Grade EA-4 (SS-1)	$0.7417	$0.1959
Grade RS-2C (CRS-2)	$0.7504	$0.1982
Grade CRS-2P	$0.8747	$0.2311

Primes

Grades EA-1 and MC-70	$0.9550	$0.2523

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 900M **CODE: (SP)**

DATE: **11/12/2003**

SUBJECT: **Estimated Monthly Quantities**

Bidders are hereby advised that each month the Contractor works, the Engineer furnishes the Contractor with a monthly progress estimate showing the total estimated quantities for each pay item in the contract. The Contractor should review the Engineer's progress estimate as to the accuracy of the quantities. Should the Engineer's estimated quantity for any pay item be greater than a tolerance of plus or minus ten percent (±10%) of the Contractor's estimated quantity, the Contractor should confer with the Resident or Project Engineer to rectify any differences. Each should make a record of the differences, if any, and conclusions reached. In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 15 calendar days following the ending date of the monthly estimate in question to file in writing, a protest Notice of Claim in accordance with the provisions Subsection 105.17. Otherwise, the Engineer's estimated quantities shall be considered acceptable pending any changes made during the checking of final quantities.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 901M **CODE: (SP)**

DATE: **11/24/2003**

SUBJECT: **Removal of Structures**

PROJECT: **NH-0015-02(078)PH2/101173 - JEFFERSON DAVIS COUNTY**

Bidders are herby advised of three structures that will be removed as part of this contract. The three structures are as follows:

1) The structure located 4 meters left of Station 7+695. Proper notification forms must be submitted to MDEQ prior to demolition.

2) The structure located 72 meters left of Station 13+608. Notification of the MDEQ is not required prior to demolition.

3) The structure located 65 meters left of Station 13+650. Proper notification forms must be submitted to MDEQ prior to demolition.

No separate payment will be made for the removal of these structures. This work shall be included as part of Pay Item 201-A (Clearing and Grubbing).

The contractor will be required to notify the Mississippi Department of Environmental Quality of planned demolition or relocation activities at leat ten working days prior to the scheduled start of these activities, as required by EPA 40 CFR Part 61.145 (a) and (b).

SUPPLEMENT TO FORM FHWA-1273

The following MINIMUM HOURLY WAGE RATES have been predetermined by the Secretary of Labor in Wage Determination Decision No. MS030024 dated 6/13/2003.

AREA 5 - COUNTIES

ADAMS, AMITE, COVINGTON, FORREST, FRANKLIN, GREENE, JEFFERSON, JEFFERSON DAVIS, JONES, LAMAR, LAWRENCE, LINCOLN, MARION, PERRY, PIKE, WALTHALL, WAYNE AND WILKINSON

PAYROLL CODE	CLASSIFICATION	MINIMUM HOURLY WAGE RATE
100	Air Tool Operator (Jack Hammer/Air Comp.)	$6.50
105	Asphalt Raker	5.88
108	Mason Tender (Cement Mason Helper)	6.48
110	Carpenter	8.58
120	Cement Mason (Finisher)	8.09
130	Electrician	14.40
131	Mechanic (Heavy Equipment)	9.24
135	Oiler-Greaser	7.01
140	Form Setter	7.33
145	Grade Checker (Asphalt Crew)	6.95
150	Ironworker, Reinforcing (Tie Steel)	8.51
155	Ironworker, Structural	7.50
160	Laborer, Unskilled	5.88
165	Pipelayer	7.88
175	Painter (Structural Steel)	8.86
180	Piledriverman	8.00
185	Truck Driver (All Types)	6.19
190	Joint Filler	5.24
195	Joint Setter	5.15
197	Welder	8.00
	POWER EQUIPMENT OPERATORS	
205	Aggregate Spreader Operator	6.58
212	Asphalt Broom (Sweeper) Operator	6.17
214	Asphalt Paving Machine/Spreader Operator	6.89
215	Asphalt Distributor Operator	5.92
216	Asphalt Plant Operator	6.31
220	Backhoe (Shovel) Operator	7.69
225	Bulldozer Operator	8.03
235	Concrete Finishing/Curing Machine Operator	7.85
240	Concrete Paving Machine Operator (Spreader)	8.97
250	Concrete Saw Operator	6.15
255	Concrete Breaker/Hydro-Hammer Operator	7.00
270	Loader (All Types)	6.90
275	Milling Machine Operator	7.27
280	Mixer Operator (All Types)	6.53
285	Motor Patrol (Grader) Operator	8.51
290	Mulcher Machine Operator	6.00
295	Earth Auger Operator	8.00
300	Piledriver Machine Operator	10.50
305	Roller Operator (Self-Propelled)	5.73
310	Scraper Operator (All Types)	6.81
315	Striping Machine Operator	10.00
320	Tractor Operator (Track Type)	9.00
325	Tractor Operator (Wheel Type)	5.70
330	Trenching Machine Operator	8.01
350	Crusher Feeder Machine Operator	5.50
360	Crane (Dragline) Operator	9.18
365	Guardrail Post Driver	10.00

Authorized Payroll Code may be used in lieu of classification titles on weekly payrolls submitted to this Department. Codes or classification titles not conforming to those listed will not be acceptable.

SUPPLEMENT TO FORM FHWA-1273

DATE: 6/15/94

SUBJECT: Final Certificate and Contract Provisions for Subcontracts

All subcontracts shall be in writing and contain all pertinent provisions and requirements of the prime contract.

Each "Request for Permission to Subcontract" (Mississippi Department of Transportation Form CAD-720) shall include a copy of subcontract for review by the Mississippi Department of Transportation. The federal contract provisions may be omitted from the subcontract copy submitted for review provided the Contractor certifies that the provisions will be physically incorporated into the agreement furnished to the Subcontractor.

In lieu of submitting a copy of the subcontract for review, the Contractor may certify that the subcontract agreement is in writing and that it contains all the requirements and pertinent provisions of the prime contract.

Each Subcontractor will be required to provide a copy of the subcontract agreement for contract compliance reviews, along with physical evidence (copy of FHWA-1273) that requirements and pertinent provisions have been provided for review and adherence.

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

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ATTACHMENTS

A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant

of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly takecorrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. **Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward

qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within thetime limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. **General:**

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. **Classification:**

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. **Payment of Fringe Benefits:**

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. **Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:**

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level ofprogress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wagedetermination for the classification of work actually performed.

5. **Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. **Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the

same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. **Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. **Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. **Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. **Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. **Payrolls and Payroll Records:**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned,

without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provideall safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary,

hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false represen-tation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended andsupplemented;

Shall be fined not more that $10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such require-ments.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. **Instructions for Certification - Primary Covered Transactions:**

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowinglyrendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. **Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive

Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for female participation in each trade (percent)
From April 1, 1978 until March 31, 1979	3.1
From April 1, 1979 until March 31, 1980	5.1
From April 1, 1980 until March 31, 1981	6.9

Until further notice	Goals for minority participation for each trade (percent)
SHSA Cities:	
Pascagoula - Moss Point	16.9
Biloxi - Gulfport	19.2
Jackson	30.3
SMSA Counties:	
Desoto	32.3
Hancock, Harrison, Stone	19.2
Hinds, Rankin	30.3
Jackson	16.9
Non-SMSA Counties:	
George, Greene	26.4
Alcorn, Benton, Bolivar, Calhoun, Carroll, Chickasaw, Clay, Coahoma,Grenada, Itawamba, Lafayette, Lee, Leflore, Marshall, Monroe,Montgomery, Panola, Pontotoc, Prentiss, Quitman, Sunflower,Tallahatchie, Tate, Tippah, Tishomingo, Tunica, Union, Washington, Webster, Yalobusha	26.5
Attala, Choctaw, Claiborne, Clarke, Copiah, Covington, Franklin, Holmes, Humphreys, Issaquena, Jasper, Jefferson, Jefferson Davis, Jones Kemper, Lauderdale, Lawrence, Leake, Lincoln, Lowndes, Madison, Neshoba, Newton, Noxubee, Oktibbeha, Scott, Sharkey, Simpson, Smith, Warren, Wayne, Winston, Yazoo	32.0
Forrest, Lamar, Marion, Pearl River, Perry, Pike, Walthall	27.7
Adams, Amite, Wilkinson	30.4

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is to the county and city (if any), stated in the advertisement.

5. The notification required in Paragraph 3 shall be addressed to the following:

Contract Compliance Officer
Mississippi Department of Transportation
P.O. Box 1850
Jackson, Mississippi 39215-1850

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-101-2M **CODE: (IS)**

DATE: **01/03/2002**

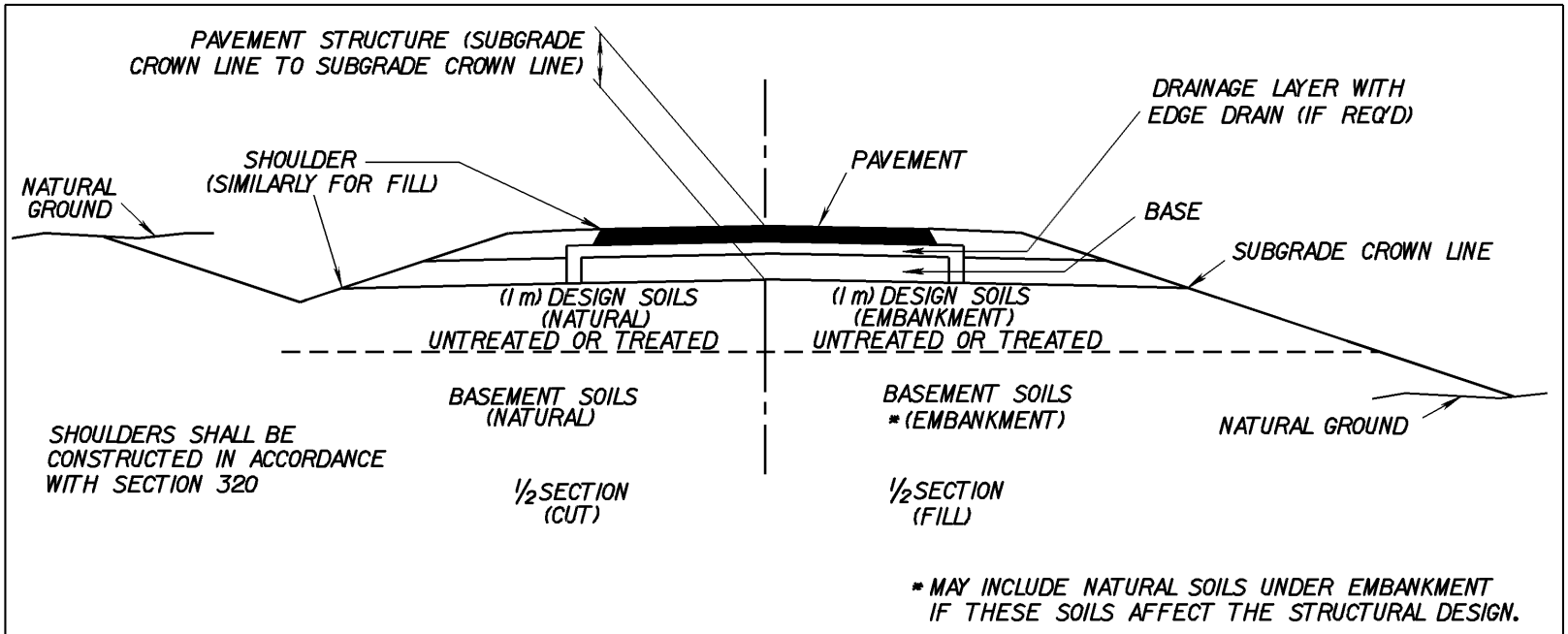
SUBJECT: **Definitions**

Section 101, Definitions and Terms, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-101.02--Definitions. Delete the definition of "Optional Items" on page 101-8 and substitute:

Optional Items-Items listed in the bid schedule of the proposal which are considered to be comparable for the purpose intended, and the Contractor is required to make a selection prior to or at the time of execution of the contract.

Delete Figure 1 at the end of Section 101 on page 101-13, and substitute the following:



IN-GRADE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 321 PRIOR TO PLACEMENT OF THE PAVEMENT STRUCTURE.

VERTICAL DIMENSIONS OF THE ROADWAY STRUCTURE INDICATED ON THE TYPICAL SECTION OF THE PLANS ARE FOR CONVENIENCE IN ESTABLISHING DESIGN GRADE AT THE TOP AND BOTTOM OF RESPECTIVE COURSE, WITH REFERENCE TO PROFILE GRADE. THEY INDICATE DESIGN THICKNESESSES, ARE NOT SPECIFIC REQUIREMENTS FOR LIMITS OF COURSE THICKNESS, AND ARE SUBJECT TO THE TOLERANCES SET FORTH FOR THE RESPECTIVE COURSES OF THE WORK.

FIGURE 1 - REFERENCE DIVISION 100 - PAGE 101-1

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-102-4M **CODE: (IS)**

DATE: 03/01/2002

SUBJECT: **Preparation of Proposal**

Section 102, Bidding Requirements and Conditions, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-102.06--Preparation of Proposal. Delete in toto the second full paragraph on page 102-4 and substitute:

Bid sheets generated by the Department's Electronic Bid System (EBS) along with a completed proposal package will constitute the official bid and shall be signed on the last sheet of the EBS generated bid sheets and delivered to the Department in accordance with the provisions of Subsection 102.09.

Bidders are cautioned that using older versions of the EBS will result in improperly printed bid sheets. The latest version of the EBS can be obtained at no cost from the MDOT Contract Administration Division or at the MDOT website, www.mdot.state.ms.us.

If bidders submit EBS generated bid sheets, then the bid sheets included in the proposal should not be completed. The EBS generated bid sheets should be stapled together and included in the bid proposal package in the sealed envelope. If both the forms in the proposal and the EBS generated bid sheets are completed and submitted, only the EBS generated sheets will be recognized and used for the official bid. The diskette containing the information printed on the EBS generated bid sheets should be placed in the pouch located on the inside of the front cover of the bid proposal package. Bid sheets printed from the EBS should be a representation of the data returned on the diskettes. To have a true representation of the bid sheets, the Bidder must copy the inputted unit prices back to the diskette by using the option titled "Copy Project File To Floppy Disk" from the drop-down menu under "Projects". Otherwise, the unit prices bid will not be recorded to the diskette. Bidders are cautioned that failure to follow proper diskette-handling procedures could result in the Department being unable to process the diskette. **Any modification or manipulation of the data contained on the diskette, other than entering unit bid prices, will not be allowed and will cause the Contractor's bid to be considered irregular.**

When the bid schedule lists optional items, the Contractor's selection may, but is not required to, be made at the time of bidding. For optional items not pre-selected, the Contractor's selection shall be made prior to or at the time of execution of the contract.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-103-3M **CODE: (IS)**

DATE: **12/2/99**

SUBJECT: **Execution and Approval of Contract**

Section 103, Award and Execution of the Contract, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-103.01-Consideration of Proposals. Delete the third paragraph of Subsection 103.01 on page 103-1, and substitute the following:

In consideration of contract proposals which are equal to or in excess of $50,000 and financed 100% with State funds, a nonresident bidder domiciled in a state having laws granting preference to local Contractors will be considered for such contracts on the same basis as the nonresident bidder's state awards contracts to Mississippi Contractors bidding under similar circumstances. When a nonresident Contractor submits a bid equal to or in excess of $50,000 on a contract financed 100% with State funds, a copy of the current laws from the state of domicile and an explanation thereof pertaining to treatment of nonresident Contractors shall be attached. If no preferential treatment is provided for Contractors in the state of domicile and contracts are awarded to the lowest responsible bidder, a statement to this effect shall be attached. Should the attachment not accompany the bid when submitted, the Contractor shall have 10 days following the opening of the bids to furnish the required information to the Contract Administration Engineer for attachment to the bid. As used herein, the term "resident Contractors" includes a nonresident person, firm or corporation that has been qualified to do business in this State and has maintained a permanent full-time office in the State of Mississippi for two years prior to January 1, 1986, and the subsidiaries and affiliates of such a person, firm or corporation.

907-103.04--Return of Proposal Guaranty. Delete the third paragraph of Subsection 103.04 on page 103-2 and substitute the following:

In the event no award is made within **30 days** after the opening of bids, the Executive Director may permit the successful bidder to replace the certified check or cashier's check with a satisfactory bidder's bond.

Delete in toto Subsection 103.07 on page 103-2, and substitute the following:

907-103.07--Execution and Approval of Contract. The successful bidder to whom the contract has been awarded shall sign and file with the Director the contract and all documents required by the contract within **10 days** after the contract has been mailed to the bidder. The contract may require certain documents be submitted at an earlier date, in which case, those documents shall be submitted within the time frame specified. If the contract is not executed by the Department within 15 days following receipt of the signed contract and all necessary documents, the bidder shall have the right to withdraw his bid without penalty. No contract is in effect until it is executed by all parties.

907-103.08--Failure to Execute Contract. Delete in toto Subsection 103.08 on page 103-2, and substitute the following:

Failure of the bidder to execute the contract and file acceptable bond within **10 days** shall be just cause for the cancellation of the award and forfeiture of the proposal guaranty which shall become the property of the Department, not as a penalty but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the work may be readvertised at the discretion of the Department.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-104-1M **CODE: (IS)**

DATE: **1/2/96**

SUBJECT: **Partnering Process**

Section 104, Scope of Work, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-104.01--Intent of Contract.

After the end of Subsection 104.01 on page no. 104-1, add the following:

907-104.01.1--Partnering Process.

COVENANT OF GOOD FAITH AND FAIR DEALING:

This contract imposes an obligation of good faith and fair dealing in its performance and enforcement.

The contractor and the Department, with a positive commitment to honesty and integrity, agree to the following mutual duties:

A. Each will function within the laws and statutes applicable to their duties and responsibilities.

B. Each will assist in the other's performance.

C. Each will avoid hindering the other's performance.

D. Each will proceed to fulfill its obligations diligently.

E. Each will cooperate in the common endeavor of the contract.

VOLUNTARY PARTNERING:

The Mississippi Department of Transportation intends to encourage the foundation of a cohesive partnership with the contractor and its principal subcontractors and suppliers. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient contract performance and completion within budget, on schedule, and in accordance with plans and specifications.

This partnership will be bilateral in make-up, and participation will be totally voluntary. Any cost associated with effectuating this partnering will be agreed to by both parties and will be shared equally.

To implement this partnering initiative prior to starting of work in accordance with the requirements of Subsection 108.02 Notice to Proceed and prior to the preconstruction conference, the contractor's management personnel and MDOT's District Engineer will initiate a partnering development seminar/team building workshop. The Contractor working with the assistance of the District and the State Construction Engineer will make arrangements to determine attendees for the workshop, agenda of the workshop, duration, and location. Persons required to be in attendance

Cont'd.

will be the MDOT key project personnel, the contractor's on-site project manager and key project supervision personnel of both the prime and principal subcontractors and suppliers. The project design engineers, FHWA and key local government personnel will be also be invited to attend as necessary. The contractors and MDOT will also be required to have Regional/District and Corporate/State level managers on the project team.

Follow-up workshops may be held periodically throughout the duration of the contract as agreed by the contractor and Mississippi Department of Transportation.

The establishment of a partnership charter on a project will not change the legal relationship of the parties to the contract nor relieve either party from any of the terms of the contract.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-104-4M **CODE: (IS)**

DATE: **04/11/2003**

SUBJECT: **Minor Alterations to the Contract**

Section 104, Scope of Work, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 104.02.3 on pages 104-3 and 104-4, and substitute the following:

907-104.02.3--Minor Alterations to the Contract. When the Department makes alterations in the details of construction or specifications that are minor in nature, the Resident or Project Engineer may elect to make an equitable adjustment to the contract under the provisions of this subsection. Minor alterations shall be defined as those alterations to the contract that are not addressed in the Standard Specifications, or supplements thereto, and are valued at less than $5,000.00. The District Engineer shall designate, in writing, the Resident or Project Engineer authorized to execute the Class I Supplemental Agreement. The Resident or Project Engineer and Contractor shall agree upon the scope of work and a lump sum amount, within the above stated limit, for the work to be performed. The agreement shall be reflected in a Class I Supplemental Agreement signed by the Resident or Project Engineer and the Contractor's authorized representative, which, when it bears both the signature of the Resident or Project Engineer and Contractor, shall constitute the scope of work and basis of payment under the item "Minor Alterations to the Contract." Work shall not proceed until both parties sign the agreement.

Any adjustment of contract time due to Minor Alterations will be in accordance with Subsection 108.06 of the Standard Specifications.

Payment will be made under:

907-104-A S/A: Minor Alterations to the Contract - lump sum

(This pay item is not to be included on the plans or in the contract proposal)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-106-1M **CODE: (IS)**

DATE: **1/2/96**

SUBJECT: **Convict Produced Materials**

Section 106, Control of Materials, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the end of Subsection 106.12 on page no. 106-5, add the following:

907-106.13--Convict Produced Materials.

Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if such materials have been:

1. Produced by convicts who are on parole, supervised release, or probation from a prison or

2. Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal-aid highway construction does not exceed the amount of such materials produced in such facility for use in Federal-aid highway construction during the 12-month period ending July 1, 1987.

Qualified prison facility means any prison facility in which convicts, during the 12-month period ending July 1, 1987, produced materials for use in Federal-aid highway construction projects.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-107-1M **CODE: (IS)**

DATE: **1/2/96**

SUBJECT: **Material Pits (NPDES Permits)**

SECTION 107, Legal Relations and Responsibility to Public, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-107.23--Material Pits.

At the end of Subsection 107.23 on page 107-21, add the following:

The Contractor is further reminded of the Clean Water Act Amendments requiring National Pollutant Discharge Elimination System (NPDES) permits for discharges composed entirely of storm water from active or inactive surface mining operations, excluding work areas covered by a U.S. Army Corps of Engineers Clean Water Act Section 404 Permit. Questions or problems concerning NPDES permits should be directed to the Mississippi Department of Environmental Quality (MDEQ), Office of Pollution Control, Industrial Branch, Jackson, Mississippi.

The Contractor shall, before a regulated area is opened or enlarged as a material pit, obtain from MDEQ the necessary Mining Storm Water NPDES Permit(s) authorizing the discharge of storm water subject to the terms and conditions of said permit. All costs involved in obtaining the permit(s) shall be borne by the Contractor. Delays encountered in obtaining the permit(s) will not be a reason for extension of contract time.

For regulated commercial sources, the owner(s) shall bear the responsibility for meeting the requirements of the NPDES permitting process.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-107-3M **CODE: (IS)**

DATE: **3/1/99**

SUBJECT: **Contractor's Responsibility For Work**

Section 107, Legal Relations and Responsibility to Public, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the second full paragraph of Subsection107.17 on page 107-15, add the following:

Damage to items of construction, caused by the traveling public on a project or section(s) of a project open to traffic, shall be repaired by the Contractor. The Contractor will be paid for repairing such damage to <u>certain</u> acceptably installed items of construction at the contract unit price(s) for the applicable item(s) used in the repair. An acceptably installed item shall be complete-in-place meeting the requirements of the specifications. The acceptably installed items of construction eligible to receive payment for repair of damage caused by the traveling public shall be items used for signing, safety and traffic control. The eligible items shall be limited to traffic signal systems, signs and sign supports, lighting items, guard rail items, delineators, impact attenuators, median barriers, bridge railing or permanent pavement markings. If damage to the above items necessitate only minor repairs, in lieu of total replacement, the work shall be performed in accordance with Subsection 109.04, or as directed by the Engineer. Damage not meeting the requirements to qualify for repair payment shall be repaired at no additional cost to the State.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-107-7M **CODE: (IS)**

DATE: **10/22/2003**

SUBJECT: **Liability Insurance**

Section 107, Legal Relations and Responsibility to Public, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows

Delete Subsection 107.14.2.1 on page 107-12 and substitute the following:

907-107.14.2.1--General. The Contractor shall carry contractor's liability (including subcontractors and contractual) with limits not less than: $300,000 each occurrence; $1,000,000 aggregate; automobile liability - $500,000 combined single limit - each accident; Workers' Compensation and Employers' Liability - Statutory & $100,000 each accident; $100,000 each employee; $500,000 policy limit. Each policy shall be signed or countersigned by a Mississippi Resident Agent of the insurance company.

The Contractor shall have certificates furnished to the Department from the insurance companies providing the required coverage. The certificates shall be on the form furnished by the Department and will show the types and limits of coverage.

Delete the first paragraph of subparagraph (a) in Subsection 107.14.2.2 on page 107-13 and substitute the following:

(a) **Railroad Protective Liability Insurance** shall be purchased on behalf of the Railroad Company with limits of $2,000,000 each occurrence; $6,000,000 aggregate applying separately to each annual period for lines without passenger trains. If the line carries passenger train(s), railroad protective liability insurance shall be purchased on behalf of the Railroad Company with limits of $5,000,000 each occurrence; $10,000,000 aggregate applying separately to each annual period.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-107-8M **CODE: (SP)**

DATE: **11/13/2003**

SUBJECT: **Contractor's Protection Plan**

Section 107, Legal Relations and Responsibility to Public, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows

Delete in toto Subsection 107.22.1 on page 107-18 and substitute:

907-107.22.1--Contractor's Protection Plan. At the preconstruction conference or prior to starting any work on the project, the Contractor shall submit to the Engineer for approval, an erosion control plan to supplement permanent erosion control work required under the contract. As a minimum, the plan shall include the following:

1. Plan profile sheets (11" x 17" or larger) of the entire project showing the locations of erosion control devices (pay items) such as silt fence, hay bales, silt basins, slope drains, etc. Also, showing the locations of other measures (absorbed items) such as brush barriers, diversion berms, etc. that the Contractor may elect to use to prevent siltation.

2. A plan for disposal of waste materials, if applicable.

3. A detailed schedule of operations at locations of high siltation potential to clearly indicate how siltation of streams, lakes and reservoirs and the interruption of normal stream flows will be held to a practical and feasible minimum.

The plan shall be updated as needed during the progress of the project. Work shall not be started until an erosion control plan is approved by the Engineer.

The Engineer will have the authority to suspend all work and/or withhold payments for failure of the Contractor to carry out provisions of the erosion control plan and/or proper maintenance thereof.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-108-11M **CODE: (IS)**

DATE: **1/02/2003**

SUBJECT: **Liquidated Damages Table**

Section 108, Prosecution and Progress, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby modified as follows:

Delete the table in Subsection 108.07 on page 108-12, and substitute the following:

Schedule of Deductions for Each Day of Overrun in Contract Time

Original Contract Amount		Daily Charge
From More Than	**To and Including**	**Per Calendar Day**
$ 0	$ 100,000	$ 140
100,000	500,000	200
500,000	1,000,000	300
1,000,000	2,000,000	450
2,000,000	5,000,000	650
5,000,000	10,000,000	750
10,000,000	-----	1,400

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-109-6M **CODE: (IS)**

DATE: **09/05/2002**

SUBJECT: **Measurement and Payment**

Section 109, Measurement and Payment, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-109.06.2--Advancement on Materials. Delete the fourth sentence of the first paragraph of Subsection 109.06.2 on page 109-7, and substitute:

To qualify for advance payment, materials must be stored or stockpiled on or near the project or at other locations approved by the Engineer; ; or in the case of prestressed concrete members that may require being produced at an out-of-state location, the prestress members shall be produced and may be stored at the commercial manufacturer's yard provided it is a PCI certified plant on the Department's List of Approved Prestress & Precast Plants and it is located within the continental United States; or in the case of prestressed concrete members that may require being produced at an out-of-state location, the prestress members may be stored at the location of the commercial manufacturer's yard provided it is a PCI certified plant on the Department's List of Approved Prestress & Precast Plants and it is located within the continental United States; or in the case of structural steel members that may require fabrication at an out-of-state location, the fabricated members may be stored at the location of the commercial fabricator's yard provided it is located within the continental United States.

Delete the second paragraph of Subsection 109.06.2 on pages 109-6 & 109-7, and substitute the following:

Advancements will not be allowed until the Project Engineer has received triplicate copies of material invoices and certified test reports or acceptable certificates of conformance, and in the case of materials stored at the commercial producer's/fabricator's yard, the material shall be positively identified for the specific project and a Certificate of Storage issued by the State Materials Engineer, another designated Department employee or a designated representative of the Department. Requests for advancements on fabricated structural steel members and prestress concrete members stored out-of-state will be denied when the Department does not have available a designated representative to issue a Certificate of Storage.

Delete the first sentence of the third paragraph of Subsection 109.06.2 on page 109-7, and substitute the following:

The Contractor shall make suitable arrangements to the satisfaction of the Engineer for storage and protection at approved sites or, in the case of materials stored at the commercial producer's yard located in Mississippi or, in the case of fabricated structural steel members stored at the commercial fabricator's yard or prestress concrete members stored at a commercial manufacturer's yard located within the continental United States, the Contractor shall make arrangements with the producer/fabricator for suitable storage and protection.

Delete the third full paragraph on page 109-7, and substitute:

Unless specifically provided for in the contract, advance payment will not be made on materials, except for fabricated structural steel members or prestress concrete members, stored or stockpiled outside of the State of Mississippi.

Delete in toto Subsection 109.06.3 on pages 109-7 and 109-8, and substitute the following:

907-109.06.3--Retainage. A deduction will be made from each partial payment and retained by the Department until the completion of all work in the contract, and the balance, less all previous payments, will be certified by the Engineer for payment. The amount of retainage will be computed as follows:

(a) When the value of earned work is less than 90 percent of the value of work scheduled for completion by the approved progress schedule, the amount to be retained is one and one half percent (1½%) of the value of the earned work.

(b) When the value of earned work is 90 percent or more of the value of work scheduled for completion by the approved progress schedule, the amount to be retained is the percentage of earned work times one and one half percent (1½%) of the value of the earned work.

(c) Retainage for advancement of materials will be computed at the same rate as determined for the earned work in (a) or (b).

When all work has been completed and the Contractor released from maintenance, except for growth and coverage as provided by 105.16.2, the Engineer may with the approval of the Director and consent of the Surety reduce the retainage to a minimum of $25,000.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-109-7M **CODE: (IS)**

DATE: **12/12/2002**

SUBJECT: **Measurement and Payment for Changes in Costs of Construction Materials (Fuels and Asphalt)**

Section 109, Measurement and Payment, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction, is hereby amended as follows:

Delete line 20, page 109-8 and add the following subsection:

907-109.07 - Changes in Material Costs. Because of the uncertainty in estimating the costs of petroleum products that will be required during the life of a contract, adjustment in compensation for certain materials is provided as follows:

Bituminous Products--Each month the Department will acquire unit prices from producers or suppliers who supply the State highway construction industry with bituminous products. The average of all quotes for each product will serve as the base price for contracts let in the subsequent month.

Fuels--Selected cash price quotations for bulk gasoline and diesel fuel will be taken from Platt's Oilgram PAD 2 and PAD 3. The appropriate adjustment per liter for gasoline and diesel fuel will be added to the quotations to allow for taxes and markups. The prices thus determined will serve as the base prices for contracts let in the subsequent month.

The established base prices for bituminous products and fuels will be included in the contract documents under a Notice to Bidders entitled "Petroleum Products Base Prices For Contracts Let In (Month and Year)."

Each month thereafter, the Engineer will be furnished with the current monthly prices. Adjustments for change in cost will be determined from the difference in the contract base prices and the prices for the period that the work is performed and for the quantities completed, provided the price change in a product is more than five percent. Adjustments may increase or decrease compensation depending on the difference between the base prices and prices for the estimate period.

The adjustments will be determined for the quantities of bituminous products and the average fuel requirements for processing a unit of work as set forth herein.

COST ADJUSTMENT FACTORS FOR FUEL USAGE

Item of Work	Units	Code	Diesel	Gasoline
Excavation & Embankment (Except Structure and Foundation)	liters/cubic meter	(E)	1.44	0.74
Granular Materials, Stabilizer Aggregates or Coarse & Seal Aggregates	liters/cubic meter	(GM)	4.36	2.82
	or liters/metric ton	(GT)	2.59	1.67
Subgrade & Base Mixing Items	liters/square meter	(M)	0.199	0.127
Hot Mix Asphalt (HMA)	liters/metric ton	(B)	10.72	3.25
Asphalt Drainage Course	liters/square meter	(D)	2.20	0.67
Portland Cement Concrete Base & Pavement	liters/square meter	(C)	0.50	0.68
Bridge Items, Structural Concrete, Pipe Culverts, (Including Foundation & Structure Excavation and all other Concrete related items)	liters/$1000	(S)	41.6	49.2

CONSTRUCTION MATERIALS

The items and quantities subject to compensation adjustment:

ADJUSTMENT CODE

(A1) Asphalt for HMA mixture -- theoretical liters based on job mix formula and unit mass of 1.010 kilograms per liter (new asphalt only for recycled HMA mixture).

(A2) Asphalt for Surface Treatment -- pay quantity in liters.

(A3) Asphalt for Prime -- pay quantity in liters.

(A4) Asphalt for Curing Seal -- 1.13 liters per square meter.

(A5) Asphalt for Bituminous Treated Roving -- 2.26 liters per square meter.

(A6) Asphalt for Asphalt Drainage Course -- theoretical gallons per square meter based on job mix formula and unit mass of 1.010 kilograms per liter.

Any difference between checked final quantity and the sum of quantities shown on the monthly estimates for any item will be adjusted by the following formula:

FA = (FCQ - PRQ) x EA

Where: FA = Final Adjustment
FCQ = Final Checked Quantity
PRQ = Total Quantity Previously Reported on Monthly Estimate
EA = Total Adjustment Shown on Monthly Estimate

The final adjustment is to consider any error(s) that may have been made in the computations of monthly adjustments.

After the expiration of contract time, including all authorized extensions, adjustments will be computed using fuel and material prices that are in effect at the expiration of contract time.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-203-1M **CODE: (IS)**

DATE: **11/26/2002**

SUBJECT: **Excavation and Embankment**

Section 203, Excavation and Embankment, of the 1996 Metric Edition of Mississippi Standard Specifications for Road and Bridge Construction, is hereby amended as follows:

907-203.03--Construction Requirements.

907-203.03.8.7--Compaction of Embankments. Delete the fifth paragraph of Subsection 203.03.8.7 on page 203-11 and substitute the following:

For basement and design soils, the required density shall be 95.0 percent and 98.0 percent, respectively. If a density test fails within minus two percent (-2.0%), 93.0 to 95.0% or 96.0 to 98.0%, of the required density, a verification test will be performed and the average of the two tests will be the test value for the lot. If this test value does not meet the required density (95.0 or 98.0%), the lot shall be rejected. If the original test value exceeds minus two percent (-2%) of the required density, no verification test will be performed and the lot shall be rejected.

907-203.05--Basis of Payment. Delete the first, fifth, and ninth pay item, description and unit of measure shown on page 203-13, and substitute the following:

907-203-A: Unclassified Excavation (_____) - per cubic meter
FM or LVM

907-203-E: Borrow Excavation (_____)(Class____) - per cubic meter
FM, FME or LVM

907-203-EX: Borrow Excavation (AH)(_____)(Class _____) - per cubic meter
FME or LVM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-213-1M **CODE: (IS)**

DATE: **9/29/2000**

SUBJECT: **Agricultural Limestone**

Section 213, Fertilizing, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-213.05--Basis of Payment. Add the "907" prefix to pay item number 213-A in Subsection 213.05 on page 213-2.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-217-1M **CODE: (SP)**

DATE: **12/10/99**

SUBJECT: **Ditch Liner**

Section 217, Ditch Liner, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-217.05--Basis of Payment. Add the "907" prefix to pay item number 217-A in Subsection 217.05 on page 217-2.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-223-1M **CODE: (SP)**

DATE: **9/29/98**

SUBJECT: **Mowing**

Section 907-223, Mowing, is added to and made a part of the 1996 Metric Edition of the Standard Specifications for Road and Bridge Construction as follows:

907-223.01--Description. When the contract includes a pay item for mowing, the Contractor shall perform litter removal and mowing of obnoxious vegetation or excess growth as directed by the Engineer in accordance with the provisions contained herein. Mowing shall also be required, when necessary, for the safe and convenient passage of traffic, as required in Subsection 104.04, Maintenance of Traffic. The importance of public safety and workplace safety can not be overemphasized. Special attention is made to Subsections 107.06, 107.07 and 107.10 of the Standard Specifications.

Prior to mowing, the Contractor shall pick up and properly dispose of all trash and debris within the area to be mowed and along any adjacent roadway shoulders. Trash and debris picked up and piled or bagged on the roadside must be removed from the right-of-way by the close of the work day. Piles or bags will not be allowed to remain on the roadside overnight. All trash and debris is defined as all trash, debris, litter, junk, rubbish, paper, cardboard, glass, cans, styrofoam cups, discarded items, garbage, old tires, treads, etc. The Contractor will not be required to pick up such items as cigarette butts, tiny chips of grass or other small items not readily visible to the traveling public.

The Engineer will advise the Contractor of the area to be mowed and the time to begin the mowing operations. The Engineer may delay mowing of lespedezas or crimson clover until after these plants have gone to seed. Mowing may be delayed to retain and promote desirable wildflower growth.

Mowing will be to a height of not more than 150 millimeters and will include trimming adjacent to culvert ends, guard rail, sign posts or other appurtenances. Trimming adjacent to objects inaccessible by mower shall be performed by hand mowers, weed-eaters, sling blades, or any acceptable means necessary to complete the work. Care shall be taken not to damage trees, plants, shrubs, delineators or other fixtures which are part of the facility. Any damages by the Contractor's operations to signs, delineators, other traffic control devices or other appurtenances shall be corrected immediately at no additional cost to the State.

The quantity of mowing will be affected by actual conditions which occur during construction and may be eliminated entirely at the direction of the Engineer.

907-223.02--Blank.

907-223.03--Construction Requirements.

907-223.03.1--General. The Contractor shall perform the work throughout the entire project on those areas directed by the Engineer. The Contractor shall take full advantage of weather and soil conditions, and no attempt shall be made to mow while the areas are deemed to be wet enough to cause damage to the soil or vegetation. Care shall be taken to use methods and mowers that will provide even, uniform mowed areas, and not damage adjacent vegetation and structures. Excessive

clippings of sufficient magnitude to smother or retard grass growth shall be removed to allow growth of existing or new grass.

The Contractor shall begin mowing operations within two weeks after receipt of the Engineer's order to begin mowing. If the Contractor fails to begin the work within that time period the Engineer shall notify the Contractor in writing that the work is not being prosecuted properly, and therefore, future progress payments may be withheld in accordance with Subsection 105.01 of the Standard Specifications.

907-223.03.2--Equipment. Equipment used for mowing operations shall be of sufficient size, type and condition to perform the work satisfactorily. Mowers may be rotary, flail, sickle or combination thereof as necessary to efficiently accomplish the work. Rotary mowers shall be equipped with safety chains or other devices to prevent flying stones, rocks, cans, etc. from striking persons or property. Change or adjustment of the equipment or operator may be required if at any time during the mowing operation, the Engineer determines that the equipment, or operators of the equipment, are not performing satisfactorily.

When required for the Contractor's mowing operations, appropriate traffic control devices shall be installed in accordance with the MUTCD.

907-223.04--Method of Measurement. Mowing, complete and accepted, will be measured by the hectare. Litter removal and any required traffic control devices will not be measured for separate payment, but will be included in the fixed contract price for mowing.

907-223.05--Basis of Payment. When ordered by the Engineer, mowing, except as required in Subsection 213.03, will be paid for at the fixed contract unit price per hectare indicated in the bid schedule, which price shall be full compensation for removing and disposing of litter, all equipment, tools, labor, traffic control devices and incidentals necessary to complete the work.

Payment will be made under:

907-223-A: Mowing - per hectare

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-234-1M **CODE: (IS)**

DATE: **12/10/2001**

SUBJECT: **Silt Fence**

Section 907-234, Silt Fence, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby modified as follows:

907-234.05--Basis of Payment. Add the "907" prefix to the pay items listed on page 234-2.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-501-6M

DATE: **4/15/2003**

SUBJECT: **Transverse Grooving**

Delete the last sentence of Subsection 907-501.04 on page 2 and substitute the following:

For bridge decks, the quantity will be computed by measuring the bound area between the face of barrier rail and the length of the span, or by the limits of transverse grooving shown in the plan. For concrete and bridge end pavements, the quantity will be computed by measuring the bound area between the edge of pavement and the length of the pavement, or by the limits of transverse grooving shown in the plan.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-501-6M **CODE: (IS)**

DATE: 12/15/99

SUBJECT: Diamond Grinding and Grooving

Section 501, Portland Cement Concrete Pavement, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-501.03--Construction Requirements.

907-501.03.18--Final Finish.

At the end of Subsection 501.03.18.5 on page 501-21, add the following:

907-501.03.18.6--Transverse Grooving. After the concrete has cured for a minimum of seven (7) days, the bridge deck and bridge end slabs shall be grooved with a self-propelled mechanical sawing device using diamond blades. Grooves shall be perpendicular to the centerline of the roadway and extend as close as possible to the gutter line but in no case more that 600 millimeters from the gutter line. The grooves shall be 3 millimeters wide and 5 millimeters deep and shall be spaced in such a manner to produce the following sequence: 20-mm, 28-mm, 15-mm, 25-mm, 15-mm, 28-mm, 20-mm in 150-mm repetitions across the width of one pass of the mechanical sawing device. The tolerance for the width of the groove is +2 to -0 millimeters and the tolerance for the depth and spacing of the grooves is ± 2 millimeters.

907-501.03.19--Surface Tests.

At the end of Subsection 501.03.19 on page 501-23, add the following:

907-501.03.19.1--Diamond Grinding. Grinding of concrete surfaces shall consist of diamond grinding the existing portland cement concrete surface to remove surface distortions to achieve the specified surface smoothness requirements.

907-501.03.19.1.1--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture portland cement concrete surfaces with diamond blades. The effective wheel base of the machine shall not be less than 3.6 meters. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 0.9 meters forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least 0.9 meter wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at cracks, joints, or other locations.

907-501.03.19.1.2--Construction. The construction operation shall be scheduled and proceed in a manner that produces a uniform finish surface. Grinding will be accomplished in a manner to provide positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane.

The operation shall result in pavement that conforms to the typical cross-section and the requirements specified in 907-501.03.19.1.3. It is the intent of this specification that the surface smoothness characteristics be within the limits specified.

The Contractor shall establish positive means for removal of grinding residue. Solid residue shall be removed from pavement surfaces before it is blown by traffic action or wind. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities, but may be allowed to flow into adjacent ditches.

907-501.03.19.1.3--Finished Concrete Surface. The grinding process shall produce a pavement surface that is smooth and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall not be more than 2 millimeters higher than the bottoms of the grooves.

The finished pavement surface will be measured for riding quality. The grinding shall produce a mainline riding surface which does not exceed either the specified profile index or the specified bump and dip limit.

The contract unit prices shall be full compensation for furnishing, loading, hauling, mixing, placing, rolling, and applying all materials; for all cleaning and sweeping; and for all labor, equipment, tools and incidentals necessary to complete the work.

907-501.04-Method of Measurement. After the last paragraph of Subsection 501.04 on page 501-28, add the following:

Transverse grooving will be measured by the square meter, complete in place and accepted. The quantity will be computed by measuring the bound area between the face of barrier rail, (edge of pavement, etc.) and the length of the span (pavement, etc.).

907-501.05--Basis of Payment.

907-501.05.1--General. After the third paragraph of Subsection 501.05.1 on page 501-28, add the following:

Transverse grooving will be paid for at the contract unit price per square meter, which price shall be full compensation for all grinding, cleaning and sweeping; and for all labor, equipment, tools and incidentals necessary to complete the work.

After the last pay item listed in Subsection 501.05.1 on page 501-29, add the following:

907-501-K: Transverse Grooving - per square meter

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-603-3M **CODE: (IS)**

DATE: **5/02/2001**

SUBJECT: **Culverts and Storm Drains**

Section 603, Culverts and Storm Drains, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-603.01--Description. At the end of Subsection 603.01 on page 603-1, add the following:

When alternate pipe is shown in the contract, the Contractor may select an alternate pipe from the alternate pipe group (type) shown in the plans or contract documents. The type of pipe used for alternate pipe shall meet the material requirements of Subsection 603.02 for the type of pipe selected.

907-603.02--Materials. Delete the entry for "Corrugated Polyethylene Pipe" and add the following material to the list contained in Subsection 603.02, pages 603-1 and 603-2:

Corrugated Polyethylene Pipe,	907-708.17
Corrugated Poly (Vinyl Chloride) (PVC) Pipe	907-708.17

907-603.03--Construction Requirements.

907-603.03.4--Joining Conduit.

907-603.03.4.1--Storm Drainage. Delete the last paragraph of Subsection 603.03.4.1 on page 603-5, add the following:

In lieu of the preceding requirements and in addition to being supplied or recommended by the pipe manufacturer, coupling bands for joining corrugated polyethylene pipe shall be in accordance with AASHTO Designation: M 294 and shall meet or exceed the soil-tightness requirements of the AASHTO Standard Specifications for Highway Bridges, Section 26, paragraph 26.4.2.4 (e).

Corrugated polyethylene pipe may also be furnished with bell & spigot type joints with O-ring rubber gasket meeting ASTM Designation: F477 placed on the spigot end. At least two (2) corrugations of the spigot end must insert into the bell end.

Joints and fittings for poly (vinyl chloride) (PVC) pipe shall meet the requirements of ASTM Designation: F 949.

907-603.05--Basis of Payment. Delete the heading, pay item number description and unit for Corrugated Polyethylene Pipe on page 603-13, and add the following headings, pay item numbers, descriptions and units to the list contained in Subsection 603.05, pages 603-9 thru 603-13:

CORRUGATED POLYETHYLENE

907-603-PE: ___-mm Corrugated Polyethylene Pipe - per meter

CORRUGATED POLY (VINYL CHLORIDE)

907-603-PVC: ___-mm Corrugated Poly (Vinyl Chloride) Pipe - per meter

ALTERNATE PIPE

907-603-ALT: ___-mm Type ___ Alternate Pipe - per meter

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-605-5M **CODE: (SP)**

DATE: **02/22/2002**

SUBJECT: **Geotextile Fabric**

Section 605, Underdrains, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby modified as follows:

907-605.05--Basis of Payment. Add the "907" prefix to pay item 605-AA on page 605-7.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-617-1M **CODE: (SP)**

DATE: 02/03/2003

SUBJECT: Right-Of-Way Markers

Section 907-617, Right-Of-Way Markers, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Section 617 on pages 617-1 and 617-2, and substitute the following:

907-617.01--Description. This work consists of furnishing and placing right-of-way markers in accordance with the plans and these specifications and at points designated on the plans, or as directed. The work also shall include the removal of right-of-way markers from their original locations and resetting at new locations as specified or established.

907-617.02--Materials. The materials used in this construction shall conform to the requirements of Subsection 706.04, or as indicated in the plans / contract documents.

907-617.03--Construction Requirements.

907-617.03.1--General. Markers shall be manufactured in accordance with the details shown on the plans / contract documents, and the requirements of this section.

All letters, symbols, and other markings shall be as shown on the details and shall be neatly imprinted in the markers.

The markers shall be set at the locations designated on the plans, or as directed. They shall be set to within six millimeters of the lines indicated or established, even with the natural ground elevation, and in a vertical position within a tolerance of 10 millimeters per meter.

The layout and placement of right-of-way markers shall be performed by, or under the supervision of, or directed by, a Registered Professional Engineer or Registered Land Surveyor who is duly registered and entitled to practice as a Land Surveyor in the State of Mississippi. The duties performed by said Registrant shall conform to the definitions under the practice of "land surveying" in Mississippi Law. The location of the markers shall be as shown in the plans, and as required to meet the minimum standards of surveying. The Contractor shall not engage the services of any person in the employ of the Department for the performance of any of the work covered by this Section or any person who has been employed by the Department within the past six months, except those who have legitimately retired from service with the Department during this period.

907-617.03.2--Removal and Resetting. Markers which are specified to be removed and reset shall be carefully removed and reset at the location indicated or established in accordance with the provisions and requirements of 907-617.03.1.

The Contractor shall replace without additional compensation all markers damaged due to the removal and resetting operation.

907-617.04--Method of Measurement. Right-of-way markers, new or removed and reset, will be measured by the unit.

907-617.05--Basis of Payment. Right-of-way markers, complete in place, will be paid for at the contract unit price per each, which shall be full compensation for completing the work.

Payment will be made under:

907-617-A: Right-of-Way Markers (Type)	- per each
907-617-B: Right-of-Way Markers Removed and Reset	- per each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-618-7M **CODE: (IS)**

DATE: **11/10/98**

SUBJECT: **Placement of Temporary Traffic Stripe**

Section 618, Maintenance of Traffic and Traffic Control Plan, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-618.03 -- Construction Requirements.

907-618.03.3 -- Safe Movement of Traffic. Delete the third paragraph of Subsection 618.03.3 on page 618-3 and substitute the following:

A longitudinal pavement edge that traffic is expected to move across should have an elevation difference of not more than 55 millimeters. If the pavement edge is more than 40 millimeters and less than or equal to 55 millimeters, uneven pavement signs will be required as shown in the plans or contract documents. If the pavement edge is less than or equal to 40 millimeters, no uneven pavement signs will be required. Transverse pavement joints shall be sufficiently tapered to allow for the safe movement of traffic.

When a paving operation produces a longitudinal pavement edge that traffic is expected to move across, the adjacent lane shall be constructed to eliminate any uneven pavement edge within 48 hours, unless prohibited by weather conditions or an emergency arises.

Delete the sixth paragraph of Subsection 618.03.3 on page nos. 618-3 and 618-4 and substitute:

All centerline, lane lines, edge lines and no-passing stripes that have been covered or removed during the day's operations shall be replaced with temporary stripe before work is discontinued for the day or as soon thereafter as weather conditions will permit, except that:

(1) Replacement of no-passing stripes may be delayed for a period not to exceed three (3) days for a two or three lane road.
(2) Temporary edge lines may be eliminated on projects requiring shoulders constructed of granular material.
(3) Temporary edge lines placed on the final pavement course of projects requiring paved shoulders without surface treatment shall be placed in the permanent stripe location, otherwise temporary edge lines on projects requiring paved shoulders may be placed on the adjacent shoulder in as near the permanent location as possible.

Temporary no-passing stripe is not considered a major item of work and such stripe which is eliminated because of placing the next course prior to expiration of the 3-day period shall not result in a monetary adjustment to the Contractor as provided in 104.02. All temporary stripe shall be placed in accordance with the plans and Subsection 907-619.03.2.

Delete the first sentence of the first full paragraph on page 618-4 under Subsection 618.03.3 and substitute the following:

In addition to the temporary no-passing stripe, the Contractor shall erect standard "DO NOT PASS," "NO-PASSING ZONE," and "PASS WITH CARE" signs in accordance with plan details or as specified in the MUTCD.

Delete the last sentence of the third full paragraph on page 618-4 under Subsection 618.03.3 and substitute the following:

All temporary stripe shall be maintained in good order until placement of the permanent pavement markings or placement of the next pavement course or until removed. Maintenance of temporary stripe may require more than one application over the life of the project. Payment will be made for one application only.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-619-11M **CODE: (IS)**

DATE: **06/18/2003**

SUBJECT: **Traffic Control for Construction Zones**

Section 619, Traffic Control for Construction Zones, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-619.02.4--Construction Signs. Delete the fourth sentence of the second paragraph of Subsection 619.02.4 on page 619-1 and substitute:

Standards for height of construction signs shall be those shown for roadside signs in Chapter 6F of the Manual of Uniform Traffic Control Devices (MUTCD).

Delete the third paragraph of Subsection 619.02.4 on page 619-1 and substitute the following:

Unless specified otherwise, fluorescent orange reflective sheeting, meeting the requirements of Subsection 721.06, shall be used on all construction signs regardless of whether used during daytime or nighttime hours.

Delete the fourth paragraph of Subsection 619.02.4 on page 619-1 and substitute the following:

Unless otherwise specified on the plans, the material on which the reflective sheeting is to be applied shall be 1.52-millimeter (minimum) steel, 2.03-millimeter (minimum) aluminum, or 15-millimeter (minimum) high density overlaid plywood. Ungalvanized steel, exterior grade plywood and lumber shall have a minimum of two coats of paint on front, back, and edges. High density overlaid plywood shall have the edges painted. The material to which reflective sheeting is to be applied shall be prepared in accordance with the recommendations of the sheeting manufacturer.

Delete the third sentence of the first paragraph of Subsection 619.02.4 on page 619-2 and substitute the following:

If tested by the Central Laboratory, the reflective sheeting shall have at least 50 percent of the reflectivity specified for new sheeting.

907-619.02.5--Advance Warning Flashing Arrow Panels. Delete in toto Subsection 619.02.5 on page 619-2 and substitute:

907-619.02.5--Advance Warning Flashing Arrow Panels. Flashing arrow panels shall meet the requirements of Section 6F.53 of the MUTCD.

907-619.02.6--Concrete Median Barrier and Delineators. Delete in toto Subsection 619.02.6 on pages 619-2 & 619-3, and substitute:

907-619.02.6--Concrete Median Barrier and Delineators. Precast concrete median barrier shall meet the requirements of the plans, contract documents, and Section 615 except the surface may be a Class 1 ordinary surface finish unless designated otherwise. When precast concrete median barriers are no longer needed at one location, as determined by the Engineer, the barriers shall be removed and reset at other designated locations. When barriers have to be stored until needed at another location, payment for removing and resetting will not be made until they are reset at their designated location. The Contractor shall furnish the storage area.

The Engineer may allow the installation of used barriers for temporary traffic control upon an inspection and determination that the barrier units are structurally adequate for their intended purpose. Barriers with small chips or fractures not affecting their integrity may be accepted.

Precast concrete barriers used on this project which were purchased or manufactured after October 1, 2002 must meet the requirements of NCHRP Report 350. Precast median barriers purchased or manufactured prior to October 1, 2002 may be used until they complete their normal service life.

Certification of precast concrete barriers shall be as required in the Notice to Bidders titled "Certification of Traffic Control Devices".

Delineators shall be listed on the Department's "Approved Sources of Materials" and meet the requirements of the plans and Section 6F.68 of the MUTCD.

Delete in toto Subsection 619.02.7 on page 619-3 and substitute:

907-619.02.7--Channelization Devices, Barricades, and Warning Lights. Channelization devices, vertical panels, tubular markers, cones, drums, barricades and temporary raised islands shall meet the requirements of the plans and Sections 6F.55 through 6F.64 of the MUTCD. Drums shall be constructed of lightweight, deformable material capable of retaining reflective sheeting. Reflective sheeting for drums shall be Type III meeting the requirements of 721.06. Warning lights shall meet the requirements of Section 6F.72 of the MUTCD.

907-619.02.8--Traffic Signals and Flashers. Delete in toto Subsection 619.02.8 on page 619-3 and substitute:

907-619.02.8--Traffic Signals and Flashers. Traffic signals and flashers shall meet the requirements of the plans and Sections 6F.71 & 6F.74 of the MUTCD.

907-619.02.9--Impact Attenuators. Delete in toto Subsection 619.02.9 on page 619-3 and substitute:

907-619.02.9--Impact Attenuators. Impact attenuators must be listed on the Department's "Approved Sources of Materials".

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-690-1M **CODE: (SP)**

DATE: **12/13/95**

SUBJECT: **Decommissioning of Abandoned or Unused Water Wells**

Section 907-690, Decommissioning of Abandoned or Unused Water Wells, is added to the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-690 -- DECOMMISSIONING OF ABANDONED OR UNUSED WATER WELLS

907-690.01--Description. This work is applicable to abandoned or unused water wells over 7.5 meters deep and shall consist of plugging with portland cement grout the aforementioned water wells in accordance with current, as amended, Surface Water and Ground Water Use and Protection Regulations issued by the State of Mississippi Department of Natural Resources, Bureau of Land and Water Resources. The work shall be performed by a water well contractor so licensed by the State of Mississippi.

907-690.02--Materials. The materials used in this construction, when sampled and tested in accordance with Subsection 700.03, shall meet the requirements of the following Subsections:

Portland Cement	701.01, 701.02, 804.02.5
Water	714.01.1, 714.01.2

907-690.02.1--Grout Mix Design. The grout mixture shall be composed of one bag (42.6 kilograms) of portland cement to 20.8 liters of water.

907-690.03--Construction Requirements. The abandoned or unused water wells shall have obstructions removed from the well casing prior to grouting.

The casing shall be pulled or reamed. If the casing cannot be removed and unless it is known that the annular space was grouted during construction of the well, then the casing shall be perforated and grout shall be forced under pressure into the annular space during the plugging operation.

Casing not removed shall be cut off a minimum of one meter below finish subgrade elevation, finish slope elevation or natural ground, whichever is applicable, depending on the location of the well with regard to the roadway typical section at the well site.

The well shall be grouted from the bottom of the hole to the top of the cut off casing for instances where the casing is not removed and from the bottom of the hole to one meter below finish subgrade elevation, finish slope elevation or natural ground, whichever is applicable, for instances where the casing is removed.

Free-fall placement of grout is prohibited.

The Haliburton Method, which consists of forcing grout under pressure, from inside the casing, out the bottom and up the outside of the casing, filling the annular spaces and at the same time, filling the

casing, is considered an acceptable alternate method to that otherwise indicated herein for the grouting operation associated with decommissioning water wells.

When the Haliburton Method is proposed for use, the Contractor shall furnish the Project Engineer with the details of this method prior to performing the work.

Excavations made in association with this work shall be backfilled and compacted following completion of plugging operations.

Within thirty days after completion of the plugging operation, the Contractor shall complete a Well Decommissioning Form and submit copies to the Bureau of Land and Water Resources and to the Mississippi Department of Transportation's Project Engineer. Well decommissioning forms are available from the office of the Bureau of Land and Water Resources.

907-690.04--Method of Measurement. The plugging of abandoned water wells will be measured by the kilogram of portland cement incorporated into the grout mixture used to plug the well.

Water incorporated into the grout mixture will not be measured for separate payment.

907-690.05--Basis of Payment. The plugging of abandoned water wells will be paid for at the contract unit price per kilogram of portland cement incorporated into the grout mixture used to plug the well, which price shall be full compensation for furnishing materials to be incorporated into the specified grout mixture; for all hauling, mixing, placing, and clean-up required to plug the well; for removing obstructions from the casing; for pulling and disposing of, reaming or perforating the casing as required; for the cutting off and disposal of cut off casing; for removal and disposal of water pipe, well pump, water tank, electrical wiring or other miscellaneous obstructions at the site; for excavation, backfill and compaction associated with this work; and for all equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-690-A:	Portland Cement Grout for Plugging Abandoned Water Wells	- per kilogram

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-699-2M **CODE: (IS)**

DATE: **7/03/2003**

SUBJECT: **Construction Layout and Staking**

Section 699, Construction Stakes, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Section 699 on page nos. 699-1 thru 699-3 and substitute the following:

SECTION 907-699--CONSTRUCTION STAKES

907-699.01--Description. This work consists of performing all calculations and other work necessary to establish and/or verify all horizontal and vertical control data; and furnishing, placing and maintaining roadway construction stakes or bridge construction stakes, or both, necessary for the proper prosecution of all features and items of the work under contract. This shall include, but not be limited to, grades and drainage structure locations, lengths, elevations and skews. When the contract includes a pay item for roadway construction stakes as provided herein, any references in other sections of the Standard Specifications to establishment of control points or construction staking "by the Department" shall be construed to mean "by the Contractor".

907-699.02--Materials. The Contractor shall furnish all personnel, materials, equipment and devices necessary for determining, establishing, setting, checking and maintaining points, lines, grades and layout of the work. All surveying equipment shall be properly adjusted and suited for performing the work required. Traffic control necessary for the proper execution of the work shall be furnished by the Contractor without separate measurement for payment. Stakes shall be of sufficient length, thickness and quality to serve the purpose for which they are being used.

907-699.03--Construction Requirements. The Department will establish, one time only, reference points and bench marks at distances not to exceed 300 meters for roadway work. For bridge work, the Engineer's field control will consist of a stationed baseline reference point near each end of the bridge(s) and one accessible bench mark near each bridge site. For the purpose of determining responsibility for construction stakes, lines and grades, a box bridge will not be considered as a bridge. The Contractor shall verify the accuracy of the control points before proceeding with the layout for construction.

When errors are discovered and control points do not agree with the plans, the Contractor shall promptly notify the Engineer in writing, and explain the problem in detail. The Engineer will advise the Contractor within five (5) working days of any corrective actions which may be deemed necessary.

The Contractor will be responsible for verifying and modifying, as necessary to best fit existing field conditions, lengths, locations, elevations and skew angles of all drainage structures shown on the construction plans. All junction box and inlet locations and heights shall also be verified and modified as necessary to fit existing field conditions. Modifications to the plans shall not be made without the consent of the Project Engineer. The Contractor will not be responsible for determining the size of drainage structures, but should immediately report any suspected error to the Engineer. Heights of fill over drainage structures shall be checked to verify class of pipe, bedding and the appropriate standard and/or modified standard drawing(s) required in the construction with any differences from the plans being reported to the Engineer.

The Contractor shall perform work necessary to verify alignment and plan grades on all roadway intersections and tie-ins. Any discrepancies in grades, alignment, location and or dimension detected by the Contractor shall immediately be brought to the attention of the Project Engineer.

The Contractor shall employ sufficient qualified personnel experienced in highway surveying and layout to complete the work accurately. The Contractor shall also determine and provide all additional grade controls and staking operations necessary to secure a correct layout and construction of the work. All minor variations in layout and grades required to meet field conditions shall be resolved with the Engineer and shall not be considered justification for adjusting contract price or time.

Examples of minor variations in layout and grades are:

(a) Adjustment of drainage or other structure length, alignment, and flow line elevation.

(b) The adjustment of grades and alignment at roadway intersections, cross-overs, railroad crossings, interchanges, existing bridges and roadways.

(c) Adjustment of curve data.

The Contractor will be responsible for calculating and laying out all additional lines, grades, elevations and dimensions necessary to construct the work required in the plans. All grades and other layout data computed by the Contractor shall be recorded and a copy of this data shall be furnished, with sufficient time for checking, to the Engineer before field work is started. The originals of all data shall be furnished to the Engineer on or before final inspection for the Department's permanent file. The Contractor shall also furnish personnel to assist the Engineer in taking stringline or other notes to determine whether specified tolerances are met. Any inspection or checking of the Contractor's layout by the Engineer and the approval of all or any part of it will not relieve the Contractor of the responsibility to secure proper dimensions, grades, and elevations of the several parts of the work.

Prior to beginning construction on any structure which is referenced to an existing structure or topographical feature, the Contractor shall check the pertinent location and grades of the existing structures or topographical features to determine whether the location and grade shown on the plans are correct.

The Contractor shall stake centerline control at each station, BOP, EOP, PC, PT, SC, CS, TS, ST, and equations just before field cross sectioning by the Department for both original and final cross sections.

The Contractor shall furnish "as built" finish centerline elevations to the Project Engineer prior to final inspection of the project.

The Contractor shall set stakes and/or flags on the right-of-way line at each station and right-of-way break or as directed by the Engineer before clearing operations are started on any section of roadway.

On grading projects, the Contractor shall set slope stakes at each station and at the beginning and end of spirals and curves. Closer intervals will be required for sharp changes in grades or alignment, widening and certain other geometric details.

The Contractor shall set subgrade blue tops on centerline, break points and at the left and right subgrade shoulder lines at intervals of not more than 30 meters on tangents and intervals of not

more than 15 meters in curves. Closer intervals will be required for sharp changes in grades or alignment, widening, or super elevation.

On paving contracts, the Contractor shall set subgrade, base and paving blue tops. The base and pavement blue tops shall be set on intervals in accordance with the appropriate applicable requirements of Sections 321, 403 and 501.

The Contractor shall exercise care in the preservation of stakes and bench marks and shall reset them when they are damaged, lost, displaced or removed. The Contractor shall use competent personnel and suitable equipment for the layout work required and shall provide that it be performed under the supervision of, or directed by, a Registered Professional Engineer or Registered Land Surveyor who is duly registered and entitled to practice as a Professional Engineer or Professional Land Surveyor in the State of Mississippi. The duties performed by said Registrant shall conform to the definitions under the "practice of engineering" and practice of "land surveying" in Mississippi Law. The Contractor shall not engage the services of any person in the employ of the Department for the performance of any of the work covered by this Section or any person who has been employed by the Department within the past six months except those who have legitimately retired from service with the Department during this period.

All cross sections, measurements, and tickets required for determining pay quantities will be the responsibility of the Department.

The Department reserves the right to check for accuracy any or all of the Contractor's layout work and shall be assisted by the Contractor's personnel in such checking. When errors or discrepancies are found, the Contractor will take measures necessary to correct, at no expense to the State, any construction that has been performed using the improper layout. Any inspection, checking and approval thereof by the Engineer of work for which the Contractor is responsible will not relieve the Contractor of responsibility to secure correct dimensions, grades, elevations, alignments and locations of the work for satisfactory completion of the project and as a condition for final acceptance by the Department.

907-699.04--Method of Measurement. Construction stakes will be measured as a lump sum quantity. When Pay Item No. 907-699-A, Roadway Construction Stakes, is provided in the contract, measurement shall include the staking of all bridges, including detour bridges, which are a part of the contract.

907-699.04.1--Roadway Construction Stakes. Measurement for payment will be in accordance with the following schedule:

(a) When one percent of the original contract amount is earned from all direct pay items, 10 percent of the amount bid for Roadway Construction Stakes will be paid.

(b) When five percent of the original contract amount is earned from all direct pay items, 25 percent of the amount bid for Roadway Construction Stakes will be paid.

(c) When 20 percent of the original contract amount is earned from all direct pay items, 50 percent of the amount bid for Roadway Construction Stakes will be paid.

(d) After the Contractor has earned 50 percent of the original value of all direct pay items, the amount paid will be based on the contract percent complete.

907-699.04.2--Bridge Construction Stakes. Measurement for payment will be in accordance with the following schedule:

(a) When one percent of the original contract value of all bridge items is earned, 10 percent of the amount bid for Bridge Construction Stakes will be paid.

(b) When five percent of the original contract value of all bridge items is earned, 25 percent of the amount bid for Bridge Construction Stakes will be paid.

(c) When 20 percent of the original contract value of all bridge items is earned, 50 percent of the amount bid for Bridge Construction Stakes will be paid.

(d) After the Contractor has earned 50 percent of original contract value of all bridge items, the amount paid will be based on the percentage of work completed on all bridge items.

907-699.05--Basis of Payment. Construction stakes, measured as prescribed in Subsection 907-699.04, will be paid for at the contract lump sum price, which shall be full compensation for completing the work.

Payment will be made under:

907-699-A:	Roadway Construction Stakes	- lump sum
907-699-B:	Bridge Construction Stakes	- lump sum

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-708-2M **CODE: (IS)**

DATE: 03/15/2002

SUBJECT: Corrugated Plastic Pipe Culverts and Drainage Tubing

Section 708, Non-Metal Structures and Cattlepasses, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 708.17 on page no. 708-7 and substitute the following:

907-708.17--Corrugated Plastic Pipe Culverts.

907-708.17.1--Corrugated Polyethylene Pipe Culverts. Corrugated polyethylene pipe shall conform to the requirements of AASHTO Designation: M 294, Type S. The pipe and fittings shall be made of virgin polyethylene compounds which conform with the requirements of cell class 335400C as defined and described in ASTM D 3350, except that the carbon black content shall not exceed 5%. Compounds that have higher cell classifications in one or more properties are acceptable provided product requirements are met.

For Type S pipe, the inner liner shall be fused to the outer corrugated shell at all internal corrugation crests.

The Contractor shall furnish to the Engineer three copies of the manufacturer's certified test reports and certification covering each shipment of pipe stating the amount furnished and that the pipe, fittings, couplings, etc. comply with the requirements of the specifications. Certifications and certified test reports for compliance with this specification shall be performed by an approved third-party testing source.

907-708.17.2--Corrugated Poly (Vinyl Chloride) (PVC) Pipe Culverts. Corrugated poly (vinyl chloride) (PVC) pipe shall conform to the requirements of ASTM Designation: F 949.

The Contractor shall furnish to the Engineer three copies of the manufacturer's certified test reports and certification covering each shipment of pipe stating the amount furnished and that the pipe, fittings, etc. comply with the requirements of the specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-7l1-1M **CODE: (IS)**

DATE: **5/8/96**

SUBJECT: **Reinforcing Steel**

Section 7l1, Reinforcement and Wire Rope, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is amended as follows:

907-7ll.02--Reinforcing Steel.

Delete the first paragraph of Subsection 711.02.1 on page 711-1 and substitute:

907-711.02.1--Bar Reinforcement. Bar reinforcement shall conform to the requirements of AASHTO Designation: M 31M, as herein amended, (Grade 420) for billet steel bars.

AASHTO Designation: M 31M is hereby amended as follows:

1. ***Sections 1.2 and 1.3, and Note 2 shall be replaced in their entirety with:***

   1.2 Bars are of three minimum yield levels: namely, 300, 420, and 520 MPa, designated as Grades 300, 420, and 520, respectively.

   1.3 Hot-rolled plain rounds, in sizes up to and including 50.8 mm in diameter in coils or cut lengths, when specified for dowels, spirals, and structural ties or supports, shall be furnished under the specification in Grades 300, 420, and 520 (Note 2). For bending properties, test provisions of the nearest nominal diameter deformed bar size shall apply. Those requirements providing for deformations and marking shall not be applicable.

   NOTE 2 - The mass for plain rounds smaller than 9.5 mm in diameter shall be computed on the basis of the size in ASTM A 510M.

2. ***Note 4 shall be replaced in its entirety with:***

   NOTE 4 - A typical ordering description is as follows: 19 metric tons, deformed and plain billet-steel bars for concrete reinforcement, No. 25, 18.3 m long, deformed, Grade 420 in secured lifts, to AASHTO M 31M as herein amended. Certified mill test reports are required.

3. ***Section 11.1 shall be replaced in its entirety by:***

   11.1 The permissible variation in mass shall not exceed 6 percent under nominal mass, except for bars smaller than 9.5 mm plain round, the permissible variation in mass shall be computed on the basis of the permissible variation in diameter in Specification ASTM A 510M. Reinforcing bars are evaluated on the basis of nominal mass. In no case shall the overmass of any bar be the cause for rejection.

4. Section 14 shall be replaced in its entirety with:

14. NUMBER OF TESTS

14.1 For bar sizes No. 10 to 36, inclusive, one tension test and one bend test shall be made of the largest size rolled from each heat. If, however, material from one heat differs by three or more designation numbers, one tension and one bend test shall be made from both the highest and lowest designation number of the deformed bars rolled.

14.2 In the case of No. 43 and 57 bars, one tension test and one bend test shall be made of each size from each heat.

5. Replace Section 20.3.4 in its entirety with:

20.3.4 *Minimum Yield Designation* - For Grade 420 bars, either the number 4 or a single continuous longitudinal line through at least 5 spaces offset from the center of the bar side. For Grade 520 bars, either the number 5 or two continuous longitudinal lines through at least 5 spaces offset each direction from the center of the bar. (No marking designation for Grade 300 bars.)

6. Table 1 shall be replaced in its entirety by:

TABLE 1 Deformed Bar Designation Numbers, Nominal Masses, Nominal Dimensions, and Deformation Requirements

Bar Designation No.[B]	Nominal Mass, kg/m	Nominal Dimensions[A]			Deformation Requirements, mm		
		Diameter, mm	Cross-Sectional Area, mm²	Perimeter, mm	Maximum Average Spacing	Minimum Average Height	Maximum Gap (Chord of 12.5% of Nominal Perimeter)
10	0.560	9.5	71	29.9	6.7	0.38	3.6
13	0.994	12.7	129	39.9	8.9	0.51	4.9
16	1.552	15.9	199	49.9	11.1	0.71	6.1
19	2.235	19.1	284	59.8	13.3	0.97	7.3
22	3.042	22.2	387	69.8	15.5	1.12	8.5
25	3.973	25.4	510	79.8	17.8	1.27	9.7
29	5.060	28.7	645	90.0	20.1	1.42	10.9
32	6.404	32.3	819	101.3	22.6	1.63	12.4
36	7.907	35.8	1006	112.5	25.1	1.80	13.7
43	11.38	43.0	1452	135.1	30.1	2.16	16.5
57	20.24	57.3	2581	180.1	40.1	2.59	21.9

[A] The nominal dimensions of a deformed bar are equivalent to those of a plain round bar having the same mass per meter as the deformed bar.

[B] Bar designation numbers approximate the number of millimeters of the nominal diameter of the bar.

7. Table 2 shall be replaced in its entirety with:

TABLE 2 Tensile Requirements

	Grade 300[A]	Grade 420	Grade 520[B]
Tensile strength, min, MPa Yield strength, min, MPa Elongation in 203.2 mm, min, %:	500 300	620 420	690 520
Bar Designation No.			
10	11	9	-
13, 16	12	9	-
19	12	9	7
22, 25	-	8	7
29, 32, 36	-	7	6
43, 57	-	7	6

[A] Grade 300 bars are furnished only in sizes 10 through 19.
[B] Grade 520 bars are furnished only in sizes 19 through 57.

8. Table 3 shall be replaced in its entirety with:

TABLE 3 Bend Test Requirements

Bar Designation No.	Pin Diameter for Bend Tests [A]		
	Grade 300	Grade 420	Grade 520
10,13,16	3½*d* [B]	3½*d*	-
19	5*d*	5*d*	5*d*
22, 25	-	5*d*	5*d*
29, 32, 36	-	7*d*	7*d*
43, 57 (90°)	-	9*d*	9*d*

[A] Test bends 180° unless noted otherwise.
[B] *d* = nominal diameter of specimen.

Delete the Standard Reinforcing Bars table on page 711-1 and substitute:

STANDARD REINFORCING BARS

Bar Designation No.(2)	Nominal Mass, kg/m	Nominal Dimensions (1)		
		Diameter, mm	Cross-Sectional Area, mm²	Perimeter, mm
10	0.560	9.5	71	29.9
13	0.994	12.7	129	39.9
16	1.552	15.9	199	49.9
19	2.235	19.1	284	59.8
22	3.042	22.2	387	69.8
25	3.973	25.4	510	79.8
29	5.060	28.7	645	90.0
32	6.404	32.3	819	101.3
36	7.907	35.8	1006	112.5
43	11.38	43.0	1452	135.1
57	20.24	57.3	2581	180.1

Delete in toto Subsection 711.02.2 on page 711-2 and substitute:

907-711.02.2--Bar Mats. Bar mats for concrete pavement reinforcement shall be Grade 420 billet steel, AASHTO Designation: M 31M, as amended by special provision, and shall conform to the requirements of AASHTO Designation: M 54.

Delete the first paragraph of Subsection 711.02.4 on page 711-2 and substitute:

907-711.02.4--Dowel Bars and Marginal Bars. Unless otherwise indicated, dowel bars used to span transverse joints and marginal bars shall be plain round bars. They shall be Grade 420 billet steel, AASHTO Designation: M 31M, as amended by special provision.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-7l1-2M **CODE: (SP)**

DATE: 4/24/96

SUBJECT: Reinforcing Steel

Section 7l1, Reinforcement and Wire Rope, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is amended as follows and the contents of which are applicable ONLY when using non-metric size reinforcement.

Delete in toto Subsection 711.02 beginning on page 711-1, and substitute the following:

907-711.02--Reinforcing Steel.

907-711.02.1--Bar Reinforcement. Bar reinforcement shall conform to the requirements of AASHTO Designation: M 31 (Grade 60) for billet steel bars.

Bars shall be fabricated as indicated on the plans; shall be cold-bent, unless otherwise permitted, to the shapes shown on the plans or as directed; and shall be bent prior to being wholly or partially embedded in concrete.

Unless otherwise authorized or provided on the plans, bends or hooks shall not be fabricated to a smaller diameter than that indicated for the bend test.

Rail steel bars shall be bent to the specified shapes at the mill or fabricating plant.

The areas and weights to be used in calculations for the various size reinforcing bars shall be as follows:

STANDARD REINFORCING BAR

Numbers*	Weight Lbs.per Foot	Nominal Dimension ---------- Round Sections		
		Diameter (Inches)	Cross-Sectional Area (Sq. In.)	Perimeter (Inches)
2 (1)	.167	.250	.05	.786
3	.376	.375	.11	1.178
4	.668	.500	.20	1.571
5	1.043	.625	.31	1.963
6	1.502	.750	.44	2.356
7	2.044	.875	.60	2.749
8	2.670	1.000	.79	3.142
9 (2)	3.400	1.128	1.00	3.544
10 (2)	4.303	1.270	1.27	3.990
11 (2)	5.313	1.410	1.56	4.430
14	7.65	1.693	2.25	5.32
18	13.60	2.257	4.00	7.09

* The bar numbers are based on the number of 1/8 inch increments in the nominal diameter of the bar, except as noted in (2) below.

(1) No. 2 bars in plain rounds only.
(2) Nos. 9, 10, and 11 are round bars and equivalent in weight and nominal cross-sectional area to the old type 1 inch, 1 1/8 inch, and 1 1/4 inch square bars, respectively.

907-711.02.2--Bar Mats. Bar mats for concrete pavement reinforcement shall be Grade 60 billet steel, AASHTO Designation: M 31, and shall conform to the requirements of AASHTO Designation: M 54.

907-711.02.3--Steel Wire Fabric. Steel wire fabric shall conform to the requirements of AASHTO Designation: M 55 or AASHTO Designation: M 221.

907-711.02.4--Dowel Bars and Marginal Bars. Unless otherwise indicated, dowel bars used to span transverse joints and marginal bars shall be plain round bars. They shall be Grade 60 billet steel, AASHTO Designation: M 31.

Before installation, each dowel bar shall be painted with one coat of industrial grade zinc base primer, epoxy or other approved rust inhibitive primers.

One half of each dowel bar shall be greased with a heavy grease equivalent to 600W or cup grease to prevent bonding with concrete. The greased end is to be inserted into the dowel bar sleeve described in the following paragraph.

Sleeves for dowel bars shall be metal or plastic of an approved design, mortar-tight, of sufficient strength to prevent collapse, and at least two inches in length. A suitable stop shall be provided in the sleeve to permit movement of the dowel bar within the sleeve of not less than the thickness of the expansion filler used.

Dowel bars shall be free from burring or other deformations restricting slippage in the concrete.

907-711.02.5--Tie Bars. Unless otherwise indicated, tie bars used to span longitudinal joints shall be deformed bars, billet steel, meeting the requirements set forth in 907-711.02.1.

907-711.02.6--Cold-Drawn Steel Wire. Cold-drawn steel wire shall conform to the requirements of AASHTO Designation: M 32.

907-711.02.7--Supports for Bar Reinforcement. Metal bar supports shall be fabricated from stainless steel wire conforming to ASTM Designation: A 493 (16% chromium minimum) or cold-drawn wire with a minimum of 1/2 inch of the height of the leg above the form surface protected by one of the following:

Plastic coating conforming to CRSI Standards.
Galvanized, conforming to ASTM Designation: A 153, Class D.
Stainless steel conforming to ASTM Designation: A 493. (16% chromium minimum)
Other protective coating as approved by the Engineer.
Other supports as approved by the Engineer may be used.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-714-5M **CODE: (IS)**

DATE: **10/31/97**

SUBJECT: **Miscellaneous Materials**

Section 714, Miscellaneous Materials, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the fifth line of Subsection 714.05.2 on page 714-4, add the following:

The available alkalis, as Na_2O, not to exceed 1.5 percent

Delete in toto Subsection 714.06 on page no. 714-4 and substitute:

907-714.06--Ground Granulated Blast Furnace Slag (GGBFS).

907-714.06.1--General. GGBFS shall be obtained from an approved source. The acceptance of GGBFS shall be based on certified test reports, certification of shipment from the supplier and tests performed on samples obtained after delivery in accordance with the Department's Standard Operating Procedures.

The Contractor shall provide suitable means for storing and protecting the GGBFS against dampness and contamination. Separate storage silos, bins or containers shall be provided for GGBFS. GGBFS which has become partially set, caked or contains lumps shall not be used.

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

GGBFS from different mills shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer; except that this requirement will not be applicable to cement treatment of design soils, subbases or bases.

In addition to these requirements, GGBFS shall meet the following specific requirements.

907-714.06.2--Specific Requirements. GGBFS shall meet the requirements of AASHTO Designation: M 302, Grade 120. GGBFS shall contain no chlorides.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-714-8M **CODE: (IS)**

DATE: **12/07/2001**

SUBJECT: **Geotextiles**

Section 714, Miscellaneous Materials, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 714.13 beginning on page 714-15 and substitute the following:

907-714.13--Geotextiles.

907-714.13.1--General. Unless specified otherwise, the fabric may be woven or non-woven. The fibers used in the manufacture of the geotextiles and the threads used in joining geotextiles by sewing, shall consist of long-chain synthetic polymers, composed of at least 95% by weight polyolefins, polyesters, or polyamides. They shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including selvages. The fabric shall be mildew resistant and inert to biological degradation and naturally encountered chemicals, alkalines and acids. Fabric which is not protected from sunlight after installation shall contain stabilizers and/or inhibitors to make it resistant to deterioration from direct sunlight, ultraviolet rays, and heat.

The edges of the fabric shall be selvaged or finished in such a manner to prevent the outer yarn of filaments from raveling. The fabric shall be free of defects or flaws, which affect the required physical properties.

Fabric for silt fence shall be manufactured in widths of not less than 900 millimeters, and fabric for other applications shall be manufactured in widths of not less than 1800 millimeters. Sheets of fabric may be sewn or bonded together at the factory or other approved locations, but deviation from the physical requirements will not be permitted.

Acceptance testing will be conducted with fabric samples from each lot shipped to the project, as per 907-714.13.10.

907-714.13.2--Geotextile for Silt Fence. The fabric shall conform to the physical requirements of Type I or II as shown in Table I. Unless a specific type is specified in the plans or contract documents, the Contractor may select Type I or II.

907-714.13.2.1--Woven Wire Backing. Except as provided herein, silt fence shall be reinforced with a woven wire backing. The wire backing shall be at least 800 millimeters high and have no less than six horizontal wires. Vertical wires shall be spaced no more than 300 millimeters apart. The top and bottom wire shall be 3.43-mm diameter or larger. All other wire shall be no smaller than 2.51-mm diameter.

907-714.13.2.2--Posts. Wood or steel posts may be used. Wood posts shall have a minimum diameter of 75 millimeters and length of 1.5 meters and shall be straight enough to provide a fence without noticeable misalignment. Steel tee posts shall be 1.5 meters long, approximately 35 millimeters wide, 35 millimeters deep, and three millimeters thick with a

nominal mass of 1.98 kilograms per meter prior to fabrication. The posts shall have projections, notches or holes for fastening the wire backing or fabric to the posts.

907-714.13.2.3--Staples. Staples shall be made of 3.76-mm wire with a minimum length of 25 millimeters after bending.

907-714.13.3--Geotextile for Subsurface Drainage. For normal drainage applications, the fabric shall conform to the physical requirements of Type III as shown in Table I.

907-714.13.3.1--Geotextile for Edge Drains. The fabric shall conform to the physical requirements of Type V as shown in Table I, except the AOS for the woven fabric shall have a range of 0.15 mm to 0.43 mm.

907-714.13.4--Geotextile Underseal. The fabric shall be non-woven polyester or polypropylene, which is satisfactory for use with asphalt cements. Unless otherwise specified, the fabric shall conform to the physical requirements of Type IV in Table I.

907-714.13.5--Geotextile for Use Under Riprap. Unless otherwise specified, the fabric shall conform to the physical requirements of Type V in Table I. The requirements for grab tensile, puncture, and trapezoidal tear strengths may be reduced 50 percent when the fabric is cushioned from rock placement by a 150-mm minimum layer of sand.

907-714.13.6--Geotextile Stabilization. The fabric shall meet the physical requirements as shown in Table I for the Type specified in the plans or contract documents.

907-714.13.7--Securing Pins. Steel pins used for anchoring the fabric shall be five millimeters in diameter, minimum length of 375 millimeters, pointed at one end and fabricated with a head for retaining a steel washer. A minimum 38-mm diameter washer shall be installed on each pin.

907-714.13.8--Identification. Each roll of fabric or container shall be visibly labeled with the name of the manufacturer, type of fabric or trade name, lot number, and quantity of material.

907-714.13.9--Shipment and Storage. During shipment and storage, the fabric shall be protected from direct sunlight, ultraviolet rays, temperatures greater than 60°C, mud, dirt, dust, and debris. The fabric shall be wrapped and maintained in a heavy-duty protective covering, including ends of roll.

907-714.13.10—Certification, Acceptance Sampling and Testing. The Contractor shall furnish to the Engineer three copies of the manufacturer's certification that each lot in a shipment complies with the requirements of the contract. All fabric, steel pins, washers, fence posts, woven wire and wire staples are subject to approval by the Engineer upon delivery to the work site.

Acceptance testing shall be completed prior to incorporating in the work. Acceptance of fabric to be used in the work will be based on the results of tests performed by the Department on verification samples submitted from the project. The Engineer will select one roll at random, from each lot in a shipment, for sampling. A sample extending full width of the randomly selected roll and containing at least five square meters of fabric will be obtained and submitted by the Engineer. The sample shall be provided at no additional cost to the State.

907-714.13.11—Table.

TABLE I
GEOTEXTILES
MINIMUM AVERAGE ROLL VALUE [1]

Type Designation	I	II	III	IV	V	VI		VII		
Application	Sediment Control		Drainage	Paving	Separation & Drainage	Separation, Stabilization & Reinforcement				
Physical Properties										Test Method
Grab Strength (N)	225	400	490	400	900	W 1250	NW 800	W 2000	NW 1250	ASTM D 4632
Elongation %	----	50% max @ 200 N	20% min	50% min @ break	50% min	50% max	50% min	50% max	50% min	ASTM D 4632
Seam Strength (N)	----	----	310	----	800	1070	710	1780	1070	ASTM D 4632
Puncture Strength (N)	----	----	175	----	360	490	330	800	510	ASTM D 4883
Trapezoidal Tear (N)	----	----	175	----	360	445	310	665	445	ASTM D 4533
Asphalt Retention (L/m^2)	----	----	----	0.9	----	----	----	----	----	ASTM D 6140
Permittivity (Sec^{-1})	0.05	0.05	0.5	----	0.15	0.2	0.2	0.2	0.2	ASTM D 4491
AOS Woven (mm)	0.15 - 0.84	0.15 - 0.84	0.15 - 0.43	----	0.21 - 0.43	0.15 - 0.21	----	0.15 - 0.21	----	ASTM D 4751
AOS Non-Woven (mm)	<0.84	<0.84	<0.43	----	<0.43	----	<0.43	----	<0.43	ASTM D 4751
Tensile Strength after UV (% Retained)	70@500Hr.	70 @ 500 Hr.	70 @ 150 Hr.	----	70 @ 150 Hr.	70 @ 150 Hr.		70 @ 150 Hr.		ASTM D 4355
Melting Point (°C)	----	----	----	165°F	----	----		----		ASTM D 276

Note 1: All property values, with the exception of apparent opening size (AOS), represent minimum average roll values in the weakest principal direction. Values for AOS represent the maximum average roll values.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-715-2M **CODE: (IS)**

DATE: **12/10/99**

SUBJECT: **Erosion Control Blanket**

Section 715, Roadside Development Materials, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-715.09.3--Erosion Control Blanket. Delete the third line of the first paragraph of Subsection 715.09.3 and substitute:

The top side of the blanket shall be covered with a photodegradable plastic mesh having 20-mm x 20-mm maximum openings which shall be substantially adhered to the straw by a knitting process using degradable thread.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-715-3M **CODE: (IS)**

DATE: **9/29/2000**

SUBJECT: **Agricultural Limestone**

Section 715, Roadside Development Materials, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete the first sentence of Subsection 715.02.2 on page 715-1 and substitute the following:

Combination or manufactured fertilizer shall be "standard commercial products" and shall contain not less than the percentages by mass of the ingredients set out in Table A, except for agricultural limestone which shall meet the requirements of Subsection 907-715-.02.2.1.

In Table A of Subsection 715.02.2 on page 715-2, delete the column titled "Agricultural Limestone" and the row titled "Calcium and Magnesium Carbonate**".

Delete the third paragraph on page 715-3.

At the end of Subsection 715.02.2 on page 715-3, add the following:

907-715-02.2.1--Agricultural Limestone. Agricultural limestone shall be either a Grade "A" liming material, or a marl or chalk agricultural liming material as addressed in the latest Mississippi Agricultural Liming Material Act of 1993, published by the Mississippi Department of Agriculture and Commerce.

907-715-02.2.1.1--Screening Requirements. Grade "A" liming material, including ground shells, shall not have less than 90% of the material passing the 2.00 mm sieve, and not less than 50% passing the 250µm sieve. Marl or chalk lining material shall not have less than 90% of the material passing the 2.00 mm sieve.

907-715-02.2.1.2--Neutralizing Values. Grade "A" liming material shall not have less than 90% calcium and magnesium carbonate calculated as calcium carbonate equivalent when expressed on a dry mass basis. Marl or chalk liming material shall not have less than 70% calcium and magnesium carbonate calculated as calcium carbonate equivalent when expressed on a dry mass basis.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-716-1M **CODE: (IS)**

DATE: **05/16/2002**

SUBJECT: **Miscellaneous Materials**

Section 716, Miscellaneous Metals, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete Subsection 716.04 on page 716-1 and substitute the following:

907-716.04--Gray Iron Casings. Gray iron castings shall conform to AASHTO Designation: M 105. Class 30B shall be furnished unless otherwise specified. For testing purposes a lot size shall be defined as the lesser of either a total of 15 875 kilograms or one week's production for the Department. The test bars shall be made from a melt of iron used in production of units for the Department. The test bar length shall be a minimum of 400 millimeters.

907-716.07--Copper Bearings and Sheet Copper.

Delete Subsection 716.07.1 on page 716-1 and substitute the following:

907-716.07.1--Rolled Copper-Alloy Bearings and Expansion Plates. Rolled copper-alloy bearings and expansion plates shall conform to ASTM Designation: B 100. Alloy UNS No. C51000 shall be furnished unless otherwise specified.

Delete Subsections 716.10 on page 716-2 and substitute the following:

907-716.10--Lead Plates, Pipes, Etc. Lead used for plates, pipes, etc. shall conform to ASTM Designation: B 29, Grade: Pure Lead.

907-716.14--Bar Grates.

Delete Subsection 716.14.1 starting on page 716-2 and substitute the following:

907-716.14.1--Material Requirements. Plain round steel bars and strap bars shall conform to the following requirements:

B-9 Grates and Bar Grates:	AASHTO Designation M 270M, Grade 250.
MI, GI, & SS-3 Grates:	AASHTO Designation: M270M, Grade 345W, or as specified in the plans.

Delete the last paragraph of Subsection 716.14.2 on page 716-3 and substitute the following:

After fabrication, the bar grate shall be coated with an approved commercial quality coating designed for coating steel castings and fabricated units. The State Materials Engineer shall approve the coating material prior to application.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-721-8M **CODE: (IS)**

DATE: **01/18/2002**

SUBJECT: **Reflective Sheeting**

Section 721, Materials for Signing, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 721.06 beginning on page 721-4 and ending on page 721-12, and substitute the following:

907-721.06--Reflective Sheeting.

907-721.06.1--General. Retroreflective sheeting materials shall comply with all applicable requirements of ASTM Designation: D 4956, except as specifically modified herein, and be listed on the Department's "Approved Sources of Materials".

Reflective sheeting shall be one of the following types.

Type III — A high-intensity retroreflective sheeting. This shall be an encapsulated glass-bead or unmetallized microprismatic retroreflective material. This sheeting shall have a protected, pre-coated, pressure-sensitive adhesive backing.

Type VII — A super high-intensity retroreflective sheeting. This shall be an unmetallized microprismatic retroreflective material. This sheeting shall have a protected, pre-coated, pressure sensitive adhesive backing.

Type VIII — A super high-intensity retroreflective sheeting. This shall be an unmetallized microprismatic retroreflective material. This sheeting shall have a protected, pre-coated, pressure sensitive adhesive backing.

Type IX — A very-high intensity retroreflective sheeting. This shall be an unmetallized, microprismatic retroreflective material. This sheeting shall have a protected, pre-coated, pressure sensitive, adhesive backing.

All other retroreflective sheeting shall be as shown in the plans.

907-721.06.2--Performance Requirements. The retroreflective sheeting shall have the following minimum brightness values at 0.2° and 0.5° observation angle (in addition 1.0° for Type IX sheeting) expressed as average candelas per lux per square meter of material.

Sheetings and inks processed and applied in accordance with the manufacturer's recommendations, shall perform effectively for the number of years stated below. The sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that: (1) the sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night driving conditions or (2) the coefficient of retroreflection

is less than the minimum specified for that sheeting during the periods listed below. For screen printed transparent colored areas on white sheeting, the coefficients of retroreflection shall not be less than 70% of the values for the corresponding color in the table.

Type III Sheeting
Retain 85% of initial values listed in Table 1 through 7 years
Retain 80% of initial values listed in Table 1 between 7 & 10 years

Type VII Sheeting
Retain 85% of initial values listed in Table 2 through 7 years
Retain 80% of initial values listed in Table 2 between 7 & 10 years
Retain 50% of initial values listed in Table 2 through 3 years (Fluorescent Orange)

Type VIII Sheeting
Retain 85% of initial values listed in Table3 through 7 years
Retain 80% of initial values listed in Table 3 between 7 & 10 years
Retain 50% of initial values listed in Table 3 through 3 years (Fluorescent Orange)
Retain 80% of initial values listed in Table 3 through 7 years (Fluorescent Yellow/Green) (Fluorescent Yellow)

Type IX Sheeting
Retain 85% of initial values listed in Table 4 through 7 years
Retain 80% of initial values listed in Table 4 between 7 & 10 years
Retain 80% of initial values listed in Table 4 for 7 years (Fluorescent Yellow/Green)(Fluorescent Yellow)

MINIMUM COEFFICIENTS OF RETROREFLECTION
(Candela per lux per square meter) - cd/lx/m²
(Per ASTM E 810)

TABLE 1
Type III Sheeting

Observation Angle	Entrance Angle	White	Orange	Yellow	Green	Red	Blue	Brown
0.2°	-4°	250	10	170	45	45	20	12
0.2°	+30°	150	60	100	25	25	11	8.5
0.5°	-4°	95	30	62	15	15	7.5	5.0
0.5°	+30°	65	25	45	10	10	5.0	3.5

TABLE 2
Type VII Sheeting

Observation Angle	Entrance Angle	White	Yellow	Green	Red	Blue	Brown	Fluorescent Orange
0.2°	-4°	750	560	75	150	34	23	200
0.2°	+30°	430	320	43	86	20	10	85
0.5°	-4°	240	180	24	48	11	8	90
0.5°	+30°	135	100	14	27	6.0	4	50

TABLE 3
Type VIII Sheeting

Observation Angle	Entrance Angle	White	Yellow	Green	Red	Blue	Brown	Fluorescent Orange	Fluorescent Yellow/ Green	Fluorescent Yellow
0.2°	-4°	700	525	70	105	42	21	200	480	375
0.2°	+30°	325	245	33	49	20	10	85	240	170
0.5°	-4°	250	190	25	38	15	7.5	90	235	165
0.5°	+30°	115	86	12	17	7	3.5	50	110	85

TABLE 4
Type IX Sheeting

Observation Angle	Entrance Angle	White	Yellow	Green	Red	Blue	Fluorescent Yellow/ Green	Fluorescent Yellow
0.2°	-4.0°	380	285	38	76	17	325	240
0.2°	+30.0°	215	162	22	43	10	205	150
0.5°	-4.0°	240	180	24	48	11	240	165
0.5°	+30.0°	135	100	14	27	6.0	110	75
1.0°	-4.0°	80	60	8	16	3.6	65	45
1.0°	+30.0°	45	34	4.5	9	2.0	35	25

907-721.06.3--Certification. The Contractor shall require the supplier to furnish certified evidence and/or samples to the Engineer showing conformance to these requirements. Manufacturer's warranties or guarantees provided as customary trade practice shall be furnished the Department.

907-721.06.4--Color. Reflective sheeting shall meet the color requirements of ASTM Designation: D 4956. See Table 5 below for color specifications for fluorescent yellow green, fluorescent orange, and fluorescent yellow sheeting.

TABLE 5
Color Specification Limits for New Sheeting (Daytime)

Color	Chromaticity Coordinate 1		Chromaticity Coordinate 2		Chromaticity Coordinate 3		Chromaticity Coordinate 4		Total Luminance Factor Limit Y? Min.
	x	y	x	y	x	y	x	y	
Fluorescent Yellow Green	0.387	0.610	0.460	0.540	0.438	0.508	0.376	0.568	60%
Fluorescent Orange	0.562	0.350	0.645	0.355	0.570	0.429	0.506	0.404	30%
Fluorescent Yellow	0.521	0.424	0.557	0.442	0.479	0.520	0.454	0.491	40%

907-721.06.5--Adhesive. The retroreflective sheeting shall include a pre-coated pressure sensitive adhesive (ASTM Designation: D 4956, Class I) applied without the necessity of additional adhesive coats on the retroreflective sheeting or application surface.

The Class I adhesive shall be a pressure sensitive adhesive of the aggressive tack type requiring no heat solvent or other preparation for adhesion to smooth clean surfaces.

The protective liner attached to the adhesive shall be removed by peeling without soaking in water or other solutions and shall be easily removed after accelerated storage for four hours at 70ºC under a mass of 1750 kilograms per square meter.

907-721.06.6--Additional Contract Requirements. In addition to the above requirements, the following requirements are applicable only when the sheeting material is being purchased for use in the MDOT Sign Shop.

907-721.06.6.1--Sheeting Manufacturer's Replacement Obligation. Where it can be shown that retroreflective traffic signs with Type III, Type VII, Type VIII, or Type IX sheeting supplied and used according to the sheeting manufacturer's recommendations have not met the performance requirements, the sheeting manufacturer shall replace the sheeting required to restore the sign surface to its original effectiveness during the entire 10 years. In addition, during the first seven (7) years the manufacturer of Type III, Type VII, Type VIII, or Type IX sheeting shall cover the cost of restoring the sign surface to its original effectiveness at no cost to the Department for materials and labor for both sign manufacture and installation.

907-721.06.6.2--Technical Assistance Requirements.

Instruction and Training. The manufacturer supplying the retroreflective sheeting shall provide at no additional cost the services of a qualified technician for instruction and training at the sign manufacturing facility. This instruction shall be provided bi-annually or when requested, and shall include but not be limited to training films, material application, equipment operation, silk screening techniques, packaging, storage, and other proven sign shop practices as they apply to the retroreflective sheeting supplied by the manufacturer, and to assure that the resulting signs can comply with the applicable specifications.

Technical Service. The sheeting manufacturer shall, without additional cost to the Department, provide the sign shop with competent technical service and product information including service on screen printing problems with the inks furnished by the manufacturer.

Equipment. The manufacturer supplying the retroreflective sheeting shall provide technical assistance for the recommended sheeting application equipment and certify that trained personnel shall be available on 72 hours notice to render such service necessary to adjust ink consistency or otherwise modify the application of silk screen equipment to accommodate use of manufacturer's sheeting. "Service" is understood to mean the capability of calibration and trouble shooting, as well as the training and retaining of personnel as required.

907-721.06.6.3--Warranty. Any warranties prepared by the manufacturer shall be included with the bid documents.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-803-14M **CODE: (SP)**

DATE: **03/21/2002**

SUBJECT: **PDA Monitoring of Piling**

Section 803, Bearing Piles, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 803.03.9 on pages 803-5 to 803-11 and substitute the following:

907-803.03.9--Determination of Bearing Value by PDA Monitoring.

907-803.03.9.1--Description. This work consists of furnishing all labor, materials, equipment and services necessary to perform all operations to complete the determination of bearing value of piling by Department forces by using a Pile Driving Analyzer (PDA) and associated equipment. The dynamic measurements will be performed in accordance with the plans and the guidelines given herein.

907-803.03.9.2--Scope and Sequence of Construction. The dynamic measurements will be performed on the piles as detailed below for the purpose of obtaining ultimate pile bearing capacity, pile driving stresses, pile integrity, and the pile driving system efficiency. The sequence of construction shall not be deviated from unless an alternate sequence of construction is approved in writing by the Engineer.

The dynamic measurements will be performed on test piles as specified in the plans. The location and length of the test piles shall be as specified in the plans.

1) When called for in the plans, Osterberg Load Testing and/or Conventional Static Load Testing will be performed on piles as detailed. Piles to be Osterberg load tested or conventionally load tested shall be driven in the location called for in the plans with PDA monitoring under initial drive and have restrikes performed as detailed.
2) When called for in the plans, 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) As deemed necessary by the Engineer, PDA monitoring may be conducted on any production pile for the purpose of determining acceptance based on bearing or to evaluate the pile driving system.

907-803.03.9.3--Submittal of Hammer Data. The Contractor shall submit to the Engineer all technical specifications and operating instructions relating to the pile driving hammer equipment that is to be used to drive the piling. The Contractor shall also submit a completed "Pile and Driving Equipment Data Form" (attached) to the Engineer at the pre-construction

conference or no later than 14 days prior to the anticipated driving date. The Contractor will not be allowed to install any piling until the driving system has been approved in writing by the Engineer. The Department will use the submitted information to perform wave equation analysis and prepare a summary report of the wave equation results. The wave equation analysis and other data shall be used to assess the ability of the proposed systems to install the piles to the desired penetration depth within the AASHTO standards for driving stresses.

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 resubmit changes. Review of these changes will be completed within seven (7) days and the Contractor notified of their acceptance or rejection. Approval of the proposed driving system by the Engineer for driving of test piles shall be based upon the wave equation analysis indicating that the proposed driving system is acceptable.

A different pile driving system, modifications to the existing system, or different pile installation procedures shall be proposed by the Contractor if the pile installation stresses predicted by the wave equation analysis or calculated by the PDA are not within the AASHTO values. All approvals are conditional and subject to trial and satisfactory performance in the field.

907-803.03.9.4--PDA Monitored Driving and/or Restrike of Piling.

907-803.03.9.4.1--General. A Pile Driving Analyzer (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 Department. The Contractor shall give notice to the Project Engineer and the State Geotechnical Engineer at least 14 calendar days before the scheduled date of driving piles to be monitored. The Contractor shall confirm the driving date three calendar days prior to the scheduled driving date.

907-803.03.9.4.2--Contractor Requirements. The Contractor shall be responsible for the following:

1) Furnishing a power supply that provides at least 1800 watts of 115-volt A.C. power with a frequency of 60 Hz at the driving site.
2) Preparing the driving site.
3) Supplying the labor necessary for attachment of 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) Driving the piles as directed by the Engineer.

The Contractor shall make the piles available prior to driving for drilling and tapping of holes that are necessary for attachment of instrumentation. The expected delay for attaching the instruments to the pile will be approximately one (1) hour per pile. The Contractor shall use

reasonable care when working with piles with instruments installed and shall replace any damaged equipment caused by Contractor error at no additional cost to the State.

907-803.03.9.4.3--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. The Engineer may modify the waiting periods that are required before the restrikes are performed. When a static load test (Osterberg or Conventional) 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 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 75 millimeters, whichever occurs first. In the event the pile movement is less than 25 millimeters after 15 blows during the restrike, the restrike may be terminated.

907-803.03.9.5--Osterberg Load Testing.

907-803.03.9.5.1--General. When called for in the plans, out-of-position test piles shall be driven with PDA instrumentation attached to the pile and shall have restrikes performed as outlined above. In addition, the pile shall be load tested to failure utilizing an Osterberg Load Cell. The Contractor will be responsible for furnishing all materials, equipment, labor, and incidentals necessary for conducting an Osterberg Load test and removing the out-of-position pile. The Contractor shall subcontract the instrumentation, conducting, and reporting of the load test to the load test cell supplier, with the cost included in prices bid for items contained in the contract. No reaction systems and extra pile installations will be required for Osterberg Load Testing.

907-803.03.9.5.2--Materials. When called for in the plans Osterberg Load cells shall be supplied by:

LOADTEST Inc.
4509 North West 23rd Avenue, Suite 19
Gainesville, Florida 32606
Phone: (904) 378-3717 or (800) 368-1138

Additional materials required for this type load test are subject to approval by LOADTEST, Inc., and include, but are not limited to the following:

1) Materials sufficient to construct a stable reference beam system for monitoring deflection of the pile during testing, supported at a minimum distance of three (3) diameters from the center of the pile to prevent disturbance of the reference system.

2) Materials sufficient to construct a protected work area (including provisions such as a tent or shed for protection from inclement weather for the load test equipment). The work area shall be of size and type required by the Engineer and/or LOADTEST Inc.
3) In the case of an out-of-position pile, the pile shall be removed or broken-off such that the remaining pile is at least 600 millimeters below the ground or mud line.

Materials supplied, which do not become a part of the finished structure, shall be removed from the job site.

907-803.03.9.6-- Conventional Static Load Testing.

907-803.03.9.6.1--General. When called for in the plans or by the Engineer, the pile to be load tested shall be installed as indicated in the plans to the specified tip elevation or as directed by the Engineer. Once the pile is in place, a static load test will be conducted to determine the ultimate bearing capacity of the pile. Before static load testing begins, a waiting period of seven (7) calendar days shall be observed beginning after all the reaction piles have been driven.

907-803.03.9.6.2--Contractor Requirements. The Contractor shall be responsible for furnishing the following:

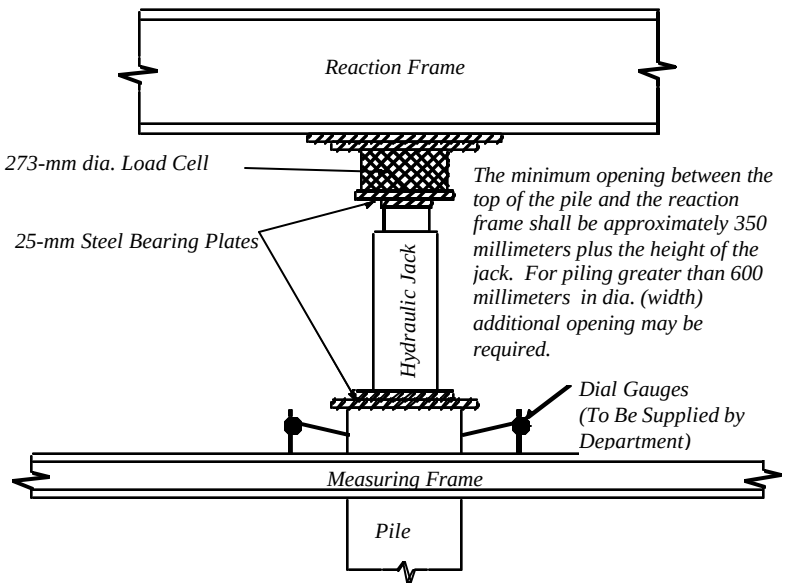
1) A reaction load frame capable of resisting a total load of at least five (5) times the design load called for in the plans. The frame shall consist of a beam or girder that will carry the above load while sustaining only minor deflections in the reaction system. The beam or girder shall be attached to a system of anchor piles. The anchor piles shall not be closer to the test pile than five times the diameter (width) of the pile to be tested. See *Figure 1* in Subsection 907-803.03.9.6.3 for additional reaction load frame requirements.

2) A hydraulic jack that has been calibrated for the full range of anticipated loads in accordance with AASHTO Designation: T 67 (ASTM Designation: E 4). The pressure gauge shall be calibrated within one year preceding the time of use and whenever there is a reason to doubt the accuracy of the results. The Contractor shall furnish a certificate of calibration for the hydraulic jack at the time of static load testing.

3) A measuring frame (or reference beam) for measuring the movement of the pile during testing. Two dial gauges (to be supplied by the Department) will be attached to the pile as indicated on *Figure 1*. Each dial gauge shall be actuated by its stem or by a stem attachment resting on the measuring frame. The supports for the measuring frame shall be placed the maximum practical distance from the test pile and the anchor piles for the reaction load frame. In no case should the measuring frame be affected by movement of the test pile or the anchor piles.

4) In the case of an out-of-position pile, including reaction piling, the pile shall be removed or broken-off such that the remaining pile is at least 600 millimeters below the ground or mud line.

907-803.03.9.6.3--Methods and Equipment. Personnel from the Geotechnical Branch will assist in the setup and will be responsible for the running of the test. The Department will be responsible for providing the load cell, dial gauges and associated equipment. The static load test will be performed using ASTM Designation: D1143, quick test methods. Before static load testing begins, a waiting period of seven (7) calendar days shall be observed beginning after all the reaction piles have been driven.



Note: Drawing Not to Scale

Figure 1. *Static Load Test*

907-803.04--Method of Measurement. Delete in toto Subsections 803.04.1 and 803.04.2 on page 803-14, and substitute the following:

907-803.04.1--Blank.

907-803.04.2--Blank.

At the end of Subsection 803.04.10 on page 803-16, add the following:

907-803.04.11--PDA Test Piles With Osterberg Load Test. The number of PDA Test Piles with Osterberg Load Test performed will be measured per each, complete-in-place. Piles paid for as PDA Test Piles with Osterberg Load Test will not be included in the measurement of pay lengths for permanent piles.

Completion of this pay item shall include the 1-day restrike after the initial pile driving, the Osterberg load test, and the restrike within 24 hours after the static load test and the individual components will not be considered separately. Any additional restrike required by the Engineer on this type test pile will be paid for as a PDA Restrike.

907-803.04.12--PDA Test Piles With Conventional Static Load Test. The number of PDA Test Piles with Conventional Static Load Test performed will be measured per each, complete-in-place. Piles paid for as PDA Test Piles with Conventional Static Load Test will not be included in the measurement of pay lengths for permanent piles.

Completion of this pay item shall include the 1-day restrike after the initial pile driving, the conventional static load test, and the restrike within 24 hours after the static load test and the individual components will not be considered separately. Any additional restrike required by the Engineer on this type test pile will be paid for as a PDA Restrike.

907-803.04-13--PDA Test Piles. The number of PDA Test Piles will be measured per each complete-in-place. Piles paid for as PDA Test Piles will not be included in the measurement of pay lengths for permanent piles.

Completion of this pay item shall include the 1-day and 7-day restrike after initial driving and individual components will not be considered separately. Any additional restrike required by the Engineer on this type test pile will be paid for as a PDA Restrike.

907-803.04.14--PDA Restrike. The number of PDA restrikes will be measured per each actually performed on permanent piles or test piles as requested by the Engineer.

907-803.04-15--Static Load Tests. The number of static load tests measured will be the actual number of static load tests make on permanent piles in accordance with these specifications for conventional static load tests.

In the event a pile is reloaded in accordance with these specifications, the reloading will be measured for payment as 50 percent of a separate load test. Loading of a permanent pile shall be subject to the same requirement for performance and compensation as for a test pile.

907-803.05--Basis of Payment. Delete in toto Subsections 803.05.1 and 803.05.2 on page 803-16, and substitute the following:

907-803.05.1--Blank.

907-803.05.2--Blank.

At the end of Subsection 803.05.11 on page 803-17, add the following:

907-803.05.12--PDA Test Piles With Osterberg Load Test. Accepted PDA Test Piles with Osterberg Load Test will be paid for at the contract unit price per each.

907-803.05.13--PDA Test Piles With Conventional Static Load Test. Accepted PDA Test Piles With Conventional Static Load Test will be paid for at the contract unit price per each.

907-803.05.14--PDA Test Piles. Accepted PDA Test Piles will be paid for at the contract unit price per each.

907-803.05.15--PDA Restrike. Accepted PDA Restrikes will be paid for at the contract unit price per each.

907-803.05.16--Static Load Test. Accepted Static Load Tests will be paid for at the contract unit price per each.

Delete the pay item number, description and unit for pay items 803-A and 803-B on page 803-17 and substitute the following:

907-803-A: Blank

907-803-B: Blank

After the last pay item number listed on page 803-18, add the following:

907-803-U:	PDA Test Piles With Osterberg Load Test	-per each
907-803-V:	PDA Test Piles With Conventional Static Load Test	-per each
907-803-W:	PDA Test Piles	-per each
907-803-X:	PDA Restrike	-per each
907-803-Y:	Static Load Test	-per each

Rev. 6/98

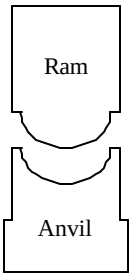
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PILE AND DRIVING EQUIPMENT DATA FORM

Project No.: _____ Bridge No.: _____

Termini: _____ Pile Driving Contractor: _____

County: _____



Hammer

Manufacture: _____ Model No.: _____

Hammer Type: _____ Serial No.: _____

Manufacturers Maximum Rated Energy: _____ (N)

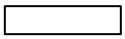
Stroke at Maximum Rated Energy: _____ (m)

Range in Operating Energy: _____ to _____ (N)

Range in Operating Stroke: _____ to _____ (m)

Modifications: _____

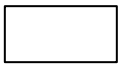
_____



Striker Plate

Mass: _____ (kg) Diameter: _____ (mm)

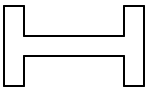
Thickness: _____ (mm)



Hammer Cushion

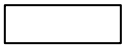
	Material #1	Material #2
Name:	_____	_____
Area:	_____ (mm^2)	_____ (mm^2)
Thickness/Plate:	_____ (mm)	_____ (mm)
No. of Plates:	_____	_____

Total Thickness of Hammer Cushion: _____ (mm)



Head)

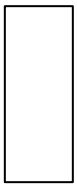
Mass: _____ (kg)



Pile Cushion

Material: _____

Area: _____ (mm^2) Total Thickness: _____ (mm)



Pile

Submitted By: _____ ***Date:*** _____

Telephone No: _____

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-804-16M **CODE: (IS)**

DATE: 01/04/2002

SUBJECT: Concrete for Bridges and Structures

Section 804, Concrete Bridges and Structures, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is deleted in toto and replaced as follows:

SECTION 907-804--CONCRETE BRIDGES AND STRUCTURES

907-804.01--Description. This work consists of constructing concrete bridges and structures in accordance with these specifications and in reasonably close conformity with the dimensions, designs, lines, and grades indicated on the plans or established.

Construction of box bridges shall be in accordance with Sections 601 and 602.

907-804.02--Materials.

907-804.02.1--General. Concrete produced and controlled from this specification shall be accepted upon proper certification of concrete production through an approved quality control plan and verification by job site acceptance criteria. The Contractor shall develop and implement a quality control plan that will be used to maintain the required properties of concrete. For large volume projects, 1525 cubic meters and more, quality control and acceptance shall be achieved through statistical evaluation of test results. For small volume projects, less than 1525 cubic meters, quality control and acceptance shall be achieved by individual test results.

The materials used in this construction, when sampled and tested in accordance with 700.03, shall meet the requirements of the following subsections:

Portland Cement	701.01 and 701.02
Admixtures	713.02
Fly Ash	714.05
Water	714.01.1 and 714.01.2
Fine Aggregate	703.02
Coarse Aggregate	703.03
Curing Materials	713.01
Joint Materials	707.01, 707.02, and 707.07
Structural Steel Joints and Bearing Devices	717.01
Sheet Copper	716.07.2
Bronze Bearing Devices	716.06
Copper-Alloy Bearing Devices	716.07.1
Self-Lubricating Bearing Plates	716.08
Bearing Pads	714.10
Wire Rope or Wire Cable for Prestressed Concrete	700.01 and 711.03
Sprayed Finish for Concrete Surface	714.12
Reinforcing Steel	711.02

907-804.02.2--Use, Care and Handling. The use, care and handling of materials shall conform to the applicable requirements of 501.03.10 and the specific requirements of 907-804.02.4 and 907-804.02.5. Unless otherwise authorized, only fine aggregate or coarse

aggregate of one type and from the same source shall be used in the construction of any one unit of a structure. Should the Contractor, with written permission of the Engineer, elect to substitute high early strength cement for cement of the type specified, the Contractor will not receive additional compensation for the substitution.

907-804.02.3--Sampling and Testing. Sampling and testing shall meet the requirements of these specifications.

907-804.02.4--Care and Storage of Concrete Aggregates. The handling and storage of aggregates shall be such as to prevent segregation or contamination with foreign materials. The Engineer may require that aggregates be stored on separate platforms at satisfactory locations.

When specified, coarse aggregates shall be separated into two or more sizes in order to secure greater uniformity of the concrete mixture. Different sizes of aggregate shall be stored in separate stock piles sufficiently removed from each other to prevent the material at the edges of the piles from becoming intermixed.

907-804.02.5--Storage of Cement. All cement shall be stored in suitable weather-proof buildings or bins. These buildings or bins shall be placed in locations approved by the Engineer. Provision for storage shall be ample, and the shipments of cement as received shall be stored separately or other provisions made to the satisfaction of the Engineer for easy access for the identification, inspection, and sampling of each shipment as deemed desirable. Stored cement shall meet the test requirements at any time after storage when a retest is ordered by the Engineer.

On small jobs, open storage consisting of a raised platform and ample waterproof covering may be permitted by written authorization from the Engineer.

When specified, the Contractor shall keep accurate records of deliveries of cement and of its use in the work. Copies of these records shall be supplied in the form required by the Engineer.

907-804.02.6--Classification and Uses of Concrete. When a specific class of concrete is not specified on the plans or in the contract documents, the structure or parts thereof shall be constructed with the class of concrete as directed by the Engineer.

The classes and their uses are as follows:

(1) Class AA - Concrete for bridge construction and concrete exposed to seawater.
(2) Class A - Concrete for use where indicated.
(3) Class B - General use, heavily reinforced sections, cast-in-place concrete piles, and conventional concrete piles.
(4) Class C - Massive sections or lightly reinforced sections.
(5) Class D - Massive unreinforced sections and riprap.
(6) Class F - Concrete for prestressed members.
(7) Class FX - Extra strength (as shown on plans) concrete for prestressed members.
(8) Class S - For all seal concrete deposited under water.

907-804.02.7--Composition of Concrete. The composition of concrete mixtures shall meet the requirements of these specifications.

907-804.02.8--Laboratory Accreditation. The Contractor shall be responsible for furnishing the laboratory used to perform concrete quality control tests. The laboratory may be the Contractor's facility, the concrete producer's facility, or a certified independent testing laboratory.

Only laboratories certified by the Mississippi Department of Transportation are qualified to perform material testing. Certification by AASHTO Accreditation Program (AAP) will be acceptable if the laboratory is listed in the latest AASHTO Accreditation Program publication and maintains accreditation to completion of concrete work.

The Contractor's laboratory designated for quality control testing shall have equipment necessary to test aggregates and concrete for the test methods listed in Table 1.

Table 1

AASHTO: T 2	Sampling Aggregates
AASHTO: T 19	Bulk Density ("Unit Weight") and Voids in Aggregates
AASHTO: T 22	Compressive Strength of Cylindrical Concrete Specimens
AASHTO: T 23	Making and Curing Concrete Test Specimens in the Field
AASHTO: T 27	Sieve Analysis of Fine and Coarse Aggregates
AASHTO: T 84	Specific Gravity and Absorption of Fine Aggregate
AASHTO: T 85	Specific Gravity and Absorption of Coarse Aggregate
AASHTO: T 119	Slump of Hydraulic Cement Concrete
AASHTO: T 121	Mass per Cubic Meter (Cubic Foot), Yield, and Air Content (Gravimetric) of Concrete
AASHTO: T 126	Making and Curing Concrete Test Specimens in the Laboratory
AASHTO: T 141	Sampling Freshly Mixed Concrete
AASHTO: T 152	Air Content of Freshly Mixed Concrete by Pressure Method *
AASHTO: T 196	Air Content of Freshly Mixed Concrete by the Volumetric Method *
AASHTO: T 231	Capping Cylindrical Concrete Specimens
AASHTO: T 248	Reducing Field Samples of Aggregate to Testing Size
AASHTO: T 255	Total Evaporable Moisture Content of Aggregate by Drying
ASTM: C 1064M	Temperature of Freshly Mixed Portland Cement Concrete

* Equipment necessary for either pressure or volumetric air content.

Testing equipment shall have been inspected by the Department or through AAP. Testing equipment calibration files shall be made available upon request by the Department.

907-804.02.9--Testing Personnel. Technicians testing Portland cement concrete, for either acceptance or production control purposes, shall be certified by an accepted certification program. Recertification is required for each Class after five years. Certification requirements are listed in Table 2.

Table 2

Required Certification	Concrete Technician's Tasks
MDOT Class I or ACI Grade I	Field Testing of Plastic Concrete (AASHTO T 23, T 119, T 121, T 141, T 152, T 196, and ASTM C 1064M)
MDOT Class II	Aggregate Sampling, Total Moisture, and Sieve Analysis (AASHTO T 2, T 27, T 248, T 255)
MDOT Class III	Unit Weight and Voids of Aggregates, Specific Gravity; Concrete Mix Design, Capping and Compressive Strength of Cylindrical Concrete Specimens (AASHTO T 19, T 22, T 84, T 85, T 126, T 231)

Any technicians can cap and break concrete test specimens or perform aggregate specific gravity tests upon certification by the Central Laboratory during the laboratory inspection of equipment.

907-804.02.10--Portland Cement Concrete Mix Design. At least 30 days prior to production of concrete, the Contractor shall submit to the Engineer proposed concrete mix designs. Materials shall be from approved sources meeting the requirements of the Standard Specifications. Proportions for the mix designs shall be for the class concrete required by the contract plans and shall meet the requirements of the "Master Proportion Table for Structural Concrete Design" listed in Table 3. The concrete producer shall assign a permanent unique mix number to each mix design. Each mix design will be field verified as required in 907-804.02.10.3.

Table 3
MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN

CLASS	COARSE AGGREGATE SIZE NO. *	MAXIMUM WATER/ CEMENTITIOUS ** RATIO	SPECIFIED COMPRESSIVE STRENGTH (f'_c) MPa	MAXIMUM SLUMP *** millimeters	TOTAL AIR CONTENT %
AA	57 or 67	0.45	30	75	3.0 to 6.0
A	57 or 67	0.45	30	75	3.0 to 6.0
B	57 or 67	0.50	25	100	3.0 to 6.0
C	57 or 67	0.55	20	100	3.0 to 6.0
D	57 or 67	0.70	15	100	3.0 to 6.0
F	67	0.40	35	75	****
FX	67	(As required by special provisions)		75	****
S	57 or 67	0.45	20	200	3.0 to 6.0

* Maximum size aggregate shall conform to the concrete mix design for the specified aggregate.

** Maximum replacement of Portland cement by mass is 25% for fly ash or 50% for ground granulated blast furnace slag.

*** The slump may be increased up to 150 millimeters with an approved mid-range water reducer or up to 200 millimeters with an approved type F or G high range water reducer. A mid-range water reducer is classified as a water reducer that reduces the mix water a minimum of 8% when compared to a control mix with no admixtures.

**** No entrained air except for pilings exposed to seawater.

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

907-804.02.10.1--Proportioning of Portland Cement Concrete Mix Design. Proportioning of Portland cement concrete shall be based on an existing mix of which the producer has field experience and documentation or based on a recently batched laboratory mix tested according to the required specifications.

907-804.02.10.1.1--Proportioning on the Basis of Previous Field Experience of Trial Mixtures. Where a concrete production facility has a record, based on at least 10 consecutive strength tests within the past 12 months, the standard deviation shall be calculated. The record of tests from which the standard deviation is calculated shall:

a) Represent similar materials and conditions to those expected. Changes in materials and proportions within the test record shall not have been more closely restricted than those for the proposed work.

b) Represent concrete produced to meet a specified strength.

c) Consist of at least 10 consecutive tests (average of two cylinders per test).

The standard deviation , s , shall be calculated as:

$$s = \left[\sum \left(X_i - \overline{X}\right)^2 \div (N-1)\right]^{1/2}$$

where:

X_i = the strength result of an individual test
$\overline{X}$ = the average of all individual tests in a series
N = number of tests in the series

When the concrete production facility does not have a record of tests for calculation of standard deviation, as required in the above formula, the requirements of 907-804.02.10.1.2 shall govern.

The required average compressive strength (f'_{cr}) used as the basis for selection of concrete proportions shall conform to the inequality listed below, while using a standard deviation, s, calculated as shown above.

$$f'_{cr} \geq f'_c + 1.43s$$

where:

f'_c = specified compressive strength of concrete, MPa
f'_{cr} = required average compressive strength of concrete, MPa
s = standard deviation, MPa
1.43 represents the Lower Quality Index necessary to assure that 93% of compressive strength tests are above f'_c.

907-804.02.10.1.2--Proportioning on the Basis of Laboratory Trial Mixtures. When an acceptable record of field test results is not available, concrete proportions shall be established based on laboratory trial mixtures meeting the following restrictions:

a) The combination of materials shall be those intended for use in the proposed work.

b) Trial mixtures having proportions and consistencies suitable for the proposed work shall be made using the ACI 211.1 as a guide to proportion the mix design.

c) Trial mixtures shall be designed to produce a slump within ± 20 millimeters of the maximum permitted, and for air-entrained concrete, 6.0 ± 0.5 percent total air content. The temperature of freshly mixed concrete in trial mixtures shall be reported.

d) For each proposed mixture, at least three compressive test cylinders shall be made and cured in accordance with AASHTO Designation: T 126. Each change of water-

cement ratio shall be considered a new mixture. The cylinders shall be tested for strength in accordance with AASHTO Designation: T 22 at 28 days.

e) The required average strength of laboratory trial mixes shall exceed f'_c by 8.3 MPa for concrete mix designs less than 35 MPa and by 9.7 MPa for concrete mix designs of 35 MPa or more.

907-804.02.10.2--Documentation of Average Strength. Documentation that the proposed concrete proportions will produce an average strength equal to or greater than the required average shall consist of the strength test records from field tests or results from laboratory trial mixtures.

907-804.02.10.3--Field Verification of Concrete Mix Design. All concrete mix designs will be reviewed by the Central Laboratory prior to use. Concrete mix designs disapproved will be returned to the Contractor with a statement explaining the disapproval. Concrete mix designs will only be tentatively approved pending field verification. Mix designs may be transferred to other projects without additional field verification testing, once the mix design has passed the field verification process. Qualification testing described in 907-804.02.10.1.1 will be required to transfer a mix design to another project.

The Contractor's Certified Quality Control Technicians shall test each concrete mix design upon the first placement of the mix. Aggregates and concrete tests during the first placement shall be as follows:

Aggregates

Specific Gravity
Moisture
Gradation

Concrete

Water Content
Slump
Air Content
Unit Mass
Yield
3, 7, & 28 day Strengths

The mix shall be verified to yield within 2.0% of the correct volume when all the mix water is added to the batch, producing a slump within a minus 38-mm tolerance of the maximum permitted, and air-entrained concrete within a minus 1½ percent tolerance of the maximum allowable air content (allow a minimum of 100-mm slump with Type F or G chemical admixture). The mix shall be adjusted and retested, if necessary, on subsequent placements until the above mentioned properties are met. Any mix design adjustments are to be made by a Class III Certified Technician representing the Contractor. After the mix design has been verified and adjustments made, verification test results will be reviewed by the Central Laboratory. Any subsequent adjustments to the mix design shall be reviewed by the Central Laboratory.

907-804.02.10.4--Adjustments of Laboratory Trial Mixtures. If the concrete mix design was proportioned on the basis of laboratory trial mixture, after ten compressive tests have been performed of which a standard deviation is calculated, the formula in 907-804.02.10.1.1 may be used to adjust the mix design as long as the average strength is more than the calculated required average compressive strength (f'_{cr}) and the adjusted mix design contains the water/cement ratio requirement listed in Table 3. Any adjustments of the concrete mix design shall necessitate repeat of field verification procedure as described in 907-804.02.10.3

907-804.02.11--Concrete Batch Plants. The concrete batch plant shall meet the requirements of the National Ready Mixed Concrete Association Quality Control Manual, Section 3, Plant Certification Checklist. A copy of the checklist along with proof of calibration of batching equipment, i.e. scales, water meter and admixture dispenser, shall be furnished to the Project Engineer 45 days prior to the production of concrete. The plant shall meet the requirements of a semi-automatic system or automatic system as described in the checklist and be capable of recording batch masses.

Mixer trucks to be used on the project are to be listed in the checklist and shall meet the requirements of the checklist.

The concrete batch plant shall have available adequate facilities to cool concrete during hot weather.

The concrete batch plant shall have a moisture meter on the fine aggregate bin capable of:

a) Automatically compensating moisture mass in fine aggregate for an automatic batching system,

or

b) Moisture compensation indicated from meter be preset in fine aggregate in a semi-automatic system.

For small volume projects, where the total volume of concrete is less than one thousand five hundred & twenty five (1525) cubic meters, the batch plant can be a manually operated plant with a moisture meter visible to the plant operator.

907-804.02.12--Contractor's Quality Control. The Contractor shall provide and maintain a quality control system that will provide reasonable assurance that all materials and products submitted to the Department for acceptance will conform to the contract requirements, whether manufactured or processed by the Contractor or procured from suppliers, subcontractors or vendors.

The Contractor shall perform, or have performed, the inspections and tests required to substantiate product conformance to contract document requirements and shall also perform, or have performed, all inspections and tests otherwise required.

The Contractor's quality control inspections and tests shall be documented and shall be available for review by the Engineer throughout the life of the contract.

The Contractor shall maintain standard equipment and qualified personnel as required to assure conformance to contract requirements.

907-804.02.12.1--Quality Control Plan. The Contractor shall prepare a Quality Control Plan detailing the type and frequency of inspection sampling and testing deemed necessary to measure and control the various properties of materials and construction governed by the specifications. As a minimum, the sampling and testing plan shall detail sampling location, sampling techniques and test frequency. As set out in these specifications, quality control sampling and testing performed by the Contractor shall be used by the Department for determination of acceptability of the concrete. The Quality Control Plan shall be submitted in writing to the Engineer for approval 45 days prior to the production of concrete.

The Plan shall identify the personnel responsible for the Contractor's quality control. This shall include the company official who will act as liaison with Department personnel, as well as the Certified Technician who will direct the inspection program.

The class(es) of concrete involved will be listed separately. If an existing mix design(s) is to be used, the mix design number(s) as previously approved shall be listed.

Quality control sampling, testing, and inspection shall be an integral part of the Contractor's Quality Control Plan. In addition to the above requirements, the Contractor's Quality Control Plan shall document the quality control requirements shown in Table 4, "CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL". The quality control activities shown in the table are considered to be normal activities necessary to control the production and placing of a given product or material at an acceptable quality level. To facilitate the Department's activities, all completed gradation samples shall be retained by the Contractor until further disposition is designated by the Department.

The Contractor's Quality Control Plan shall encompass the requirements of AASHTO M 157 into concrete production and control, equipment requirements, testing, and batch ticket information. The requirement of Section 11.7 of AASHTO M 157 shall be followed except, on arrival to the job site, a maximum of seven liters per cubic meter shall be allowed to be added to bring the slump within the required limits. Water shall not be added at a later time.

It is intended that sampling and testing be in accordance with standard methods and procedures, and that measuring and testing equipment be standard and properly calibrated. If alternative sampling methods and procedures, and inspection equipment are to be used, they shall be detailed in the Quality Control Plan.

907-804.02.12.1.1--Elements of Plan. The Plan shall address all elements that affect the quality of the structural concrete including but not limited to the following:

1) Mix Design(s)
2) Aggregate Uniformity
3) Quality of Components
4) Stockpile Management
5) Batching - Including any added water
6) Mixing and Transportation - Including time from batching to completion of delivery
7) Concrete Batch Masses for each material.
8) Initial Mix Properties - Including temperature, air content, and consistency
9) Placement and Consolidation
10) Compressive Strength
11) Finishing and Curing
12) Conditions for Admixture Type and Dosage Rates
13) Procedures for Corrective Actions for Non Compliance of Specifications
14) Procedure for Controlling Concrete Temperatures

907-804.02.12.1.2--Personnel Requirements.

1) The Plan shall detail:

a) The frequency of sampling and testing, coordination of activities, corrective actions to be taken, and documentation.

b) How the duties and responsibilities are to be accomplished and documented, and whether more than one Certified Technician is required.

c) The criteria used by the Technician to correct or reject unsatisfactory materials.

2) The Certified Technician shall perform and use quality control tests and other quality control practices to assure that delivered materials and proportioning meet the requirements of the mix design including temperature, slump, air content, and strength and shall periodically inspect all equipment used in transporting, proportioning, and mixing.

3) The Contractor's Designated Technician shall periodically inspect all equipment used placing, consolidating, finishing, and curing to assure it is operating properly and that placement, consolidation, finishing, and curing conform with the mix design and other contract requirements.

907-804.02.12.2--Documentation. The Contractor shall maintain adequate records of all inspections and tests. The records shall indicate the nature and number of observations made, the number and type of deficiencies found, date and time of samples taken, the quantities approved and rejected, and the nature of corrective action taken as appropriate. The Contractor's documentation procedures will be subject to approval of the Department prior to the start of the work and to compliance checks during the progress of the work.

All conforming and non-conforming inspections and test results shall be kept complete and shall be available at all times to the Department during the performance of the work. Forms shall be on a computer-acceptable medium where required. Batch tickets and gradation data shall be documented in accordance with Department requirements. Copies shall be submitted to the Department as the work progresses.

Test data for Portland cement concrete, including gradation, shall be charted in accordance with the applicable requirements.

The Contractor may use additional control charts as deemed appropriate. It is normally expected that testing and charting will be completed within 24 hours after sampling.

All charts and records documenting the Contractor's quality control inspections and tests shall become the property of the Department upon completion of the work.

907-804.02.12.3--Corrective Action. The Contractor shall take prompt action to correct conditions that have resulted, or could result, in the submission to the Department of materials and products that do not conform to the requirements of the contract documents. All corrective actions shall be documented.

907-804.02.12.4--Non-Conforming Materials. The Contractor shall establish and maintain an effective and positive system for controlling non-conforming material, including procedures for its identification, isolation and disposition. Reclaiming or reworking of non-conforming materials shall be in accordance with procedures acceptable to the Department.

All non-conforming materials and products shall be positively identified to prevent use, shipment, and intermingling with conforming materials and products. Holding areas, mutually agreeable to the Department and the Contractor, shall be provided by the Contractor.

TABLE 4
CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL

Portland Cement Concrete		
Control Requirement	**Frequency**	**AASHTO/ASTM Designation**
A. PLANT AND TRUCKS		
1. Mixer Blades	Prior to start of job & weekly	
2. Scales		
a. Tared	Daily	
b. Calibrate	Prior to start of job and/or every 6 mo.	
c. Check Calibration	Weekly	
3. Gauges & Meters - Plant & Truck		
a. Calibrate	Prior to start of job and/or every 6 mo.	
b. Check Calibration	Weekly	
4. Admixture Dispenser		
a. Calibrate	Prior to start of job and/or every 6 mo.	
b. Check Operation & Calibration	Daily	
B. AGGREGATES		
1. Sampling		T 2
2. Fine Aggregate		
a. Gradation / FM	200 m³ Concrete	T 27
b. Moisture	Check Meter Against Test Results Weekly	T 255
c. Specific Gravity / Absorption	2000 m³ Concrete	T 84
3. Coarse Aggregates		
a. Gradation / FM	200 m³ Concrete	T 27
b. Moisture	Minimum of once daily or more as needed to control production	T 255
c. Specific Gravity / Absorption	2000 m³ Concrete	T 85
C. PLASTIC CONCRETE		
1. Sampling		T 141
2. Air Content	First load then one per 40 m³	T 152 or T 196
3. Slump	First load then one per 40 m³	T 119
4. Compressive Strength	One set (two cylinders) for 0-75 m³ inclusive and one set for each additional 75 m³ or fraction thereof for each class concrete delivered and placed on a calendar day from a single supplier. A test shall be the average of two cylinders.	T 22, T 23, T 231
5. Yield	Each 300 m³	T 121
6. Temperature	With each sample	ASTM C 1064M

907-804.02.13--Quality Assurance Sampling and Testing. Quality Assurance (QA) inspection and testing shall be provided by the Department to assure that the Contractor's Quality Control (QC) testing meets the requirements of these specifications.

Acceptance of the material is based on the inspection of the construction, monitoring of the Contractor's quality control program, QC test results, and the comparison of the QA test

results to the QC test results. The Department may use the results of the Quality Control Plan as a part of the acceptance procedures, provided:

a) The Department's inspection and monitoring activities indicate that the Contractor is following the approved Quality Control Plan and,
b) The results from the Contractor's quality control and the Department's quality assurance testing of aggregate both meet gradation requirements; and Contractor's and Department's concrete strengths compare when using the data comparison computer program with an alpha value of 0.01 for large volume projects (≥ 1525 m³); or, strength comparisons are within 6.8 MPa for small volume projects (< 1525 m³).

The minimum frequency for QA testing of aggregate and plastic concrete by the Department will follow the frequencies listed in Table 5, "DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE".

When it is determined that the Contractor's QC test results of aggregate gradation and concrete compressive strengths are comparative to that of the Department's QA test results, then the Department's QA testing frequency can be reduced to a frequency of no less than 50 percent of the frequency for testing listed in the Table 5.

TABLE 5
DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE

Quality Assurance Tests	Frequency	AASHTO/ASTM Designation
A. AGGREGATES		
1. Sampling		T 2
2. Fine Aggregate Gradation and FM	200 m³ Concrete	T 27
3. Coarse Aggregates Gradation and FM	200 m³ Concrete	T 27
B. PLASTIC CONCRETE		
1. Sampling		T 141
2. Air Content	First load, then every 75 m³	T 152 or T 196
3. Slump	First load, then every 75 m³	T 119
4. Compressive Strength	One set (two cylinders) for every 75 m³ inclusive. A test shall be the average of two cylinders.	T 22, T 23, T 231
5. Temperature	With each sample	ASTM C 1064M

Periodic inspection by the Department of the Contractor's QC testing and production will continue through the duration of the project. Weekly reviews will be made of the Contractor's QC records and charts. Comparison of data of the Contractor's QC strength test results to those of the Department's QA strength test results will be made monthly during concrete production periods according to Department Standard Operating Procedures. If the Contractor's QC strength test results fail to compare to those of the Department's QA strength test results, Department testing will continue as shown in Table 5 until the Contractor's and Department's strength test data compare.

907-804.02.13.1--Basis of Acceptance.

907-804.02.13.1.1--Slump. Slump of plastic concrete shall meet the requirements of Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.2--Air. Total air content of concrete shall be within the specified range for the class of concrete listed in Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.3--Yield. If the yield of the concrete mix design is more than plus or minus 3% of the designed volume, the mix shall be adjusted by a Class III Certified Technician representing the Contractor to yield the correct volume plus or minus 3%.

907-804.02.13.1.4--Temperature. Cold weather concreting shall follow the requirements of 907-804.03.16.1. Hot weather concreting shall follow the requirements of 907-804.03.16.2 except the maximum allowable temperature for concrete shall be 35°C for concrete mixes containing pozzolanic materials as a replacement of Portland cement and 32°C for concrete mixes without pozzolanic materials, when measured according to ASTM C 1064M. Concrete with a temperature more than the maximum allowable temperature shall be rejected and not used in Department work.

907-804.02.13.1.5--Compressive Strength. Laboratory cured concrete compressive strength tests shall conform to the specified strength (f'_c) listed in the specifications. Concrete represented by compressive strength test below the specified strength (f'_c) may be removed and replaced by the Contractor. If the Contractor elects not to remove the material, it will be evaluated by the Department as to the adequacy for the use intended. All concrete evaluated as unsatisfactory for the intended use shall be removed and replaced by the Contractor at no additional cost to the Department. For concrete allowed to remain in place, reduction in payment will be as follows:

Large Volume Projects (^{3} 1525 m^3). When the evaluation indicates that the work may remain in place, a statistical analysis will be made of the QC and QA concrete test results. If this statistical analysis indicates at least 93% of the material would be expected to have a compressive strength equal to or greater than the specified strength (f'_c) and 99.87% of the material would be expected to have a compressive strength at least one standard deviation above the allowable design stress (f_c), the work will be accepted. If the statistical analysis indicates that either of the two criteria are not met, the Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c - (f_c + s)} \times 100$$

where:

f'_c = Specified 28-day compressive strength, MPa
X = Individual compressive strength below f'_c, MPa
s = standard deviation, MPa*
f_c = allowable design stress, MPa

* Standard deviation used in the above reduction of pay formula shall be calculated from the nine preceding compressive strengths test results plus the individual compressive strength below f'_c. If below f'_c strengths occur during the project's first ten compressive strength tests, the

standard deviation shall be calculated from the first ten compressive strength tests results.

Small Volume Projects (< 1525 m³). When the evaluation indicates that the work may remain in place, a reduction in pay (percentage) will be based on a comparison of the deficient 28-day test result to the specified strength. The Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c} \times 100$$

where:

f'_c = Specified 28-day compressive strength, MPa
X = Individual compressive strength below f'_c, MPa

907-804.02.14--Dispute Resolution. Disputes over variations between Contractor's QC test results and the Department's QA test results shall be resolved at the lowest possible level. When there are significant discrepancies between the QC test results and the QA test results, the Contractor's Quality Control Manager, the Project Engineer, and/or the District Materials Engineer shall look for differences in the procedures, and correct the inappropriate procedure before requesting a third party resolution.

If the dispute cannot be resolved at the project or District level, the Department's Central Laboratory will serve as a third party to resolve the dispute. The Central Laboratory's decision shall be binding.

The Contractor shall be responsible for the cost associated with the third party resolution if the final decision is such that the Department's QA test results were correct. Likewise, the Department will be responsible for the cost when the final decision is such that the Contractor's QC test results were correct.

907-804.03--Construction Requirements.

907-804.03.1--Measurement of Materials.

907-804.03.1.1--General. The accuracy for measuring materials shall be in accordance with AASHTO Designation: M 157.

907-804.03.1.2--Measurement by Mass Determination. Except when otherwise specified or authorized, materials shall be measured by determining their mass. The apparatus provided for determining the mass of materials shall be suitably designed and constructed for this purpose. The mass of cement and each size of aggregate shall be determined separately. The mass of cement in standard bags need not be determined, but the mass of bulk cement shall be determined. The mixing water shall be measured by volume or by determining it's mass. All measuring devices shall be subject to approval.

907-804.03.2--Blank.

907-804.03.3--Blank.

907-804.03.4--Hand Mixing. Hand mixing of concrete will not be allowed.

907-804.03.5--Delivery. The plant supplying concrete shall have sufficient capacity and transporting apparatus to insure continuous delivery at the rate required. The rate of delivery shall be such as to provide for the proper continuity in handling, placing, and furnishing of the concrete. The rate shall be such that the interval between batches shall not exceed 20 minutes. The methods of delivering and handling the concrete shall be that which will facilitate placing with minimum rehandling and without damage to the structure or the concrete.

907-804.03.6--Handling and Placing Concrete.

907-804.03.6.1--General. Prior to placing concrete, all reinforcement shall have been accurately placed in the position shown on the plans and fastened as set out in Section 805. All sawdust, chips, and other construction debris and extraneous matter shall have been removed from the interior of the forms. Temporary struts, braces, and stays holding the forms in correct shape and alignment shall be removed when the concrete placing has reached an elevation rendering their service unnecessary. These temporary members shall be entirely removed from the forms and shall not be buried in the concrete.

No concrete shall be placed until the forms and reinforcement have been inspected.

Except as provided for truck mixers and truck agitators, concrete shall be placed in the forms within 30 minutes after the time that the cement is first added to the mix.

Concrete shall be placed so as to avoid segregation of materials and displacement of reinforcement. The use of troughs, chutes, and pipes over eight meters in length for gravity conveyance of concrete to the forms, will not be permitted except when authorized by the Engineer and subject to the production of quality concrete.

Only approved mechanical conveyors will be permitted.

Open troughs and chutes shall be metal or metal lined. The use of aluminum pipes, chutes or other devices made of aluminum that come into direct contact with the concrete shall not be used. Where steep slopes are required, the chutes shall be equipped with baffles or be in short sections that change the direction of movement.

All chutes, troughs, and pipes shall be kept clean and free from coatings of hardened concrete by thoroughly flushing with water after each run. Water used for flushing shall be discharged clear of the structure.

When placing operations involve dropping the concrete more than 1.5 meters, it shall be deposited through sheet metal or other approved pipes to prevent segregation and unnecessary splashing. The pipes shall be made in sections to permit discharging and raising as the placement progresses. A non-jointed pipe may be used if sufficient openings of the proper size are provided to allow for the flow of the concrete into the shaft. As far as practicable, the pipes shall be kept full of concrete during placing, and their ends shall be kept buried in the newly placed concrete.

Except as hereinafter provided, concrete shall be placed in horizontal layers not more than 300 millimeters thick. When, with the Engineer's approval, less than the complete length of a layer is placed in one operation, it shall be terminated in a vertical bulkhead. Each layer shall be placed and compacted before the preceding layer has taken its initial set and shall be compacted so as to avoid the formation of a construction joint with the preceding layer.

907-804.03.6.2--Consolidation. Concrete, during and immediately after depositing, shall be thoroughly consolidated by the use of approved mechanical vibrators and suitable spading tools. Hand spading alone will be permitted on small structural members such as railing and small culvert headwalls. Mechanical vibration of concrete shall be subject to the following:

A. The vibration shall be internal unless special authorization of other methods is given by the Engineer or as provided herein.

B. In general, vibrators shall be a type and design approved by the Engineer. They shall be capable of vibration frequencies of at least 4500 impulses per minute.

C. The intensity of vibration shall be such as to visibly affect a mass of concrete of 25-mm slump over a radius of at least 450 millimeters.

D. The Contractor shall provide sufficient vibrators to properly compact each batch immediately after it is placed in the forms.

E. Vibrators shall be manipulated so as to thoroughly work the concrete around the reinforcement and embedded fixtures and into the corners and angles of the forms.

   Vibration shall be applied at the point of deposit and in the area of freshly deposited concrete. The vibrators shall be inserted into and withdrawn out of the concrete slowly. The vibration shall be of sufficient duration and intensity to thoroughly compact the concrete, but shall not be continued so as to cause segregation. Vibration shall not be continued at any one point to the extent that localized areas of grout are formed.

   Application of vibrators shall be at points uniformly spaced and not farther apart than twice the radius over which the vibration is visibly effective.

F. Vibration shall not be applied directly or through the reinforcement to sections or layers of concrete which have taken initial set. It shall not be used to make concrete flow in the forms over distances so great as to cause segregation, and vibrators shall not be used to transport concrete in the forms.

G. Vibration shall be supplemented by spading as necessary to insure smooth surfaces and dense concrete along form surfaces, in corners, and in locations impossible to reach with vibrators.

H. These provisions shall apply to the filler concrete for steel grid floors except that the vibrator shall be applied to the steel.

I. These provisions shall apply to precast piling, concrete cribbing, and other precast members except that, if approved by the Engineer, the manufacturer's methods of vibrations may be used.

When hand spading is used for consolidation, a sufficient number of workmen with spading tools shall be provided. They will be required to flush a thin layer of mortar to all the surfaces and thoroughly and satisfactorily consolidate the concrete.

The entire operation of depositing and consolidating the concrete shall be conducted so that the concrete shall be smooth and dense and free from honeycomb or pockets of segregated aggregate.

907-804.03.6.3--Discontinuance of Placing. When placing is temporarily discontinued, the concrete, after becoming firm enough to retain its form, shall be cleaned of laitance and other objectionable material to a sufficient depth to expose sound concrete. To avoid visible joints insofar as possible upon exposed faces, the top surface of the concrete adjacent to the forms shall be smoothed with a trowel. Where a "feather edge" might be produced at a construction joint, such as in the sloped top surface of a wing wall, an inset form work shall be used in the preceding layer to produce a blocked out portion that will provide an edge thickness of at least 150 millimeters in the succeeding layer. Work shall not be discontinued within 450 millimeters of the top of any face unless provision has been made for a coping less than 450 millimeters thick. In this case and if permitted by the Engineer, the construction joint may be made at the under side of the coping.

Immediately following the discontinuance of placing concrete, all accumulations of mortar splashed on the reinforcement and the surface of forms shall be removed. Dried mortar chips and dust shall not be puddled into the unset concrete. If the accumulations are not removed prior to the concrete becoming set, care shall be exercised not to break or injure the concrete-steel bond at and near the surface of the concrete while cleaning the reinforcement. After initial set the forms shall not be jarred, and no strain shall be placed on the ends of projecting reinforcement until the concrete has sufficiently set to insure against any damage by such jarring or strain.

907-804.03.6.4--Placing Bridge Concrete. The method and sequence of placing concrete shall conform to the provisions and requirements set forth for the particular type of construction.

907-804.03.6.4.1--Foundations and Substructures. Concrete seals shall be placed in accordance with 907-804.03.9. All other concrete for foundations shall be poured in the dry unless otherwise stipulated or authorization is given in writing by the Engineer to do otherwise. Concrete shall not be placed in foundations until the foundation area has been inspected and approved.

Unless otherwise specified, the placement of concrete in the substructure shall be in accordance with the general requirements of 907-804.03.6.

Unless otherwise directed, concrete in columns shall be placed in one continuous operation, and shall be allowed to set at least 12 hours before the caps are placed.

907-804.03.6.4.2--Superstructure. For simple spans, concrete shall preferably be deposited by beginning at the center of the span and working toward the ends. For continuous spans, concrete shall be deposited as shown on the plans. Concrete in girders shall be uniformly deposited for the full length of the girder and brought up evenly in horizontal layers.

Unless otherwise permitted by the Engineer, concrete shall not be placed in the superstructure until the column forms have been stripped sufficiently to determine the character of the concrete in the columns. Unless otherwise permitted by the Engineer, the load of the superstructure shall not be placed on pile bents until the caps have been in place at least seven days and shall not be placed on other types of bents until the bents have been in place at least 14 days.

In placing concrete around steel shapes, it shall be placed on one side of the shape until it flushes up over the bottom flange of the shape on the opposite side, after which it shall be placed on both sides to completion.

Concrete in girder haunches less than one meter in height shall be placed at the same time as that in the girder stem. Whenever a haunch or fillet has a height of one meter or more at the abutment or columns, the haunch and the girder shall be poured in three successive stages:

first, up to the lower side of the haunch; second, to the lower side of the girder; and third, to completion.

Except when intermediate construction joints are specified, concrete in slab, T-beam, or deck-girder spans shall be placed in one continuous operation for each span.

The floors and girders of through-girder superstructures shall be placed in one continuous operation unless otherwise specified, in which case special shear anchorage shall be provided to insure monolithic action between girder and floor.

Concrete in box girders shall be placed as shown on the plans.

Concrete shall not be chuted directly into the forms of the span and shall be placed continuously with sufficient speed to be monolithic and to allow for finishing before initial set.

907-804.03.7--Pneumatic Placing. Pneumatic placing of concrete will be permitted only if specified in the contract or if authorized by the Engineer. The equipment shall be so arranged that no vibrations result which might damage freshly placed concrete.

Where concrete is conveyed and placed by pneumatic means the equipment shall be suitable in kind and adequate in capacity for the work. The machine shall be located as close as practicable to the place of deposit. The position of the discharge end of the line shall not be more than three meters from the point of deposit. The discharge lines shall be horizontal or inclined upwards from the machine. At the conclusion of placement the entire equipment shall be thoroughly cleaned.

907-804.03.8--Pumping Concrete. Placement of concrete by pumping will be permitted only if specified in the contract or if authorized in writing by the Engineer. If used, the equipment shall be arranged so that no vibrations result which might damage freshly placed concrete.

Where concrete is conveyed and placed by mechanically applied pressure, the equipment shall be suitable in kind and adequate in capacity for the work. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. When pumping is completed, the concrete remaining in the pipe line, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients. After this operation, the entire equipment shall be thoroughly cleaned.

The use of aluminum pipe as a conveyance for the concrete will not be permitted.

907-804.03.9--Depositing Concrete Under Water. Concrete shall not be deposited in water except with the approval of the Engineer.

Concrete deposited under water shall be Class S.

Concrete deposited under water shall be carefully placed in a compact mass in its final position by means of a tremie, a bottom dump bucket, or other approved method and shall not be disturbed after being deposited. Special care shall be exercised to maintain still water at the point of deposit. No concrete shall be placed in running water and all form work designed to retain concrete under water shall be water-tight. The consistency of the concrete shall be carefully regulated, and special care shall be exercised to prevent segregation of materials.

Concrete seals shall be placed continuously from start to finish, and the surface of the concrete shall be kept as nearly horizontal as practicable at all times. To insure thorough

bonding, each succeeding layer of a seal shall be placed before the preceding layer has taken initial set.

When a tremie is used, it shall consist of a tube having a diameter of at least 250 millimeters and constructed in sections having flanged couplings fitted with gaskets. The means of supporting the tremie shall be such as to permit the free movement of the discharge over the entire top surface of the work and to permit it to be lowered rapidly when necessary to choke off or retard the flow of concrete. The discharge end shall be closed at the start of the work so as to prevent water entering the tube and shall be entirely sealed. The tremie tube shall be kept full to the bottom of the hopper. When a batch is dumped into the hopper, the flow of concrete shall be induced by slightly raising the discharge end, always keeping it in the deposited concrete. The flow is then stopped by lowering the tremie. The flow shall be continuous until the work is completed.

Depositing of concrete by the drop bottom bucket method shall conform to the following: The top of the bucket shall be open. The bottom doors shall open freely downward and outward when tripped. The bucket shall be completely filled and slowly lowered to avoid backwash. It shall not be dumped until it rests on the surface upon which the concrete is to be deposited and when discharged shall be withdrawn slowly until well above the concrete.

Dewatering may proceed when the concrete seal is sufficiently hard and strong. As a general rule, this time will be 48 hours for concrete made with high-early-strength cement and three days for concrete made with other types of cement. All laitance and other unsatisfactory material shall be removed from the exposed surface by scraping, chipping, or other means which will not injure the surface of the concrete.

907-804.03.10--Construction Joints.

907-804.03.10.1--General. Unless otherwise approved by the Engineer, construction joints shall be made only where located on the plans or shown in the pouring schedule.

In the event the Contractor plans to deviate from the pouring schedule for spans as shown on the plans, the Contractor shall submit a proposed pouring schedule to the Bridge Engineer for approval prior to commencing the pour.

If not detailed on the plans, or in the case of emergency, construction joints shall be placed as directed by the Engineer. Shear keys or inclined reinforcement shall be used where necessary to transmit shear or to bond the two sections together.

907-804.03.10.2--Bonding. Before depositing new concrete on or against concrete which has hardened, the forms shall be retightened. The surface of the hardened concrete shall be roughened as required by the Engineer and in a manner that will not leave loosened particles of aggregate or damaged concrete at the surface. It shall be thoroughly cleaned of foreign matter and laitance and saturated with water. When directed by the Engineer, the cleaned and saturated surfaces, including vertical and inclined surfaces, shall first be thoroughly covered with a coating of mortar or neat cement grout against which the new concrete shall be placed before the grout has attained its initial set.

The placing of concrete shall be carried continuously from joint to joint. The face edges of all joints which are exposed to view shall be carefully finished, true to line and elevation.

In order to bond successive courses suitable depressed or raised keys of the designated size shall be constructed. Raised keys shall be monolithic with the concrete of the lower course.

907-804.03.11--Concrete Exposed to Seawater. Unless otherwise specifically provided, concrete for structures exposed to seawater shall be Class AA concrete (Reference 907-

804.02.10). The clear distance from the face of the concrete to the nearest face of reinforcing steel shall be at least 100 millimeters. The mixing time and the water content shall be carefully controlled and regulated so as to produce concrete of maximum impermeability. The concrete shall be thoroughly compacted, and stone pockets shall be avoided. No construction joints shall be formed between the levels of extreme low water and extreme high water as determined by the Engineer. Between these levels, seawater shall not come in direct contact with the new concrete until at least 30 days have elapsed. The surface concrete as left by the forms shall be left undisturbed.

907-804.03.12--Blank.

907-804.03.13--Falsework. The Contractor shall submit to the Engineer four copies of structural design analysis and detail drawings, which show the method of falsework or centering. These designs and detail plans shall be prepared and bear the seal of a Registered Professional Engineer with experience in falsework design.

Falsework plans shall include falsework elevations together with all other dimensions and details which is considered necessary for the construction.

Other pertinent data needed is size and spacing of all falsework members and minimum bearing requirements for false piles.

Upon completion of falsework erection, the Registered Professional Engineer shall certify that the erected falsework is capable of supporting the load for construction.

Falsework piling shall be spaced and driven so that the bearing value of each pile is sufficient to support the load that will be imposed upon it. The bearing value of the piles should be calculated according to the appropriate formula given in Section 803.

For designing falsework and centering, a mass of 2400 kilograms per cubic meter shall be assumed for green concrete. All falsework shall be designed and constructed to provide the necessary rigidity and to support the loads without appreciable settlement or deformation. The Contractor may be required to employ screw jacks or hardwood wedges to take up slight settlement in the falsework either before or during the placing of concrete. An allowance shall be made for anticipated compressibility of falsework and for the placement of shims, wedges, or jacks to produce the permanent structural camber shown on the plans. If during construction, any weakness develops and the falsework shows any undue settlement or distortion, the work shall be stopped, the part of the structure affected removed, and the falsework strengthened before work is resumed. Falsework which cannot be founded on a satisfactory footing shall be supported on piling, which shall be spaced, driven, and removed (reference 907-804.03.15) in a manner approved by the Engineer.

All structures built across a public street or highway on which maintenance of traffic is required, shall have falsework so arranged that a vertical clearance of at least 3.8 meters is provided. Unless otherwise specified, a horizontal clearance of at least the width of the traveled way shall be provided at all times. If the vertical clearance is less than 4.1 meters or the horizontal clearance is less than the full crown width of the roadway, the Contractor shall install and maintain appropriate safety devices, clearance signs and warning lights, and shall notify the Engineer sufficiently in advance of restricting the clearance for the Engineer to advise both the Traffic Engineering and the Maintenance Divisions. All traffic control and safety devices shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

907-804.03.14 Forms.

907-804.03.14.1--General. Forms shall be wood, metal, or other material approved by the Engineer. All forms shall be built mortar-tight and sufficiently rigid to prevent distortion due to pressure of the concrete and other loads incident to the construction operations. Forms shall be constructed and maintained so as to prevent warping and the opening of joints due to shrinkage. The forms shall be substantial and unyielding and shall be so designed that the finished concrete will conform to the proper dimensions and contours. The design of the forms shall take into account the effect of vibration of concrete as it is placed.

Minimum requirements for slab overhang forms shall be 20-mm plywood supported on 50-mm x 150-mm S4S wood timbers placed flatwise on 400-mm centers.

Adjustable brackets for support of slab overhang forms shall be spaced at a maximum distance of 0.9 meter center to center unless specifically approved otherwise. Grade points for forms shall coincide with the location of the adjustable form brackets.

Forms for surfaces exposed to view shall be of uniform thickness with a smooth inside surface of an approved type. Joints in forms for exposed surfaces shall be closely fitted to eliminate fins, stone pockets, or other variations in the surface of the concrete which would mar a smooth and uniform texture.

Forms shall be filleted at all sharp corners and shall be given a bevel or draft in the case of all projections, such as girders and copings, to insure easy removal.

Metal ties or anchorages within the forms shall be so constructed as to permit their removal, without injury to the concrete, to a depth of at least the reinforcing steel clearance shown on the plans. In case ordinary wire ties are permitted, all wires, upon removal of the forms, shall be cut back at least six millimeters from the face of the concrete with chisels or nippers. Nippers shall be used for green concrete. All fittings for metal ties shall be designed so that upon their removal the cavities which are left will be the smallest practicable size. The cavities shall be filled with cement mortar and the surface left sound, smooth, even, and uniform in color.

Forms shall be set and maintained to the lines designated until the concrete is sufficiently cured for form removal. Forms shall remain in place for periods which shall be determined as hereinafter specified. If forms are deemed to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer will order the work stopped until the defects have been corrected.

The shape, strength, rigidity, water-tightness, and surface smoothness of reused forms shall be maintained at all times. Warped or bulged lumber shall be resized before being reused. Forms which are unsatisfactory in any respect shall not be reused.

Access to the lower portions of forms for narrow walls and columns shall be provided for cleaning out extraneous material immediately before placing the concrete.

All forms shall be treated with an approved oil or saturated with water immediately before placing the concrete. For rail members or other members with exposed faces, the forms shall be treated only with an approved oil to prevent the adherence of concrete. Any material which will adhere to or discolor the concrete shall not be used.

When metal forms are used they shall be kept free from rust, grease, or other foreign matter which will discolor the concrete. They shall be of sufficient thickness and so connected that they will remain true to shape and line, and shall conform in all respects as herein prescribed for mortar tightness, filleted corners, beveled projections, etc. They shall be constructed so as to insure easy removal without injury to concrete. All inside bolt and rivet heads shall be countersunk.

All chamfer strips shall be dressed, straight, and of uniform width and shall be maintained as such at all times.

907-804.03.14.2--Stay-In-Place Metal Forms. The use of stay-in-place metal forms will not be allowed.

907-804.03.15--Removal of Falsework, Forms, and Housing. In the determination of the time for the removal of falsework, forms, and housing and the discontinuance of heating, consideration shall be given to the location and character of the structure, the weather and other conditions influencing the setting of the concrete, and the materials used in the mix. No forms or supports shall be removed prior to approval by the Engineer. During cold weather, removal of housing and the discontinuance of heating shall be in accordance with 907-804.03.16.1.

Concrete in the last pour of a continuous superstructure shall have attained a compressive strength of 16.55 MPa, as determined by cylinder tests, prior to striking any falsework. It is important that falsework be removed as evenly as possible to prevent excessive deflection stresses in the spans.

At the Contractor's option and with the approval of the Engineer, the time for removal of forms may be determined by cylinder tests, in which case the Contractor shall furnish facilities for testing the cylinders. The facilities shall include an approved concrete testing machine of sufficient capacity and calibrated by an acceptable commercial laboratory. Tests shall be conducted in the presence of a Department representative to witness and record strengths obtained on each break or performed by a Department certified technician in an approved testing laboratory.

When form removal or placing of beams is not controlled by cylinder tests, Column A (exclusive of the days when the ambient temperature is below 5°C) herein shall apply as a guide for removal of forms and falsework. When cylinder tests are used, Column B shall be used. The cylinders shall be cured under conditions which are not more favorable than those existing for the portions of the structure which they represent.

If Type IP cement or Type I or II Portland cement plus fly ash is used, only Column B will be applicable.

	Column A (Minimum Cure)	Column B (Minimum MPa)
Forms:		
Columns	24 Hours	7
Side of Beams	24 Hours	7
Walls (not under pressure)	24 Hours	7
Floor Slabs (overhead)	7 Days	14
Floor Slabs (between beams)	7 Days	14
Slab Spans	14 Days	17
Other Parts	24 Hours	7
Centering:		
Under Beams	14 Days	17
Under Bent Caps	7 Days	14
Limitation for Placing Beams on:		
Pile Bents (pile under beam)	3 Days	14
Frame Bents (two or more columns)	7 Days	16

Frame Bents (single column)	14 Days	17

Methods of form removal likely to cause overstressing of the concrete shall not be used. Forms and supports shall be removed in a manner that will permit the concrete to uniformly and gradually take the stresses due to its own mass. Centers shall be gradually and uniformly lowered in a manner that will avoid injurious stresses in any part of the structure.

As soon as concrete for railings, ornamental work, parapets and vertical faces which require a rubbed finish has attained a safe strength, the forms shall be carefully removed without marring the surfaces and corners, the required finishing performed, and the required curing continued.

Prior to final inspection of the work, the Contractor shall remove all falsework, forms, excavated material or other material placed in the stream channel during construction. Falsework piles may be cut or broken off at least 300 millimeters below the mudline or ground line unless the plans specifically indicate that they are to be pulled and completely removed from the channel.

907-804.03.16--Cold or Hot Weather Concreting.

907-804.03.16.1--Cold Weather Concreting. In cold weather, the temperature of the concrete when delivered to the job site shall conform to the temperature limitations of "Temperature Limitations on Concrete when Delivered to Job Site" listed in Table 6 below.

When the Contractor proposes to place concrete during seasons when there is a probability of ambient temperatures lower than 5°C, the Contractor shall have available on the project the approved facilities necessary to enclose uncured concrete and to keep the temperature of the air inside the enclosure within the ranges and for the minimum periods specified herein.

When there are indications of temperatures of less than 5°C during the first four days after placement of the concrete, the concrete shall be protected from cold temperatures by maintaining a temperature between 10°C and 38°C for at least four days after placement and between 5°C and 38°C for at least three additional days. The Contractor shall use such heating equipment such as stoves, salamanders, or steam equipment as deemed necessary to protect the concrete. When dry heat is used, means of maintaining atmospheric moisture shall be provided.

One or more of the aggregates and/or mixing water may be heated. The aggregates may be heated by steam, dry heat or by placing in the mixing water which has been heated. Frozen aggregates shall not be used. When either aggregates or water are heated above 38°C, the aggregates and water shall be combined first in the mixer before the cement is added to avoid flash set. Cement shall not be mixed with water or with a mixture of water and aggregate having a temperature greater than 38°C.

The use of salt or other chemical admixtures in lieu of heating will not be permitted.

Before placing concrete, all ice or frost shall be removed from the forms and reinforcement.

In the case of concrete placed directly on or in the ground, such as for footings or bottom slabs, protection and curing during cold weather may be provided as set for concrete pavement under 501.03.20.3.

The Contractor shall assume all risk and added cost connected with the placing and protecting of concrete during cold weather. Permission given by the Engineer to place concrete during such time will in no way relieve the Contractor of responsibility for satisfactory results. Should it be determined at any time that the concrete placed under such conditions is

unsatisfactory, it shall be removed and replaced with satisfactory concrete by the Contractor without extra compensation.

TABLE 6
TEMPERATURE LIMITATIONS ON CONCRETE WHEN DELIVERED TO JOB SITE

Ambient Temperature °C	Minimum Concrete Temperature °C	
	For sections with least dimension less than 300 mm.	For sections with least dimensions 300 mm or greater
-1 to 7	16	10
-18 to -1	18	13
Below -18	21	16

907-804.03.16.2--Hot Weather Concreting. The manufacture, placement, and protection of concrete during hot weather requires special attention to insure that uniform slump ranges and satisfactory placement qualities are maintained, that surface cracking is held to a minimum, and that design strengths are produced.

907-804.03.17--Curing Concrete. Concrete surfaces shall be protected from premature drying by covering as soon as possible with a satisfactory curing material. When wetted burlap is used, it shall be not less than two thicknesses of Class 3 burlap or its equivalent, and the burlap shall be kept continuously and thoroughly wet. Careful attention shall be given to the proper curing and protection of concrete, and curing by the wetting method shall continue for a period of at least seven days after placing the concrete. If high-early-strength cement is used, this period may be reduced to four days.

Surfaces to have a Class 2 rubbed or sprayed finish and bridge deck surfaces when the atmospheric temperature is 32°C or above shall be cured only by wetting methods. The curing of concrete bridges with membrane curing will be permitted only under the conditions specified herein.

Surfaces on which curing is to be by liquid membrane shall be given the required surface finish prior to the application of curing compound. During the finishing period the concrete shall be protected by the water method of curing. Concrete surfaces cured by the liquid membrane method shall receive two applications of curing compound. The first application shall be applied immediately after the finishing is completed and accepted. Prior to applying the first application, the concrete shall be thoroughly wetted with water and the liquid membrane applied just as the surface film of water disappears. The second application shall be applied immediately after the first application has set. The rate of application of curing compound will be as prescribed by the Engineer with a minimum spreading rate per application of one liter per five square meters of concrete surface. The coating shall be protected against marring for at least 10 days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

When using curing compound, the compound should be thoroughly mixed within an hour before use. If the use of curing compound results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

Other precautions to insure the development of strength shall be taken as directed.

Adequate tarpaulins of ample size shall be on the project and used as necessary to protect the work in case of rain or other emergencies.

Conditions governing the placement of concrete and the requirements for the placement, protection, and curing of concrete during cold or hot weather shall conform to the limitations, conditions, and requirements stipulated in 907-804.03.16 as applicable.

907-804.03.18--Expansion and Fixed Joints, Bearings, Anchor Bolts, Plates, Castings, Pipes, Drains, Conduits, Etc. All joints shall be constructed according to details shown on the plans. The edges of the concrete at open or filled joints shall be chamfered or edged as indicated on the plans.

907-804.03.18.1--Open Joints. Open joints shall be placed in the locations shown on the plans and shall be constructed by the insertion and subsequent removal of a wood strip, metal plate, or other approved material. The insertion and removal of the template shall be accomplished without chipping or breaking the corners of the concrete. Reinforcement shall not extend across an open joint unless so specified on the plans.

907-804.03.18.2--Filled Joints. Poured expansion joints and joints to be sealed with premolded materials shall be constructed similar to open joints. When premolded types are specified, the filler shall be placed in correct position as the concrete on one side of the joint is placed. When the form is removed, the concrete on the other side shall be placed. Adequate water stops of metal, rubber, or plastic shall be carefully placed as shown on the plans.

907-804.03.18.3--Premolded and Preformed Joint Seals. When preformed elastomeric compressive joint seals are specified, the previously formed and cured open joint shall be thoroughly cleaned of all foreign matter, the required adhesive uniformly applied, and the seal installed in accordance with the recommendations of the manufacturer of the seal.

When premolded filler is used for the joints in the roadway slab, the tops shall be adequately sealed with poured joint filler in accordance with details on the plans. Premolded filler shall be permanently fastened to an adjacent concrete surface by appropriate use of copper wire, copper nails, or galvanized nails.

907-804.03.18.4--Steel Joints. The plates, angles, or other structural shapes shall be accurately shaped at the shop to conform to the section of the concrete floor. Fabrication and painting shall conform to the specifications covering those items. When called for on the plans or in the special provisions, the material shall be galvanized in lieu of painting. Care shall be taken to insure that the surface in the finished plane is true and free of warping. Positive methods shall be employed in placing the joints to keep them in correct position during the placing of the concrete. The opening at expansion joints shall be that designated on the plans at normal temperature, and care shall be taken to avoid impairment of the clearance in any manner.

907-804.03.18.5--Water Stops. Adequate water stops of metal, rubber, or plastic shall be placed as shown on the plans. Where movement at the joint is provided for, the water stops shall be of a type permitting movement without injury. They shall be spliced, welded, or soldered to form continuous watertight joints.

907-804.03.18.6--Bearing Devices. Bearing plates, rockers, and other bearing devices shall be constructed according to details shown on the plans. Unless otherwise specified or set in plastic concrete, they shall be set in grout to insure uniform bearing. Structural steel and painting shall conform to the requirements of Section 810 and 814. When specified, the material shall be galvanized in lieu of painting. The rockers or other expansion bearing devices shall be set, considering the temperature at the time of erection, so that the required position of the device is provided.

At all points of bearing contact, concrete members shall be separated from underlying members by dimensioned bearing pads or by methods and/or materials specified on the plans.

When not otherwise specifically provided, contact areas between concrete super-structures and substructures shall be separated by three layers of No. 15 (Type I) roofing felt.

907-804.03.18.7--Friction Joints. Metal friction joints shall consist of plates as indicated on the plans and shall be securely anchored in correct position. All sliding surfaces shall be thoroughly coated with an approved graphite grease. Movement shall not be impeded by the concrete in which the plates are embedded.

907-804.03.18.8--Placing Anchor Bolts, Plates, Castings, Grillage, Conduits, Etc. All anchor bolts, plates, castings, grillage, conduits, etc. indicated on the plans to be placed in or on the concrete shall be placed, set, or embedded as indicated or as directed. These items of the construction shall be set in Portland cement mortar (Subsection 714.11.5) except that anchor bolts may, as permitted by the Engineer, be built into the masonry, set in drilled holes, or placed as the concrete is being constructed by inserting encasing pipe or oiled wooden forms of sufficient size to allow for adjustment of the bolts. After removal of the pipe or forms, the space around the bolts shall be filled with Portland cement mortar (Subsection 714.11.5) completely filling the holes. The bolt shall be set accurately and perpendicular to the plane of the seat.

Anchor bolts which are to be set in the masonry prior to the erection of the superstructure shall be carefully set to proper location and elevation with a template or by other suitable means.

When bed plates are set in mortar, no superstructure or other load shall be placed thereon until this mortar has been allowed to set for a period of at least 96 hours (subject to the restrictions for cold weather concreting in 907-804.03.16.1). The mortar shall be kept well moistened during this period.

Weep hole drains shall be installed in abutments and retaining walls, and roadway drains or scuppers shall be installed in the roadway slabs in accordance with the details shown on the plans.

Where backfill is to be made at weep holes or openings in the structure, sand or stone chimneys or French drains shall be constructed as specified and shall extend through the portion of the backfill to be drained. Except as otherwise provided, the sand, stone, or slag used in this construction shall meet the requirements of Subsection 704.04.

907-804.03.19--Finishing Concrete Surfaces.

907-804.03.19.1--Classes of Finishes. Surface finishes of exposed concrete surfaces shall be classified as follows:

Class 1 - Ordinary Surface Finish
Class 2 - Rubbed or spray Finish
Class 3 - Tooled Finish
Class 4 - Sand-Blast Finish
Class 5 - Wirebrush or Scrubbed Finish
Class 6 - Floated Surface Finish

907-804.03.19.2--Class 1, Ordinary Surface Finish. Immediately following the removal of forms, all fins and irregular projections shall be removed from all surfaces except from those which are not to be exposed or not to be waterproofed. On all surfaces, the cavities produced

by form ties and all other holes, honeycomb spots, broken corners or edges, and other defects shall be thoroughly cleaned, and after having been kept saturated with water for at least three hours shall be carefully pointed and trued with a mortar of cement and fine aggregate mixed in the proportions used in the class of the concrete being finished. Mortar used in pointing shall be not more than one hour old. The mortar patches shall be cured as specified under 907-804.03.17. All construction and expansion joints shall be left carefully tooled and free of mortar and concrete. The joint filler shall be left exposed for its full length with clean and true edges.

The resulting surfaces shall be true and uniform. All surfaces which cannot be repaired to the satisfaction of the Engineer shall be given a Class 2 rubbed finish.

907-804.03.19.3--Class 2, Rubbed or Spray Finish.

907-804.03.19.3.1--Rubbed Finish. After removal of forms, the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as its condition will permit. Immediately before starting this work, the concrete shall be kept thoroughly saturated with water for at least three hours. Surfaces shall be rubbed with a medium course Carborundum stone using a small amount of mortar on its face. The mortar shall be composed of cement and sand mixed in the proportions used in the concrete being finished. Rubbing shall be continued until all form marks, projections, and irregularities have been removed, all voids are filled, and a uniform surface has been obtained. The paste produced by this rubbing shall be left in place at this time.

After all concrete above the surface being treated has been cast, the final finish shall be obtained by rubbing with a fine carborundum stone and water. This rubbing shall continue until the entire surface is of a smooth texture and uniform color.

After the final rubbing is completed and the surface has dried, it shall be rubbed with burlap to remove loose powder and objectionable marks.

907-804.03.19.3.2--Spray Finish. Prior to the spray finish, the concrete shall be given a Class 1 finish in accordance with 907-804.03.19.2, supplemented if necessary with a grout meeting the requirements of Subsection 714.11 with fine aggregate modified to require 100 percent passing the 1.18-mm Sieve.

Grout shall be applied with burlap pads or float sponges, and as soon as the grout has dried the surface shall be brushed to remove all loose grout and the surface left smooth and free of air holes. Surfaces to be sprayed shall be free of efflorescence, flaking coatings, dirt, oil, and other foreign substances. Prior to application of the spray finish, the surfaces shall be free of moisture, as determined by sight and touch, and in a condition consistent with the manufacturer's published recommendations.

The spray finish shall be applied with heavy duty spray equipment capable of maintaining a constant pressure as necessary for proper application. The material shall be applied as recommended by the manufacturer except the rate of application shall not be less than one liter per 1.2 square meter of surface area without prior written approval of the Engineer.

The completed finish shall be tightly bonded to the structure and present a uniform appearance and texture equal to or better than a rubbed finish. If necessary, additional coats shall be sprayed to produce the desired surface texture and uniformity. Upon failure to adhere positively to the structure without chipping or cracking or to attain the desired surface appearance, the coatings shall be completely removed and the surface given a rubbed finish in accordance with 907-804.03.19.3.1, or other approved methods shall be used to obtain the desired surface finish to the satisfaction of the Engineer without additional cost to the State.

907-804.03.19.4--Classes 3, 4, and 5 Finishes. If required, specifications for these finishes will be contained in the special provisions.

907-804.03.19.5--Class 6, Floated Surface Finish. After the concrete has been deposited in place, it shall be consolidated and the surface shall be struck off by means of a strike board and floated with a wooden or cork float. An edging tool shall be used on edges and expansion joints. The surface shall not vary more than three millimeters under a 3-meter straightedge. The surface shall have a granular or matte texture which will not be slick when wet.

907-804.03.19.6--Required Finishes for Various Surfaces.

907-804.03.19.6.1--General. Unless otherwise specified, the top surface of sidewalks, the top horizontal surfaces of footings, and top slabs of box bridges, box culverts, or other structures shall be given a Class 6 finish. All formed concrete surfaces shall be given a Class 1 finish, except on surfaces which are completely enclosed, such as the inside surfaces of cells of box girders, the removal of fins and form marks and the rubbing of mortared surfaces to a uniform color will not be required.

In reference to finishing, exposed surfaces are surfaces or faces which may be seen after all backfill has been placed. Exposed surfaces requiring a Class 2 finish shall be finished at least 300 millimeters below the ground line or the low water elevation, whichever is higher.

The Class 2 finish shall be made upon a Class 1 finish. After the removal of forms the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as the condition of the concrete will permit.

Bridge floors shall be finished in accordance with 907-804.03.19.7.

907-804.03.19.6.2--Finishing Formed Concrete Surfaces of Box Bridges, Box Culverts, Pipe Headwalls, and Minor Structures. The exposed surfaces of wing walls and parapets of box bridges and box culverts to be used as vehicular or pedestrian underpasses shall be given a Class 2 finish. Exposed surfaces of other box culverts or box bridges, pipe culvert headwalls, and other minor structures shall be given a Class 1 finish unless otherwise indicated on the plans.

The exposed surfaces of retaining walls including copings and parapets shall receive a Class 2 finish.

907-804.03.19.6.3--Finishing Formed Concrete Surface of Bridges. All formed concrete bridge surfaces which are exposed shall have a Class 1 or 2 finish as set forth herein unless designated otherwise on the plans.

Bridges with designated surfaces for Class 2 finish are classified as follows:

Group A - Bridges over highways, roads and streets.
Group B - Bridges over waterways and railroads.
Group BB - Twin or adjacent bridges of Group B category.

When a Group B or BB bridge also spans a highway, road or street, exposed concrete surfaces shall be finished in accordance with Group A requirements.

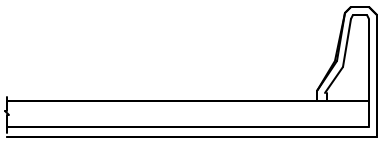
(A) Superstructures. Concrete surfaces to be given a Class 2 finish shall be the exposed surfaces of wings and rails and other exposed surfaces indicated by a double line in Figures 804-1, 804-2, and 804-3.

When a Group B or BB also spans a highway, road or street, the superstructure of spans over and extending one span in each direction beyond the lower level highway, road or street shall be given a Class 2 finish as shown for Group A.

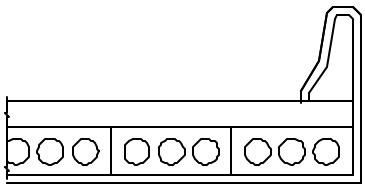
(B) Substructures. Concrete surfaces to be given a Class 2 finish are as follows:

Group A. Exposed surfaces of abutments, end bents, end bent posts, wing walls, railing, retaining walls, parapets, copings, piers, columns, piles, caps, struts or walls between columns or piles, encasement of steel piles, arch rings and spandrel walls.

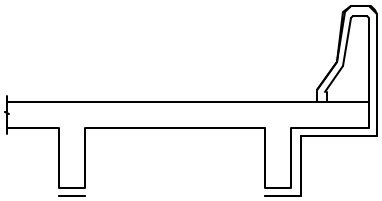
Group B and BB. Exposed surfaces of abutments, wing walls, end bent posts, railing, retaining walls, parapets and copings.



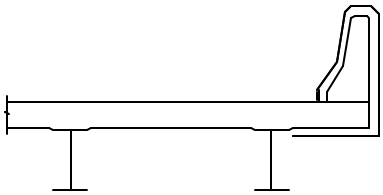
CONCRETE SLAB SPAN & HOLLOW SLAB SPAN



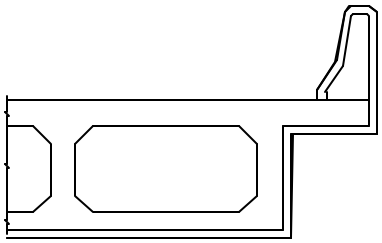
PRECAST HOLLOW SLAB SPAN



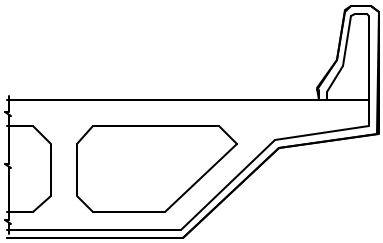
CONCRETE GIRDER SPAN



STEEL BEAM SPAN

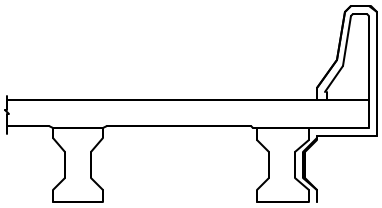


Vertical Face

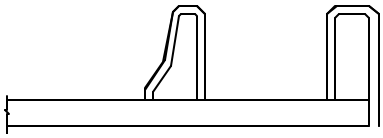


Slope Face

CONCRETE BOX GIRDER SPAN



PRESTRESSED CONCRETE BEAM SPANS



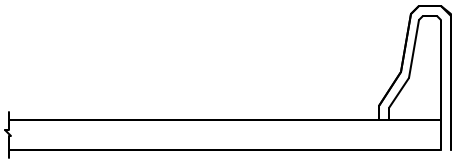
For Finishing On The Remainder Of Superstructure,
See The Appropriate Section On This Page.

TYPICAL SIDEWALK SECTION

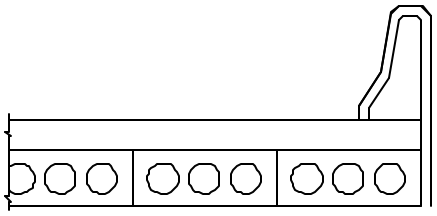
GROUP "A"

BRIDGES OVER HIGHWAYS, ROADS & STREETS

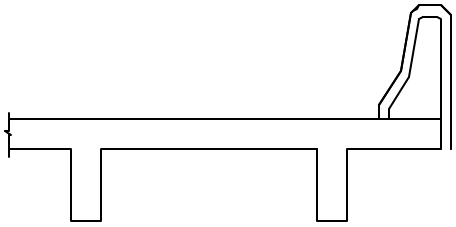
CLASS 2 FINISH - BRIDGE SUPERSTRUCTURES - FIG. 804-1



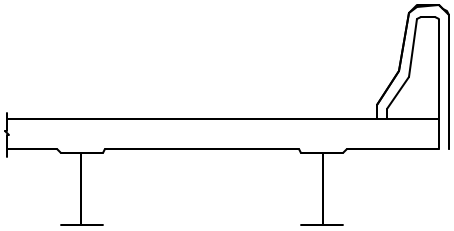
CONCRETE SLAB SPAN & HOLLOW SLAB SPAN



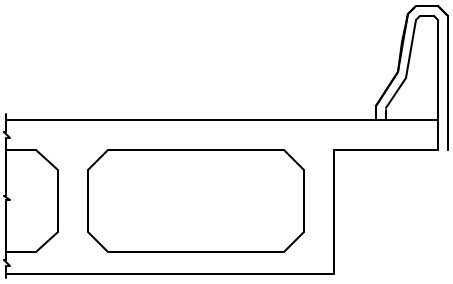
PRECAST HOLLOW SLAB SPAN



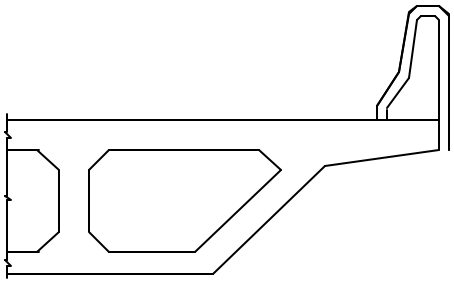
CONCRETE GIRDER SPAN



STEEL BEAM SPAN

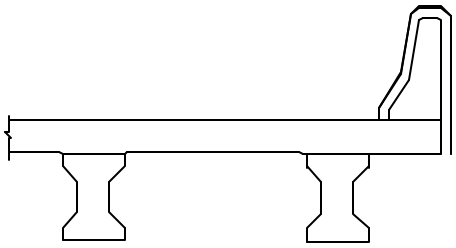


Vertical Face

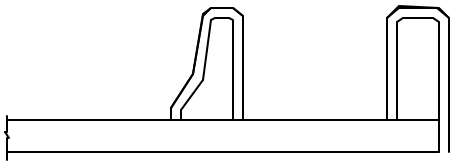


Slope Face

CONCRETE BOX GIRDER SPAN



PRESTRESSED CONCRETE BEAM SPANS



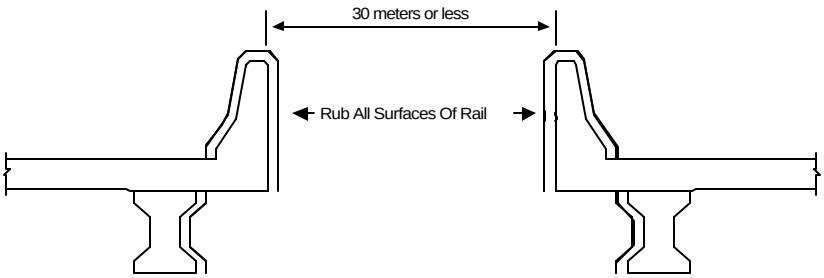
For Finishing On The Remainder Of Superstructure,
See The Appropriate Section On This Page.

TYPICAL SIDEWALK SECTION

GROUP "B"

BRIDGES OVER WATERWAYS AND BRIDGES OVER RAILROAD TRACKS

CLASS 2 FINISH - BRIDGE SUPERSTRUCTURES - FIG. 804-2



GROUP "B B" - ADJACENT BRIDGES

TYPICAL FOR OTHER BRIDGE SPAN TYPES

GROUP "B B"

TWIN or DUAL BRIDGES

CLASS 2 FINISH - BRIDGE SUPERSTRUCTURES - FIG. 804-3

907-804.03.19.7--Finishing Bridge Floors.

907-804.03.19.7.1--General. Concrete bridge decks shall be struck off and finished by the method(s) designated on the plans.

In the event a method is not designated, the Contractor may use either the longitudinal or transverse method subject to the requirements contained in these specifications.

Except when indicated otherwise on the plans, the final surface texture of the bridge floor shall be either a drag, belt or broom finish. The surface texture specified and surface requirements shall be in accordance with the applicable requirements of 501.03.17 and 501.03.18 modified only as the Engineer deems necessary for bridge deck construction operations.

907-804.03.19.7.2--Longitudinal Method. The longitudinal method requires that the strike-off screed be supported on accurately graded and supported bulkheads or templates placed across the full width at the end(s) of the pour. Before the concrete is placed, approved fixed templates or wooden bulkheads of not less than 31-mm lumber shall be placed perpendicular to the centerline of the roadway, or in the case of skew bridges at the angle of skew. The upper surface of the template or bulkheads shall be accurately set to conform to the required grade and crown.

Special attention shall be given to the gutter lines where the strike-off screed cannot reach. The gutters shall be finished by hand and tested with the straight edge. Floor drains shall be set lower than the finished gutter line and finished over. After initial set, the concrete shall be dished out and finished around the drains to form an outlet.

After the concrete has been deposited and rough graded, it shall be struck off by means of a strike-off screed resting on the bulkheads or fixed templates. The strike-off screed shall be of a type satisfactory to the Engineer and shall have sufficient strength to retain its shape under all working conditions. The final surface shall comply with the applicable requirements of Subsections 501.03.17.6 and 501.03.18, and unless otherwise specified in the contract, the final finish under this method shall be the belt finish.

In general, the overall strike-off screed should be trussed, with bracing heavy enough to support the mass of a man without deflecting, and should be adjustable for camber and correction of sag.

The strike-off screed will ride on the bulkheads or fixed templates at the ends of the section being finished. Care shall be taken to see that the bulkhead or fixed template elevations are accurately set since the entire span surface will be controlled by them. The manipulation of the screed shall be such that neither end is raised from the bulkheads or templates during the process.

The concrete shall be struck off by beginning at one curb and proceeding entirely across the span. A slight excess of concrete shall be kept in front of the cutting edge at all times. This operation shall be repeated at least three times. In each case, the strike-off screed shall be picked up and carried back to the point of beginning. No backward strokes will be allowed. The strike-off screed shall be moved along the bulkheads or fixed templates with a combined longitudinal and transverse motion. This operation may be manual or mechanical. Standing or walking in the fresh concrete ahead of the strike- off screed will not be permitted.

907-804.03.19.7.3--Transverse Method. The transverse method requires that the screeding equipment be supported on accurately graded and supported rails placed beyond the gutter lines and parallel with the centerline of the bridge.

The machine shall be so constructed and operated as to produce a bridge floor of uniform density with minimum manipulation of the fresh concrete and achieved in the shortest possible time. Manual transverse methods of screeding will not be permitted.

The finishing machine shall be supported on vertically adjustable rails set a sufficient distance from the gutter line to allow free movement of the screed from gutter line to gutter line. Satisfactory means of load distribution with minimum rail deflection shall be provided. The screed rails for a deck pour shall be completely in place for the full length of the pour and shall be firmly secured prior to placing concrete. The screed rails shall be adjusted as necessary to compensate for settlement and deflection occurring during the screeding operations. Supports for the screed rail shall be located directly over slab overhang support brackets (reference 907-804.03.14.1).

At least one dry run shall be made the length of each pour with a "tell-tail" device attached to the screed carriage to assure the specified clearance to the reinforcing steel.

The screed shall be equipped with a metal cutting edge or other approved mechanical means for accurately fine grading the plastic concrete to the required grade and surface smoothness and shall be supported by a bridging structure sufficiently rigid and heavy to perform operations satisfactorily on concrete of minimum slump without vibration, distortion, and wrecking of forms. The screed shall be mechanically actuated to deliver the screeding action and for travel in a longitudinal direction at a uniform rate along the bridge floor.

The screed shall complete sufficient passes to strike off all of the excess concrete with ample mortar along the entire leading edge to assure filling of low spots. Care shall be taken to remove all objectionable material from the gutters where final hand finishing will be required.

The selection of the transverse method may require the Contractor to furnish bridge deck concrete which contains an approved water-reducing set retarding admixture in the quantities approved by the Engineer at no additional cost to the State. (Reference Subsection 713.02)

Other finishing requirements shall be in accordance with the general requirements in 907-804.03.19.7.1 and as specified on the plans.

907-804.03.19.7.4--Acceptance Procedure for Bridge Deck Smoothness. After the bridge decks and bridge end slabs are completed and preferably before the construction of the bridge railing, they shall be tested for ride quality using a Contractor furnished profilograph. Profile Index Values shall be determined in accordance with Department SOPs and these specifications. The profilograph shall meet the requirements of 907-401.02.6.5. Profiles will be obtained in the wheel paths of the main thru lanes and, where conditions allow, in the wheel paths of any auxiliary lanes or tapers. Profile Index Values for bridge decks and bridge end slabs shall be obtained for all state roads with four lanes or more, on state roads three lanes or less where the current traffic count is 2,000 ADT or higher, or as designated on the plans. Ride quality tests will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge end slab as possible and shall proceed forward across the remainder of the bridge end slab, across the bridge deck and continue across the next bridge end slab to a point where the frontmost wheel of the profilograph reaches the farmost edge of the bridge end slab. Bridges and bridge end slabs not requiring a ride quality test must meet a 3.0 millimeters in 3-meter straightedge requirement in longitudinal and transverse directions. Bridges in horizontal curves having a radius of less than 300 meters at the centerline and bridges within the superelevation transition of such curves are excluded from a test with the profilograph.

The Profile Index Value for bridge decks including the bridge end slabs shall be averaged for the left and right wheel path for each lane and where applicable, each auxiliary lane and taper,

and shall not exceed 1025 millimeters per kilometer for each lane. In addition, individual bumps or depressions exceeding 8.0 millimeters, when measured from a chord length of 7.5 meters, shall be corrected and the surface shall meet a 3.0 millimeters in 5-meter straightedge check made transversely across the deck or slab.

Bridge decks and bridge end slabs not meeting the preceding requirements shall be corrected. Corrective work shall be done at no additional cost to the Department. Corrective work shall consist of grinding the bridge deck in accordance with this specification. All corrective work shall precede final surface texturing. All surface areas, corrected by grinding, shall be sealed with a sealant approved by the Bridge Engineer.

In case the bridge end slabs are to be constructed on a future project, the bridge deck(s) alone shall be tested for ride quality using the acceptance procedure outlined above, except that the ride quality test will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge as possible and shall proceed forward across the bridge deck to a point where the frontmost wheel of the profilograph reaches the farmost edge of the bridge.

Expansion joint installation shall be delayed and the joint temporarily bridged to facilitate operation of the profilograph and grinding equipment across the joint wherever feasible.

It shall be the Contractor's responsibility to schedule profilograph testing. The Contractor shall notify the Department at least five (5) days in advance of profilograph testing. The Contractor shall ensure that the area to be tested has been cleaned and cleared of all obstructions. Profilograph testing of bridge decks and bridge end slabs shall be performed by the Contractor under supervision of the Engineer. All profilograph testing shall be performed at no additional cost to the Department. The Contractor will be responsible for traffic control associated with this testing operation.

907-804.03.19.7.4.1--Grinding Bridge Decks.

907-804.03.19.7.4.1.1--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture portland cement concrete pavement with diamond blades. The effective wheel base of the machine shall not be less than 3.6 meters. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 0.9 meter forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least 0.9 meter wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at cracks, joints, or other locations.

907-804.03.19.7.4.1.2--Grinding. The grinding areas will be determined by the Contractor and approved by the Engineer. The Contractor shall develop and submit to the Engineer for approval a Grinding Plan. The Contractor shall allow up to 45 days for the Department to review the Plan prior to starting any grinding operations. This plan shall include as a minimum:

1. Name of the project superintendent in responsible charge of the grinding operation.
2. List and description of all equipment to be used.
3. Maximum depth of each pass allowed by the grinding equipment.
4. Maximum width of each pass allowed by the grinding equipment.
5. Details of a sequence of the grinding operation.
6. Complete data from Profilograph runs, based on a 8.0-mm bump height, for each wheel path over the entire bridge including bridge end slabs, which shall include profile

index, bump locations (in stations), bump heights and proposed final cross-slopes. When a computerized profilograph is used, a complete printout of the profile including the header information for each wheel path will be required.

7. Data showing reinforcing steel clearance in all areas to be ground.
8. A detailed drawing of the deck showing areas to be ground with station numbers and grinding depths clearly indicated.
9. A description of grinding in areas where drains are in conflict with grind areas.
10. Details of any changes in deck drainage (anticipated ponding, etc.)

The Engineer will evaluate the grinding plan for conformance with the plans and specifications, after which the Engineer will notify the Contractor of any additional information required and/or changes that may be needed. Any part of the plan that is unacceptable will be rejected and the Contractor shall submit changes for reevaluation. All approvals given by the Engineer shall be subject to trial and satisfactory performance in the field, and shall not relieve the Contractor of the responsibility to satisfactorily complete the work.

The construction operation shall be scheduled and proceed in a manner that produces a uniform finished surface. Grinding will be accomplished in a manner that eliminates joint or crack faults while providing positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane. Auxiliary or ramp lane grinding shall transition as required from the mainline edge to provide positive drainage and acceptable riding surface.

The operation shall result in a finished surface that conforms as close as possible to the typical cross-section and the requirements specified in Subsection 907-804.03.19.7.4.1.3.

The Contractor shall establish positive means for removal of grinding residue. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities.

907-804.03.19.7.4.1.3--Final Surface Finish. The grinding process shall produce a finish surface that is as close as possible to grade and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall be approximately 2.0 millimeters higher than the bottoms of the grooves with approximately 173 to 187 evenly spaced grooves per meter. Grinding chip thickness shall be a minimum of 2.0 millimeters thick.

The finished bridge decks and bridge end slabs shall be retested for riding quality using a Contractor furnished profilograph meeting the requirements of 907-401.02.6.5. The finished results shall meet the following conditions:

(a) Individual bumps or depressions shall not exceed 8.0 millimeters when measured from a chord length of 7.5 meters.
(b) The final index value for the bridge deck and bridge end slabs shall be an average of both the right and left wheel paths of each lane and shall not exceed 1025 millimeters per kilometer.

The final profilogram will be furnished to the Engineer for informational purposes.

907-804.03.19.8--Finishing Horizontal Surfaces of Footings or Top Slabs of Box Bridges, Culverts, or Other Structures. The finishing of horizontal surfaces of footing or top slabs of box bridges, culverts, or other structures shall be achieved by placing an excess of material in the form and removing or striking off the excess with a template, forcing the coarse aggregate below the mortar surface. After the concrete has been struck off the surface shall be given a Class 6 finish.

907-804.03.19.9--Finishing Exposed Surfaces of Sidewalks. After the concrete has been deposited in place it shall be consolidated and the exposed surface shall be given a Class 6 finish. An edging tool of the required radius shall be used on all edges and at all expansion joints. The surface shall have a granular texture which will not be slick when wet.

Sidewalk surfaces shall be laid out in blocks with an approved grooving tool as shown on the plans or as directed.

907-804.03.20--Opening Bridges.

907-804.03.20.1--Public Traffic. Unless otherwise specified, concrete bridge floors shall be closed to public highway traffic for a period of at least 21 days after placing concrete.

907-804.03.20.2--Construction Traffic. Unless otherwise specified, concrete bridge floors shall be closed to construction traffic for a period of 7 days after placing concrete and the minimum required compressive strength for the concrete placed is obtained.

907-804.03.21--Final Cleanup. Upon completion of the work all equipment, surplus materials, forms, and waste material shall be removed, the bridge cleaned, and the site of the work given a final cleanup.

907-804.03.22--Precast-Prestressed Concrete Bridge Members.

907-804.03.22.1--General. All installations and plants for the manufacture of precast-prestressed bridge members shall be PCI (Prestressed Concrete Institute) Certified. Bridge members manufactured in plants or installations not so approved will not be accepted for use in the work. The Contractor or other manufacturer shall employ a technician skilled in the adopted system of prestressing to supervise the manufacturing operations. This technician shall be certified according to the guidelines of this specification. The Contractor shall develop and implement a Quality Control Program as per Division I of PCI Quality Control Manual, 3rd Edition. The Quality Control Program shall be submitted to the District Materials Engineer for approval.

907-804.03.22.2--Stressing Requirements. The jacks for stressing shall be equipped with accurate calibrated gages for registering the jacking pressure. Means shall be provided for measuring elongation of strands to at least the nearest millimeter.

Prior to beginning work, the Contractor or manufacturer shall have all jacks to be used, together with their gages, calibrated by an approved laboratory. All jacks and gages shall have an accuracy of reading within two percent. The testing agency shall furnish the Engineer a statement certifying that the jacks and gages meet this requirement. During the progress of the work, if a gage appears to be giving erratic results or if the gage pressure and elongations indicate materially differing stresses, recalibration will be required.

Calibration of jacks and gages shall be repeated at intervals deemed necessary by the Engineer. These intervals for calibration shall not exceed one year.

Shop drawings of prestressed beams, including an erection plan, shall be submitted in duplicate to the Bridge Engineer for approval prior to manufacture of members.

907-804.03.22.2.1--Methods. Plans for the particular bridge members will show prestressing by one of the following methods:

(A) Pretensioning. The prestressing strands are stressed initially. After the concrete is placed, cured, and has attained the compressive strength shown on the plans, the stress is

transferred to the member. The method used for pretensions shall be in accordance to Division II of PCI Quality Control Manual, 3rd Edition.

(B) Posttensioning. The posttensioning tendons are installed in voids or ducts and are stressed and anchored after development of the compressive strength specified on the plans. The voids or ducts are then pressure grouted.

(C) Combined Method. Part of the reinforcing is pretensioned and part posttensioned. Under this method all applicable requirements for the two methods specified shall apply to the respective stressing elements being used.

907-804.03.22.2.2--Alternate Details for Prestressed Members. In the event that the Contractor (Manufacturer) desires to use materials or methods that differ in any respect from those shown on the plans or described in these specifications, the Contractor shall submit for approval full plan details (on acceptable tracings suitable for reproduction) and specifications, and these shall become the property of the Department. In order for alternate materials and/or methods to be considered, they will be required to comply fully with the following:

A. Provisions equal to those stipulated in these specifications.
B. Current AASHTO Specifications.
C. Recommendations of materials manufacturer.
D. Camber tolerance of beams and spans shown on plans.

(Note: Alternate materials and methods will not be authorized on Federal-Aid Projects.)

The Engineer shall be the sole judge as to the adequacy and propriety of any variation of materials or methods.

907-804.03.22.2.3--Stressing Procedure.

(A) General. Stressing shall be performed by suitable jacks working against unyielding anchorages and capable of maintaining the required stress for an indefinite period without movement or yielding. Strands may be stressed singularly or in a group.

The tension to be applied to each strand shall be as shown on the plans. The tension shall be measured by both jacking gages and elongations in the strands and the result shall check within close limits.

It is anticipated that there will possibly be a difference in indicated tension between jack pressure and elongation of about five (5) percent. In this event, the discrepancy shall be placed on the side of slight overstress rather than understress.

In the event of an apparent discrepancy between gage pressure and elongation of as much as five (5) percent, the entire operation shall be carefully checked, and the source of error determined before proceeding further.

Elongation is to be measured after the strands have been suitably anchored, and all possible slippage at the anchorages has been eliminated.

In all stressing operations, the stressing force shall be kept as nearly symmetrical about the vertical axis of the member as practicable.

(B) Pretensioning. All strands to be prestressed shall be brought to a uniform initial tension prior to being given their full pretensioning. This uniform initial tension of approximately 4450 to 8900 newtons shall be measured by suitable means such as a dynamometer so that its value can be used as a check against elongation computed and measured.

After the initial tensioning, the strand or group shall be stressed until the required elongation and jacking pressure is within the limits specified.

When the strands are stressed in accordance with the plan requirements and these specifications and all other reinforcing is in place, the concrete shall be placed in the prepared forms.

Strand stress shall be maintained until the concrete between anchorages has attained the required compressive strength as determined by cylinder tests, after which the strands shall be cut off flush with the ends of column members, and cut as shown on the plans for beams, girders, etc. Strands shall be cut or released in such a manner that eccentricity of prestress will be kept to a minimum and no damage to the member will result. The strand cutting pattern shall be as shown on the plans or as approved by the Bridge Engineer.

(C) Posttensioning. For all posttensioning tendons/bars the anchor plates shall set exactly normal in all directions to the axis of the tendon/bar. Parallel wire anchorage cones shall be recessed within the beams. Tensioning shall not take place until the concrete has reached the compressive strength shown on the plans.

Elongation and jacking pressures shall make appropriate allowance for all possible slippage or relaxation of the anchorage. Posttensioning tendons/bars shall be stressed in the order and manner shown on the plans.

The units shall be tensioned until the required elongations and jacking pressures are attained and reconciled within the limits specified in 907-804.03.22.2.3(A) with such overstresses as approved by the Engineer for anchorage relaxation.

Independent references shall be established adjacent to each anchorage to indicate any yielding or slippage that may occur between the time of initial stressing and final release of the strands.

Straight tendons/bars may be tensioned from one end. Unless otherwise specified, curved tendons shall be stressed by jacking from both ends of the tendons.

(D) Combined Method. In the event that girders are manufactured with part of the reinforcement pretensioned and part posttensioned, the applicable portions of the requirements listed herein shall apply to each type.

907-804.03.22.3--Manufacture.

907-804.03.22.3.1--Forms. The forms used for precast-prestressed bridge members shall meet the requirements of Division V of the PCI Quality Control Manual, 3rd Edition.

907-804.03.22.3.2--Placing and Fastening Steel. Placing and fastening of all steel used for precast-prestressed bridge members shall meet the requirements of Division V of the PCI Quality Control Manual, 3rd Edition.

907-804.03.22.3.3--Holes for Prestressing Tendons/Bars. Holes provided in girders for prestressing tendons/bars shall be formed by means of inflatable rubber tubing, flexible metal conduit, metal tubing, or other approved means.

907-804.03.22.4--Placing and Curing Concrete.

907-804.03.22.4.1--Placing. The placing of concrete shall meet the applicable requirements of Division III of PCI Quality Control Manual, 3rd Edition.

907-804.03.22.4.2--Curing. Initial curing of all members shall be accomplished by fogging, wet burlap, or other approved methods and shall begin as soon as the concrete has hardened sufficiently to withstand surface damage. This curing shall continue until the concrete has attained its initial set; however, the minimum initial curing period shall be three hours and the maximum, five hours. If a retarding agent is used, the minimum period shall be five hours and the maximum seven hours. Following the initial curing, curing shall be resumed by steam, specified as follows.

In steam curing, the member shall be enclosed in a suitable enclosure. The enclosure shall be of sturdy construction to withstand wind and shall be weather-tight to minimize moisture and heat losses. There shall be at least 150 millimeters of space between the enclosure and concrete for proper circulation of steam. Application of the steam shall not be directly on the surface of the concrete.

The steam shall be completely saturated in order to prevent loss of humidity and to provide excess moisture for proper hydration of the cement. When weather conditions require, and when directed, additional moisture shall be applied during steam curing in order that the surface of the concrete will show free moisture. This can be accomplished by use of fogging, spraying, wet burlap, or other approved methods.

The temperature of the interior of the enclosure shall be at least 26°C and not more than 71°C. The ideal temperature is 38°C to 54°C. During initial application of the steam, the ambient air temperature within the enclosure shall increase at a rate not exceeding 22°C per hour.

At least one recording thermometer for each enclosure shall be furnished by the producer. If the enclosure is longer than 100 meters, an additional recording thermometer shall be furnished for each additional 100 meters of length or fraction thereof. Each recording thermometer shall be placed within the enclosure at a point designated by the inspector. An approved portable thermometer shall be furnished by the producer for use by the producer and the Inspector in determining the temperature(s) at other points within the enclosure. The temperature at any point within the enclosure shall not vary more than 5°C from that of the recording thermometer or the average of the recording thermometers if more than one is used.

An alternate means of determining and recording temperatures may consist of the use of temperature bulbs connected electrically to a central recorder. The same number of such bulbs will be required as specified above for recording thermometers, and the central recorder shall record the temperature of each bulb.

Steam may be temporarily suspended, if necessary, during removal of side forms. This operation shall be performed in such a manner that the concrete in any portion of the member shall not be exposed for more than one hour. If directed, due to low humidity or temperature, the exposed concrete shall be kept wet. In discontinuing the steam, it shall be cut off for at least one hour before uncovering the member. No restrictions as to the rate of increase of temperature are applicable for applying steam after this operation is completed.

Steam may be suspended, if necessary, during transfer of the tensioning load (detensioning or posttensioning). No restrictions as to rate of increase or decrease of temperature are applicable to discontinuing or re-applying steam for this operation. However, the concrete shall be kept wet during exposure.

After the stress-transfer operation, curing may be resumed either by steam, cotton mats, wetted burlap, constant fogging, or liquid membrane. When used, liquid membrane shall be white pigmented and shall be applied at the rate of one liter per 3.6 square meters of surface. Membrane shall not be applied to portions of units designated to be bonded to other concrete or which are to receive a Class 2 finish. Such portions shall be cured by other methods.

907-804.03.22.4.3--Removal of Side Forms. Side forms may be removed after the concrete has attained sufficient strength to maintain a true section. In order to obtain "sufficient strength", it may be necessary to cure members for 12 hours or more as prescribed in 907-804.03.22.4.2, or to attain a minimum compressive strength of 7 MPa.

If high-early-strength concrete is obtained by use of low slump (0 to 38 mm) concrete, vacuum process, or other approved methods, side forms may be removed earlier; however, approval of the methods and revision from normal schedules will be made only after inspections by the District and Jackson Laboratories have determined that satisfactory results will be attained by the methods and schedules proposed.

907-804.03.22.4.4--Grouting. The holes through posttensioned members in which the tendons are installed shall be equipped with approved grouting vents. All prestressing tendons to be bonded shall be free of dirt, loose rust, grease, or other deleterious substances. Before grouting, the ducts shall be free of water, dirt, and other foreign substances. The ducts shall be blown out with compressed air until no water comes through the ducts. For long members with draped tendons an open tap at low points may be necessary. After completion of stressing, the annular space between sides of tendon and sides of hole shall be grouted as set in the following paragraphs.

With the grouting vent open at one end of the core hole, grout shall be applied continuously under moderate pressure at the other end until all entrapped air is forced out through the open grout vent, as evidenced by a steady stream of grout at the vent. Whereupon, the open vent shall be closed under pressure. The grouting pressure shall be gradually increased to refusal (at least 520 kPa) and held at this pressure for approximately 10 seconds, and the vent shall then be closed under this pressure.

Portland cement grout shall consist of a mixture of:

1 part Type 1 Portland cement
1/4 part fly ash
3/4 part washed sand (all passing the 1.18-mm sieve and not more than five percent retained on the 600-µm sieve)
15 to 22 liters of water per bag of cement.

A plasticizing admixture, subject to approval by the Engineer, shall be used in accordance with the manufacturer's recommendations.

The grout shall be mixed in a mechanical mixer, shall have the consistency of heavy paint, and shall be kept agitated until placed.

Members shall not be moved before the grout has set, ordinarily at least 24 hours at 26°C or higher.

907-804.03.22.5--Finishing and Marking. Units shall be given a Class 1 finish at the plant and shall be given a Class 2 finish after erection when required.

Recesses in girders at end of diaphragm bars, holes left by form ties, and other surface irregularities shall be carefully cleaned and patched with an approved non-shrink commercial grout or a non-shrinkage mortar of the following composition:

1 part Type 1 cement
1 1/2 to 2 parts fine sand
14 to 21 grams aluminum powder per bag of cement
Approved admixture per Subsection 713.02.

Sufficient water to produce a workable but rather stiff mix.

The units shall be clearly marked in accordance with Department SOP.

907-804.03.22.6--Handling, Storage, and Installation. Posttensioned members may be handled immediately after completion of stressing and grout has set. Pretensioned members may be handled immediately after release of tensioning. In either case, the members shall have developed a minimum compressive strength of 28 MPa prior to handling. In the event stressing is not done in a continuous operation, members shall not be handled before they are sufficiently stressed, as determined by the Engineer, to sustain all forces and bending moments due to handling. In the handling, storage, and transporting of beams or girders, they shall be maintained in an upright position (position as cast) at all times and shall be picked up from points within distance from beam ends equal to beam depth or at pick-up points designated on the plans. Disregard of this requirement and dropping of units may be cause for rejection, whether or not injury to the unit is apparent. Piles shall be picked up and loaded for shipment at points shown by the suspension diagram on the plans. Extreme care shall be used in handling and storing piles to prevent damage. The dropping of a pile may be cause for rejection of same, whether or not there is apparent injury to the member.

Care shall be exercised during the storage, hoisting, and handling of precast units to prevent damage. Damaged units shall be replaced by the Contractor at no additional costs to the State.

When members are stacked for storage, each layer shall be supported at or near the pick-up points. Supports shall be carefully placed in a vertical line in order that the mass of any member will not stress an underlying member. To prevent damage in moving members it is suggested that rigid supports be covered with a cushion of wood or other resilient material.

Members shall not be transported until at least one day after the concrete has reached a compressive strength of 35 MPa or greater strength when shown on the plans.

Piles used in salt water shall not be driven until concrete is seven days old, and air-entrained concrete shall be used in such piles.

After prestressed concrete voided slab units are set, doweled and bolted in their final position the keyways and dowel holes shall be filled with an approved non-shrink grout. Traffic shall not be permitted on the spans for 24 hours after grouting, and heavy construction equipment exceeding 13.6 metric tons will not be permitted on the spans for a period of 72 hours after grouting.

Adjacent slab units that mismatch more than six millimeters shall be adjusted prior to grouting of the shear keys. The maximum deviation from cross-section and grade (exclusive of camber) at any point shall not exceed six millimeters; and when the surface is checked with a three-meter straightedge applied both parallel and perpendicular to the centerline, the variance shall not exceed six millimeters.

In addition to the requirements set out in this section, the applicable requirements of Section 803 shall apply.

907-804.03.22.7--Tolerances for Accepting Precast Prestressed Concrete. Member shall meet the dimension tolerances set by Division VI of PCI Quality Control Manual, 3rd Edition.

907-804.03.22.8--Testing of Materials. The frequency of testing shall meet the requirements of Table 4 of this Special Provision, "CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL", except the minimum requirements of plastic concrete shall meet those in Division VI of PCI Quality Control Manual, 3rd Edition.

907-804.03.22.9--Testing Personnel. Technicians testing Portland cement concrete used in the production of precast-prestressed members shall be PCI Quality Control Technician/Inspector Certified. Each producer of precast-prestressed members shall have at least one PCI Level II certified technician on site during production for Department projects.

907-804.03.22.10--Documentation. The Precast-Prestressed Producer for each Precast-Prestressed concrete bridge member shall maintain documentation as set forth in Department SOPs. Testing and inspection record forms shall be approved by the Central Laboratory and as a minimum contain information listed in Division VI of PCI Quality Control Manual, 3rd Edition.

907-804.03.22.11--Use in the Work. Before any Precast-Prestressed member is incorporated into the work, documentation as described in 907-804.03.22.10 is required along with visual inspection of the member at the bridge construction site. Project Office personnel as per Department SOP will make visual inspection of the prestressed member at the bridge construction site.

907-804.04--Method of Measurement. The volume of concrete, complete and accepted, will be measured in cubic meter. In computing the volume, the neat dimensions shown on the plans will be used, except for such variations as may be ordered in writing by the Engineer. The quantity of concrete involved in fillets, scorings, and chamfers 645 square millimeters or less in cross-sectional area will be neglected. Deductions shall be made for the following:

(1) The volume of structural steel, including steel piling encased in concrete.
(2) The volume of timber piles encased in concrete, assuming the volume to be 0.075 cubic meter per meter of pile.
(3) The volume of concrete piles encased in concrete.
(4) Any deductions in total pay as a result of the formula shown in 907-804.02.13.1, Basis of Acceptance.

No deduction will be made for the volume of concrete displaced by steel reinforcement, floor drains, or expansion joint material that is 25 millimeters or less in width normal to the centerline of the joint. Where railing is bid as a separate item, that portion of the railing above the top of the curb, above the surface of the sidewalk, or above the bridge roadway, as the case may be, will not be included in the measurement of concrete, but will be measured as railing. Massive pylons or posts which are to be excepted from payment for railing and are intended to be measured for as concrete will be so noted on the plans.

When shown on the plans or directed by the Engineer, concrete placed as a seal for cofferdams will be measured by the cubic meter actually in place, except that no measurement will be made of seal concrete placed outside of an area bounded by vertical planes 450 millimeters outside the neat lines of the footing as shown on the plans or as directed and parallel thereto.

Reinforcing steel will be measured and paid for in kilograms as set out in Section 805.

Unless otherwise specified, structural steel will be measured and paid for as set out in Section 810.

Excavation for bridges will be measured and paid for as in Section 801.

Piling will be measured and paid for as set out in Sections 802 and 803.

Railing will be measured and paid for as set out in Section 813.

Prestressed concrete beams and plank will be measured by the meter.

Prestressed concrete voided slab units (interior and exterior with railing) and precast concrete caps (intermediate and end cap with winged abutment wall) of the size and type specified will be measured by the unit complete in place and accepted. Railing, winged abutment walls, grout, tie rods, nuts, washers, bearing pads and other appurtenances will not be measured for separate payment.

907-804.05--Basis of Payment. Concrete will be paid for at the contract unit price per cubic meter for the class or classes specified, complete in place. Prestressed concrete beams and plank will be paid for at the contract unit per meter of specified size and type.

Prestressed concrete voided slab units and precast caps will be paid for at the contract unit price per each for the specified types and sizes, complete in place and accepted; which price shall be full compensation for furnishing, hauling and erecting the members; including all prestressing reinforcement and other reinforcement in the members. Payment at the contract unit prices bid shall be full compensation for furnishing all materials, equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-804-A:	Bridge Concrete (Class ____)	- per cubic meter
907-804-B:	Box Bridge Concrete (Class ___)	- per cubic meter
907-804-C:	_____ (Length) Prestressed Concrete Beam, Type _____	- per meter
907-804-D:	_____ (Length) Prestressed Concrete Plank	- per meter
907-804-E:	_____ (Length) Prestressed Concrete Voided Slab (_*_ Int.)	- per each
907-804-F:	_____ (Length) Prestressed Concrete Voided Slab (_*_ Ext.)	- per each
907-804-G:	_____ (Length) Precast Concrete Caps (End Unit with Wall)	- per each
907-804-H:	_____ (Length) Precast Concrete Caps (Intermediate Unit)	- per each

*Description

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-815-4M **CODE: (IS)**

DATE: **12/10/2001**

SUBJECT: **Geotextile for RipRap**

Section 907-815, RipRap and Slope Paving, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby modified as follows:

907-815.05--Basis of Payment. Delete the last pay item number, description and unit in Subsection 815.05 on page 815-5 and substitute the following:

907-815-E: Geotextile Fabric under _____
Description
(Type ___*___) (AOS ___*___) - per square meter

* When not designated, see 714.13.

SPECIAL PROVISION NO. 906-3

Training Special Provisions

This Training Special Provision supersedes subparagraph 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," (Attachment 1), and is in implementation of 23 U.S.C. 140(a).

As part of the Contractor's equal employment opportunity affirmative action program training shall be provided as follows:

> The Contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

The number of trainees to be trained under this special provision will be as indicated in the bid schedule of the contract.

In the event that a Contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also insure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the State highway agency for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeymen status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a

journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the State highway agency and the Federal Highway Administration. The State highway agency and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the engineer, reimbursement will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A

Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

SPECIAL PROVISION NO. 906-4

2000 MISSISSIPPI DEPARTMENT OF TRANSPORTATION ON-THE-JOB TRAINING PROGRAM

ALTERNATE TRAINING SPECIAL PROVISION

PURPOSE

The purpose of the On-The-Job Training (OJT) Program is to provide training for minority, female and economically disadvantaged individuals in order that they may develop marketable skills and gain journey status in the skilled craft classifications in which they are being trained.

INTRODUCTION

The Year 2000 OJT Program has been developed through the partnering efforts of the Road Builders of Mississippi, the Federal Highway Administration (FHWA) and the Mississippi Department of Transportation (MDOT).

The OJT Program has been designed for use by participating contractors and subcontractors in meeting their training needs. The objective of the OJT Program is to develop skilled workers in the skilled craft trade areas of highway construction who are sufficiently trained to be productive employees in the highway construction industry work force.

The success of the OJT Program will require that contractors and subcontractors follow uniform and basic procedures in training in keeping records of trainees' progress toward journey status, and in reporting trainees' successful completion or termination from the program.

FUNDING

MDOT will establish an annual OJT Fund in which, contractors and subcontractors may bill the Department directly for hours worked by trainees. The funding source of this money will be state and federal funds for MDOT's OJT Program, with a cap of $50,000.00.

PROCEDURE

Trainee positions will be selected by prime and sub contractors and will not be project specific. Provided below are some of the factors that will be used to establish the number of trainee positions each contracting year, they are:

- number of contracts let during a contracting year
- dollar volume
- type of project
- location
- available trainees
- training program(s) submitted by contractor

Each contractor will submit a yearly certification with regard to their participation in the OJT Program. This certification will also identify the number of trainees each prime or sub contractor intends to train on either federal or state funded highway projects.

DISBURSEMENT OF FUNDS

Contractors will be paid $3.00 rate for each hour of training performed by all trainees in an approved training program. Program reimbursements will be made directly to the prime or sub contractor. Request for payment will be submitted to the Contract Administration Office for approval.

Contractors must complete the form providing the following information to be reimbursed.

Contractor's Name
Mailing Address

Trainee Name _____

Social Security Number _____

Type of Program _____

Total Number of Training Hours Required _____

Training Hours Completed for Reimbursement _____

Type of Statement: Monthly _____ Quarterly _____ Annual _____

Work Period or Time Frame	Project Number	Total Hours Worked By Project	Cumulative Hours in Program	Number of Hours to be paid on this Voucher

I hereby certify that this information is true... (Must have customary certification of information).

Signed by: _____ Date: _____

TRAINING PROGRAM APPROVAL

A. To use the OJT Program on highway construction projects, the contractor will notify the Department Contract Administration Office using the Request for On-the-Job Training Program Approval. The notification must include the following information:

- Trainee Starting Date
- Project number (s) trainee starting on
- Training program (classification) to be used; and
- Anticipated date of trainee employment
- Number of classroom training hours by subject

B. If a contractor chooses to use a training program different from those listed in the OJT Program, or desires to train in a different classification, the training program must be submitted in its entirety for approval by the Department and FHWA. The training proposal must include the following:

1. The primary objective of the program: To provide training for minority, female and economically disadvantaged individuals for development to full journey status in the work classifications in which they are being trained.

2. The minimum number of hours and type of training the trainee will receive as it relates to each specific task required to achieve journey status.

3. Minimum wage.

4. Trainee certification of completion.

5. Records and reports submitted to the Contract Administration Office on a quarterly basis.

DEPARTMENT RESPONSIBILITY

1. Department project staff will monitor trainees on the project. They will monitor payrolls for payment of correct wage rates and fringe benefits. The Contract Administration Office will maintain a master list by contractor name, project number, trainee name and trainee social security number to aid project staff in monitoring trainees who work on multiple projects.

2. The Contract Administration Office may elect to interview trainees periodically during the training period to assess their performance and training program. To facilitate the interviews, the Contract Administration Office will contact contractors for the location of the trainees.

CONTRACTOR RESPONSIBILITY

1. Trainees must be identified on payrolls (i.e. dragline trainee).

2. The contractor will submit a quarterly report of training hours completed by trainees to the Contract Administration Office by the tenth working day of the first month of the new quarter using the Federal-Aid Highway Construction Contractors Monthly Training Report form (CAD-322). The trainee must also be provided a copy of the report.

3. When any trainee completes a program, or is terminated for a reason or reasons other than successful completion, the contractor must include the date of completion or an explanation for the termination and date of termination on the quarterly training report.

4. The contractor will assign each trainee to a particular person--either a supervisor or a journeyman/woman who is proficient in the craft the trainee is being trained in, to ensure that timely instructional experience is received by the trainee. This person, cooperating with the appropriate company personnel, will see that proper

records and the total intended training hours are completed during the allocated number of hours set up in the classification criteria.

5. The contractor has the prerogative of terminating the training period of the trainee and advancing the trainee to journey status. Approval requests must be submitted to the Contract Administration Office with an explanation (***refer to 2 above***).

6. Upon notification from the contractor, the Department will issue a certificate of completion to the trainee.

7. Trainees may be transferred to state-aid highway construction projects in order to complete the training program. If transfers are made the Contract Administration Office must be notified on the Quarterly Reporting Form. All of the training hours completed by trainees will count toward overall program completion.

8. Program reimbursements will be made directly to the prime or sub contractor.

CLASSROOM TRAINING

1. Classroom training programs must be pre-approved by the Department, if the contractor wishes to count the hours toward the trainee's training program.

2. Contractors will be reimbursed for classroom training hours after the trainee has completed 20 hours of work on a highway construction project.

3. Reimbursement for classroom training will be limited to 40 hours per trainee per construction season.

- ***NOTE:*** All proposed classroom training must be submitted as part of the trainee's OJT training program.

WAGE RATE

1. The wage rate for all trainees is $5.15, during their OJT training program. Trainees shall be paid full fringe benefit amounts, where applicable. At the completion of the training program, the trainee shall receive the wages of a skilled journey.

2. For the purpose of this training program, a quarter does not represent three months. The first two quarters of a 500-hour training program would end after 250 hours. On a 750-hour training program, the first two quarters would end after 375 hours, the third quarter after 560 or an additional 186 hours or work and the fourth after 750 hours.

JOURNEY WORKER RATIO

The ratio of trainee to journey will be less than 1:4 and not more than 1:10.

RECRUITMENT AND SELECTION PROCEDURES

A. Prerequisites for Trainees

To be qualified for enrollment in the OJT Program, trainees must possess basic physical fitness for the work to be performed, dependability, willingness to learn and ability to follow instructions.

B. Licenses

Truck driver trainees must possess appropriate driver permits or licenses for the operation of Class A, B and C trucks. However, when an instructional permit is used in lieu of a license, the trainee must be accompanied by an operator who:

1. Holds a license corresponding to the vehicle being operated;

2. Has had at least one year of driving experience; and

3. Is occupying the seat next to the driver.

C. Recruitment

1. Notices and posters setting forth the contractor's Equal Employment Opportunity Policy and availability of training programs will be placed in areas readily accessible to employees, applicants for employment and potential employees.

2. The contractor must target minority, female or economically disadvantaged trainees.

3. The contractor will conduct systematic and direct recruitment through public and private employee referral sources. Contractors must submit the trainee's name and completed application form to the Contact Administration Office for review and approval. Approval must be obtained before the trainee can begin work under the training program.

4. Present employees will be screened for upgrading.

D. Selection

1. The selection and employment of a person by participating contractor shall qualify the person for the OJT Program.

2. Selection will be made without regard to race, color, religion, sex, age or national origin and shall be completely nondiscriminatory.

3. Employment of trainees will be in accordance with the work force requirements of the contractor. Each contractor will hire and train the trainees for uses in their own organization.

4. Written certification of individuals under the category of economically disadvantaged can be provided to the contractor at the time of the interview. This certification must then be provided to the Contract Administration Office with the other required information as part of the approval process for trainees.

- ***NOTE:*** The OJT Program is to provide training for minority, female and economically disadvantaged individuals in order that they may develop marketable skills and gain journey status in the skilled craft classifications in which they are being trained. However, this program does not exclude trainees that are not members of the above groups.

S E C T I O N 9 0 5 - P R O P O S A L

Date _____

Mississippi Transportation Commission
Jackson, Mississippi

Sirs: The following proposal is made on behalf of _____
_____ of _____
_____
for constructing the following designated project(s) within the time(s) hereinafter specified.

The plans are composed of drawings and blue prints on file in the offices of the Mississippi Department of Transportation, Jackson, Mississippi.

The Specifications are the current Standard Specifications and Supplemental Specifications of the Mississippi Department of Transportation approved by the Federal Highway Administration, except where superseded or amended by the plans, Special Provisions and Notice(s) to Bidders attached hereto and made a part thereof.

I (We) certify that I (we) possess a copy of said Standard and Supplemental Specifications.

Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporation. I (We) certify that I (we) have carefully examined the Plans, the Specifications, including the Special Provisions and Notice(s) to Bidders, herein, and have personally examined the site of the work. On the basis of the Specifications, Special Provisions, Notice(s) to Bidders, and Plans, I (we) propose to furnish all necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials in the manner specified. I (We) understand that the quantities mentioned herein are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid, in accordance with the above.

Attached hereto is a certified check, cashier's check or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law).

INSTRUCTION TO BIDDERS: Alternate and Optional Items on Bid Schedule.

1. Two or more items entered opposite a single unit quantity WITHOUT DEFINITE DESIGNATION AS "ALTERNATE ITEMS" are considered as "OPTIONAL ITEMS". Bidders may or may not indicate on bids the Optional Item proposed to be furnished or performed WITHOUT PREJUDICE IN REGARD TO IRREGULARITY OF BIDS.

2. Items classified on the bid schedule as "ALTERNATE ITEMS" and/or "ALTERNATE TYPES OF CONSTRUCTION" must be preselected and indicated on bids. However, "Alternate Types of Construction" may include Optional Items to be treated as set out in Paragraph 1, above.

3. Optional items not preselected and indicated on the bid schedule MUST be designated in accordance with Subsection 907-102.06 prior to or at the time of execution of the contract.

4. Optional and Alternate items designated must be used throughout the project.

I (We) further propose to perform all "force account or extra work" that may be required of me (us) on the basis provided in the Specifications and to give such work my (our) personal attention in order to see that it is economically performed.

S E C T I O N 9 0 5 -- P R O P O S A L (CONTINUED)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for **five percent (5%) of total bid** and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. _____ DATED _____ ADDENDUM NO. _____ DATED _____
ADDENDUM NO. _____ DATED _____ ADDENDUM NO. _____ DATED _____

TOTAL ADDENDA: _____
(Must agree with total addenda
issued prior to opening of bids)

Respectfully submitted, _____
Contractor

BY _____

TITLE _____

ADDRESS _____

Date _____, _____

(To be filled in if a corporation.)

Our corporation is chartered under the Laws of the State of _____ and the names, titles and business addresses of the executives are as follows:

_____
President Address

_____
Secretary Address

_____
Treasurer Address

The following is my (our) itemized proposal.

Revised 11/26/2003

SECTION 905

PROPOSAL (Sheet No. 2- 1)

CONSTRUCTION ON APPROXIMATELY 14 KM OF U.S. 84 FROM LAWRENCE COUNTY LINE TO EAST OF PRENTISS, KNOW AS FEDERAL AID PROJECT NO. NH-0015-02(078)PH2 / 101173, IN THE COUNTY OF JEFFERSON DAVIS, STATE OF MISSISSIPPI.

I (We) agree to complete the entire project within the specified contract time.

*** SPECIAL NOTICE TO BIDDERS ***

BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED

BIDS WILL NOT BE CONSIDERED UNLESS THE BID CERTIFICATE LOCATED AT THE END OF THE BID SHEETS IS SIGNED

BID SCHEDULE

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
					DIRECT PAY ITEMS				
(10)	201-A			lump sum	Clearing and Grubbing	XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX	XXXX XXXX XXXX XXXX		
(20)	201-B		1	hectare	Clearing and Grubbing				
(30)	202-B		352	meter	Removal of Pipe (All Sizes)				
(40)	202-B		5	each	Removal of Headwall				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(50)	202-B		3287	square meter	Removal of Asphalt Pavement (All Depths)				
(60)	202-B		85	square meter	Removal of Concrete Paved Ditch				
(70)	202-B		1512	square meter	Removal of Concrete Pavement (All Depths)				
(80)	907-203-A	(E)	717 756	cubic meter	Unclassified Excavation (FM)				
(90)	907-203-EX	(E)	332 610	cubic meter	Borrow Excavation (AH)(FME) (Class B9)				
(100)	907-203-EX	(E)	30 995	cubic meter	Borrow Excavation (AH)(FME) (Class B9-6)				
(110)	203-G	(E)	125 109	cubic meter	Excess Excavation (FM) (AH)				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(120)	206-A	(S)	7053	cubic meter	Structure Excavation				
(130)	206-B	(E)	437	cubic meter	Select Material for Undercuts (Contractor Furnished)(FM)				
(140)	212-B		750 700	square meter	Standard Ground Preparation				
(150)	907-213-A		503	metric ton	Agricultural Limestone				
(160)	213-B		75	metric ton	Combination Fertilizer (13-13-13)				
(170)	213-C		75	metric ton	Superphosphate				
(180)	214-A		1727	kilogram	Seeding (Bermudagrass)				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(190)	214-A		2102	kilogram	Seeding (Bahiagrass)				
(200)	214-A		638	kilogram	Seeding (Tall Fescue)				
(210)	214-A		1051	kilogram	Seeding (Sericea Lespedeza)				
(220)	214-A		864	kilogram	Seeding (Crimson Clover)				
(230)	215-A		338	metric ton	Vegetative Materials for Mulch				
(240)	216-A		10 214	square meter	Solid Sodding				
(250)	907-217-A		24 068	square meter	Ditch Liner				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(260)	219-A		929	1000 liters	Watering	6	.0000	5,574	.00
(270)	220-A		35	hectare	Insect Pest Control	75	.0000	2,625	.00
(280)	221-A	(S)	2930	cubic meter	Portland Cement Concrete Paved Ditch				
(290)	907-223-A		0	hectare	Mowing	75	.0000	0	.00
(300)	907-234-A		18 369	meter	Temporary Silt Fence				
(310)	235-A		19 262	bale	Temporary Erosion Checks				
(320)	236-A		49	each	Silt Basin (Type D)				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(330)	239-A		492	meter	Temporary Slope Drains				
(340)	310-B	(GM)	2661	cubic meter	Size I Stabilizer Aggregate, Coarse (LVM)				
(350)	601-A	(S)	2176	cubic meter	Class "B" Structural Concrete				
(360)	601-B	(S)	39	cubic meter	Class "B" Structural Concrete, Minor Structures				
(370)	602-A	(S)	240 879	kilogram	Reinforcing Steel				
(380)	603-C-A	(S)	990	meter	450-mm Reinforced Concrete Pipe, Class III				
(390)	603-C-A	(S)	375	meter	600-mm Reinforced Concrete Pipe, Class III				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(400)	603-C-A	(S)	92	meter	750-mm Reinforced Concrete Pipe, Class III				
(410)	603-C-A	(S)	33	meter	900-mm Reinforced Concrete Pipe, Class III				
(420)	603-C-A	(S)	88	meter	1050-mm Reinforced Concrete Pipe, Class III				
(430)	603-C-A	(S)	720	meter	1200-mm Reinforced Concrete Pipe, Class III				
(440)	603-C-A	(S)	70	meter	1350-mm Reinforced Concrete Pipe, Class III				
(450)	603-C-A	(S)	112	meter	1650-mm Reinforced Concrete Pipe, Class III				
(460)	603-C-A	(S)	17	meter	1800-mm Reinforced Concrete Pipe, Class III				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(470)	603-C-A	(S)	102	meter	1200-mm Reinforced Concrete Pipe, Class IV				
(480)	603-C-B	(S)	35	each	450-mm Reinforced Concrete End Section				
(490)	603-C-B	(S)	16	each	600-mm Reinforced Concrete End Section				
(500)	603-C-B	(S)	4	each	750-mm Reinforced Concrete End Section				
(510)	603-C-B	(S)	2	each	900-mm Reinforced Concrete End Section				
(520)	603-C-B	(S)	2	each	1050-mm Reinforced Concrete End Section				
(530)	603-C-B	(S)	16	each	1200-mm Reinforced Concrete End Section				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(540)	603-C-B	(S)	2	each	1350-mm Reinforced Concrete End Section				
(550)	603-C-B	(S)	4	each	1650-mm Reinforced Concrete End Section				
(560)	603-C-E	(S)	64	meter	1485-mm x 915-mm Concrete Arch Pipe, Class A III				
(570)	603-C-E	(S)	69	meter	2235-mm x 1370-mm Concrete Arch Pipe, Class A III				
(580)	603-C-F	(S)	6	each	1485-mm x 915-mm Concrete Arch Pipe End Section				
(590)	603-C-F	(S)	6	each	2235-mm x 1370-mm Concrete Arch Pipe End Section				
(600)	603-S-B	(S)	1	each	450-mm Branch Connections (Stub into 1800-mm Concrete Pipe)				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(610)	907-603-ALT	(S)	635	meter	450-mm Type A Alternate Pipe				
(620)	907-603-ALT	(S)	140	meter	600-mm Type A Alternate Pipe				
(630)	907-603-ALT	(S)	56	meter	750-mm Type A Alternate Pipe				
(640)	604-B		4140	kilogram	Gratings				
(650)	605-O	(S)	300	meter	150-mm Perforated Sewer Pipe for Underdrains (SDR 23.5)				
(660)	605-P	(S)	30	meter	150-mm Non-perforated Sewer Pipe for Underdrains (SDR 23.5)				
(670)	605-W	(GM)	46	cubic meter	Filter Material for Combination Storm Drain &/or Underdrains, Type A (FM)				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(680)	605-W	(GM)	26	cubic meter	Filter Material for Combination Storm Drain &/or Underdrains, Type B (FM)				
(690)	907-605-AA		615	square meter	Geotextile Fabric for Subsurface Drainage (Type V)				
(700)	907-617-A		262	each	Right-of-Way Markers (Type II)				
(710)	619-D1		75	square meter	Standard Roadside Construction Signs (less than 0.9 square meter)				
(720)	619-D2		114	square meter	Standard Roadside Construction Signs (0.9 square meter or more)				
(730)	619-G4		653	meter	Barricades (Type III) (Single Faced)				
(740)	619-G4		24	meter	Barricades (Type III) (Double Faced)				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(750)	619-G5		205	each	Free Standing Plastic Drums				
(760)	621-A		1	each	Field Laboratory				
(770)	907-690-A		1035	kilogram	Portland Cement Grout for Plugging Abandoned Wells				
(780)	907-501-K		7908	square meter	Transverse Grooving				
(790)	801-A	(S)	395	cubic meter	Foundation Excavation for Bridges				
(800)	803-E	(S)	2750	meter	350-mm x 350-mm Prestressed Concrete Piling				
(810)	803-E	(S)	5165	meter	400-mm x 400-mm Prestressed Concrete Piling				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(820)	803-E	(S)	1518	meter	450-mm x 450-mm Prestressed Concrete Piling				
(830)	907-803-W	(S)	16	each	PDA Test Piles				
(840)	907-803-X	(S)	9	each	PDA Restrike				
(850)	907-803-Y	(S)	6	each	Static Load Test				
(860)	907-804-A	(S)	3218	cubic meter	Bridge Concrete (Class AA)				
(870)	907-804-C	(S)	2568	meter	12-m Prestressed Concrete Beams, Type I+50				
(880)	907-804-C	(S)	320	meter	18-m Prestressed Concrete Beams, Type II+50				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(890)	907-804-C	(S)	510	meter	30-m Prestressed Concrete Beams, Type IV				
(900)	907-804-C	(S)	208	meter	17.5-m Prestressed Concrete Beams, Type BT-1830				
(910)	907-804-C	(S)	459	meter	38.5-m Prestressed Concrete Beams, Type BT-1830				
(920)	907-804-C	(S)	193	meter	16.25-m Prestressed Concrete Beams, Type BT-1830				
(930)	805-A	(S)	251 443	kilogram	Reinforcement				
(940)	813-A	(S)	1166	meter	Concrete Railing				
(950)	815-A	(S)	3243	metric ton	Loose Riprap, (Size 136 kg)				

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
(960)	815-D	(S)	161	cubic meter	Concrete Slope Paving				
(980)	907-815-E	(S)	1664	square meter	Geotextile Fabric under Riprap				
(990)	907-815-F	(S)	129	metric ton	Sediment Control Stone				

SUBTOTAL - DIRECT PAY ITEMS.....$_____

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE DOLLAR	UNIT PRICE CENT	ITEM TOTAL DOLLAR	ITEM TOTAL CENT
					DEPENDENT PAY ITEMS				
(1000)	618-A			lump sum	Maintenance of Traffic	XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX	XXXX XXXX XXXX XXXX		
(1010)	620-A			lump sum	Mobilization	XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX	XXXX XXXX XXXX XXXX		
(1020)	907-699-A			lump sum	Roadway Construction Stakes	XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX	XXXX XXXX XXXX XXXX		

SUBTOTAL - DEPENDENT ITEMS.....$_____

TOTAL BID - DIRECT AND DEPENDENT ITEMS.....$_____

COMPLETE ITEM NOS. 1, 2, AND/OR 3 AS APPROPRIATE. SEE NOTICE TO BIDDERS NO.724M AND SUPPLEMENT.

1. I/We agree that no less than percent shall be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE and WBE).

2. Classification of Bidder: Small Business (DBE)_____ Small Business (WBE)_____

3. A joint venture with a Small Business (DBE/WBE): YES _____

*** SIGNATURE STATEMENT ***

BIDDER ACKNOWLEDGES THAT HE/SHE HAS CHECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFIED THAT THE FIGURES SHOWN THEREIN CONSTITUTE THEIR OFFICIAL BID.

_____
BIDDER'S SIGNATURE

CONDITIONS FOR COMBINATION BID

If a bidder elects to submit a combined bid for two or more of the contracts listed for this month's letting, the bidder must complete and execute these sheets of the proposal in each of the individual proposals to constitute a combination bid. In addition to this requirement, each individual contract shall be completed, executed and submitted in the usual specified manner.

Failure to execute this Combination Bid Proposal in each of the contracts combined will be just cause for each proposal to be received and evaluated as a separate bid.

* * * *

SECTION 905 - COMBINATION BID PROPOSAL (Continued)

Project Number	Pay Item Number	Unit	Unit Price Reduction	Total Item Reduction	Total Contract Reduction
1. _____	_____ _____	_____ _____	_____ _____	_____ _____	
2. _____	_____ _____	_____ _____	_____ _____	_____ _____	
3. _____	_____ _____	_____ _____	_____ _____	_____ _____	
4. _____	_____ _____	_____ _____	_____ _____	_____ _____	
5. _____	_____ _____	_____ _____	_____ _____	_____ _____	
6. _____	_____ _____	_____ _____	_____ _____	_____ _____	
7. _____	_____ _____	_____ _____	_____ _____	_____ _____	
8. _____	_____ _____	_____ _____	_____ _____	_____ _____	

Project Number	Pay Item Number	Unit	Unit Price Reduction	Total Item Reduction	Total Contract Reduction
9. _____	_____ _____	_____ _____	_____ _____	_____ _____	
10. _____	_____ _____	_____ _____	_____ _____	_____ _____	

C. If option (c) has been selected, then initial and complete one of the following, go to II. and sign Combination Bid Proposal.

_____ I (We) desire to be awarded work not to exceed a total monetary value of $ _____.

_____ I (We) desire to be awarded work not to exceed _____ number of contracts.

II. It is understood that the Mississippi Transportation Commission not only reserves the right to reject any and all proposals, but also the right to award contracts upon the basis of lowest separate bids or combination bids most advantageous to the State.

It is further understood and agreed that the Combination Bid Proposal is for comparison of bids only and that each contract shall operate in every respect as a separate contract in accordance with its proposal and contract documents.

I (We), the undersigned, agree to complete each contract on or before its specified completion date.

SIGNED _____

_____

_____

Certification with regard to the Performance of Previous Contracts or Subcontracts subject to the Equal Opportunity Clause and the filing of Required Reports

The Bidder ____, proposed Subcontractor ____, hereby certifies that he has ____, has not ____, participated in a previous contract or subcontract subject to the Equal Opportunity Clause, as required by Executive Orders 10925, 11114, or 11246, and that he has ____, has not ____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

_____
(COMPANY)

BY _____

_____
(TITLE)

DATE: _____

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and Subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime Contractors and Subcontractors who have participated in a previous contract or subcontract subject to the Executive orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such Contractors submit a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

CERTIFICATION
(Execute in duplicate)

State of Mississippi

County of _____

I,_____,
(Name of person signing certification)

individually, and in my capacity as _____ of
(Title)

_____ do hereby certify under
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that _____

_____, Bidder
(Name of Firm, Partnership, or Corporation)

on Project No. _____,

in _____ Count ____, Mississippi, has not either

directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds:

a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in (b) above; and

d) Have not within a three-year period preceding this application/ proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Initial here "_____" if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

The bidder further certifies that the certification requirements contained in Section XI of Form FHWA 1273, will be or have been included in all subcontracts, material supply agreements, purchase orders, etc. except those procurement contracts for goods or services that are expected to be less than the Federal procurement small purchase threshold fixed at 10 U.S.C. 2304(g) and 41 U.S.C. 253(g) (currently $25,000) which are excluded from the certification requirements.

The bidder further certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions will be completed and submitted.

The certification contained in (1) and (2) above is a material representation of fact upon which reliance is placed and a prerequisite imposed by Section 1352, Title 31, U.S. Code prior to entering into this contract. Failure to comply shall be subject to a civil penalty of not less than $10,000 and not more than $100,000. The bidder shall include the language of the certification in all subcontracts exceeding $100,000 and all subcontractors shall certify and disclose accordingly.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on _____ _____

Signature

(11/23/92F)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

CERTIFICATION
(Execute in duplicate)

State of Mississippi

County of _____

I,_____,
(Name of person signing certification)

individually, and in my capacity as _____ of
(Title)

_____ do hereby certify under
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that _____

_____, Bidder
(Name of Firm, Partnership, or Corporation)

on Project No. _____,

in _____ Count ____, Mississippi, has not either

directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds:

a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in (b) above; and

d) Have not within a three-year period preceding this application/ proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Initial here "_____" if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

The bidder further certifies that the certification requirements contained in Section XI of Form FHWA 1273, will be or have been included in all subcontracts, material supply agreements, purchase orders, etc. except those procurement contracts for goods or services that are expected to be less than the Federal procurement small purchase threshold fixed at 10 U.S.C. 2304(g) and 41 U.S.C. 253(g) (currently $25,000) which are excluded from the certification requirements.

The bidder further certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions will be completed and submitted.

The certification contained in (1) and (2) above is a material representation of fact upon which reliance is placed and a prerequisite imposed by Section 1352, Title 31, U.S. Code prior to entering into this contract. Failure to comply shall be subject to a civil penalty of not less than $10,000 and not more than $100,000. The bidder shall include the language of the certification in all subcontracts exceeding $100,000 and all subcontractors shall certify and disclose accordingly.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on _____ _____

Signature

(11/23/92F)

S E C T I O N 9 0 2

CONTRACT FOR _____

LOCATED IN THE COUNTY OF _____

STATE OF MISSISSIPPI,

COUNTY OF HINDS

This contract entered into by and between the Mississippi Transportation Commission on one hand, and the undersigned contractor, on the other witnesseth;

That, in consideration of the payment by the Mississippi Transportation Commission of the prices set out in the proposal hereto attached, to the undersigned contractor, such payment to be made in the manner and at the time of times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all materials and equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertising according to law, the Advertisement, the instructions to bidders, the proposal for the contract, the specifications, the revisions of the specifications, the special provisions, and also the plans for the work herein contemplated, said plans showing more particularly the details of the work to be done, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid; or from the action of the elements and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work, exceptions being those specifically set out in the contract; and for faithfully completing the whole work in good and workmanlike manner according to the approved Plans, Specifications, Special Provisions, Notice(s) to Bidders and requirements of the Mississippi Department of Transportation.

It is further agreed that the work shall be done under the direct supervision and to the complete satisfaction of the Executive Director of the Mississippi Department of Transportation, or his authorized representatives, and when Federal Funds are involved subject to inspection at all times and approval by the Federal Highway Administration, or its agents as the case may be, or the agents of any other Agency whose funds are involved in accordance with those Acts of the Legislature of the State of Mississippi approved by the Governor and such rules and regulations issued pursuant thereto by the Mississippi Transportation Commission and the authorized Federal Agencies.

The Contractor agrees that all labor as outlined in the Special Provisions may be secured from list furnished by

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the _____ day of _____, _____.

_____

Contractor (s)

By _____

MISSISSIPPI TRANSPORTATION COMMISSION

Title _____

By _____

Executive Director

Signed and sealed in the presence of:
(names and addresses of witnesses)

_____

_____

Secretary to the Commission

Award authorized by the Mississippi Transportation Commission in session on the ____ day of _____, _____, Minute Book No. _____, Page No. _____.

Revised 8/06/2003

S E C T I O N 9 0 3

CONTRACT BOND FOR: _____

LOCATED IN THE COUNTY OF: _____

STATE OF MISSISSIPPI,

COUNTY OF HINDS

Know all men by these presents: that we, _____

_____ Principal, a _____

residing at _____ in the State of _____

and _____

residing at _____ in the State of _____,

authorized to do business in the State of Mississippi, under the laws thereof, as surety, are held and firmly bound unto the State of Mississippi in the sum of _____

_____

($_____) Dollars, lawful money of the United States of America, to be paid to it for which payment well and truly to be made, we bind ourselves, our heirs, administrators, successors, or assigns jointly and severally by these presents.

Signed and sealed this the _____ day of _____ A.D. _____.

The conditions of this bond are such, that whereas the said _____

_____

principal, has (have) entered into a contract with the Mississippi Transportation Commission, bearing the date of ____ day of _____ A.D. _____ hereto annexed, for the construction of certain highways in the State of Mississippi as mentioned in said contract in accordance with the plans, specifications and special provisions therefor, on file in the offices of the Mississippi Department of Transportation, Jackson, Mississippi.

Now therefore, if the above bounden _____

_____ in all things shall stand to and abide by and well and truly observe, do keep and perform all and singular the terms, covenants, conditions, guarantees and agreements in said contract, contained on his (their) part to be observed, done, kept and performed and each of them, at the time and in the manner and form and furnish all of the material and equipment specified in said contract in strict accordance with the terms of said contract which said plans, specifications and special provisions are included in and form a part of said contract and shall maintain the said work contemplated until its final completion and acceptance as specified in Subsection 109.11 of the approved specifications, and save harmless said Mississippi Transportation Commission from any loss or damage arising out of or occasioned by the negligence, wrongful or criminal act, overcharge, fraud, or any other loss or damage whatsoever, on the part of said principal (s), his (their) agents, servants, or employees in the performance of said work or in any manner connected therewith, and shall be liable and responsible in a civil action instituted by the State at the instance of the Mississippi Transportation Commission or any officer of the State authorized in such cases, for double any amount in money or property, the State may lose or be overcharged or otherwise defrauded of, by reason of wrongful or criminal act, if any, of the Contractor(s), his (their) agents or employees, and shall promptly pay the said agents, servants and employees and all persons furnishing labor, material, equipment or supplies therefor, including premiums incurred, for Surety Bonds, Liability Insurance, and Workmen's Compensation Insurance; with the additional obligation that such Contractor shall promptly make payment of all taxes,

SECTION 903 - CONTINUED

licenses, assessments, contributions, damages, any liquidated damages which may arise prior to any termination of said principal's contract, any liquidated damages which may arise after termination of the said principal's contract due to default on the part of said principal, penalties and interest thereon, when and as the same may be due this state, or any county, municipality, board, department, commission or political subdivision: in the course of the performance of said work and in accordance with Sections 31-5-51 et seq. Mississippi Code of 1972, and other State statutes applicable thereto, and shall carry out to the letter and to the satisfaction of the Executive Director of the Mississippi Department of Transportation, all, each and every one of the stipulations, obligations, conditions, covenants and agreements and terms of said contract in accordance with the terms thereof and all of the expense and cost and attorney's fee that may be incurred in the enforcement of the performance of said contract, or in the enforcement of the conditions and obligations of this bond, then this obligation shall be null and void, otherwise to be and remain in full force and virtue.

Witness our signatures and seals this the _____ day of _____ A.D. _____.

_____ _____

(Contractors) Principal Surety

By _____ By _____

(Signature) Attorney in Fact

_____

Title _____ _____

(Contractor's Seal) (Name and address of local (Mississippi) representative.)

(Surety Seal)

Revised 1/18/2000

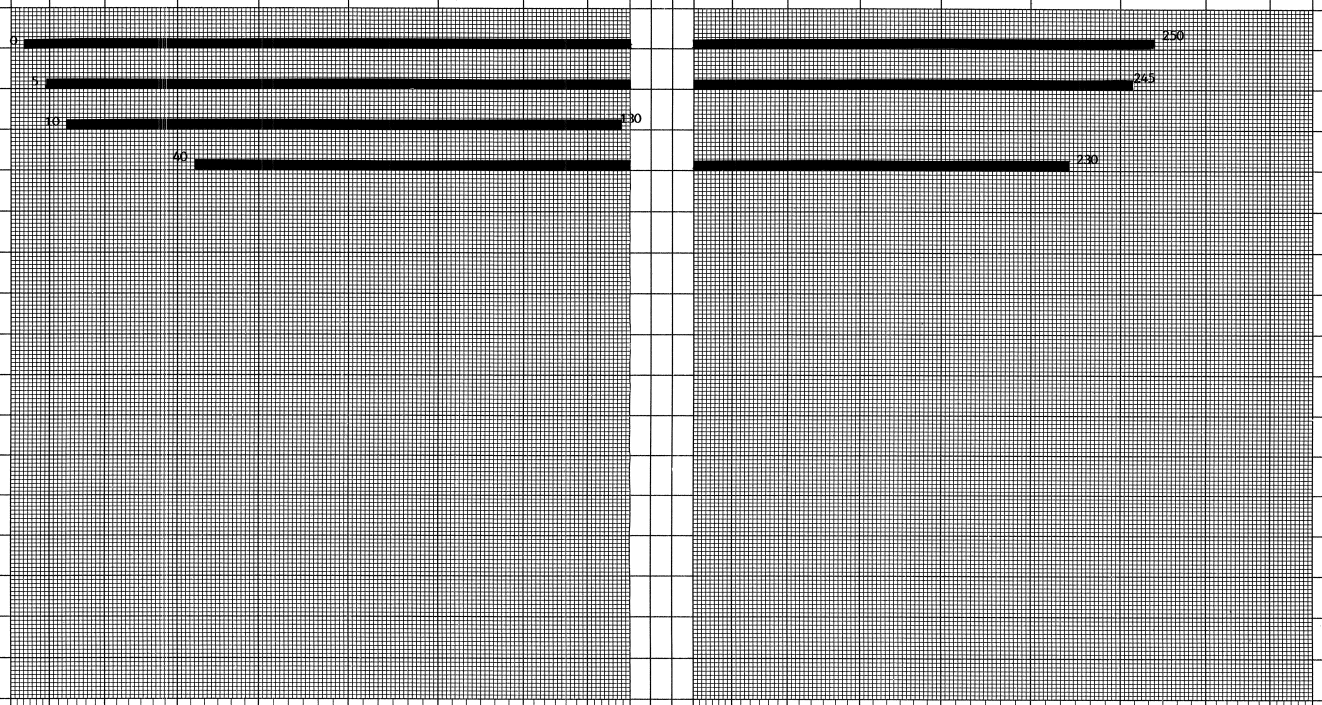
FORM CSD-605
Rev. 10 / 90

YEAR 2004 **PROGRESS SCHEDULE** YEAR 2005

FOR USE WITH COLUMN "A" IN THE TABLE OF TIME UNITS

PROJECT NUMBER NH-0015-02(078)PH2 / 101173
COUNTY JEFFERSON DAVIS

WORK PHASE NO.	WORK PHASE DESCRIPTION	CONTROLLING QUANTITY	IBM NUMBERS	PHASE VALUE	NO.	AVTU
1	MISCELLANEOUS		10-70,120,140-340, 360,380-770, 1000-1020			
2	EXCAVATION		80-110			
3	STRUCTURES		130,350,370			
4	BRIDGES		780-990			
		LET: JAN. 27, 2004 NTP: MARCH 1, 2004 BCT: MARCH 11, 2004				
		SCD: SEPT. 12, 2005 TU: 250				



5 CALENDAR DAY INCREMENTS																										
MONTH	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOV	DEC	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOV	DEC		
TIME UNITS PER MONTH	0	0	9	13	17	19	21	21	20	15	10	0	0	0	9	13	17	19	21	21	20	15	10	0		145 TIME UNITS PER YEAR
CUMULATIVE TIME UNITS																										

HORIZONTAL SCALE – 1"=20 TIME UNITS

OCR-485
REV. 10/02

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
OFFICE OF CIVIL RIGHTS
JACKSON, MISSISSIPPI

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on Project No: _____
County: _____

Disadvantaged Business Enterprise (DBE) Regulations as stated in 49 CFR 26.11 require the Mississippi Department of Transportation (MDOT) to create and maintain a comprehensive list of all firms quoting/bidding subcontracts on prime contracts and quoting/bidding subcontracts on federally-funded transportation projects. For every firm, we require the following information:

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

_____
SUBMITTED BY (Signature)

_____
FIRM NAME

Submit this form to **Contract Administration as a part of your bid package**. If this form is not included as part of the bid packet, your bid will be deemed irregular. For further information about this form, call Mississippi DOT's Office of Civil Rights at (601) 359-7466; FAX (601) 576-4504. **Please make copies of this form when needed and also add those copies to the bid package.**

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

HAUL PERMIT FOR BRIDGES

WITH

POSTED LOAD LIMITS

DATE: _____

PROJECT: NH-0015-02(078)PH2 / 101173

COUNTY: JEFFERSON DAVIS

LOCATION: U.S 84 FROM LAWRENCE COUNTY LINE TO EAST OF PRENTISS

A permit is issued to _____ for transporting loads exceeding the posted limit for any such bridge located on State designated routes within the project termini provided that such transport vehicles comply with all other governing statutory load limits.

This permit is valid on all State designated routes from the point of origin to the point of delivery for materials and equipment utilized in construction of said project and also valid for sub-contractors and vendors upon written permission of the Contractor. The permit is non-transferable and no other haul permit for posted bridges will be issued to other individuals, vendors, or companies for construction of this project.

A copy of this signed permit shall be carried in all vehicles operating under the authority of this permit and also a copy of the Contractor's written permission when the vehicle is other than Contractor owned.

In accordance with State law, the above named Contractor will be liable for damages directly attributable to vehicles operating under this permit.

_____

EXECUTIVE DIRECTOR