



PROPOSAL AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF (NONEXEMPT)

1
Construction necessary for site improvements to the Jackson County
Welcome Center, known as Federal Aid Project No. STP-0010-01(093) /
103316, in the County of Jackson, State of Mississippi.
Project Completion: March 1, 2008

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 (2004) 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 Subsection 102.11).
- _____ 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.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

TABLE OF CONTENTS

PROJECT: STP-0010-01(093) / 103316 - Jackson County

901--Advertisement

904--Notice to Bidders: Governing Specs. - # 1
Status of ROW, Utility Adjustments and Underground Storage
Tanks, W/Attachments - # 2
On-The-Job Training Program - # 7
Disadvantage Business Enterprise W/Supplement - # 8
DBE Participation and Payment - # 10
Federal Bridge Formula - # 12
Submission of Form OCR-485 - # 13
Storm Water Discharge Associated w/Construction Activities
(>5 Acres) - # 15
Errata & Modifications to 2004 Standard Specifications - # 18
Clarification of Pay Item - # 19
Petroleum Products Base Price - # 41
Contract Time - # 71
Specialty Items - # 72
Placement of Fill Material in Federally Regulated Areas - # 73
Projects Schedule and Priorities - # 74

906: Required Federal Contract Provisions -- FHWA-1273, W/Supplement
907-104-1: Partnering Process
907-107-1: Liability Insurance
907-222-1: Wildflower Seeding
907-226-1: Temporary Grassing
907-230-2: Tree and , Shrub Planting
907-242-138: Site Improvements to Jackson County Welcome Center
907-244-1: Tree Pruning
907-258-1: Miscellaneous Rest Area Facilities
907-259-1: Site Amenities
907-282-1: Irrigation System
907-288-1: Site Grading
907-304-1: Crushed Stone Granular Material
907-611-2: Unit Pavers
907-626-4: Thermoplastic Markings
906-3: MDOT On-the-Job Training Program
906-4: MDOT On-the-Job Training Program - Alternate Program

SECTION 905 - PROPOSAL,
PROPOSAL SHEET NOS. 2-1 THRU 2-25,
COMBINATION BID PROPOSAL,
CERTIFICATE OF PERFORMANCE - PRIOR FEDERAL-AID CONTRACTS
NON-COLLUSION CERTIFICATE,
SECTION 902 - CONTRACT FORM, AND SECTION 903 - CONTRACT BOND FORM,
OCR-485,
HAUL PERMIT FOR BRIDGES WITH POSTED WEIGHT LIMITS.

(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, July 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, July 27, 2004, and shortly thereafter publicly opened for:

Construction necessary for site improvements to the Jackson County Welcome Center, known as Federal Aid Project No. STP-0010-01(093) / 103316, in the County of Jackson, 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 87-58 1, 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.

Bid proposals must be acquired from the MDOT Contract Administration Division. These proposal 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, Room 1100, MDOT Administration Building, 401 North West Street, Jackson, Mississippi, 39201, Telephone (601) 359-7460 or e-mail at plans@mdot.state.ms.us or FAX (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

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1

CODE: (IS)

DATE: 05/03/2004

SUBJECT: Governing Specifications

The current (2004) Edition of the 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 MDOT 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.

In the event the plans or proposal contain references to the 1990 Edition of the Standard Specifications for Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 2004 Edition of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2

CODE: (IS)

DATE: 05/03/2004

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

STP-0010-01(093)

103316/301000

103316/302000

JACKSON COUNTY

August 14, 2003

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

NONE.

STATUS OF POTENTIALLY CONTAMINATED SITES

103316/301000

STP-0010-01(093)

JACKSON COUNTY

August 14, 2003

THERE IS NO RIGHT OF WAY REQUIRED FOR THIS PROJECT. NO INITIAL SITE ASSESSMENT WILL BE PERFORMED. IF CONTAMINATION ON EXISTING RIGHT OF WAY IS DISCOVERED, IT WILL BE HANDLED BY THE DEPARTMENT.

STATUS OF POTENTIALLY CONTAMINATED SITES

103316/302000

STP-0010-01(093)

JACKSON COUNTY

August 14, 2003

THERE IS NO RIGHT OF WAY REQUIRED FOR THIS PROJECT. NO INITIAL SITE ASSESSMENT WILL BE PERFORMED. IF CONTAMINATION ON EXISTING RIGHT OF WAY IS DISCOVERED, IT WILL BE HANDLED BY THE DEPARTMENT.

ASBESTOS CONTAMINATION STATUS OF BUILDINGS
TO BE REMOVED BY THE CONTRACTOR

103316/301000
STP-0010-01(093)
JACKSON COUNTY
August 14, 2003

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

The following pertinent information is furnished concerning asbestos containing materials (ACMs), if any, found in buildings to be removed by the Contractor.

There is no Right of Way required for this project. There are no buildings to be removed by the contractor.

ASBESTOS CONTAMINATION STATUS OF BUILDINGS
TO BE REMOVED BY THE CONTRACTOR

103316/302000
STP-0010-01(093)
JACKSON COUNTY
August 14, 2003

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

The following pertinent information is furnished concerning asbestos containing materials (ACMs), if any, found in buildings to be removed by the Contractor.

There is no Right of Way required for this project. There are no buildings to be removed by the contractor.

UTILITY STATUS REPORT

STP-0010-01(093) / 103316

JACKSON COUNTY

AUGUST 14, 2003

All work associated with this project is to be done within existing rights-of-way. No conflict with contractor's operations is anticipated.

Forty-eight hours prior commencing any excavation operations the contractor is advised to call MS One-Call at 1-800-227-6477.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 7

CODE: (IS)

DATE: 05/03/2004

SUBJECT: On-The-Job Training Program

Payment for training hours will be handled as outlined in Special Provision 906-4. A pay item for trainees will not 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).

On Federal-Aid projects, failure on the part of the Contractor to carryout the terms of the Alternate Training Special Provision (Special Provision 906-4) will be considered grounds to preclude the Contractor from participating in the Alternate On-The-Job Training Program. In the event the Department is required to preclude the Contractor from participating in the program, the Contractor will be required to adhere to the requirements of the Training Special Provision (Special Provision 906-3), for which purpose the special provision is also made a part of this proposal.

SUPPLEMENT TO NOTICE TO BIDDERS NO. 8

DATE: 05/03/2004

The goal is 6 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, 401 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.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 8

CODE: (IS)

DATE: 05/03/2004

**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 Form OCR-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 they performed on the 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" at the end of this document 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 **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.

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 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 Contractor / Supplier. 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 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).

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.

<u>Offense</u>	<u>Percentage of the monetary amount disallowed from (1) above</u>	<u>Lump Sum</u>
# 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. 10

CODE: (IS)

DATE: 05/03/2004

SUBJECT: DBE Participation and Payment

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. Bidders are hereby advised that each month, the Prime Contractors will submit this form to the Project Engineer no later than the 20th of each month. This form certifies payments to all Subcontractors and shows all firms even if the Prime 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.

Form OCR-484 can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at www.gomdot.com 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. 12

CODE: (IS)

DATE: 05/03/2004

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. 13

CODE: (IS)

DATE: 05/03/2004

SUBJECT: Submission of Form OCR-485

Bidders are hereby advised that 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. 15

CODE: (SP)

DATE: 05/03/2004

SUBJECT: Storm Water Discharge Associated with Construction Activity
(≥ 5 Acres)

PROJECT: STP-0010-01(093) / 103316 - Jackson 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-102712 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. 18

CODE: (IS)

DATE: 05/03/2004

SUBJECT: ERRATA AND MODIFICATIONS TO THE 2004 STANDARD SPECIFICATIONS

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
278	404.04	In the second sentence, change the subsection from “401.04” to “403.04”.
294	413.02	In the first sentence of the second paragraph, change “707.02.1.3” to “Subsection 707.02.1.3”.
340	511.04	In the second sentence of the second paragraph, change “412” to “512”.
349	601.03.3	In the first sentence, change “804.03.2” to “804.03.5”.
355	603.02	Change the subsection reference for Joint mortar from “707.03” to “714.11”.
369	604.04	In the first sentence, change “601.04” to “Subsection 601.04”.
427	619.04	Delete the second paragraph.
442	625.04	In the third paragraph, change “626.04” to “Subsection 626.04”.
444	626.03.1.2	Delete the third sentence of the first paragraph.
464	631.02	Change the subsection reference for Water from “714.01.0” to “714.01.1”.
603	702.11	In the first sentence, change “702.12” to “Subsection 702.12”.
612	703.04.2	In the fifth paragraph, delete “Subsection 703.11 and”.
618	703.13.1	In the first sentence of the first paragraph, change “703.09” to “703.06”.
618	703.13.2	In the first sentence, change “703.09” to “703.06”.

671	712.06.2.2	In the first sentence, change “712.05.1” to “Subsection 712.05.1”.
689	714.11.2	In the first sentence, change “412” to “512”.
741	720.05.2.2	In the last sentence of this subsection, change “720.05.2.1” to “Subsection 720.05.2.1”.
827	803.03.2.3.7.5.2	In the first sentence of the second paragraph, change “803.03.5.4” to “803.03.2.3.4”.
833	803.03.2.6	In the first sentence, change “803.03.7” to “803.03.2.5”.
879	804.03.19.3.2	In the last sentence of the last paragraph, change “804.03.19.3.1” to “Subsection 804.03.19.3.1”.
962	814.02.3	In the first sentence, change “710.03” to “Subsection 710.03”.
976	820.03.2.1	In the first sentence, change “803.02.6” to “803.03.1.7”.
976	820.03.2.2	In the first sentence, change “803.03.9.6” to “803.03.1.9.2”.
985	Index	Change the subsection reference for Petroleum Asphalt Cement from “702.5” to “702.05”.
985	Index	Change the subsection reference for the Definition of Asphaltic Cement or Petroleum Asphalt from “700.2” to “700.02”.
985	Index	Change the subsection reference for Automatic Batchers from “501.03.2.4” to “804.02.10.4”.
986	Index	Delete “501.03.2” as a subsection reference for Batching Plant & Equipment.
988	Index	Change the subsection reference for the Central Mixed Concrete from “501.03.3.2” to “804.02.11”.
988	Index	Change the subsection reference for the Concrete Batching Plant & Equipment from “501.03.2” to “804.02.11”.
999	Index	Delete “501.03.3.3” as a subsection reference for Truck Mixers.
1001	Index	Change the subsection reference for Edge Drain Pipes from “605.3.5” to “605.03.5”.

1002	Index	Change the subsection reference for Metal Posts from "713.05.2" to "712.05.2".
1007	Index	Change the subsection reference for Coarse Aggregate of Cement Concrete Table from "703.3" to "703.03".
1007	Index	Change the subsection reference for Composite Gradation for Mechanically Stabilized Courses Table from "703.8" to "703.08".
1009	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers and Truck Agitators.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 19

CODE: (SP)

DATE: 05/14/2004

SUBJECT: Clarification of Pay Items

Bidders are hereby advised that the pay items listed on the Summary of Quantities Sheets of the plans may have a different pay item number than that shown on the bid sheets of the contract proposal. Bidders shall consider the pay items listed on the bid sheets of the proposal as the correct pay items.

Bidders are reminded that this project is let under the 2004 Edition of the Mississippi Standard Specification for Road and Bridge Construction.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 41

CODE: (SP)

DATE: 06/10/2004

SUBJECT: Petroleum Products Base Prices For Contracts Let In July, 2004

REFERENCE: Subsection 109.07

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

FUELS

	<u>Per Gallon</u>	<u>Per Liter</u>
Gasoline	\$1.6740	\$0.4423
Diesel	\$1.4690	\$0.3881

MATERIAL OF CONSTRUCTION

<u>Asphalt Cements</u>	<u>Per Gallon</u>	<u>Per Ton</u>	<u>Per Liter</u>	<u>Per Metric Ton</u>
Viscosity Grade AC-5	\$0.8072	\$191.50	\$0.2132	\$211.09
Viscosity Grade AC-10	\$0.7912	\$187.71	\$0.2090	\$206.91
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	\$0.8009	\$190.00	\$0.2116	\$209.44
Grade PG 64-22	\$0.7708	\$182.86	\$0.2036	\$201.57
Grade PG 67-22	\$0.7671	\$182.00	\$0.2026	\$200.62
Grade PG 76-22	\$1.1163	\$264.83	\$0.2949	\$291.92
Grade PG 82-22	\$1.2915	\$306.40	\$0.3412	\$337.74

Emulsified Asphalts

Grade EA-4 (SS-1)	\$0.7300	\$0.1928
Grade RS-2C (CRS-2)	\$0.7466	\$0.1972
Grade CRS-2P	\$0.8651	\$0.2285

Primes

Grades EA-1 and MC-70	\$0.9550	\$0.2523
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MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 71

CODE: (SP)

DATE: JUNE 9, 2004

SUBJECT: CONTRACT TIME

PROJECT: STP-0010-01 (093) / 103316 - Jackson County

The calendar date for completion of work to be performed by the Contractor for this project shall be **March 1, 2008** which date or extended date as provided in Subsection 108.06 shall be the end of contract time. It is anticipated that the Notice to Proceed will be issued by not later than **August 30, 2004** and the date for Beginning of Contract Time will be **September 9, 2004**. Liquidated damages per calendar day shall be charged the Contractor for each day the Work for each Phase is not complete based on Contract Sum of that Phase of the Work.

In order to meet the completion date for Phase I of **March 15, 2005**, an Inspection and Acceptance of Phase I (Partial Acceptance of the Contract) is expected by that date. At which date Phase I will be open to the Public and the Work for Phase II can proceed.

In order to meet the completion date for Phase II of **August 15, 2005**, an Inspection and Acceptance of Phase II (Partial Acceptance of the Contract) is expected by that date. At which date Phase II will be open to the Public and the Work for Phase III can proceed.

In order to meet the completion date for Phase III of **February 15, 2006**, an Inspection and Acceptance of Phase III (Partial Acceptance of the Contract) is expected by that date. At which date Phase III will be open to the Public.

A progress schedule as referenced to in Subsection 108.03 will not be required for this contract. A Construction Schedule as described in Section 01320 of this Special Provision will be required.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 72

CODE: (SP)

DATE: 06/04/2004

SUBJECT: Specialty Items

PROJECT: STP-0010-01(093) / 103316--JACKSON 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: ELECTRICAL

Ref No	Pay Item	Description
180	214-A	Seeding, Annual Ryegrass

CATEGORY: EROSION CONTROL

Ref No	Pay Item	Description
120	212-B	Standard Ground Preparation
130	213-B	Combination Fertilizer, 13-13-13
140	213-B	Combination Fertilizer, 8-8-8
170	214-A	Seeding, Bermudagrass
200	216-B	Solid Sodding, Centipede

CATEGORY: PAVEMENT MARKING

Ref No	Pay Item	Description
1330	907-626-G	Thermoplastic Detail Stripe, Blue-ADA
1331	907-628-G	Cold Plastic Detail Stripe, White, 4" Equivalent Length
1332	626-G	Thermoplastic Detail Stripe, White
1333	626-G	Thermoplastic Detail Stripe, Yellow
1334	907-626-H	Thermoplastic Legend, Blue-ADA
1335	907-628-G	4" Cold Plastic Detail Stripe, White
1340	628-H	Cold Plastic Legend, White

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO.73

CODE (SP)

DATE: 06/04/2004

SUBJECT: Placement of Fill Material in Federally Regulated Areas

PROJECT: STP-0010-01(093) / 103316 - Jackson County

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

The Department has acquired the following permit 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

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 74

DATE: June 9, 2004

SUBJECT: PROJECT SCHEDULE AND PRIORITIES

PROJECT: STP-0010-01(093) 103316 – JACKSON COUNTY

The following construction sequencing/ objectives and calendar dates for the completion of the various elements of this project are as follows. Contractor may work on one additional Phased area (or portion of phased area) as allowed by the Engineer, however, failure to complete work on a specific phased area by the date noted shall result in liquidated damages as defined in the Contract Documents.

<u>Construction Sequencing</u>	<u>Calendar Date</u>
Anticipated Beginning of Contract Time	September 9, 2004
Phase I – New Nature Trail Parking and Amenities – provide new parking area, pavilion, sidewalks, and other related elements. Construct guardhouse during this phase. <ul style="list-style-type: none">• Open to Public March 16, 2005• Landscape establishment and mowing March 16, 2005 through March 15, 2007. Plant replacement and release of maintenance by April 1, 2007.• If Bermuda Grassing not completed during scheduled construction period and Rye Grass provided, perform Bermuda Grassing during landscape establishment period at acceptable seasonal times.	6 months ending March 15, 2005
Phase II – South Plaza – demolish existing plaza, relocate existing elements, construct new elements and relocate existing elements. <ul style="list-style-type: none">• Area shall be complete in halves as noted on the drawings. Contractor to provide all weather temporary access as necessary, acceptable to the Engineer. Provide a pedestrian access plan to the Engineer for review and approval prior to construction.• Open to Public – 1st half June 16, 2005; 2nd half August 16, 2005.• Landscape establishment and mowing August 16, 2005 through August 15, 2007. Plant replacement and release of maintenance by September 1, 2007.	5 months ending August 15, 2005

<p>Phase III – Expand Truck Parking, New Bus Parking, and North Plaza of Welcome Center – expand truck parking area including cleaning, repair, and sealing of joint and cracks; construct bus parking area complete, and construct north welcome center pedestrian plaza.</p> <ul style="list-style-type: none">• Truck/ Recreational Vehicle parking and drives shall remain closed during this phase.• Open to Public February 16, 2006• Landscape establishment and mowing February 16, 2006 through February 15, 2008. Plant replacement and release of maintenance by March 1, 2008.• If Bermuda Grassing not completed during scheduled construction period and Rye Grass provided, perform Bermuda Grassing during landscape establishment period at acceptable seasonal times.	<p>6 months ending February 15, 2006</p>
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The site will remain open to the public during construction. Drums and barricading of areas to prevent vehicular and pedestrian access into construction areas shall be coordinated with the Engineer. Payment for erection and removal of drums, barricades, and on-site temporary traffic sign shall be paid for under maintenance of traffic.

Site access and lay down areas required must be coordinated with the Engineer.

Planting Operations (including permanent seeding) - Irrigation system shall be operable prior to installation of plant material in a given area.

SUPPLEMENT TO FORM FHWA-1273

The following MINIMUM HOURLY WAGE RATES have been predetermined by the Secretary of Labor in Wage Determination Decision No. MS030027 dated 6/13/2003.

AREA 6A - COUNTIES

HANCOCK, HARRISON AND JACKSON

<u>PAYROLL CODE</u>	<u>CLASSIFICATION</u>	<u>MINIMUM HOURLY WAGE RATE</u>
100	Air Tool Operator (Jack Hammer/Air Comp.)	\$6.25
105	Asphalt Raker	6.25
108	Mason Tender (Cement Mason Helper)	7.50
110	Carpenter	8.67
120	Cement Mason (Finisher)	8.33
130	Electrician	12.00
131	Mechanic (Heavy Equipment)	9.68
135	Oiler-Greaser	6.55
140	Form Setter	7.00
145	Grade Checker (Asphalt Crew)	7.35
150	Ironworker, Reinforcing (Tie Steel)	12.36
155	Ironworker, Structural	13.89
160	Laborer, Unskilled	5.77
165	Pipelayer	7.45
175	Painter (Structural Steel)	5.43
180	Piledriverman	7.50
185	Truck Driver (All Types)	6.14
190	Joint Filler	5.15
195	Joint Setter	5.15
197	Welder	10.14

POWER EQUIPMENT OPERATORS

205	Aggregate Spreader Operator	7.31
212	Asphalt Broom (Sweeper) Operator	5.63
214	Asphalt Paving Machine/Spreader Operator	7.50
215	Asphalt Distributor Operator	6.40
216	Asphalt Plant Operator	6.31
220	Backhoe (Shovel) Operator	7.67
225	Bulldozer Operator	8.40
235	Concrete Finishing/Curing Machine Operator	8.45
240	Concrete Paving Machine Operator (Spreader)	8.97
250	Concrete Saw Operator	8.56
255	Concrete Breaker/Hydro-Hammer Operator	8.24
270	Loader (All Types)	7.75
275	Milling Machine Operator	10.75
280	Mixer Operator (All Types)	8.12
285	Motor Patrol (Grader) Operator	9.10
290	Mulcher Machine Operator	5.33
295	Earth Auger Operator	8.50
300	Piledriver Machine Operator	8.13
305	Roller Operator (Self-Propelled)	6.26
310	Scraper Operator (All Types)	6.83
315	Striping Machine Operator	7.63
320	Tractor Operator (Track Type)	6.83
325	Tractor Operator (Wheel Type)	5.96
330	Trenching Machine Operator	8.88
350	Crusher Feeder Machine Operator	5.50
360	Crane (Dragline) Operator	9.47
365	Guardrail Post Driver	8.57

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

	Page
I. General -----	1
II. Nondiscrimination -----	1
III. Nonsegregated Facilities -----	3
IV. Payment of Predetermined Minimum Wage -----	3
V. Statements and Payrolls -----	6
VI. Record of Materials, Supplies, and Labor-----	7
VII. Subletting or Assigning the Contract -----	7
VIII. Safety: Accident Prevention -----	7
IX. False Statements Concerning Highway Projects -----	8
X. Implementation of Clean Air Act and Federal Water Pollution Control Act-----	8
XI. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion -----	8
XII. Certification Regarding Use of Contract Funds for Lobbying -----	10

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 take corrective 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 the time 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 of progress, 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 an approved definition, shall be paid not less than the applicable wage rate on the wage determination 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 than the applicable wage rate and fringe benefits or cash equivalent for the classification of work 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 provide all 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 representation 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 and supplemented;

Shall be fined not more than \$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 requirements.

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 knowingly rendered 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)
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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
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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
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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
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Forrest, Lamar, Marion, Pearl River, Perry, Pike, Walthall -----	27.7
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Adams, Amite, Wilkinson-----	30.4
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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. 907-104-1

CODE: (IS)

DATE: 05/03/2004

SUBJECT: Partnering Process

Section 104, Scope of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-104.01--Intent of Contract. At the end of Subsection 104.01 on Page 24, 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 supplier. 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 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. 907-107-1

CODE: (IS)

DATE: 05/03/2004

SUBJECT: Liability Insurance

Section 107, Legal Relations and Responsibility to Public, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-107.14.2--Liability Insurance. Delete in toto Subsection 107.14.2 beginning on page 60 and substitute:

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.

907-107.14.2.2--Railroad Protective. The following provisions are applicable to all work performed under a contract on, over or under the rights-of-way of each railroad shown on the plans.

The Contractor shall assume all liability for any and all damages to work, employees, servants, equipment and materials caused by railroad traffic.

Prior to starting any work on railroad property, the Contractor shall furnish satisfactory evidence to the Department that insurance of the forms and amounts set out herein in paragraphs (a) and (b) has been obtained. Also, the Contractor shall furnish similar evidence to the Railroad Company that insurance has been obtained in accordance with the Standard Provisions for General Liability Policies and the Railroad Protective Liability Form as published in the Code of Federal Regulations, 23 CFR 646, Subpart A. Evidence to the Railroad Company shall be in the form of a Certificate of Insurance for coverages required in paragraph (b), and the original policy of the Railroad Protective Liability Insurance for coverage required in paragraph (a).

All insurance herein specified shall be carried until the contract is satisfactorily complete as evidenced by a release of maintenance from the Department.

The Railroad Company shall be given at least 30 days notice prior to cancellation of the Railroad Protective Liability Insurance policy.

For work within the limits set out in Subsection 107.18 and this subsection, the Contractor shall provide insurance for bodily injury liability, property damage liability and physical damage to property with coverages and limits no less than shown in paragraphs (a) and (b). Bodily injury shall mean bodily injury, sickness, or disease, including death at anytime resulting therefrom. Property damage shall mean damages because of physical injury to or destruction of property, including loss of use of any property due to such injury or destruction. Physical damage shall mean direct and accidental loss of or damage to rolling stock and their contents, mechanical construction equipment or motive power equipment.

(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.

Coverage shall be limited to damage suffered by the railroad on account of occurrences arising out of the work of the Contractor on or about the railroad right-of-way, independent of the railroad's general supervision or control, except as noted in paragraph 4 below.

Coverage shall include:

- (1) death of or bodily injury to passengers of the railroad and employees of the railroad not covered by State workmen's compensation laws,
- (2) personal property owned by or in the care, custody or control of the railroads,
- (3) the Contractor, or any of the Contractor's agents or employees who suffer bodily injury or death as a result of acts of the railroad or its agents, regardless of the negligence of the railroads, and
- (4) negligence of only the following classes of railroad employees:
 - (i) any supervisory employee of the railroad at the job site
 - (ii) any employee of the railroad while operating, attached to, or engaged on, work trains or other railroad equipment at the job site which are assigned exclusively to the Contractor, or
 - (iii) any employee of the railroad not within (i) or (ii) above who is specifically loaned or assigned to the work of the Contractor for prevention of accidents or protection of property, the cost of whose services is borne specifically by the Contractor or Governmental authority.

(b) **Regular Contractor's Liability**, including subcontractors, XCU and railroad contractual with limits of \$1,000,000 each occurrence; \$2,000,000 aggregate. **Automobile** with limits of \$1,000,000 combined single limit any one accident; **Workers' Compensation and Employer's Liability** - statutory and \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. **Excess/Umbrella Liability** \$5,000,000 each occurrence; \$5,000,000 aggregate. All coverage to be issued in the name of the Contractor shall be so written as to furnish protection to the Contractor respecting the Contractor's operations in performing work covered by the contract. Coverage shall include protection from damages arising out of bodily injury or death and damage or destruction of property which may be suffered by persons other than the Contractor's own employees.

In addition, the Contractor shall provide for and on behalf of each subcontractor by means of a separate and individual liability and property damage policy to cover like liability imposed upon the subcontractor as a result of the subcontractor's operations in the same amounts as contained above; or, in the alternative each subcontractor shall provide same.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-222-1

CODE: (SP)

DATE: 05/11/2004

SUBJECT: Wildflower Seeding

Section 907-222, Wildflower Seeding, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-222 -- WILDFLOWER SEEDING

907-222.01--Description. This work shall consist of furnishing the specified kind(s) of wildflower seeds, herbicide material for site preparation and mulch material; planting the seeds in a prepared and approved seedbed; compacting the planted area(s); and providing plant establishment, all in accordance with these specifications and in reasonable close conformity with the locations shown on the plans or established by the Engineer.

907-222.02--Materials.

907-222.02.1--Seeds. Wildflower seeds shall be furnished in containers labeled or tagged with the scientific and common names of each kind along with the percent/pounds of each to make up the mixture. The Contractor shall acquire the seed or seed mixture from a commercial seed supplier. The Contractor shall have the supplier furnish a certified letter to the Engineer that the seeds furnished are from the current seed crop.

The Contractor shall protect the seeds from damage until planted. Seed containers that appear, by visual inspection, to be damaged will not be acceptable.

The seed or seed mixtures to be planted shall be specified on the plans.

907-222.02.2--Herbicides. The herbicide material used in preparing the site to kill the existing vegetation shall be 41% Isopropyl Amine Salt of Glyphosphate. The rate of glyphosphate shall be five (5) quarts in twenty-five (25) to thirty (30) gallons of potable water per acre.

907-222.02.3--Fertilizers. All fertilizers shall be uniform in composition, free flowing and suitable for application with approved equipment. Fertilizers shall be delivered to the site fully labeled according to applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer/manufacturer.

Fertilizer application rates shall be determined by soil tests. A minimum of one soil test sample per every 10,000 square feet will be required. Tests shall then be combined and averaged for determining application rates.

Fertilizer shall be distributed uniformly over the entire area to receive wildflower seed.

907-222.02.4--Lime. Low pH Correction Materials: Lime material shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Ground limestone shall be ground to such fineness that at least 50% will pass through a 100-mesh sieve and 98% to 100% will pass through a 20-mesh sieve.

Lime application rates shall be determined by soil tests. A minimum of one soil test sample per every 10,000 square feet will be required. Tests shall then be combined and averaged for determining application rates.

Lime shall be distributed uniformly over the entire area to receive wildflower seed.

High pH Correction Materials: Materials and application rates shall be determined by appropriate soil tests performed by an approved laboratory. If leaching or special management is necessary, final grading will be delayed as specified.

907-222.03--Construction Requirements.

907-222.03.1--Construction Methods. Prior to planting the seeds, ground preparation, herbicide application, fertilization and liming shall have been satisfactorily performed in accordance with the contract and the area approved by the Engineer for planting.

Tillage: Soil amendments such as lime and fertilizer shall be uniformly mixed into the top four inches of soil by discing, harrowing or other approved method.

Final Grading: Any undulations or irregularities in the surface resulting from fertilization, liming, tilling, or other causes shall be smoothed prior to wildflower seed installation. Flooded, washed out areas damaged or otherwise, shall be reconstructed and all grades re-established by the Contractor in accordance with the applicable specifications, or site conditions that existed prior to wash-out if grades are not specified.

The rates of application and the planting dates of seed shall be as set out in the plant material schedule on the plans. Seed quantities that are required per wildflower planting area, are indicated on the planting plans.

Herbicide applications for site preparation shall be performed to kill existing vegetation on designated areas to receive wildflower seed. The herbicide shall be uniformly applied, conforming to the manufacturer's recommendation, a minimum of ten days, or until all vegetation appears to be dead, prior to seedbed preparation in an approved manner at the rate specified in Subsection 907-222.02.2.

When designated by the Engineer, the dead vegetation shall be cut, raked and removed from the seedbed areas, and disposed of in an approved manner.

Light ground preparation shall be performed for seedbed preparation on designated areas. This work shall consist of discing and/or tilling the soil as required to provide a uniform and thoroughly pulverized soil to a depth of approximately four (4) inches with approved equipment to the satisfaction of the Engineer.

The seeds shall be uniformly sown on the prepared seedbed, in an approved manner, immediately after the ground preparation is completed and approved by the Engineer.

Upon completion of the seeding operation, the seeded area shall be compacted with an approved cultipacker to the satisfaction of the Engineer.

Upon completion of the seeding and cultipacking operation, the seeded area shall be mulched as indicated on the plans. The application of the mulch shall conform to Section 215 of the Standard Specifications, except that anchoring will not be required. Mulch shall be required unless indicated otherwise on the plans or so directed by the Engineer.

907-222.03.2--Plant Establishment. The Contractor shall be required to provide plant establishment on all areas where wildflower seeds are planted, until release of maintenance.

Plant establishment shall consist of preserving, protecting, watering, reseeding, controlling obnoxious vegetation by approved methods, and such other work as may be deemed necessary to keep the planted area(s) in a satisfactory condition.

The Engineer may require reseeding on area(s) which, for any cause, is (are) deemed to be unsatisfactory. Unless otherwise directed by the Engineer, these areas shall be prepared and seeded as if the reseeding was the initial seeding.

The Contractor shall be responsible for any damage to the vegetation outside the wildflower area(s) and shall repair or replace such damaged vegetation, as directed by the Engineer, at no additional cost to the State.

907-222.03.3--Water. Potable water shall be furnished by the Contractor and applied to the wildflower areas in adequate quantities to insure the healthy growth of the plants, until final acceptance of the project by the State. The Contractor shall make, at no additional costs to the State, whatever arrangements may be necessary to insure an adequate supply of water to meet the needs. The Contractor shall also furnish all necessary hose, equipment, attachments and accessories as may be necessary to complete the work specified.

907-222.04--Method of Measurement. Wildflower seeding will be measured by the acre as indicated on the plans and in the bid schedule of the contract.

907-222.05--Basis of Payment. Wildflower seeding, measured as prescribed above, will be paid for at the contract unit price bid per acre, which price shall be full compensation for furnishing all seeds; herbicide and mulch; water; for all site preparation; seedbed preparation and

compaction; for all plant establishment until release of maintenance; and for all equipment, tools labor and incidentals necessary to complete the work.

Payment will be made under:

907-222-A: Wildflower Seeding - per acre

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-226-1

CODE: (SP)

DATE: 06/23/2004

SUBJECT: Temporary Grassing

Section 907-226, Temporary Grassing, is hereby added to and made part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-226 -- TEMPORARY GRASSING

907-226.01--Description. This work consists of furnishing, transporting, placing, plant establishment and all work necessary to produce rapid-growing grasses, grains or legumes to provide an initial, temporary cover of grass. This work includes ground preparation, fertilizing, seeding and mulching necessary to establish a satisfactory growth of temporary grass.

The Engineer or the plans will designate areas to be temporarily grassed. Any other areas the Contractor desires to grass will be measured for payment on if agreed upon by the Engineer.

907-226.02--Materials.

907-226.02.1--Fertilizers. Fertilizers for purposes of these specifications shall be understood to include standard manufactured products consisting of single or combination ingredients and agricultural limestone.

All fertilizer shall comply with the State fertilizer laws and the requirements of these specifications.

Fertilizers shall meet the requirements of Subsection 715.02.

907-226.02.2--Seeds. Seeds shall meet the requirements of Subsection 715.03, subject to the provisions of this subsection. The Contractor shall acquire seed from persons registered with the Mississippi Department of Agriculture and Commerce.

Except for the germination requirements, bags of seeds properly labeled or tagged according to law and indicating characteristics meeting or exceeding the requirements of Subsection 715.03 will be acceptable for planting.

The Contractor should provide adequate dry storage facilities for seeds, and shall furnish access to the storage for sampling stored seed.

907-226.02.3--Mulching. The vegetative materials for mulch shall meet the requirements of Subsection 715.05.

When used, bituminous material for mulch shall be Emulsified Asphalt, Grade SS-1, meeting the requirement of Subsection 702.07.

907-226.03--Construction Requirements. When the payment for temporary grassing is made using individual pay items, the rate of application shall not exceed the rate shown on the temporary vegetation schedule, unless otherwise approved by the Engineer. Any unauthorized overage due to increased application rates will not be measured for payment.

907-226.03.1--Ground Preparation.

907-226.03.1.1--General. Any equipment used for ground preparation shall be approved units suitable to perform the work and subject to the requirements of Subsection 108.05.

Light ground preparation should be used on areas where seeding is required to improve the coverage of partially vegetated areas.

907-226.03.1.2--Light Ground Preparation. Light ground preparation consists of scratching the surface with a close-tooth harrow, disk-harrow, or similar equipment. The depth of scratching should be at least three-quarters inch but not deep enough to damage existing grasses of the type being planted.

Aerating, moistening, or otherwise bringing the soil to a suitable condition for ground preparation shall be considered as incidental to the work and will not be measured for separate payment.

907-226.03.2--Fertilizing. The Contractor shall furnish all equipment necessary to properly handle, store, uniformly spread, and incorporate the specified application of fertilizer.

The Contractor shall incorporate fertilizer at a rate of 500 pounds per acre of 13-13-13 commercial fertilizer. The equivalent rate of other type fertilizers will be allowed if the equivalent percentages of Nitrogen, Phosphorus and Potassium are obtained. Fertilization shall be applied uniformly on the areas to be planted or seeded and uniformly incorporated into the soil.

Fertilizers should be applied on individual areas of not more than three acres.

All fertilizer should be incorporated within 24 hours following spreading.

907-226.03.3--Seeding.

907-226.03.3.1--General. Prior to planting the seeds, ground preparation and fertilizing should have been satisfactorily performed.

The required type of seeds, recommended rates of application and recommended planting dates of seeds are shown in the vegetation schedule on the plans. It is the Contractor's responsibility to apply an ample amount of each type of seed to produce a satisfactory growth of grass and of the seed type required.

Legume seeds should be treated in accordance with Subsection 715.03.4 immediately before sowing. Seeds should be uniformly sown over the entire area with mechanical seeders. Seeds of different sizes may necessitate separate sowing. When legume seeds become dry, they should be reinoculated.

Seeding should not be done during windy weather or when the ground is frozen, extremely wet, or in an untillable condition.

All seeds should be covered lightly with soil by raking, rolling, or other approved methods, and the area compacted with a cultipacker.

907-226.03.3.2--Plant Establishment. Plant establishment shall consist of preserving, protecting, watering, reseeding, and other work necessary to keep the seeded areas in satisfactory condition.

Areas requiring reseeding should be prepared and seeded and all other work performed as if the reseeding was the initial seeding. The types and application rates of fertilizer will be at the discretion of the Contractor.

907-226.03.3.3--Growth and Coverage. It shall be the Contractor's responsibility to provide satisfactory growth and coverage of grasses, legumes, or combination produced from the specified seeding.

Growth and coverage on seeded areas will be considered to be in reasonably close conformity with the intent of the contract when the type of vegetation specified, exclusive of that from seeds not expected to have germinated and shows growth at that time, has reached a point of maturity where stems or runners overlap adjacent similar growth in each direction over the entire area.

907-226.03.4--Mulching.

907-226.03.4.1--Equipment. Mulching equipment should be capable of maintaining a constant air stream which will blow or eject controlled quantities of mulch in a uniform pattern. If asphalt is used, a jet or spray nozzle for applying uniform, controlled amounts of asphalt to the vegetative material as it is ejected should be located at or near the discharge spout.

Mulch stabilizers should consist of dull blades or disks without camber and approximately 20 inches in diameter. The disks should be notched, should be spaced at approximately 8-inch intervals, and should be equipped with scrapers. The stabilizer should weigh approximately 1000 to 1200 pounds, should have a working width of no more than eight feet, and should be equipped with a ballast compartment, so that weight can be increased.

907-226.03.4.2--Placement of Vegetative Mulch. If required, mulching should be placed uniformly on designated areas within 24 hours following seeding unless weather conditions are such that mulching cannot be performed. Placement should begin on the windward side of areas and from tops of slopes. In its final position, the mulch should be loose enough to allow air to circulate but compact enough to partially shade the ground and reduce erosion.

The baled material should be loosened and broken thoroughly before it is fed into the machine to avoid placement of unbroken clumps.

907-226.03.4.3--Rates of Application and Anchoring Mulch. The recommended rate of application of vegetative mulch shall be as shown in the vegetation schedule in the plans. The mulch should be anchored by either the use of a mulch stabilizer or by tacking with bituminous material. If a mulch stabilizer is used, the mulch should be punched into the soil for a minimum depth of one inch. If bituminous material is used, the rate of application should be 150 gallons per acre.

Where steep slopes or other conditions are such that anchoring cannot be performed satisfactory with a mulch stabilizer, the Contractor may elect to use bituminous material applied at the time or immediately following the mulch placement.

When mulch stabilizers are used, anchoring the mulch should be performed along the contour of the ground surface.

907-226.03.4.4--Protection and Maintenance. The Contractor should take every precaution to prevent unnecessary foot and vehicular traffic.

907-226.04--Method of Measurement. When a pay item for temporary grassing is included in the plans, temporary grassing will be measured by the acre. Acceptance will be based on a satisfactory growth and coverage of seeds planted. When a pay item for temporary grassing is not included in the plans, temporary grassing shall be measured for payment using the appropriate pay items in the contract.

907-226.05--Basis of Payment. When a pay item for temporary grassing is included in the plans, temporary grassing, measured as prescribed above, will be paid for at the contract unit price per acre, which will be full compensation for all required materials, equipment, labor, testing and all work necessary to establish a satisfactory growth of grass.

Payment will be made under:

907-226-A: Temporary Grassing

- per acre

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-230-2

CODE: (SP)

DATE: 06/01/2004

SUBJECT: Tree, Annual, Shrub and Groundcover Planting

Section 907-230, Tree and Shrub Planting, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as amended by this special provision is applicable to Tree, Annuals, Shrub and Groundcover Planting Only.

907-230.01--Description. The work covered under this special provision consists of furnishing all labor, materials, tools, tests, royalties, services and other incidentals as may be required for the good and proper completion of the tree, annual, shrub and groundcover planting operations.

The extent of planting locations are shown on the plans.

The Contractor is responsible for notes on the plans which call attention to particular requirements or conditions. The fact that these requirements or conditions are not called out in the specifications does not relieve the Contractor of responsibility for these requirements or conditions.

907-230.01.1--Maintenance of Site During Planting. Sidewalks, roads and other paving adjacent to planting operations shall be kept clean and free of obstruction, mud and debris at all times. Wheels of vehicles used in the work shall be cleaned if necessary. Sidewalks shall be protected from damage and markings from wheels of vehicles used in the work.

Flushing of streets and disposal of dirt or debris into sewers or drainage ditches will not be permitted.

Dust shall be controlled by approved means to the satisfaction of the Engineer.

907-230.01.2--Quality Assurance. At least one person thoroughly familiar with the type of materials being installed and the proper materials and methods for their installation shall be present at all times during execution of this work and shall direct all work being performed.

All workers shall have sufficient skill and experience to properly perform the work assigned to them. Workers engaged in special work or skilled work shall have the sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactory.

The selection of all materials and execution of all preparations required under the plans and specifications shall be subject to the approval of the Engineer. The Engineer shall have the right to reject any and all materials, any and all work, which in the opinion of the Engineer does not meet with the requirements of the specifications at any stage of the operations. All rejected materials shall be removed from the site at no additional cost to the State. Rejected work shall be replaced with

work of the specified quality or corrected as directed by the Engineer at no additional cost to the State.

All plants and their installation materials, shall meet or exceed the specifications of Federal, State, and County laws requiring inspection for plant disease and insect control.

Quality and size shall conform with the current edition of "Horticulture Standards" for number one grade nursery stock as adopted by the American Association of Nurserymen.

All plants shall be true to name. Each tree or planting lot shall be tagged with the name and size of the plants in accordance with the standards of practice of the American Association of Nurserymen. In all cases, botanical names shall take precedence over common names.

Plant nomenclature shall conform to Hortus Third, A Concise Dictionary of Plants Cultivated in the United States and Canada by MacMillan Publishing Company, Inc., New York.

907-230.01.3--Replacements of Plants. The Contractor shall make periodic inspections during the life of the project to determine what changes, if any, should be made in the City of Ridgeland's maintenance program. All such recommended changes shall be submitted, in writing, to the Engineer.

The Contractor shall replace, at no additional cost to the State, and as soon as weather conditions permit, all dead plants and all plants not in a vigorous, thriving condition, as determined by the Engineer. The plants shall be free of dead branches and dead branch tips, and shall bear foliage of a normal density, size and color. Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this specification.

The Contractor shall make all necessary repairs to grades, mulch or plant materials required because of plant replacements. Such repairs shall be done at no additional cost to the State.

907-230.02--Materials.

907-230.02.1--Soil Mix. Soil mix within all groundcover and annual planting beds shall be furnished at a 24-inch depth. Shrub planting pits shall be backfilled with soil mix as specified on the shrub planting drawing details. Soil mix furnished for all plant materials shall be fertile, friable, sandy loam soil mix complying with the following quantitative analysis:

1. Decomposed organic matter 5 to 8%
2. Silt 10 to 30%
3. Sand 25 to 75%
4. Clay 5 to 10%
5. pH 5.0 to 6.5

Soil mix shall not contain any substance or material inhibitory to plant growth, and shall be without admixture of clay, hardpan, mulch, marl, shale or other material which in the opinion of the Engineer

shall render it unsuitable for use. Soil mix shall also be free of stones, lumps, noxious weeds or their seeds, grasses or their seeds, other plants or their roots, branches, sticks, or other extraneous material larger than two inches in diameter. Soil mix found to contain any of the above-listed items shall be chemically or mechanically treated, or removed from the project at the discretion of the Engineer.

The Contractor shall be required to have tests run on the soil mix proposed for use, to determine the soil mix's compliance with the above-listed quantitative analysis. In addition to the above tests, the Contractor shall be required to have tests run for soluble salt, nitrogen, phosphorus, potassium, calcium, and magnesium content, for percent organic matter, and pH. These soil tests shall be conducted by a soils testing laboratory approved by the Engineer.

Following initial soil testing and approval of soil mix for use, soil mixes placed on the project may be sampled and tested as specified above at random, as directed by the Engineer, at no additional cost to the State.

Additions of fertilizer and/or lime to the soil mix furnished, as may be recommended by the Soil Test Report issued by the soil testing laboratory, shall be done by the Contractor as part of the work. No additions of fertilizer, lime, conditioning, or placement of soil mix shall be done prior to furnishing, in writing to the Engineer, all initial soil test results and obtaining his approval of soil mixes tested.

907-230.02.1.1--Fertilizer. Fertilizer shall be a commercially available material conforming to Mississippi Fertilizer Laws. Fertilizer shall be uniform in composition, dry and free flowing, and shall be delivered to the site in the original unopened containers, each bearing the manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it, in the opinion of the Engineer, unsuitable for use, will not be accepted. Commercial balanced fertilizer of analysis 13-13-13 shall be provided for use in soil mixture conditioning.

907-230.02.1.2--Lime. Lime shall be crushed or ground so that 90 percent passes a 10-mesh screen and not less than 50 percent will pass a 60-mesh screen. All lime shall have a neutralizing value of 90 percent calcium carbonate or better. Lime which has become caked or otherwise damaged, making it, in the opinion of the Engineer, unsuitable for use, will not be accepted.

Lime shall be applied at the rate specified by the soil test reports.

907-230.02.1.3--Water. Potable water, furnished by the Contractor, shall be supplied to the plants in adequate quantities to insure their healthy survivability until final acceptance of the project. The Contractor shall make whatever arrangements may be necessary to insure an adequate supply of water. The Contractor shall also furnish all necessary hose, equipment, attachments and accessories as may be necessary to complete the work.

907-230.02.1.4--Organic Matter. Klumb's, or approved equal, decomposed pine bark soil conditioner shall be provided for use in planting soil mix.

907-230.02.1.5--Sand. Clean sharp builder's sand shall be provided for use in planting soil mix.

907-230.02.2—Plant Materials.

907-230.02.2.1--General. All plants as indicated on the plans and/or listed in the plant schedule shall be provided. Unless otherwise specifically permitted, plants shall be nursery-grown in accordance with the best modern horticultural practices.

Plants shall comply with State and Federal laws relating to inspection for diseases and insect infestation. Inspection certificates shall be filed with the State.

Substitutions of other plants shall not be permitted unless authorized in writing by the Engineer. If proof is submitted that any plant size specified is unobtainable, a proposal will be considered for use of the nearest equivalent size or variety.

Durable, legible labels stating the correct plant name and size specified in the Plant Schedule shall be securely attached to each plant or plant container delivered to the planting site for the purpose of inspection and plant identification.

907-230.02.2.2--Quality and Inspection. Plants shall conform to the requirements set forth in ANSI 260.1 Standard for Nursery Stock and shall be of standard quality, true to name and type and first-class representatives of their species and variety. Balled & Burlapped (B&B) materials shall have been root pruned within the last two years. Container grown plants shall have been grown in the delivery container for one growing season.

Plants shall have normal, well-developed branches and vigorous fibrous root systems. They shall be healthy, vigorous plants free from defects, decay, disfiguring roots, sun-scald injuries, abrasions of the bark, diseases, insect pests or their eggs, borers and any other form of infestation or objectionable disfigurements.

Plants lacking density or proper proportions, plants which are weak or thin, plants which have a damaged or crooked leader or multiple leaders unless specifically specified, or plants injured by too close planting in nursery rows will be rejected. Plant materials which have been cut back from larger grades to meet certain requirements will not be accepted. Plants shall not be pruned prior to delivery to the point of planting.

All plants shall be subject to inspection and approval by the Engineer at any place and at any time. Portions or parts of plants required for the work may be inspected at the place of growth, but inspection at the place of growth shall not in any way impair the right of rejection at the site.

907-230.02.2.3--Measurements. Trees shall be measured when branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from tip to tip. Caliper measurements shall be taken at a point on the tree trunk six inches above natural ground line for trees up to four inches in caliper. Caliper measurements for trees specified as greater than four inches in caliper shall be taken at a point on the trunk 12 inches above the natural ground line.

Shrubs and groundcover shall be measured by container size; however, additional dimensions are often given within the plant material schedule on the plans to verify that the container size is accurate for the spread & height of the plant, per the American Association of Nurserymen (AAN). These measurements are taken when branches are in the plant's normal position. Height and spread dimensions specified refer to the main body of the plant and not from tip to tip.

Annuals shall be measured by container size.

If a range of size is given, no plant shall be less than the minimum size and not less than 50% of the plants shall be as large as the maximum size acceptable and/or the measurements after pruning, where pruning is necessary.

Plants that meet the measurements specified, but do not possess a normal balance between height and spread, shall be rejected.

Plants larger than those specified and of equal quality to those specified may be accepted at no additional cost to the State.

907-230.02.2.4--Balled & Burlapped (B&B) Trees. Trees designated "B&B" in the Plant Schedule shall be adequately balled with firm, natural balls of soil in sizes as set forth in ANSI 260.1 Standard for Nursery Stock. Balls shall be firmly wrapped with jute burlap weighing not less than 7.2 ounces per square yard or other approved strong cloth of equal strength and resistance to tearing and laced with a suitable heavy jute twine. No B&B tree shall be planted if the root ball is cracked or broken before or during the process of planting or if the tree is loose in the root ball.

907-230.02.2.5--Container Grown Plants. Plants designated "container-grown" in the Plant Schedule shall be furnished in sound containers of the size specified. The plant materials contained therein shall conform to the requirements set forth in ANSI 260.1 Standard for Nursery Stock for container-grown plants. No container-grown plant shall be planted if the root and soil mass is cracked or broken either before or during the process of planting. Root bound container-grown stock will not be accepted. Containers shall be free of weeds and grasses. Containers found to contain objectionable weeds and/or grasses will be rejected.

907-230.02.2.6--Delivery, Handling and Temporary Storage. Trees designated "B&B" shall be freshly dug at the time of delivery. All trees shall be dug and/or handled with skill and care so as to prevent injuries to the trunk, branches and roots and shall be packed in an approved manner to ensure arrival at the project site in good condition.

Plants shall not be bound with wire or rope at any time in such a manner that injury to the plant results. Plants shall be handled and lifted from the bottom of the root ball, using whatever means is necessary.

Protective covering shall be provided for the plants during delivery and while in storage awaiting planting.

Until planted, all plants shall be protected from excessive moisture loss and/or freezing by covering the root balls or containers with sawdust or other approved mulch material. Adequate water shall be provided to all plants while in storage and awaiting planting.

907-230.02.2.7--Pine Bark Mulch. A three (3) inch depth layer of clean pine bark mulch, free of weed seeds, moss, stones, sticks, cones, or other debris shall be provided within the planting saucer of each tree. Pine bark mulch shall not contain materials or toxic substances which may adversely influence growth.

907-230.02.2.8--Antitranspirant. "Wilt-proof" antitranspirant or other approved wilt-proofing agent shall be provided for all trees in leaf.

907-230.02.2.9--Staking And Guying. Materials for staking and guying of trees shall be as called for by the planting details.

The Contractor will be responsible for removal of all tree guy wires. It will be up to the Contractor to determine when to remove guy wires to prevent girdling to tree trunks. The Contractor will re-guy trees if the tree is not yet mature enough to support its own weight, or not enough root growth has occurred to anchor it firmly. If damage occurs to trees from girdling of the trunks, or removal of guy wires too early, the Contractor will replace all such material at no additional cost to the State.

907-230.03--Construction Requirements.

907-230.03.1--Site Preparation. All construction debris shall be removed from the subgrade surface before beginning landscape operations. Subgrade shall be free of all brick, concrete, mortar, gravel, asphalt, lumber, sheetrock, and any other materials which would adversely influence plant growth.

907-230.03.2--Installation. The locations of all trees shall be staked and approval of the Engineer obtained before planting begins. The Engineer may adjust the locations of tree prior to planting.

Prior to planting, fluorescent marking paint shall be used to lay out each of the plant beds for location approval by the Engineer. The plant material in their original containers shall be positioned within the painted bed locations, for approval as well. The Engineer may adjust the locations of the plants prior to planting.

Existing site conditions shall be examined before work begins. The Contractor shall notify the Engineer of any unsatisfactory conditions. No work shall be performed until such conditions are satisfactory and acceptable.

Prior to planting, the Engineer shall be informed in writing of existing conditions which could be detrimental to the successful planting and subsequent growth and health of the plants, including but not limited to: subsurface drainage conditions, underground utility locations, and other subgrade conditions.

All plant pits shall be circular in outline. All excavations shall have vertical sides. The depths and widths shall be as specified on planting details.

907-230.03.3--Setting Plants. Trees shall be uniformly set two to four inches (2" to 4") higher than the surrounding grade or as necessary to provide adequate drainage away from the roots.

Annuals, shrubs and groundcover, as specified in the appropriate planting detail, shall be set to insure the plant material is high enough to promote positive water drainage away from the roots.

Planting areas and pits shall be prepared as specified and as shown on the plans, prior to inserting plants. Specified soil mixture shall be used to backfill beds and pits. When tree pits have been backfilled approximately 2/3 full, water shall be thoroughly incorporated before installing remainder of soil mix to top of pit.

Plants shall be set plumb and braced rigidly in position until the soil mix has been tamped solidly around the root ball.

Rope or strings shall be cut from the top of the root ball after the tree has been set. Burlap or cloth wrapping shall be left intact around balls. Portions of the burlap exposed at the top of root ball shall be turned under and buried.

Shallow saucers capable of holding water about each tree shall be formed by placing a mound of soil mix around the edge of each filled-in pit.

All plants shall be thoroughly watered by hose immediately after planting.

Tree saucers and bed areas shall be uniformly mulched with a three (3) inch layer of pine bark mulch.

Trees over two inches in caliper shall be guyed with a minimum of three guy wires spaced evenly around the tree. Each guy wire shall be attached to the tree with a single loop through a hose with an angle of 60 degrees to the tree trunk. The guy wire shall be attached in accordance with planting details. Guy wires shall be kept taut. Removal of guy wires will be the responsibility of the Contractor.

All trees shall be pruned, as necessary, at the site in accordance with standard modern horticultural practice as approved by the Engineer. Cuts over two inches in diameter shall be painted with flat black oil based enamel paint. Pruning shall be done with clean, sharp tools.

907-230.03.4--Site Maintenance. Excess and waste materials shall be continuously and promptly removed and disposed of as specified herein and all reasonable precaution taken to avoid damage to existing structures.

When all work has been completed in an area, the area shall be cleaned up to the satisfaction of the Engineer. Debris, rubbish, subsoil, soil mix and other waste material shall be cleaned up and

removed from the project site.

907-230.03.5--Protection Of The Work And The Public. The Contractor shall take all necessary precautions to adequately protect the work under construction from damage by the public and to protect the public from accident and unnecessary inconvenience.

In the event that pavement, structures, walls, sidewalks, curbs, substructures, or utilities are disturbed or damaged by the Contractor during execution of the work, the Contractor shall make repairs, at no additional cost to the State. If the damaged item is owned or operated by one of the several public utilities, repair shall be accomplished as directed by the utility. If the damaged item is the property of the State, repair shall be made in a manner acceptable to the Engineer.

907-230.03.6--Landscape Maintenance. Maintenance shall begin immediately after each plant is planted.

Maintenance of new plants shall consist of pruning, trimming, watering, cultivating, weeding, mulching, resetting to proper grades or upright position, restoration of the planting saucer, litter removal from bed areas and furnishing and applying such sprays as are necessary to keep the plants free of insects and diseases. This will be required until final acceptance of the work.

Planting areas and plants shall be protected at all times against trespassing damage of any kind for the duration of the maintenance period. If any plants become damaged or injured, they shall be treated or replaced as directed by the Engineer at no additional cost to the State. No work shall be done within, adjacent to, or over any planting area without proper safeguards and protection to the plant.

The Contractor shall be responsible for keeping all plants and work incidental thereto, in good condition by planting replacements, watering, weeding, pruning and spraying, and by performing all other necessary operations of care for promotion of root growth and plant life, so that all work is in a satisfactory condition at the final inspection of the project.

All leaves, litter, gravel, or other debris shall be removed from all landscaped areas at weekly intervals until final acceptance. Such materials shall be collected and properly disposed of off the project site.

The root system of all plants shall be watered at such intervals as will keep the surrounding soil in the best condition for promotion of root growth and the overall healthy life of the plant.

907-230.3.7--Inspection And Final Acceptance. After the completion of all items of work, and upon written request of the Contractor, the Engineer will inspect all work for final acceptance. Upon completion of any deficiencies, the Engineer will certify in writing as to the final acceptance of the project. The Contractor's responsibility for maintenance will terminate the day after final acceptance of the work.

907-230.04--Method of Measurement. Tree planting, annual planting, shrub and groundcover

planting, complete and accepted, will be measured per each as indicated on the plans and in the bid schedule of the contract.

907-230.05--Basis of Payment. Tree planting, annual planting, shrub and groundcover planting, measured as prescribed above, will be paid for at the contract unit price bid per each, which price shall be full compensation for furnishing all planting soil mix, soil lab testing and reports, fertilizer, lime, herbicide treatment, nursery tagging and associated trips, tree staking and guying, mulches, watering, plant material, labor and equipment, storing and protection and incidentals necessary to complete the work.

Payment will be made under:

907-230-A: Tree Planting, <u>Description</u>	- per each
907-230-F: Shrub and Groundcover Planting, <u>Description</u>	- per each
907-230-G: Annuals Planting, <u>Description</u>	- per each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

TABLE OF CONTENTS
DOCUMENT 00010

**PROJECT: SITE IMPROVEMENTS TO JACKSON COUNTY
WELCOME CENTER ON I-10, JACKSON COUNTY,
MISSISSIPPI**

PROJECT NUMBER: STP-0010-01(093) 103316

DATE: JUNE 17, 2003

DESCRIPTION 907-242-A: This Work shall consist of minor site work and all construction work necessary in constructing the Guardhouse as a part of Phase 1 for the Site Improvements to Jackson County Welcome Center on the Westbound side of Interstate 10, Jackson County, Mississippi, for District Six, in accordance with these Specifications and conforming with the Drawings.

It is the intention of these Specifications to provide the necessary items and instruction for these improvements including all code compliance. Omission of items or instruction necessary or considered standard good practice for the proper installation and construction of the Work shall not relieve the Contractor of furnishing and installing such items and conforming to the regulatory codes having jurisdiction.

GENERAL INDEX

DOCUMENT	00010	TABLE OF CONTENTS
DOCUMENT	00015	INDEX OF DRAWINGS

DIVISION 1 GENERAL REQUIREMENTS

SECTION	01110	SUMMARY OF WORK
SECTION	01290	PAYMENT PROCEDURES
SECTION	01295	SCHEDULE OF VALUES
SECTION	01310	PROJECT MANAGEMENT AND COORDINATION
SECTION	01315	PROJECT MEETINGS
SECTION	01320	CONSTRUCTION PROGRESS DOCUMENTATION
SECTION	01330	SUBMITTAL PROCEDURES
SECTION	01425	REFERENCE DOCUMENTS
SECTION	01455	TESTING LABORATORY SERVICES
SECTION	01500	TEMPORARY FACILITIES AND CONTROLS
SECTION	01610	BASIC PRODUCT REQUIREMENTS
SECTION	01630	PRODUCT OPTIONS AND SUBSTITUTION PROCEDURES
SECTION	01735	CUTTING AND PATCHING
SECTION	01740	CLEANING
SECTION	01770	CLOSEOUT PROCEDURES
SECTION	01785	PROJECT RECORD DOCUMENTS

DIVISION 2 SITE CONSTRUCTION

SECTION	02315	EXCAVATION, FILLING, AND GRADING FOR BUILDINGS
SECTION	02365	SOIL TREATMENT FOR TERMITE CONTROL

DIVISION 3	CONCRETE	
SECTION	03100	CONCRETE FORMS AND ACCESSORIES
SECTION	03200	CONCRETE REINFORCEMENT
SECTION	03300	CAST-IN-PLACE CONCRETE
DIVISION 4	MASONRY	
SECTION	04200	MASONRY UNITS
DIVISION 5	METALS	
SECTION	05500	METAL FABRICATION
DIVISION 6	WOOD AND PLASTICS	
SECTION	06100	ROUGH CARPENTRY
SECTION	06175	WOOD TRUSSES
SECTION	06400	ARCHITECTURAL WOODWORK
DIVISION 7	THERMAL AND MOISTURE PROTECTION	
SECTION	07210	BUILDING INSULATION
SECTION	07260	VAPOR RETARDERS
SECTION	07610	SHEET METAL ROOFING
SECTION	07650	FLEXIBLE FLASHING
SECTION	07920	JOINT SEALANTS
DIVISION 8	DOORS AND WINDOWS	
SECTION	08210	WOOD DOORS
SECTION	08550	WOOD WINDOWS
SECTION	08710	DOOR HARDWARE
SECTION	08800	GLAZING
DIVISION 9	FINISHES	
SECTION	09050	COLOR DESIGN
SECTION	09250	GYPSUM BOARD
SECTION	09900	PAINTS AND COATINGS
DIVISION 10	SPECIALTIES	
SECTION	10400	IDENTIFICATION DEVICES
DIVISION 11	EQUIPMENT (Not Used)	
DIVISION 12	FURNISHINGS (Not Used)	
DIVISION 13	SPECIAL CONSTRUCTION (Not Used)	
DIVISION 14	CONVEYING SYSTEMS (Not Used)	
DIVISION 15	MECHANICAL	
SECTION	15010	BASIC MECHANICAL REQUIREMENTS
SECTION	15669	THROUGH-WALL HEAT PUMP
DIVISION 16	ELECTRICAL	
SECTION	16010	ELECTRICAL GENERAL REQUIREMENTS
SECTION	16100	BASIC MATERIALS AND METHODS
SECTION	16200	SERVICE AND DISTRIBUTION
SECTION	16300	LIGHTING

INDEX OF DRAWINGS

DOCUMENT 00015

WORKING NUMBER	SHEET NUMBER	DESCRIPTION
1	1	MDOT TITLE SHEET
DI-1	2	DETAILED INDEX AND GENERAL NOTES
SQ1	3	SUMMARY OF QUANTITIES
SQ2	4	SUMMARY OF QUANTITIES
PP	5	PHASING PLAN
SP	6	OVERALL SITE PLAN
DM1	7	EXISTING CONDITIONS / DEMOLITION PLAN
DM2	8	EXISTING CONDITIONS / DEMOLITION PLAN
SWPPP	9	STORM WATER POLLUTION PREVENTION PLAN
TCP	10	TRAFFIC CONTROL PLAN
L1	11	OVERALL LAYOUT PLAN
L2	12	LAYOUT PLAN
L3	13	LAYOUT PLAN
L4	14	LAYOUT PLAN
L5	15	PAVING PLAN
JP	16	CONCRETE PAVEMENT PLAN
G1	17	OVERALL GRADING PLAN
G2	18	GRADING PLAN
G3	19	GRADING PLAN
PL1	20	PLAN AND PROFILE PLAN
PL2	21	PLAN AND PROFILE PLAN
PL3	22	PLAN AND PROFILE PLAN
PL4	23	PLAN AND PROFILE PLAN
IR1	24	OVERALL IRRIGATION PLAN AND DETAILS
IR2	25	IRRIGATION PLAN
IR3	26	IRRIGATION PLAN
IR4	27	IRRIGATION PLAN
LA1	28	PLANTING PLAN
LA2	29	PLANTING PLAN
LA3	30	PLANTING PLAN
VS1	31	VEGETATION SCHEDULE
ML	32	MOWING LIMITS / LANDSCAPE ESTABLISHMENT
D1	33	SITE DETAILS
D2	34	SITE DETAILS
PJ-1	35	CONCRETE PAVEMENT JOINTS
PJ-2	36	CONCRETE PAVEMENT JOINTS (LONGITUDINAL)
PM-5	37	PAVEMENT MARKING LEGEND DETAILS
PM-6	38	PAVEMENT MARKING LEGEND DETAILS
DT-1	39	DETAILS OF TYPICAL DITCH TREATMENT
SD1	40	DRIVEWAYS, CURB AND GUTTER, AND SIDEWALK
SD2	41	DRIVEWAYS, INTEGRAL CURB, AND SIDEWALK
FE1	42	FLARED END SECTION FOR CONCRETE PIPE
PAV1	43	PAVILION
PAV2	44	PAVILION
PAV3	45	PAVILION
GHP	46	GUARDHOUSE PLAN
SG1	47	SIGN (MASONRY AND STONE)
E0.1	48	ELECTRICAL LEGEND, ABBREVIATIONS AND GEN'L. NOTES
E1.0	49	SITE LIGHTING – ELECTRICAL NEW / DEMOLITION
ME2.1	50	GUARDHOUSE – MECH. / ELEC., SCH. & POWER RISER
E3.1	51	ELECTRICAL DETAILS

END OF DOCUMENT

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS:

- A. Work covered by the Contract Documents shall be provided by one (1) General Contractor under one (1) Contract to improve the Mississippi Department of Transportation site in the following location: Project No. STP-0010-01(093) 103316, Site Improvements to Jackson County Welcome Center on I-10, in Jackson County, Mississippi.
 - 1. Description A: Construction of New Nature Trail Parking & Amenities (Phase 1)
 - 2. Description B: Construction of Guardhouse (Phase 1)
 - 3. Description C: Construction of South Plaza (Phase 2)
 - 4. Description D: Construction of Truck Parking, Bus Parking & North Plaza (Phase 3)
- B. General Conditions: AIA 201 General Conditions and Supplemental Conditions.
- C. Time of Completion: The completion of this Work is to be on or before the time indicated on the Owner and Contractor Agreement.
- D. Sequence of Work: See Drawings and Specifications that define the different phases in detail of each portion of the Work. Each phase shall have Inspections as described in Section 01770 – Closeout Procedures at Substantial Completion (Partial Completion) and Liquidated Damages will be charged for that portion of the Work if not completed on schedule.
- E. Contractor's Duties:
 - 1. Except as specifically noted, provide and pay for:
 - a. Labor, materials, equipment.
 - b. Tools, construction equipment, and machinery.
 - c. Other facilities and services necessary for proper execution and completion of the Work.
 - 2. Pay legally required sales, consumer, use, payroll, privilege and other taxes.
 - 3. Secure and pay for, as necessary for proper execution and completion of Work, and as applicable at time of receipt of bids:
 - a. Permits
 - b. Government Fees
 - c. Licenses
 - 4. Give required notices.
 - 5. Comply with codes, ordinances, rules, regulations, orders and other legal requirements of public authorities that bear on performance of Work.
 - 6. Promptly submit written notice to Project Architect of observed variance of Contract Documents from legal requirements. Appropriate modifications to Contract Documents will adjust necessary changes. Assume responsibility for Work known to be contrary to such requirements, without notice.
 - 7. Enforce strict discipline and good order among employees. Do not employ on Work, unfit persons or persons not skilled in assigned task.

8. Schedule of Values: The Contractor shall submit to the Project Architect a Schedule of Values as described in Section 01295 of these Specifications. This submittal will be recorded as submittal number one for this Project. When this submittal is approved, a copy will be transmitted to Construction Administration to be used to review and compare to amounts submitted on the CAD-720 form.
9. Sub-Contractors List: The Contractor shall submit a list, acceptable to the MDOT, of all subcontractors to be used on the Project within seven (7) days after written notice of Contract award by the MDOT. Submit to the Project Architect CAD-720 form - REQUEST FOR PERMISSION TO SUBCONTRACT for each subcontractor before they are allowed to perform any Work.
10. Coordination: The Contractor is responsible for the coordination of the total Project. All subcontractors will cooperate with the Contractor so as to facilitate the general progress of the Work. Each trade shall afford all other trades every reasonable opportunity for the installation of their Work. Refer to Section 01310—Project Management & Coordination.

1.02 CONTRACTOR'S USE OF PREMISES

- A. Confine operations at the site to areas permitted by:
 1. Law
 2. Ordinances
 3. Permits
 4. Contract Documents
 5. Owner
- B. Do not unreasonably encumber site with materials or equipment.
- C. Do not load structure with weight that will endanger structure.
- D. Assume full responsibility for protection and safekeeping of products stored on premises.
- E. Move any stored products which interfere with operations of MDOT or other Contractors.
- F. Obtain and pay for use of additional storage of work areas needed for operations.
- G. Limit use of site for work and storage to the area indicated on the Drawings.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01290

PAYMENT PROCEDURES

PART 1 GENERAL

1.01 METHOD OF MEASUREMENT: The method of measurement and payment shall conform to the applicable provisions of Article 9 of the AIA Document A201-1997 General Conditions of the Contract for Construction.

1.02 APPLICATION FOR PAYMENT

A. Format:

1. Applications for Payments will be prepared on AIA forms G702-Application and Certificate for payment and G703-Continuation Sheet; or, a computer generated form containing similar data may be used.

B. Preparation of Application:

1. Present required information in type written form.
2. Execute certification by signature of authorized officer.
3. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of Work performed and for stored products.
4. List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original Item of Work.
5. Prepare Application for Final Payment as specified in Section 01770-Closeout Procedures.

C. Submittal Procedures:

1. Submit 5 copies of each Application for Payment.
2. Submit an updated construction schedule with each Application for Payment as described in Section 01320-Construction Progress Documentation.
3. Submit request for payment at intervals agreed upon by the Project Architect, Owner, and Contractor.
4. Submit requests to the Project Architect at agreed upon times, or as may be directed otherwise.

D. Substantiating Data:

1. Submit data justifying dollar amounts in question when such information is needed.
2. Provide one copy of the data with a cover letter for each submittal.
3. Indicate the Application number, date and line item number and description.

1.03 BASIS OF PAYMENT

- A. This Work will be paid for by Contract Sum for the construction in District Six. The Work includes Site Improvements to Jackson County Welcome Center on I-10, Jackson County, Mississippi. The Contract Sum shall be full compensation for all site work, for furnishing all materials, and all other Work and effort of whatever nature in the construction of the buildings, installation of underground and other equipment, and final clean-up of the area. It shall also be complete compensation for all equipment, tools, labor, and incidentals necessary to complete the Work.

B. Payment will be made under:

- | | | |
|----|---|----------|
| 1. | Description A: New Nature Trail Parking & Amenities (Phase 1) | Lump Sum |
| 2. | Description B: Guardhouse (Phase 1) | Lump Sum |
| 3. | Description C: South Plaza (Phase 2) | Lump Sum |
| 4. | Description D: Truck Parking, Bus Parking & North Plaza (Phase 3) | Lump Sum |

TOTAL PROJECT CONTRACT SUM

LUMP SUM

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 01295

SCHEDULE OF VALUES

PART 1 GENERAL

1.01 DESCRIPTION

- A. Scope: Submit a Schedule of Values to the Project Architect at least 10 days prior to submitting first Application for Payment. This Schedule will be reviewed and forwarded to the Consultants. Upon Project Architect's request, support the values given with data substantiating their correctness. List quantities of materials. Payment for materials stored on site will be limited to those listed in Schedule of Unit Material Values. Use Schedule of Values only as basis for contractor's Application for Payment.
- B. Form of Submittal: Submit typewritten Schedule of Values on AIA Document G703-1992, using Table of Contents of this Specification as basis for format for listing costs of Work for Sections under Divisions 2- 16. Identify each line item with number and title as listed in Table of Contents of this Specification.
- C. Preparing Schedule of Values:
 - 1. Itemize separate line item costs for each of the following general cost items: Performance and Payment Bonds, field supervision and layout, Contingency Allowance, temporary facilities and controls, and closeout documents.
 - 2. Itemize separate line item cost for Work required by each Section of this specification. Breakdown installed cost with overhead and profit.
 - 3. For each line item, which has installed value of more than \$20,000, break down costs to list major products for operations under each item; rounding figures to nearest dollar. Make sum of total costs of all items listed in schedule equal to total Contract Sum.
- D. Preparing Schedule of Unit Material Values:
 - 1. Submit separate schedule of unit prices for materials to be stored on which progress payments will be made. Make form of submittal parallel to Schedule of Values with each line item identified same as line item in Schedule of Values. Include in unit prices only: Cost of material, delivery and unloading site, and sales tax.
 - 2. Make sure unit prices multiplied by quantities equal material cost of that item in Schedule of Values.
- E. Review and Re-submittal: After Project Architect's review, if requested, revise and resubmit schedule in same manner.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01298

CHANGE ORDER PROCEDURES

PART 1 GENERAL

- 1.01 SCOPE: This Section describes the procedures for processing Change Orders by the Project Architect and the Contractor.
- 1.02 CHANGE ORDER PROCEDURES
- A. Change Proposed by the Project Architect: The Project Architect may issue a Proposal Request to the Contractor which includes a detailed description of a proposed change with supplementary or revised Drawings and Specifications and a change in Contract Time for executing the change. The Contractor shall prepare and submit an estimate within 10 days.
 - B. Change Proposed by the Contractor: The Contractor may propose a change by submitting a request for change to the Project Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other Contractors. Document any requested substitutions in accordance with Section 01630 - Product Options and Substitution Procedures.
 - C. Contractor's Documentation:
 - 1. Maintain detailed records of Work completed on a time and material basis. Provide full information required for evaluation of proposed changes, and substantiate costs of changes in the Work.
 - 2. Document each quotation for a change in cost or time with sufficient data allowing evaluation of the quotation.
 - 3. On request, provide additional data to support computations:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 - 4. Support each claim for additional costs, and for work completed on a time and material basis, with additional information:
 - a. Origin and date of claim.
 - b. Dates and time work was performed and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 - D. Construction Change Directive: The Project Architect may issue a document, approved by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. The document will describe changes in the Work, and will designate method of determining any change in the Contract Sum or Contract Time. The change in Work will be promptly executed.
 - E. Format: The Project Architect will prepare 5 originals of the Change Order using the Mississippi Department of Transportation's Change Order Form.
 - F. Types of Change Orders:
 - 1. Stipulated Sum Change Orders: Based on Proposal Request and Contractor's fixed price quotation, or Contractor's request for a Change Order as approved by the Project Architect.

2. Unit Price Change Order: For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work, which are not pre-determined, execute Work under a Construction Change Directive. Changes in Contract Sum or Contract Time will be computed as specified for Time and Material Change Order.
 3. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Standard Form of Agreement Between the Owner and the Contractor. The Project Architect will determine the change allowable in Contract Sum and Contract Time as provided in the Contract Documents. The Contractor shall maintain detailed records of Work accomplished on Time and Material basis and shall provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- G. Execution of Change Order: The Project Architect will issue Change Orders for signatures of parties as provided in the Standard Form of Agreement Between the Owner and the Contractor. Final execution of all Change Orders requires approval by the Owner.
- H. Correlation of Contractor Submittals: The Contractor shall promptly revise Schedule of Values and the Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust time for other items of Work affected by the change and resubmit. Promptly enter changes in Project Record Documents.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 01310

PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Scope: To set forth procedures, conditions and responsibility for coordination of the total project.
- B. Project Coordinator: The General Contractor shall designate one individual as Project Coordinator (Superintendent), as referred to in the General Conditions. Prior to beginning Work his name, qualifications and address shall be submitted, in writing, to the MDOT Director with copies to the Construction Engineer, Office Engineer, District Engineer, Project Engineer and Project Architect. Upon approval, he will remain until the Project is completed and cannot be removed during construction without the written consent of the Project Architect.

1.02 DUTIES OF PROJECT COORDINATOR (SUPERINTENDENT)

- A. General:
 - 1. Coordination: Coordinate the work of all subcontractors and material suppliers.
 - 2. Supervision: Supervise the activities of every phase of Work taking place on the project.
 - 3. Contractor's Daily Job Diary: Submit copy of daily job diary to the Project Architect each Monday for the previous week.
 - 4. Electrical: Take special care to coordinate and supervise the Work of the electrical and other subcontractors.
 - 5. Communication: Establish lines of authority and communication at the job site.
 - 6. Location: The Project Coordinator (Superintendent) must be present on the job site at all times, when, work is in progress.
 - 7. Permits: Assist in obtaining building and special permits required for construction.
- B. Interpretations of Contract Documents
 - 1. Consultation: Consult with Project Architect to obtain interpretations.
 - 2. Assistance: Assist in resolution of any questions.
 - 3. Transmission: Transmit written interpretations to concerned parties.
- C. Cessation of Work: Stop all Work not in accordance with the requirements of the Contract Documents.

- D. Division One: Coordinate and assist in the preparation of all requirements of Division One and specifically as follows:
1. Enforce all safety requirements.
 2. Schedule of Values: Assist in preparation and be knowledgeable of each entry in the Schedule of Values.
 3. Cutting and Patching: Supervise and control all cutting and patching of other trades work.
 4. Project Meetings: Schedule with Project Architect's approval and attend all project meetings.
 5. Construction Schedules: Prepare and submit all construction schedules. Supervise Work to monitor compliance with schedules.
 6. Shop Drawings, Product Data and Samples: Administer the processing of all submittals required by the Project Manual.
 7. Testing: Coordinate all required testing.
 8. Temporary Facilities and Controls: Allocate, maintain and monitor all temporary facilities.
 9. Substitutions and Product Options: Administer the processing of all substitutions.
 10. Cleaning: Direct and execute a continuing (daily) cleaning program throughout construction, requiring each trade to dispose of their debris.
 11. Project Closeout: Collect and present all closeout documents to the Project Architect.
 12. Project Record Documents: Maintain up-to-date Project Record Documents.
- E. Changes: Recommend and assist in the preparation of requests to the Project Architect for any changes in the Contract.
- F. Application for Payment: Assist in the preparation and be knowledgeable of each entry in the Application and Certificate for Payment.

1.03 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements, supports, and installation of Mechanical and Electrical Work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

- D. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's partial occupancy, if required.
- E. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.04 SUBCONTRACTOR'S DUTIES

- A. The Subcontractor is responsible to coordinate and supervise his employees in the Work accomplished under his part of the Contract.
- B. Schedules: Conduct Work to assure compliance with construction schedules.
- C. Suppliers: Transmit all instructions to his material suppliers.
- D. Cooperation: Cooperate with the Project Coordinator and other subcontractors.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 01315

PROJECT MEETINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Provisions for and procedures related to the required Project Meetings which include, but not limited to, the following for each Project Phase:
 - 1. Pre-Construction Meeting.
 - 2. Periodic Progress Meetings.

1.02 MEETINGS

- A. Purpose of Meetings: Project Meetings shall be held for the following reasons:
 - 1. To establish an understanding of what is expected from everyone involved.
 - 2. To enable an orderly Project review during the progress of the Work.
 - 3. To provide for systematic discussion of problems and effect remedies and clarifications.
 - 4. To coordinate the Work.
 - 5. To review installation procedures and schedules.

1.03 SCHEDULING AND ADMINISTRATION

- A. The Project Architect shall schedule and preside over all meetings throughout the progress of the Work. Duties include the following:
 - 1. Review, modify / approve minutes of the previous meeting.
 - 2. Discuss items that have been done the previous month and anticipated work to be done within the next month.
 - 3. Review Contractor's Pay Request and resolve questions or conflicts with Construction Documents.
- B. The Contractor shall attend and administer all meetings throughout the progress of the Work. Duties include the following:
 - 1. Preparation of agenda for meetings
 - 2. Distribution of agenda and written notice 7 days in advance of date for each regularly scheduled meeting.
 - 3. Make physical arrangements for meetings.
 - 4. Record the minutes which shall include list of all participants and all significant proceedings and, in particular, all decisions, agreements, clarifications, and other data related to Project cost, time, and modifications.

5. Distribute copies of minutes within 7 calendar days to all parties affected by decisions made at the meeting.
 6. Follow-up unresolved matters discussed at meetings and promptly effect final resolution, especially for work in progress. Advise all effected parties of result and include report of activities in next scheduled meeting.
- C. Representatives of Contractor's, Subcontractor's, and Supplier's attending the meetings shall be qualified and authorized to act on behalf of the entity each represents.
- D. Consultants may attend meetings to ascertain work is expedited consistent with Contract Documents and construction schedules.
- 1.04 PRE-CONSTRUCTION MEETING
- A. Schedule: Schedule Pre-Construction Meeting within 10 days after Notice to Proceed.
- B. Location: A central site, convenient for all parties, designated by the Contractor and approved by the Project Architect.
- C. Attendance: Attending shall be the MDOT representatives associated with the Project, the Project Architect and his Consultants, the General Contractor, all major Subcontractors, and any representatives of governmental or other regulatory agencies as required.
- D. Minimum Agenda:
1. Distribute and discuss construction schedule prepared by Contractor.
 2. Review critical Work sequencing.
 3. Designate responsibilities.
 4. State procedures for submittals.
 5. State procedures for maintaining record documents.
 6. State procedures for change orders.
 7. State procedures for application of payment.
 8. Coordinate use of premises, including office and storage areas.
 9. List Owner's requirements.
 10. Show clear understanding of Security.
 11. Show clear understanding of Housekeeping procedures.

1.05 PROGRESS MEETINGS

- A. Schedule: Progress Meetings will be scheduled monthly. The Project Architect will cancel the meeting with at least 48 hours notice if a meeting is not necessary for any particular month.
- B. Place of Project Meetings: Contractor's Field Office except as otherwise agreed.

- C. Attendance: Attending shall be the MDOT representatives associated with the Project, the Project Architect or his representative and his Consultants, the General Contractor, and all Subcontractors as pertinent to the agenda.
- D. Minimum Agenda:
1. Review, modify / approve minutes of the previous meeting.
 2. Review work progress since last meeting.
 3. Note field observations, problems and decisions.
 4. Identify problems that impede planned progress.
 5. Review off-site fabrication problems.
 6. Revise construction schedule as indicated.
 7. Plan progress during the next work period.
 8. Review submittal schedules; expedite and modify as required.
 9. Review proposed changes,
 10. Review Request for Payment.
 11. Complete other current business.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 01320

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.01 DESCRIPTION

- A. Scope: Provide projected Construction Schedules for entire Work and revise monthly to show progress through the pay period. The following is a minimum requirement and other type schedules are acceptable with Owner's approval.
- B. Form of Schedules: Prepare in form of horizontal bar chart.
 - 1. Provide separate horizontal bar column for each trade or operation.
 - 2. Order: Table of Contents of Specifications.
 - 3. Identify each column by major Specification section number.
 - 4. Horizontal Time Scale: Identify first work day of each week.
 - 5. Scale and Spacing: To allow space for updating.
- C. Content of Schedules:
 - 1. Provide complete sequence of construction by activity.
 - 2. Indicate dates for beginning and completion of each stage of construction.
 - 3. Identify Work of logically grouped activities.
 - 4. Show projected percentage of completion for each item of Work as of first day of each month.
- D. Updating:
 - 1. Show all changes occurring since previous submission of updated schedule.
 - 2. Indicate progress of each activity and completion dates.
- E. Submittals:
 - 1. Submit initial schedules to the Project Architect within 15 days after date of Notice to Proceed.
 - 2. Submit to Project Architect, periodically updated schedules accurately depicting progress to first day of each month.
 - 3. Submit 2 copies, one to be retained by the Project Architect and the other forwarded to the Project Engineer.
- F. If the Contractor is required to produce two revised construction schedules because of lack of progress in the Work, the Owner will notify the Contractor's surety.

END OF SECTION

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Scope: Submit to the Project Architect Shop Drawings, product data, and samples required by Specification Sections. Faxed submittals will **not** be accepted. Refer to Section 01630 – Product Options and Substitution Procedures, for requirements concerning products that will be acceptable on this Project.
- B. Shop Drawings: Original (legible) drawings prepared by Contractor, Subcontractor, Supplier or Distributor which illustrate actual portions of the Work; showing fabrication, layout, setting or erection details. Reproductions of the Contract Drawings will **not** be acceptable. Minimum requirements for Shop Drawings shall include the following:
 - 1. Prepared by a qualified detailer.
 - 2. Identify details by reference to sheet and detail numbers shown on Contract Drawings.
 - 3. Minimum sheet size: 8-1/2 inches by 11 inches.
 - 4. Reproductions for submittals: 7 Prints. Submit 8 prints if they are Plumbing, Mechanical or Electrical Submittals.
 - 5. Shop Drawings shall be stamped and signed by the Contractor certifying accuracy, completeness and compliance with Contract requirements prior to submitting to the Project Architect.
- C. Product Data: Provide 7 copies each. Provide 8 copies if they are Plumbing, Mechanical or Electrical Submittals. Minimum information submitted shall include the following:
 - 1. Manufacturer's standard schematic drawings: Modify drawings to delete information that is not applicable to the Project. Supplement standard information to provide additional information applicable to Project.
 - 2. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data: Clearly mark each copy to identify pertinent materials, products or models. Show dimensions and clearances required. Show performance characteristics and capacities, wiring diagrams and controls.
 - 3. Product Data shall be stamped and signed by the Contractor certifying accuracy, completeness and compliance with contract requirements prior to submitting to the Project Architect.
- D. Samples: Provide physical examples to illustrate materials, equipment or workmanship and to establish standards by which completed Work is judged.
 - 1. Provide one copy each of sufficient size and quantity to clearly illustrate functional characteristics of products or material with integrally related parts and attachment devices and full range of color samples.
 - 2. Samples remain the property of the Project Architect until completion of construction of the Project.
 - 3. Samples will not be required when specified product is submitted.
 - 4. If a specified product color is discontinued, Contractor shall notify Project Architect promptly to determine if it affects other color selections.

E. Field Samples and Mock-Ups: Erect on Project Site at location acceptable to Project Architect.

1. Construct each sample or mock-up complete, including Work of all trades required in the finished Work. Field Samples are used to determine standards in materials, color, texture, workmanship, and overall appearance.
2. Work shall not be allowed using these materials until the mock-up is approved.
3. The mock-up shall not be destroyed, until after the Work it represents is finished, without permission of the Project Architect. This mock-up shall be used as a standard to compare to the Work it represents for color, craftsmanship, overall appearance, and how the different materials make up the whole system.

F. Contractor Responsibilities:

1. Review Shop Drawings, product data, and samples prior to submission.
2. Verify field measurements, construction criteria, catalog numbers and other data.
3. Coordinate each submittal with requirements of Work and Contract Documents.
4. Contractor's responsibility for errors and omissions in submittals is not relieved by Project Architect's review of submittals.
5. Contractor's responsibility for deviations in submittals from requirements of Contract Documents is not relieved by Project Architect's review of submittals unless Project Architect gives written acceptance of specific deviations.
6. Notify Project Architect in writing at the time of submission, of deviations in submittals from requirements of Contract Documents.
7. Order no materials or begin no Work requiring submittals until the return of submittals bearing Project Architect's stamp and initials indicating review.
8. After Project Architect's review, distribute copies.

G. Submission Requirements:

1. Schedule submission with ample time given to review submittals prior to being needed.
2. Submit 7, 8 if Plumbing, Mechanical or Electrical copies of Shop Drawings and number of copies of product data which Contractor requires for distribution.
3. Submit number of samples specified in each Specification Section.
4. Accompany submittals with transmittal letter, in duplicate, containing data, project title and number; Contractor's name and address; the number of each Shop Drawings, product data and samples submitted; notification of deviations from Contract Documents; and other pertinent data.
5. Submittals shall include the following:
 - a. Date and revision dates.
 - b. Project title and number.
 - c. The names of Project Engineer, Architect/Engineer, Contractor, Supplier, Manufacturer, and separate detailer, when pertinent.
 - d. Identification of product or material.
 - e. Relation to adjacent structure or materials.
 - f. Field dimensions, clearly identified as such.
 - g. Specification Section Number.
 - h. Applicable standards such as ASTM Number or Federal Specification.
 - i. A blank space, 2 inches by 3 inches for the Project Architect's stamp.
 - j. Identification to deviations from Contract Documents.
 - k. Contractor's stamp, initialed or signed, certifying the review of submittal, verification of field measurements, and compliance with Contract Documents.

H. Resubmission Requirements:

1. Shop Drawings: Revise initial Drawings as required and resubmit as specified for initial submittal. Indicate on Drawings, any changes that have been made other than those required by Architect / Engineer.
2. Product Data and Samples: Submit new data and samples as required for initial submittal.

I. Distribution of Submittals after Review:

1. Distribute copies of Shop Drawings and product data which carry Project Architect's stamp to: Project Engineer's File, Project Architect's File, Architect's File (as required), Electrical / Mechanical Engineer's File (as required), Materials' File, Contractor's File, Job Site File, and Subcontractor, Supplier and/or Fabricator as necessary.
2. Distribute samples as directed. The Project Architect shall retain one of each.

J. Architect / Engineer's Duties:

1. Review submittals with reasonable promptness.
2. Review for design concept of Project and information given in Contract Documents.
3. Review of separate item does not constitute review of an assembly in which item functions.
4. Affix stamp and initial, or signature, certifying the review of submittal.
5. Return submittals to the Project Architect, who will forward to the Contractor for distribution.
6. Retain one copy of accepted submittals.

K. Delays attributable to untimely submittals, submittals not approved, or time taken to resubmit will not serve as a basis for a Contract Time extension.

L. Acceptance of submittal items will not preclude rejection of these items upon discovery of defects in them prior to final acceptance of completed Work.

M. After an item has been accepted, no change in brand, make, manufacturer's catalog number, or characteristics will be considered unless:

1. Satisfactory written evidence is presented to and approved by the Project Architect, that manufacturer cannot make scheduled delivery of accepted item, or;
2. Item delivered has been rejected and substitution of a suitable item is an urgent necessity, or;
3. Other conditions became apparent which indicates acceptance of such substitute item to be in the best interest of the Owner.

PART 2 PRODUCTS
Not Used.

PART 3 EXECUTION
Not Used.

END OF SECTION

SECTION 01425

REFERENCE DOCUMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Identification and purpose of Reference Documents.
- B. Administrative procedures and responsibility for the use of Reference Documents.

1.02 IDENTIFICATION AND PURPOSE

- A. Identification: Throughout the Contract Documents are references to nationally known and recognized Codes, Reference Standards, Reference Specifications, and similar documents that are published by Regulatory Agencies, Trade and Manufacturing Associations and Societies, Testing Agencies and others. References also include certain Project Documents or designated portions.
- B. Purpose: All named and otherwise identified "Reference Documents" are "by reference" hereby incorporated into these Specifications as though fully written and hereby serve to establish specific requirements and pertinent characteristics for materials and workmanship as well as methods for testing / reporting on compliance thereto.

1.03 PROCEDURES AND RESPONSIBILITIES

- A. Compliance with Laws and Codes of governmental agencies having jurisdiction shall be mandatory and take precedence over the requirements of all other Reference Documents. For products or workmanship specified by Associations, Trade, or Federal Standards, comply with the requirements of the standard, except when supplemented instructions indicate a more rigid standard and / or define more precise requirements. Should specified reference standards conflict with regulatory requirements or the Contract Documents, request Project Architect's clarification before proceeding.
- B. The Contractor (including any and all Parties furnishing and / or installing any portion of The Work) shall be familiar with the indicated codes and standards. It shall be the Contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify (and provide written certification, when required) that the items procured for use in this Work (and their installation, as applicable) meet or exceed the specified requirements.
- C. When date of Reference Document is not specified, conform to latest edition of said Document except when earlier editions are specifically required by Codes.
- D. The contractual relationship of the Parties to the Contract shall not be altered from the requirements of the Contract Documents by mention or inference otherwise in any reference document.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01455

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 SUMMARY

- A. Scope: The Contractor shall use testing laboratory services of the Mississippi Department of Transportation for all testing required in this Section. These services will be provided to the Contractor by the MDOT at no charge. Use of said services shall in no way relieve the Contractor of his obligation to perform Work in accordance with the Contract.
- B. Inspection, Sampling and Testing are required for:
 - 1. Section 02315, Excavation, Filling, and Grading.
 - 2. Section 03200, Concrete Reinforcement.
 - 3. Section 03300, Cast-In-Place Concrete.

1.02 LABORATORY'S DUTIES

- A. Materials will be inspected and sampled in accordance with current Mississippi Department of Transportation SOP pertaining to inspecting and sampling.
- B. Prepare reports of inspections and tests including:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Testing laboratory, name and address.
 - 4. Name and signature of inspector.
 - 5. Date of inspection or sampling.
 - 6. Record of temperature and weather.
 - 7. Date of test.
 - 8. Identification of product and Specification Section.
 - 9. Location of Project.
 - 10. Type of inspection or test.
 - 11. Observations regarding compliance with Contract Documents requirements.
- C. Distribute copies of reports of inspections and tests to Project Architect.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel to provide to laboratory in required quantities preliminary representative samples of materials to be tested.
- B. When required, furnish copies of mill test reports. Furnish to laboratory, casual labor to obtain and handle samples at the site and to facilitate inspections and tests.
- C. Provide facilities for laboratory's exclusive use for storage and curing of test samples.
- D. Notify laboratory in advance of operations to allow for assignment of personnel and scheduling of tests.

1.04 MATERIAL CERTIFICATIONS AND CERTIFIED TEST REPORTS

- A. All certifications shall meet the following requirements:
1. Have letterhead of the manufacturer, producer, supplier, or fabricator.
 2. Include the project number.
 3. Itemized list of materials covered by the certification.
 4. Contain a material conformance statement, which certifies that the materials conform to the specific specification requirements.
 5. Certification for all steel and steel wire products must also include a certified statement by the manufacturer that all of the manufacturing processes are of domestic origin.
 6. Signature of a responsible company official.
- B. All certified test reports shall meet the following requirements:
1. Have letterhead of the manufacturer, producer, supplier, fabricator, or laboratory.
 2. Include name and description of material, lot, batch, or heat number, etc., as applicable.
 3. Show results of each required test, and state that the test was run according to the test method specified.
 4. Test reports for all steel and steel wire products must also include a certified statement by the manufacturer that all of the manufacturing processes are of domestic origin.
 5. Signature of a responsible laboratory official.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

- 1.01 GENERAL: Establish and initiate use of each temporary facility at time first reasonably required for proper performance of the Work. Terminate use and remove facilities at earliest reasonable time, when no longer needed or when permanent facilities have, with authorized use, replaced the need.
- 1.02 FIELD OFFICE AND STORAGE FACILITIES: The Contractor shall be responsible for construction of the field office. The Contractor shall provide, maintain, and remove when directed, suitable substantial and watertight temporary field office and storage shed(s), in locations on the site as directed by the Project Architect, or his authorized representative and best suited for their respective uses, as follows:
- A. Field Office (One Required): For the use of the Contractor, Project Architect and his representative(s), and Consultants. Provide in office suitable furniture for plan layout, progress meetings and storage. Storage files and racks will maintain duplicates of all correspondence, shop drawings, plans, specifications, samples, etc. required to administer the project. These duplicates will be permanently kept as reference and shall not be used in the field. Also, provide lights, heat, air-conditioning, fax machine and telephone. Maintain each office in a sanitary and usable condition. Contractor shall provide the Project Architect with job site and emergency telephone numbers.
 - B. Storage Facilities: It shall be the Contractor's option to provide watertight storage facilities for storage of cement, lime, and / or other materials subject to water damage. If storage facilities are used, it shall be of sufficient size to hold all materials required for logically grouped activities on the site at one time, and shall have floors raised at least 6 inches above the ground on heavy joists or sleepers. Fully enclosed trailer is allowed, but location must be coordinated with Project Architect.
- 1.03 FURNISHING AND MAINTENANCE OF EQUIPMENT: Furnish and maintain all equipment such as temporary stairs, ladders, ramps, scaffolds, hoists, runways, derricks, chutes, elevators, etc. as required for proper execution of the Work of all trades. All such apparatus, equipment and construction shall meet all the requirements of the Labor Law and other applicable State or local laws
- 1.04 ELECTRIC LIGHTS AND POWER: Supply lights and power when necessary for the progress of the Work. The operating costs shall be borne by the Owner. Temporary wiring, where required, shall be run in conduits.
- 1.05 WATER: Supply water service. The operating costs shall be borne by the Owner.
- 1.06 ROADS AND ACCESS: The drive is to remain open at all times. A flagman will be required to control traffic when construction vehicles are present.
- 1.07 TOILETS FOR WORKMEN: Provide and maintain all necessary toilets for workmen. Toilets are to be maintained in strict accordance with the regulations of the State Board of Health. The toilets are to be located on the site as directed by the Project Architect or his authorized representative.

1.08 SECURITY / PROTECTION PROVISIONS

- A. The types of temporary security and protection provisions required include, but are not limited to, fire protection, barricades, warning signs / lights, personnel security program (theft prevention), environmental protection, and similar provisions intended to minimize property losses, personal injuries and claims for damages at Project Sites.
- B. Barricades and Construction Fence: Provide and erect all necessary barricades and any other protection required. Provide all necessary warning and danger lights from twilight to sunrise.
- C. Fire Extinguishers: Provide types, sizes, numbers and locations as would be reasonably effective in extinguishing fires during early stages, by personnel at project site. Provide Type A extinguishers at locations of low potential for either electrical or grease/oil flammable liquid fires: provide Type ABC dry chemical extinguishers at other locations; comply with recommendations of NFPA No. 10. Post warning and quick-instructions at each extinguisher location, and instruct personnel at Project Site, at time of their first arrival, on proper use of extinguishers and other available facilities at Project Site. Post local fire department call number on each telephone instrument at Project Site.
- D. Environmental Protection Procedures: Designate one person, the Construction Superintendent or other, to enforce strict discipline on activities related to generation of wastes, pollution of air/water/soil, generation of noise, and similar harmful or deleterious effects which might violate regulations or reasonably irritate persons at or in vicinity of Project Site.
- E. Water Control: Provide pumps as required to keep the excavation free from standing water and shall slope the excavation to prevent water from running toward existing buildings at all times.

1.09 BURNING OF TRASH: No burning of trash or debris shall be done on Owner's property. All such materials shall be removed from the site and disposed of in accordance with local laws and ordinances.

1.10 POWDER ACTUATED TOOLS: The use of powder actuated tools shall be prohibited from use during all phases of the construction, unless explicitly approved in writing, prior to construction, by the Project Architect.

1.11 FIRE HAZARDS: Special precautions shall be taken to reduce fire hazards where electrical or gas welding or cutting Work is done and suitable fire extinguishing equipment shall be maintained near such operations.

1.12 CONDUCT OF WORKERS: Workmen who, because of improper conduct or persistent violation of Owner's requirements, become objectionable, shall be removed at the Owner's request. Inform all workmen of Owner's requirements.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 01610

BASIC PRODUCT REQUIREMENT

PART 1 GENERAL

1.01 SECTION INCLUDES: The products of The Work and the requirements for their quality, delivery, handling, storage, protection and installation.

1.02 DEFINITIONS

- A. "Products". Defined as: The materials, machinery, equipment, components, and systems, in whole or in part, incorporated into The Work. "Products" does not include materials, tools, devices, machinery, equipment and systems used for the preparation, manufacture, fabrication, conveying and installation of The Work.
- B. "Level of Excellence". Defined as: The degree of quality for the Products and Workmanship of this Project. The required "degree of quality" shall be established on the basis of one or more of the following criteria which shall become the minimum acceptable "level of excellence" for the work of this Project:
1. Products selected by Architect.
 2. Architect's Specifications.
 3. Reference Standards.
 4. Manufacturer's Instructions.
 5. Industry Standards.

In the absence of all the criteria from the Specifications Section, the normal local Industry Standard shall prevail. The Party or Parties responsible for the required work shall be experienced in the work to be provided; shall have knowledge as to what, in the local area, constitutes "good and acceptable practice" in producing the completed work of this Section, and will be expected to provide nothing less.

Example: Masonry and Drywall Contractors are expected to know that Industry Standards, "good practice", and "common sense" dictate, to prevent cracks in the completed work, control joints must be installed at minimum distances or should be placed in certain locations where movement or other stress conditions are likely to occur. When such items are not specified or shown on the Drawings, the Contractor will be expected to request the Project Architect's clarification for location (primarily for esthetic considerations) and then provide not less than the minimum Industry Standard, at no additional cost to the Owner.

- C. "Standard of Quality". Defined as: A specific and particular manufacturer whose product(s) has / have been selected by the Architect as amply suitable to meet the Project requirements in one or more of the following criterions: appearance, physical attributes, performance characteristics, appropriateness for intended use, and cost.

The work of the individual Specification Section will be based on product(s) of the "Standard of Quality Manufacturer" and the product(s) of that manufacturer, designated within the Specifications Section by catalog number(s) (or other identification), shall become "Standard of Quality Product(s) and the basis by which the product(s) of "Other Acceptable Manufacturers", and any substitutions, are judged.

In the absence of the designation "Standard of Quality", such as for generic product, material or system, then the specified item (product, material or system) shall be the reference standard and shall become the "Standard of Quality".

- D. "Equivalent Products". Defined as: Products having a level of excellence which, in the Project Architect's judgment, is equal to the level of excellence established by the product(s) selected as Architect's "Standard of Quality".

- E. "Manufacturer". Defined as: An entity whose principal business is the manufacturing, fabricating, assembling, and / or supplying of products / systems from off site for incorporation (in whole, or in part, such as components of a system) into the construction at the Project Site.
1. The Architect's selection of a particular manufacturer usually is on the basis of the manufacturer's reputation within the Construction Industry, and / or "track record" with the Architect, for producing quality products on time, and providing responsive follow-up and reliable warranties.
 2. The terms "Fabricator" and "Supplier" used in these Specifications shall be synonymous with "manufacturer".
- F. "Other Acceptable Manufacturers". Defined as: Manufacturers who have qualifications and products similar to those of the "Standard of Quality" Manufacturer (see above) selected by Architect and are therefore "acceptable" to offer any of their products considered to be "equivalent" to the specified product(s).
1. To the best of the Architect's knowledge, information and belief, the manufacturers, listed as "Other Acceptable Manufacturers", now have products available that are considered to be "equivalent" to the specified product (or selection) of the "Standard of Quality" Manufacturer. Where no "Standard of Quality" is indicated then any of the "Acceptable Manufacturers" listed may offer products complying with the specified requirements.
 2. The inclusion of particular manufacturers as "Other Acceptable Manufacturers" does not signify that other (that is, unlisted) manufacturers are not acceptable or that they do not have equivalent products nor does the omission of any manufacturer's name indicate unacceptability for any reason.
 3. Manufacturers, who are not listed in the Contract Documents, and who desire consideration, must submit their product under provisions of Section 01630-Product Options and Substitutions Procedures.

1.03 QUALITY ASSURANCE – GENERAL

- A. The quality of all products and workmanship shall be in accordance with the provisions of this Section and the requirements of the individual Specifications Section.
- B. Whenever a "level of excellence" higher than the minimum industry standard is expected for products and workmanship, the more rigid standards and precise requirements will be indicated within individual Specifications Sections.

Example: For whatever reason, the Architect may specify a "dry film thickness (DFT)" for a coating that is more than the manufacturer's recommendation or than normally available in a three coat system. It shall be the Contractor's responsibility to achieve the required DFT with one or more additional coats, none of which shall be more than the manufacturer's recommendation for wet film thickness, for a single coat, when applied.

- C. Establishing and maintaining Project Quality Control shall be the responsibility of the Contractor.

1.04 QUALITY ASSURANCE – PRODUCTS

- A. All products incorporated into The Work shall be new except where otherwise provided by the Contract Documents and shall comply with the requirements of the individual Specifications Sections and as supplemented herein. All products incorporated into the Work shall be asbestos free. Products containing asbestos are not acceptable and will be considered as defective material. Whenever these products containing asbestos are discovered, they shall be removed from the Work at no cost to the Owner. Contractor shall certify that all materials incorporated into the Work are asbestos free, refer to Section 01770 - Closeout Procedures.

- B. Matching / Mating of Products:

MDOT – 6th District – Jackson

01610-2

Basic Product Requirements

1. Products required in quantity within a Specifications Section shall be the same, and shall be interchangeable.
 2. All manufactured products exposed to view, especially those considered as "Finishes" (including, but not limited to, items as floor material, wall coverings, glass, paint ceiling tile, that are installed or applied directly from manufacturer's containers), shall be of the same factory "run".
 3. The Contractor is expected to secure a sufficient quantity with initial purchase to avoid running short. Materials within an area that do not match, as a result of such failure, will be cause to reject all materials and will not be grounds for additional compensation.
- C. Extra Materials: When required by individual Specifications Sections, provide products, spare parts and maintenance material in condition and quantities required. All "extra materials" shall be of the same factory "run" as installed materials. Deliver to Project Site, properly store in appropriate locations, and obtain receipt from authorized person prior to Final Payment.
- 1.05 QUALITY ASSURANCE – WORKMANSHIP
- A. Comply with the "level of excellence" required by individual Specifications Sections. In the absence of specific requirements, comply with product(s) manufacturer's instructions and Industry Standards.
- B. Use only suitably qualified craftsmen to produce work of the specified quality.
1. Craftsmen shall be of excellent ability, thoroughly trained and experienced in types of work required, completely familiar with the quality standards, procedures and materials required.
 2. In the acceptance or rejection of manufactured and / or installed work, the Architect will make no allowance for the lack of skill on the part of workmen.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.
- D. Provide finishes to match approved samples.
- E. Adjusting of Operating Products: As follows:
1. Adjust moving parts of product / equipment (including, but not limited to, doors, drawers, hardware, appliances, mechanical and electrical equipment) to ensure smooth and unhindered operation and movement at time when Owner assumes control of item's use.
 2. All items shall be properly set, calibrated, balanced, lubricated, charged, and otherwise prepared and ready for intended use.
 3. Starting of Systems: When specified in individual Sections, require manufacturer's representative to be present at the Site to inspect, check, and approve equipment installation prior to start-up; to supervise placing equipment in operation; and to certify by written report that equipment has been properly installed, adjusted, lubricated, and satisfactorily operated under full load conditions.
 4. Equipment/systems Demonstrations and Personnel Instruction: When specified in individual Sections, require manufacturer to provide authorized representative to demonstrate operation of equipment and systems and to instruct Owner's personnel on proper operation and maintenance manuals as basis of instruction and demonstration. Include start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at schedule times, at equipment location.
- 1.06 TRANSPORTATION AND HANDLING
- A. Transport products by means and methods to avoid product damage; deliver in undamaged condition in manufacturers' unopened containers or packaging, keep dry.

- B. Provide equipment and personnel to handle products by means to prevent soiling or damage.
- C. Promptly inspect shipments for compliance with requirements, quantities, and damage.

1.07 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weathertight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions. Protect prefinished surfaces from damage or deterioration by acceptable means; do not use adhesive papers, sprayed or strippable coatings that bond when exposed to sunlight or weather.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering (do not use "Visqueen" or other polyethylene sheeting when subject to direct sunlight); provide ventilation to avoid condensation.
- C. Store loose granular materials on solid surface in a well-drained area; prevent mixing with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under specified conditions and are fit for use.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 01630

PRODUCT OPTIONS AND SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Scope: To give the product options available to the Contractor and to set forth the procedure and conditions for substitutions.

1.02 CONTRACTOR'S OPTIONS

- A. For products specified only by reference standards, select any product meeting standards by any manufacturer.
- B. For products specified by naming several (minimum of three) products or manufacturers, select any product and manufacturer named. Contractor must submit request, as required for substitution, for any product not specifically named and give reasons for not using product specified. Substitution will not be granted unless reasons are considered justified.
- C. For product specified by naming one or more products, but indicating the option of selecting equivalent products by stating "or approved equal" after specified product, Contractor must submit request, as required for substitution, for any product not specifically named.
- D. For products specified by naming only one product and manufacturer, an equivalent product will always be accepted if it is equal in all respects (size, shape, texture, color, etc.). The Contractor must submit a request for substitution as set forth in this section
- E. For products specified by naming only one product and manufacturer and stating no substitutions will be accepted, there is no option and no substitutions will be allowed.

1.03 PRODUCT SUBSTITUTION LIST

- A. Within 45 days after Notice to Proceed, submit to the Project Architect 4 copies of complete list of all proposed product substitutions.
- B. Tabulate list by each Specification Section.
- C. For named products specified with reference standards, include with listing of each product:
 - 1. Name and address of manufacturer.
 - 2. Trade name.
 - 3. Model or catalog designation.
 - 4. Manufacturer's data.
 - 5. Performance and test data.
 - 6. Reference standards.
- D. Proposed product will be reviewed for incorporation into the Project. Contractor will be notified for substitution rejection if not allowed, or will be instructed to submit in standard substitution submittal process for approval.

1.04 SUBSTITUTIONS

A. Project Architect will consider formal written requests from Contractor for substitution of products in place of those specified. Only one request per product will be allowed. Refer to Section 01330 - Submittal Procedures. Include in request:

1. Complete data substantiating compliance of proposed substitutions with Contract Documents.
2. For products:
 - a. Product identification including manufacturer's name and address.
 - b. Manufacturer's literature: Submit literature of actual product specified and literature of proposed substitution with all comparable features or components highlighted. Highlighted information is to include, but shall not be limited to, product description, performance, test data and reference standards.
 - c. Samples of the proposed substitution.
 - d. Name and address of similar projects on which product was used and date of installation.
3. For construction methods:
 - a. Detailed description of proposed method.
 - b. Drawings illustrating methods.
4. Itemized comparison of proposed substitution with product or method specified.
5. Data relating to changes in construction schedule.
6. Accurate cost data on proposed substitution in comparison with product or method specified.

B. In making request for substitution, Contractor represents:

1. He has personally investigated proposed product or method, compared the product specified with the proposed substitution, and determined that it is equal or superior in all respects to that specified.
2. He will provide the same guarantee for substitution as for product or method specified.
3. He will coordinate installation of accepted substitution into Work, making such changes required of Work to be complete in all respects.
4. He waives all claims for additional costs related to substitution that consequently becomes apparent.
5. Cost data is complete and includes all related costs under his Contract.

C. Substitutions will not be considered if:

1. They are indicated or implied on Shop Drawings or product data submittals without formal request submitted in accordance with this Section.
2. Acceptance will require substantial revision of Contract Documents.
3. In the Project Architect's judgment, the product or material is not equal.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 01735

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Scope: To set forth broad general conditions covering cutting and patching that applies to everyone and everything on the job.
- B. Execute cutting including excavating, fitting or patching or work required to:
 - 1. Make several parts fit properly.
 - 2. Uncover work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to Contract requirements.
- C. In addition to Contract requirements, upon Project Architect's written instructions:
 - 1. Uncover work for observation of covered work.
 - 2. Remove samples of installed materials for testing.
 - 3. Remove work to provide alteration of existing work.
- D. Do not cut or modify work of another Contractor without his consent.
- E. Payment for Costs: Costs caused by ill-timed, defective or work not conforming to the Contract will be borne by party responsible for ill-timed, defective or non-conforming work.

PART 2 PRODUCTS

- 2.01 GENERAL: Materials for replacement of work removed shall comply with individual Specifications Sections for type of work to be done.

PART 3 EXECUTION

3.01 GENERAL

- A. Inspection: Inspect existing conditions of work, including elements subject to movement or damage during cutting and patching.
- B. Preparation prior to cutting: Provide shoring, bracing and supports required to maintain structural integrity. Provide protection for other portions of project and protection from the elements.

C. Performance:

1. Execute cutting and demolition of methods that prevent damage to other work and will provide surfaces to receive installation of repairs and new work.
2. Execute excavating and backfilling by methods that prevent damage to other work and prevent settlement
3. Restore work that has been cut or removed install new products to provide completed work in accordance with requirements of the Contract Documents.
4. Refinish entire surfaces as necessary to provide an even finish. Refinish continuous surfaces to the nearest intersection and assemblies.

END OF SECTION

SECTION 01740

CLEANING

PART 1 GENERAL

1.01 SUMMARY

- A. Scope: Maintain premises and public properties from accumulations of waste, debris, and rubbish, caused by operations. At completion of Work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials and clean all sight-exposed surfaces; leave project clean and ready for occupancy.
- B. Dispose of all waste, debris and rubbish in accordance with the Owner's requirements.

PART 2 PRODUCTS

- 2.01 MATERIALS: Use only cleaning materials recommended by the manufacturer of surface to be cleaned, but cross reference cleaning materials used on surfaces to insure they are recommended by the cleaning material manufacturer.

PART 3 EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute cleaning to insure that structure, grounds, and surrounding properties are maintained free from accumulations of waste materials and rubbish. Wet down dry materials and rubbish to lay dust and prevent blowing dust. Clean site and surrounding properties at reasonable intervals during progress of Work, and remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off MDOT owned property. Handle materials in a controlled manner with as few handling as possible; do not drop or throw materials from heights. Schedule cleaning operations so that dust or other contaminants resulting from cleaning process will not fall on wet or newly painted surfaces.
- B. No materials may be disposed of by dumping them in the sanitary or storm sewer systems without specific approval by the Owner.
- C. Washdown of cement trucks will be done at locations determined by the Project Architect.

3.02 FINAL CLEANING

- A. Employ experienced workmen, or professional cleaners, for final cleaning. In preparation for Inspection of structure, conduct final inspection of sight-exposed surfaces and concealed spaces. Remove grease, dust, dirt, stains, labels, fingerprints and other foreign materials from sight-exposed finished surfaces. Repair, patch and touch up marred surfaces to specified finish to match adjacent surfaces.
- B. Broom clean paved surfaces; rake clean other surfaces of grounds.
- C. Remove temporary fencing and leave in same condition as surrounding landscaped areas.
- D. Keep Project clean until occupied by Owner.

END OF SECTION

SECTION 01770

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 DESCRIPTION

- A. The Scope of Work required under this Section consists of the Final Inspections, submitting of all closeout Documents and related items to complete the Work indicated on the Drawings and described in the Project Manual.
- B. Each Phase of Construction shall have separate Final Inspections as described below. Work cannot proceed on the next Phase until Work is completed and accepted on the previous Phase. Closeout Documents and related items will not be required until all Phases are complete.

1.02 FINAL INSPECTIONS

- A. Engineer and Architect's Inspection: The Contractor shall make written request for a Final Inspection to the Project Architect. Notice is to be given 10 calendar days prior to this inspection. At the day of inspection the Contractor shall have in hand 6 copies of a list prepared by the Contractor of deficiencies, which will be edited by the Project Architect and Consultants. A copy of these composite lists will be given to the Contractor for correcting the Work. Within 15 calendar days after this revised list is received, the Contractor shall make all corrections of the items listed. If, in the Project Architect's judgment, the Project is not ready for an Inspection, the Project Architect may schedule another inspection.
 - B. Owner's Inspection: After the Project Architect has determined the Project to be Substantially Complete and all punch list items have been corrected, an Owner's Inspection will be scheduled. The Contractor shall submit a letter that states all items have been corrected and submit required closeout Documents. The Owners may add to the punch list items, if it is determined that corrective work still needs to be done. Within 15 calendar days after this revised list is received, the Contractor shall make all corrections of the items listed.
 - C. Correction of Work before Final Payment: Contractor shall promptly remove from the Owner's premises, all materials condemned for failure to conform to the Contract, whether incorporated in Work or not, and Contractor shall, at his own expense, replace such condemned materials with those conforming to the requirements of the Contract. Failure to remedy such defects after 10 days written notice will allow the Owner to make good such defects and such costs shall be deducted from the balance due the Contractor or charged to the Contractor in the event no payment is due.
 - D. Should additional inspections by the Project Architect's Consultants of the Work be required due to failure of the Contractor to remedy defects listed, the Project Architect may deduct the expense of additional Consultants inspections from the Contract Sum in the Owner / Contractor Agreement. The additional expense will be based on the rate shown for services in the Consultants' Architect or Engineering Services Contract.
- 1.03 PARTIAL ACCEPTANCE: That portion of the Work is not complete and time does not end until all defects are remedied and Partial Acceptance is given.
- 1.04 FINAL ACCEPTANCE: The Project is not complete and time does not end until all defects are remedied and Final Acceptance is given.

- 1.05 CLOSEOUT DOCUMENTS: Unless otherwise notified, the Contractor shall submit to the Owner through the Project Architect 3 copies the following before final payment is made:
- A. Request for Final Payment: AIA Document G702, current edition, completed in full or a computer generated form having similar data.
 - B. Contractor's Affidavit of Payment of Debts and Claims: AIA Document G706, current edition, completed in full.
 - C. Release of Liens and Certification that all Bills Have Been Paid: AIA Document G706A, current edition, completed in full or a sworn statement and affidavit from the Contractor to the Owner stating that all bills for this project have been paid and that the Owner is released from any and all claims and / or damages.
 - D. Consent of Surety Company to Final Payment: AIA Document G707, current edition, completed in full by the Bonding Company.
 - E. Power of Attorney: Closeout Documents should be accompanied by an appropriate Power of Attorney.
 - F. Guarantee of Work: Sworn statement that all Work is asbestos free and guaranteed against defects in materials and workmanship for one year from Date of Final Acceptance, except where specified for longer periods.
 - 1. Word the guaranty as follows: "We hereby guarantee all Work performed by us on the above captioned Project to be free from asbestos and defective materials. We also guarantee workmanship for a period of one (1) year or such longer period of time as may be called for in the Contract Documents for such portions of the Work".
 - 2. All guarantees and warranties shall be obtained in the Owner's name.
 - 3. Within the guaranty period, if repairs or changes are requested in connection with guaranteed Work which, in the opinion of the Owner, is rendered necessary as a result of the use of materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the Contract, the Contractor shall promptly, upon receipt of notice from and without expense to the Owner, place in satisfactory condition in every particular, all such guaranteed Work, correct all defects wherein and make good all damages to the building, site, equipment or contents thereof which, in the opinion of the Owner, is the result of the use of materials, equipment, or workmanship which are inferior, defective or not in accordance with the terms of the Contract; and make good any Work or materials or the equipment and contents of said buildings or site disturbed in fulfilling any such guaranty.
 - 4. If, after notice, the Contractor fails to proceed promptly to comply with the terms of the guaranty, the Owner may have the defects corrected and the Contractor and his sureties shall be liable for all expense incurred.
 - 5. All special guaranties applicable to definite parts of the Work stipulated in the Project Manual or other papers forming part of the Contract shall be subject to the terms of this paragraph during the first year of the life of such special guaranty.
 - G. Project Record Documents: Furnish all other record documents as set forth in Section 01785 – Project Record Documents.
 - H. Additional Documents Specified Within the Project Manual:

1. General: Provide all additional certificates, warranties, guarantees, bonds, or documents as called for in the individual Sections of the Project Manual. The Contractor is responsible for examining the Project Manual for these requirements.
2. Maintenance Stock: Deliver to Owner all required additional maintenance materials as required in the various Sections of the Specifications.

END OF SECTION

SECTION 01785

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Scope: To set forth the minimum procedure and requirements for keeping the Project Record Documents. One of these Documents is to be kept on site throughout the Project.
- B. Maintenance of Documents:
 - 1. Maintain 2 copies of all: Full-size Contract Drawings, Project Manual (Proposal), Addenda, Change Orders, Warranties, Certificates, Guarantees, Bonds, reviewed Shop Drawings, reviewed submittals (materials, fixtures, appliances, etc.), hardware schedules, field and laboratory test records, equipment brochures, spare parts lists, maintenance and operation manuals and other modifications to the Contract.
 - 2. Store Record Documents apart from Documents used for construction.
 - 3. Maintain Record Documents in clean, dry legible condition. Do not use Record Documents for construction purposes.
 - 4. Make Record Documents available at all times for inspection by the Project Architect and Owner.
- C. Recording:
 - 1. General: Mark all modifications in red pencils. Keep Record Documents current. Review log at Progress Meetings. Do not permanently conceal any Work until required information has been accurately recorded.
 - 2. Contract Drawings: Legibly mark to record actual construction:
 - a. Horizontal and vertical location of underground and overhead utilities with their connections referenced to permanent surface improvements.
 - b. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - c. Field changes that involve dimension and detail.
 - d. Changes made by Supplemental Agreement (Change Order) or Field Order.
 - 3. Project Manual (Proposal) and Addenda: Legibly mark up each Section to record manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 - 4. Shop Drawings: Maintain as Record Documents; legibly mark Drawings to record changes made after review.
- D. Submittals:
 - 1. Furnish two (2) copies of all Record Documents.
 - 2. The information, except Contract Drawings, shall be arranged and labeled by corresponding Specification Section, neatly bound in three ring binders, indexed, and all drawings readable without being removed or unstapled.
 - 3. The name and address of each subcontractor and material supplier shall be listed in front of each binder along with the Project Manual (Proposal).

4. Sufficient information, such as as-built control drawings for air handling system and variable drive controls, shall be furnished to allow qualified personnel to service equipment.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION

SECTION 02315

EXCAVATION, FILLING AND GRADING FOR BUILDING

PART 1 GENERAL.

- 1.01 SECTION INCLUDES: The extent of excavation, filling and grading is shown on the Drawings. Preparation of subgrade for building slabs is included as part of this Work. Backfilling of trenches within the building lines is included as part of this Work.
- 1.02 RELATED SECTIONS
- A. Section 01455 – Testing Laboratory Services.
 - B. Section 02300 – Earthwork.
- 1.03 SUBMITTALS: Notification shall be provided to Project Architect indicating source of borrow material in advance of start of Work and certification provided that proposed soil material is satisfactory for specified use.
- 1.04 QUALITY ASSURANCE
- A. Perform excavation Work in compliance with applicable requirements of governing authorities having jurisdiction.
 - B. Compaction density shall be 95 percent of the maximum dry density value as determined by ASTM D 698 (Standard Proctor Test) of AASHTO T-99.
 - C. Soils compaction control tests shall be performed as specified herein and under Section 01455-Testing Laboratory Services. Stability is defined as absence of significant yielding or pumping of soils under compaction effort.
 - D. Number of Tests: Make test(s) in accordance with AASHTO T-99 for each class of material. Make in-place density tests in accordance with AASHTO T-238 (Nuclear Method) for density tests, as the fill and backfill work progresses. At least one test per lift of any isolated portions and each footing.
 - E. Work on Non-Tested Areas: Placing permanent construction over fill that has not been tested and approved may require removal of permanent Work, recompacting the fill and replacing the Work at no additional cost to the Owner.
- 1.05 EXISTING UTILITIES
- A. Locate existing underground utilities in the areas of Work. If utilities are to remain in place, provide adequate means of protection during earthwork operations. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the Utility Owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
 - B. Do not interrupt existing utilities serving facilities occupied and used by Owner or others except when permitted in writing by Project Architect and then only after acceptable temporary utility services have been provided. Demolish and completely remove from site existing underground utilities indicated "To Be Removed". Coordinate with utility companies for shut off of services if lines are active.

- 1.06 PROTECTION OF PERSONS AND PROPERTY: Barricade open excavations occurring as part of this Work and post with warning lights. Operate warning lights as recommended by authorities having jurisdiction. Protect structures, utilities, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
- 1.07 USE OF EXPLOSIVES: The use of explosives is not permitted.

PART 2 PRODUCTS

- 2.01 BACKFILL AND FILL: Select fill shall be an approved select material free from trash, debris, stones larger than 3 inches, roots and other organic matter.
- 2.02 GRANULAR FILL
- A. Below existing natural grade line: Sandy clay with a liquid limit less than 45 and PI in range of 10 to 22, or clayey sand with PI not less than 7 and liquid limit not greater than 35.
 - B. Above existing natural grade under slabs and footings: Silty or sandy clay as above or clayey-sand with LL less than 35 and PI of 3 to 15.

PART 3 EXECUTION

- 3.01 INSPECTION: Examine the areas and conditions under which excavating, filling, and grading are to be performed and notify the Contractor, in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in an acceptable manner.
- 3.02 EXCAVATION
- A. Excavation consists of removal and disposal of material encountered when establishing required grade elevations.
 - B. Earth excavation includes removal and disposal of pavements and other obstructions visible on ground surface, underground structures and utilities indicated to be demolished and removed, material of any classification indicated in data on subsurface conditions, and other materials encountered that are not classified as rock excavation or unauthorized excavation.
 - C. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Project Architect. Unauthorized excavation, as well as remedial Work directed by the Project Architect, shall be at the Contractor's expense. Under footings, foundation bases, or retaining walls, fill unauthorized excavation by extending the indicated bottom elevation of the footing or base to the excavation bottom, without altering required top elevation. Lean concrete fill may be used to bring elevations to proper position, when acceptable to Project Architect.
 - D. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by Project Architect.

- E. Additional Excavation: When excavation has reached required subgrade elevations, notify the Project Architect who will make an inspection of conditions. If unsuitable bearing materials are encountered at the required subgrade elevations, carry excavations deeper and replace the excavated material as directed by the Project Architect. Removal of unsuitable material and its replacement as directed will be paid on the basis of contract conditions relative to changes in work.
 - F. Stability of Excavations. Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
 - G. Shoring and Bracing: Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross braces, in good serviceable condition. Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction. Maintain shoring and bracing in excavations regardless of time period excavations will be open. Carry down shoring and bracing as excavation progresses.
 - H. Dewatering: Prevent surface water and subsurface or groundwater from flowing into excavations and from flooding project site and surrounding area. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrade and foundations.
 - 1. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
 - 2. Convey water removed from excavations and rainwater to collecting or run-off areas. Establish and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.
- 3.03 MATERIAL STORAGE: Stockpile satisfactory excavated materials where directed, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage. Locate and retain soil materials away from edge of excavations. Dispose of excess soil material and waste materials as herein specified.
- 3.04 EXCAVATION FOR STRUCTURES: Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 feet, and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction, and for inspection. In excavating for footings and foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive concrete.
- 3.06 EXCAVATION FOR TRENCHES: Dig trenches to the uniform width required for the particular item to be installed, sufficiently wide to provide ample working room. Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations. Beyond the building perimeter, keep bottoms of trenches sufficiently below finish grade to avoid freeze-ups.
- A. Grade bottoms of trenches as indicated, notching under pipe bells to provide solid bearing for the entire body of the pipe. Backfill trenches with concrete where trench excavations pass within 18 inches of column or wall footings and which are carried below the bottom of such footings, or which pass under wall footings. Place concrete to the level of the bottom of adjacent footings.

- B. Do not backfill trenches until tests and inspections have been made and backfilling authorized by the Project Architect. Use care in backfilling to avoid damage or displacement of pipe systems.
- 3.07 COLD WEATHER PROTECTION: Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F.
- 3.08 COMPACTION: Control soil compaction during construction providing minimum percentage of density specified for each area classification. Building Slabs: Compact top 12 inches of subgrade and each layer of backfill or fill material at 95 percent maximum dry density.
- 3.09 MOISTURE CONTROL: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
- 3.10 BACKFILL AND FILL: Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below.
 - A. Under buildings use sub-base material, or satisfactory excavated or borrow material, or combination of both. Backfill excavations as promptly as work permits, but not until completion of the following:
 - 1. Acceptance by Project Architect of construction below finish grade including, where applicable, dampproofing, waterproofing, and soil treatment.
 - 2. Inspection, testing, approval, and recording locations of underground utilities.
 - 3. Removal of concrete formwork, shoring and bracing, and backfilling of voids with satisfactory materials.
 - 4. Removal of trash and debris.
- 3.11 GROUND SURFACE PREPARATION: When existing ground surface has a density less than that specified under "Compaction" for the particular area classification, break up the ground surface, pulverize, moisture condition to the optimum moisture content, and compact to required depth and percentage of maximum density.
- 3.12 PLACEMENT AND COMPACTION: Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
 - A. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content. Compact each layer to required percentage of maximum dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
 - B. Place backfill and fill materials evenly adjacent to structures, to required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.
- 3.13 GRADING: Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

- A. Grading Outside Building Lines: Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes, and as follows:
 - B. Grading Surface of Fill Under Building Slabs: Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1/2 inch when tested with a 10-foot straightedge.
- 3.14 COMPACTION: After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.
- 3.15 MAINTENANCE
- A. Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.
 - B. Reconditioning Compacted Areas: Where subsequent construction operations or adverse weather disturbs completed compacted areas, scarify surface, re-shape, and compact to required density prior to further construction.
- 3.16 DISPOSAL OF EXCESS AND WASTE MATERIALS: Remove waste materials, including unacceptable excavated material, trash and debris, and dispose of it off the Owner's property.

END OF SECTION

SECTION 02365

SOIL TREATMENT FOR TERMITE CONTROL

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Soil treatment for termite control.
- 1.02 SUBMITTALS
- A. Submit manufacturer's technical product data and application instructions prior to application for Project Architect's approval. Transmit copy of instructions to the Applicator.
 - B. Submit sample copies of the Termite Soil Treatment Guarantee form prior to application for Project Architect's approval.
- 1.03 QUALITY ASSURANCE: In addition to the requirements of these Specifications, comply with manufacturer's instructions and recommendations for the Work, including preparation of substrate and application.
- A. Engage a professional pest control operator, licensed by the State of Mississippi, Mississippi Department of Agriculture and Commerce, Bureau of Plant Industry, and in accordance with regulations of governing authorities for application of soil treatment solution. The pest control operator is to have the aforementioned valid license, the company technician is to have a valid identification card for pest control, and the company vehicle is to be clearly marked with the company name.
 - B. Comply with Mississippi Regulations Governing Pest Control Operators in following the labels of the termiticide.
- 1.04 PROJECT CONDITIONS
- A. Do not apply soil treatment solution until excavating, filling and grading operations are completed, except as otherwise required in construction operations.
 - B. To insure penetration, do not apply soil treatment to frozen or excessively wet soils or during inclement weather. Comply with other handling and application instructions of the soil toxicant manufacturer.
- 1.05 GUARANTEE: Furnish 3 copies of written guarantee certifying that the applied soil poisoning treatment will prevent the infestation of subterranean termites and, that termite contractor will re-treat the soil and also repair or replace any damage caused by termite infestation without expense to the Owner. Provide guarantee for a period of 5 years from the date of treatment, signed by the Applicator and the Contractor.

PART 2 PRODUCTS

2.01 SOIL TREATMENT SOLUTION

- A. Use an emulsible concentrate insecticide for dilution with water specially formulated to prevent infestation by termites. Fuel oil will not be permitted as a diluent. Provide a working solution of one of the following chemical elements and concentrations:
 - 1. Chlorpyrifos, 1.0 percent in water emulsion.
 - 2. Aldrin, 0.5 percent in water emulsion.

- B. Other solutions may be used as recommended by Applicator and if acceptable to local and state governing authorities. Use only soil treatment solutions that are not injurious to plants.

PART 3 EXECUTION

3.01 INSPECTION: Applicator must examine the areas and conditions under which soil treatment for termite control is to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the Applicator.

3.02 APPLICATION

- A. Remove foreign matter, which could decrease effectiveness of treatment on areas to be treated. Loosen, rake, and level soil to be treated, except previously compacted areas under slabs and foundations. Toxicants may be applied before placement of compacted fill under slabs, if recommended by toxicant manufacturer.

- B. Application Rates: Under slab-on-grade, suspended slab, foundation footings and other similar structures, treat the soil before concrete slabs are poured using either power sprayer or tank-type garden sprayer. Apply soil treatment solution as follows:

1. Apply 4 gallons of chemical solution per 20 linear feet to the soil critical areas under the slab, such as along the inside of foundation walls, along both sides of interior partition walls, and around plumbing.
2. Apply one gallon of chemical solution per 10 square feet as an overall treatment under the slab and attached slab areas where fill is soil or unwashed gravel. Apply one & one-half gallons of chemical solution to those areas where fill is washed gravel or other coarse absorbent material.
3. Apply 4 gallons of chemical solution per 10 linear feet of trench, for each foot of depth from grade to footing, along the outside edge of the building. When the outside edge of the exterior grade beam is formed with other than earth, treat 6 inches to 8 inches wide along the outside of the foundation to a depth of not less than 12 inches. Punch holes to top of footing at not more than 12 inches on center and apply chemical solution. Mix the chemical solution with the soil as it is being replaced in the trench.
4. In absorbent soil or fill (sand, sand and gravel mix, etc.) increase the application rate to one & one-half gallons per 10 square feet where one gallon to 10 square feet is specified.
5. Reapply soil treatment solution to areas disturbed by subsequent excavation or other construction activities following application.

- C. Allow a minimum of 12 hours for drying after application, before beginning concrete placement or other construction activities.

3.03 PROTECTION: Post signs in the areas of application warning workers that soil poisoning has been applied. Remove signs when areas are covered by other construction.

END OF SECTION

SECTION 03100

CONCRETE FORMS AND ACCESSORIES

PART 1 GENERAL

- 1.01 SECTION INCLUDES : All concrete formwork and other related items necessary to complete project indicated by Contract Documents unless specifically excluded.
- 1.02 RELATED ITEMS SPECIFIED ELSEWHERE
- A. Section 03200 – Concrete Reinforcement.
 - B. Section 03300 – Cast-in-Place Concrete.
- 1.03 PROJECT CONDITIONS: Contractor shall examine the substrate over which concrete forms are installed and advise the Project Architect of conditions detrimental to the installation of concrete formwork. Do not proceed until unsatisfactory conditions have been corrected.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Wood forms: 3/4-inch exterior grade plywood on studs and joists.
- B. Form Ties: Standard snap ties, 1-1/2 inch break-back.
- C. Form Oil: Approved non-staining type, "Noxcrete" or equal. Oil must not affect bonding of finishes on exposed concrete.

PART 3 EXECUTION

- 3.01 FORM CONSTRUCTION: Forms shall be properly aligned, adequately braced and mortar tight to produce concrete shapes required by Drawings. Align forms so that the actual surface does not vary from true surface more than 1/8 inch. The surface shall be clean, undamaged, and free of offsets and irregularities at joints. Adequately brace and frame to retain true shapes under vibration and placing strains without leaks, bowing, or deflection.
- A. Studs, girts, and walls shall not be less than 2 by 4's, S4S, construction of standard grade Douglas fir, or equal, selected for straightness. All walls shall consist of at least two 2 by 4's. Studs shall not be spaced more than 16 inches, girts not more than 24 inches and ties not more than 27 inches, on center.
 - B. Lightly oil wood forms prior to placing reinforcing, and with oil not permitted on the reinforcing. Where oil form is used, remove excess before pouring concrete.
 - C. Meet recommendations of "Recommended Practice for Concrete Form work" ACI 347 unless specified herein otherwise.

3.02 INSERTS AND FASTENING DEVICES FOR OTHER WORK

- A. Provide for installation of inserts, hangers, metal ties, anchors, bolts, dowels, nailing strips, grounds and other fastening devices required for attachment of other Work
- B. Locate partitions for other trades prior to pouring concrete in order that conduits, sleeves and inserts required by others will be installed in the proper locations
- C. Do not install sleeves in any concrete beams or piers except upon approval of the Project Architect.
- D. Do not put aluminum conduits in concrete.

3.03 FORM REMOVAL

- A. Grade beam and column forms may be removed 24 hours after a pour is completed.
- B. Floor slab wood forms may be removed 10 days after pour, providing compressive strength has reached a minimum of 2500 psi based on job cast cylinders.

END OF SECTION

SECTION 03200

CONCRETE REINFORCEMENT

PART 1 GENERAL

- 1.01 SECTION INCLUDES: All concrete reinforcing and the related items necessary to complete the Project indicated by the Contract Documents unless specifically excluded.
- 1.02 RELATED ITEMS SPECIFIED ELSEWHERE
- A. Section 03100 – Concrete Forms and Accessories.
 - B. Section 03300 – Cast-in-Place Concrete.
- 1.03 SUBMITTALS
- A. Submit reinforcing steel shop drawings and materials list prior to placement for Project Architect's approval. Shop drawings shall include complete placing plans, order lists, bend diagrams and details showing dimensions with clearances.
 - B. Furnish mill certificates for steel bar reinforcement, to the Project Architect certifying that each shipment meets specifications. The fabricator will furnish certificates with bar lists to designate location of shipment and the time steel is delivered to the project.
- 1.04 QUALITY ASSURANCE
- A. Reinforcing bars shall conform to ASTM A 615 "Deformed Billet-Steel Bars for Concrete".
 - B. Mesh reinforcement shall conform to ASTM A 185 "Welded Steel Wire Fabric for Concrete Reinforcement".
 - C. Accessories shall conform to American Concrete Institute ACI 301 "Specifications for Structural Concrete for Buildings".
 - D. Placement shall be in accordance with approved shop drawings and ACI 318 "Standard Building Code Requirements for Reinforced Concrete".
 - E. Comply with ACI 315 "Manual of Standard Practice of Detailing Reinforced Concrete Structures".
- 1.05 DELIVERY, STORAGE, AND HANDLING
- A. Reinforcing bar steel and mesh shall be handled, shipped and stored in a manner that will prevent distortion or other damage.
 - B. Materials shall be stored in a manner to prevent excessive rusting and fouling with dirt, grease, or other bond-breaking coatings.
- 1.06 PROJECT CONDITIONS: Placement of concrete reinforcing shall be coordinated with installation of concrete formwork, vapor barriers, concrete inserts, conduit and all other items occurring in the area.

PART 2 PRODUCTS

- 2.01 STEEL BAR REINFORCEMENT: Bar reinforcement shall conform to ASTM A 615, grade 60, of domestic manufacture. Bars shall be new; free from rust, scale, oil, or other coatings that will prevent bond.
- 2.02 WELDED STEEL WIRE FABRIC: Shall conform to ASTM A 185, new, free from rust and other coatings that will prevent bond.
- 2.03 ACCESSORIES: Metal accessories as required shall support reinforcing bars and comply with ACI 315. Chairs and bolsters for use in exposed concrete shall have plastic coated or stainless steel legs or shall be plastic.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Fabricate and place reinforcement in accordance with the latest requirements of the American Concrete Institute and the approved shop drawings. Fabrication shall not proceed until Project Architect's approval is obtained.
- B. Reinforcing for one day's pour shall be completely placed and an inspection made by the Project Architect prior to starting the pour.
- C. Concrete Protection for Reinforcement: Minimum coverage shall be as follows unless shown otherwise on drawings:
 - 1. Footings
(bottom and sides) 3 inches clear
 - 2. Slabs 1-1/2 inches clear top and 3/4 inch clear bottom
 - 3. Beams 1-1/2 inch clear to stirrups
 - 4. Walls 2-1/2 inches clear
 - 5. Columns 2 inches clear to verticals
- D. Steel Dowels for successive work shall be wired in correct position before placing concrete. The "sticking" of dowels after placing concrete will not be permitted.
- E. Do not weld reinforcing steel unless specifically approved by the Project Architect.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

- 1.01 SECTION INCLUDES: All cast-in-place concrete and other related items necessary to complete Project indicated by Contract Documents unless specifically excluded.
- 1.02 RELATED SECTIONS
- A. Section 03100 – Concrete Forms and Accessories.
 - B. Section 03200 – Concrete Reinforcement.
 - C. Section 07260 – Vapor Retarders
- 1.03 SUBMITTALS: Submit concrete mix design, concrete compression test reports and product data and manufacturer's installation instructions for concrete curing compound.
- 1.04 TESTING LABORATORY SERVICES: The Owner will provide testing as specified in Section 01455.
- 1.05 QUALITY ASSURANCE
- A. Concrete work shall conform to all requirements of ACI 301, Specifications for Structural Concrete for Buildings and ACI 318 Building Code Requirements for Reinforced Concrete, latest editions, except as modified by supplemental requirements herein.
 - B. Design mix is to be established to provide concrete of 10 percent higher strength than the specified job strength, and proposed mix is to be submitted to the Project Architect for review and approval prior to use on the job. The use of an approved mix design from a previous MDOT Project that can be transferred to this Project is recommended. Laboratory cylinders are to be made according to ASTM C 192 and compression tests according to ASTM C 39, using representative materials. Control of mixes is to be maintained at the Ready-Mix Plant and on the job site. When the mix is approved, no change shall be made without the written consent of the Project Architect.
 - C. The Owner will provide testing as specified in Section 01455 – Testing Laboratory Services. Cylinders, 2 specimens from each sample, are to be cast on the job in accordance with ASTM C 31. Specimens will be tested in accordance with ASTM C 39. One cylinder from each location will be tested at 7 days for information and the other at 28 days for acceptance. Owner is to make at least one strength test for each 100 cubic yards, or fractions thereof, of concrete placed in any one day. Copies of all test reports shall be furnished as directed by the Project Architect.
- 1.06 COORDINATION
- A. Verify that all pipes under grade have been installed and tested before being covered. Check and verify materials and locations of inserts, anchors, and items required by other trades before pouring concrete. Concerned subcontractors shall be notified of date of pour in sufficient time to allow for completion of their work.
 - B. The Contractor shall notify the Project Architect upon completing formwork and all reinforcing steel for the next intended pour, and shall not commence pouring operation until all forms and steel are approved by the Project Architect.

- C. Project Architect shall have free access to all materials used, and the required samples are to be furnished by the Contractor, as directed.
- D. Inspection and written approval from the floor-covering subcontractor is required for slab finish receiving floor covering.

PART 2 PRODUCTS

2.01 CONCRETE

- A. All concrete, unless otherwise specifically approved in writing by the Project Architect, shall be transit-mixed in accordance with ASTM C94. Control of concrete shall be under supervision of testing laboratory as described in Section 01455.
- B. All concrete shall have 3000-psi minimum compressive strengths at 28 days, unless noted otherwise.
- C. Maximum slump for normal weight concrete shall be 4 inches.

2.02 CONCRETE MATERIALS

- A. Portland Cement: ASTM C-150, Type I.
- B. Water: From city or community water supply.
- C. Structural Concrete Aggregate: ASTM C-33 with maximum size of 3/4 inch.
- D. Admixtures: Provide admixtures produced by established reputable manufacturers and use in compliance with manufacturer's printed directions. Do not use admixtures that have not been incorporated and tested in accepted mixes, unless otherwise authorized in writing by the Project Architect. Non-uniform addition of mixtures that result in erratic setting of the concrete will cause rejection of the concrete with subsequent removal from the structure at the concrete producer's expense.

2.03 RELATED MATERIALS

- A. Preformed Expansion Joint Fillers: Provide pre-molded, asphalt impregnated board in widths and thickness required by conditions (1/2-inch minimum). Joint fillers shall conform to ASTM D994, D1751 or D1752.
- B. Chemical Hardener (Sealer): Colorless aqueous solution containing a blend of magnesium fluosilicate and zinc fluosilicate combined with a wetting agent containing not less than 2 pounds of fluosilicates per gallon.
- C. Curing Compound: Clear bond, manufactured by Guardian Chemical Co., Kure-N-Seal, manufactured by Sonneborn, Safe-Cure, manufactured by Dayton Superior Corp. or approved equal. Compound shall not interfere with bonding or floor finish.
- D. Non-shrink Grout: Shall be one part Portland cement to 2-1/2 parts of fine aggregate or Cement grout ASTM C 387 Dry Package mixtures similar and equal to Masterflow 713, Master Builders; Sonnogrout, Sonneborn; Five Star Grout, U.S. Grout Company.

2.04 CONCRETE MIXES

- A. The ready-mix concrete shall be mixed and delivered in accordance with requirements of ASTM C 94. Uniformly and accurately control proportions of material weight. Control mixes for concrete shall be "Class 1" conforming to ACI 301. Mix proportions shall be selected in accordance with ACI 211.1 "Recommended Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete". Excessive slump deviations will be cause for rejection of the supplied mix. Calcium chloride shall not be used.
- B. Failure of concrete to meet the specified requirements may result in rejection with subsequent removal and replacement or re-testing (including coring, load test, etc.) at the supplier's expense. Concrete exhibiting adverse reaction as a result of the presence of deleterious substances shall be removed and replaced or repaired in a manner completely satisfactory to the Project Architect. All cost of such corrective action, including all necessary testing, shall be borne by the concrete producer.
- C. The Contractor may request adjustment to concrete mix design when characteristics of materials, job conditions, weather, test results, or circumstances warrant, at no additional cost to the Owner and as approved by the Project Architect. Laboratory test data for revised mix designs and strength results must be submitted to and approved before using in the Work.

PART 3 EXECUTION

3.01 PLACING CONCRETE

- A. Concrete shall be placed so as to avoid segregation of materials and to prevent cold joints by avoiding re-handling, by keeping pours generally level, and by adequate vibration. Placing is not to be started during rain or snow, and if placing is underway when such conditions occur, continue operations only long enough to provide a suitable construction joint.
- B. During hot weather or periods of low humidity combined with a definite breeze, rapid loss of moisture shall be discouraged by thorough wetting of forms and by using a fine fog spray when finishing. At these times particular attention shall be given to providing an adequate number of finishers to expedite this operation. During cold weather fresh concrete shall be protected from freezing.
- C. Prior to placing, forms shall be cleaned free of foreign material and shall be washed down with water. Placing shall be a continuous operation between planned construction joints with fresh cement mixed only with plastic concrete already in place. Avoid cold joints.
- D. Vibration shall be thorough, using vibrators small enough to work within reinforcing. The vibrator shall be inserted at many points about 24 inches apart. Avoid over-vibration and transporting concrete in form by vibration. A spare vibrator, which will operate, shall be kept on the job during all placing operations.

- 3.02 CONSTRUCTION JOINTS: Locate construction joints and provide shear keys as directed by the Project Architect. Allow concrete to set for 24 hours before an adjoining pour is started. Slabs across the joint shall be level and the surface shall be level and shall not be feathered. Before proceeding with the following pour at a joint, thoroughly clean the joint, remove all loose material, and brush in a thick cement slurry.

3.03 CURING: Keep all concrete moist for 5 days after placing by covering with concrete curing paper, by leaving forms in place or by using curing compound. All combined with regular wetting as necessary.

3.04 PATCHING

A. Honeycombed and defective concrete shall be removed and replaced, or repaired, as directed by the Project Architect. Form tie holes and minor areas, as determined by the Project Architect, shall be repaired as follows:

1. Completed patch shall be indistinguishable from surrounding surfaces in color and texture.
2. Patching mixture, using same cement sand as used in concrete shall consist of 1 part cement to 2-parts sand, with just enough mixing water to permit placing. Premix mixture, allow standing at least 30 minutes before using, stirring with trowel during this period.
3. Remove material to sound concrete, dampen surface and brush thick 1 to 1 cement sand bond coat into surface.
4. When bond coat begins to lose water sheen, thoroughly pack patching mixture in place, leaving it somewhat higher than adjacent surface. Embed pieces of gravel by hand into patch.

3.05 FINISHES FOR FLATWORK

A. Trowel finish floor surfaces scheduled as concrete finish walking surfaces, or floor surfaces scheduled to receive floor covering. Trowel finished surfaces shall be true planes within 1/8 inch in 10 feet as determined by a 10 foot straightedge placed anywhere on the slab in any direction.

B. Smooth trowel finish after the surface is screeded and floated. Start troweling when all water has disappeared from the surface to first level the surface, then start final troweling when concrete has set where it no longer shows indentation from finger pressure. Trowel to a hard, smooth surface free of marks. Dusting of cement or cement and sand will not be permitted.

C. Interior floors, with concrete finish scheduled, shall receive an application of hardener compound applied according to manufacturer's published instructions. Concrete surfaces to receive ceramic floor tile or brick shall receive float finish.

D. Exterior walks and ramps shall have smooth trowel and fine broom finish.

E. Exterior sign base shall have a Class 2, Rubbed Finish as follows:

1. 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.
2. 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 filled, and a uniform surface has been obtained.
3. The final finish shall be obtained by rubbing with a fine Carborundum stone and water. This rubbing shall continue until the entire surface is a smooth texture and uniform color.

4. After the final rubbing is completed and the surface has dried, it shall be rubbed with burlap to remove loose powder and objectionable marks.

3.06 FINISHES FOR GRADE BEAMS

- A. Exposed grade beam faces shall have a smooth form finish obtained by using selected form facing plywood, arranged orderly and symmetrically with a minimum of seams. Repair and patch defective areas with all fins or other projections completely removed and smoothed. Provide grout cleaned finish consisting of 1 part Portland Cement to 1-1/2 parts fine sand by column, and mix with water to the consistency of thick paint. Blend standard Portland cement and white Portland cement, amounts determined by trial patches, so that the final color of dry grout will closely match adjacent concrete surfaces.
- B. Thoroughly wet concrete surfaces and apply grout immediately to coat surfaces and fill small holes. Remove excess grout by scraping and rubbing with clean burlap. Keep damp by fog spray for at least 36 hours after rubbing.

END OF SECTION

SECTION 04200

MASONRY UNITS

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Brick masonry cavity wall work and brick veneer masonry work as shown on the Drawings and schedules.
- 1.02 RELATED SECTIONS: Section 09050 – Color Design.
- 1.03 SUBMITTALS: Submit product data, specifications and other data for each type of masonry unit and accessory required, including certification that each type complies with the specified requirement. Include instructions for handling, storage, installation and protection of each. Indicate by transmittal that the Installer has received a copy of each instruction.
- 1.04 QUALITY ASSURANCE
- A. Fire-rated Masonry: Wherever a fire-resistance classification is shown or scheduled for unit masonry construction (4 hour, 3 hour, and similar designations), comply with the requirements for materials and installation established by the American Insurance Association and other governing authorities for the construction shown.
 - B. Job Mock-up: Prior to installation of masonry work, erect sample wall panel mock-up materials, bond and joint tooling shown or specified for final Work. Provide special features as directed for caulking and contiguous work. Build mock-up at the site, where directed, of full thickness and approximately 4 feet by 3 feet unless otherwise shown, indicating the proposed range of color, texture and workmanship to be expected in the completed Work. Obtain Project Architect's acceptance of visual qualities of the mock-up before start of masonry work. Retain mock-up during construction as a standard for judging completed masonry work. Do not alter, move or destroy mock-up until Work is completed. Provide mock-up panel for each type of exposed unit masonry work.
- 1.05 PROJECT CONDITIONS
- A. Protect partially completed masonry against weather, when Work is not in progress, by covering top of walls with strong, waterproof, non-staining membrane. Extend membrane a minimum of 2 inches down both sides of walls and anchor securely in place.
 - B. Protect masonry against freezing when the temperature of the surrounding air is 40 degrees F. and falling. Heat materials and provide temporary protection of completed portions of masonry work. Comply with the requirements of the governing code and with the "Construction and Protection Recommendations for Cold Weather Masonry Construction" of the Technical Notes on Brick and Tile Construction by the Brick Institute of America (BIA).

PART 2 PRODUCTS

2.01 ACCEPTABLE BRICK MANUFACTURERS

- A. Equivalent products by the following are acceptable:
 - 1. Boral Brick, Hattiesburg, Mississippi
 - 2. Columbus Brick, Columbus, Mississippi
 - 3. Old South Brick & Supply Company, Jackson, Mississippi
 - 4. Tri-State Brick & Tile Company, Inc., Jackson, Mississippi
- B. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures.

2.02 MASONRY UNITS: Obtain masonry units from one manufacturer, of uniform texture and color for each kind required, for each continuous area and visually related areas.

2.03 BRICK, GENERAL: Unless otherwise shown or specified, provide standard size brick (8 inches long x 2-1/4 inches high x 3-3/4 inches wide) for exposed vertical brickwork. At Contractor's option, provide solid or cored brick for vertical brickwork. Do not use cored brick with net cross-sectional area less than 75 percent of gross area in the same plane or with core holes closer than 3/4 inch from any edge.

- A. Face Brick: Brick exposed to view ASTM C 216, Grade SW for exterior exposures.
- B. Building (Common) Brick: Brick not exposed to view, ASTM C 62, Grade SW for exterior exposures and Grade MW for interior masonry which will be concealed by other work. Select from manufacturer's standard colors and textures.

2.04 CONCRETE MASONRY UNITS, GENERAL: Manufacturer's standard units with nominal face dimensions of 16 inches long by 8 inches high (15-5/8 inches by 7-5/8 inches actual), unless otherwise shown. Provide special shapes where shown and where required for lintels, corners, jambs, sash, control joints, headers, bonding and other special conditions. Provide UL certified units where indicated.

- A. Hollow Load-Bearing: Provide units complying with ASTM, C 90. Provide lightweight units using ASTM C 33I aggregate for a dry net weight of not more than 105 lbs. per cubic foot.
- B. Classification: Curing shall comply with ASTM C 90, Type II, Nonmoisture-Controlled Units.
- C. Exposed Face: Provide manufacturer's standard color and texture, unless otherwise indicated.

2.05 MORTAR MATERIALS: Mortar mixes shall comply with the requirements of ASTM C 270 Standard Specification for Mortar for Unit Masonry. Type S mortar shall be used for exterior Work. Type N mortar shall be used for interior Work. Mortar color for face brick shall be as selected by the Project Engineer / MDOT Architect from manufacturer's standard colors. Mortar color for building (common) brick shall be natural color or white cement as required to produce the required standard mortar color.

- A. Portland Cement: ASTM C 150 Type I, except Type III may be used for cold weather protection.

- B. Hydrated Lime: ASTM C 207, Type S.
- C. Sand: ASTM C 144, except for joints less than 1/4 inch, use aggregate graded with 70 to 100 percent passing the No. 16 sieve.

2.06 MASONRY ACCESSORIES

- A. Brick Masonry Cavity Wall Work: Provide welded wire units prefabricated in straight lengths of not less than 10', with matching corner and tee units. Fabricate from Cold-drawn steel wire complying with ASTM A 82, with deformed continuous side rods and plain cross-rods, crimped for cavity wall construction (if any), and a unit width of 1-1/2 inches to 2 inches less than thickness of wall or partition. Provide units fabricated with single pair of 9 gage side rods and 9-gage perpendicular cross-rods spaced not more than 16 inches on center. For composite exterior walls with concrete masonry back up, fabricate units with additional side rod spaced for embed in inside face of back up wythe. All units shall be hot-dip galvanized after fabrication and shall conform to ASTM A 153 Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware, Class B-2.
- B. Brick Veneer Masonry Work: Provide adjustable wire ties conforming to ASTM A 82 Specification for Steel Wire, Plain, for Concrete Reinforcement. The wire shall be a minimum of W1.7, 9 gage. Plate portions of adjustable ties shall be a minimum of 14 gage in thickness. Plate portion shall conform to ASTM A 366 Standard Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality. All tie components shall be hot-dip galvanized after fabrication and shall conform to ASTM A 153 Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware, Class B-2.
- C. Anchoring Devices for Masonry: Provide straps, bars, bolts and rods fabricated from not less than 16 gage sheet metal or 3/8 inch diameter rod stock, unless otherwise indicated.
- D. Concrete Inserts for Masonry:
 - 1. Furnish dovetail shots with filler strips, where masonry abuts concrete. Fabricate from 24 gage galvanized steel unless otherwise indicated.
 - 2. For installation of concrete inserts, see concrete sections of these Specifications. Advise concrete installer of specific requirements regarding his placement of inserts, which are to be used, by the masonry installer for anchoring of masonry Work.
- E. Embedded Masonry Cavity Wall Flashing: Provide concealed flashing, shown to be built into masonry, as specified in Section 07620 - Sheet Metal Flashing and Trim, unless otherwise indicated.
- F. Flashing for Brick Veneer Walls: Provide concealed flashing, shown to be built into masonry, as specified in Section 07650 - Flexible Flashing, unless otherwise indicated.

2.07 MASONRY MAT & WEEP VENTS

- A. Manufacturer and Type: Products equal to CavClear Masonry Mat and CavClear Weep Vents as manufactured by Archovations, Inc., PO Box 241, Hudson, WI 54016. Telephone (888) 436-2620.
 - 1. Description: Airspace maintenance and drainage system for masonry cavities to prevent mortar from making contact with the backup to ensure water management. The system shall be fluid conducting, non-absorbent, mold and mildew resistant polymer mesh consisting of 100 percent recycled polymer with PVC binder. Weep Vents shall have "M" notched bottom. Color to be selected by the Project Architect from full range of standard colors
 - 2. Mat Size: 1-1/4 inch thick by 16 inches high by 8 feet long.
 - 3. Weep Vent Size: 1/2 inch thick by 2-1/2 inches high by 3-1/2 inches wide.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. Advanced Building Products, Inc., P.O. Box 98, Springvale, ME 04083. Tel: (800) 252-2306.
 - 2. Colbond Geosynthetics, P.O. Box 1057, Sand Hill Road, Enka, NC 28728. Tel. (800) 664-6638.
- C. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures.

PART 3 EXECUTION

- 3.01 INSPECTION: Masonry installer must examine the areas and conditions under which masonry is to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to masonry installer.
- 3.02 INSTALLATION: Building masonry construction to the full thickness shown, except, build single-wythe walls to the actual thickness of the masonry units, using units of nominal thickness shown or specified.
 - A. Build chases and recesses as shown and as required for the work of other trades. Provide not less than 8 inches of masonry between chase or recess and jamb of openings and between adjacent chases and recesses.
 - B. Cut masonry units with motor driving saw designed to cut masonry with clean, sharp, un-chipped edges. Cut units as required to provide pattern shown and to fit adjoining Work neatly. Use full units without cutting wherever possible.
 - C. Wet brick having ASTM C67 absorption rates greater than 0.025 oz. per sq. inch per minute. Determine absorption by drawing a circle the size of a quarter on typical units and place 20 drops of water inside the circle. Wet brick units only if water is absorbed within 1-1/2 minutes. The units shall be wetted thoroughly 3 to 24 hours prior to their use so as to allow moisture to become distributed throughout the unit. The units shall be surface dry when laid.
 - D. Do not wet concrete masonry units.

- E. Frozen Materials and Work: Do not use frozen materials or materials mixed or coated with ice or frost. For masonry, which is specified to be wetted, comply with the BIA recommendations. Do not use calcium chloride in mortar or grout.
- F. Pattern Bond: Lay masonry work in a running bond unless indicated otherwise.
- G. Layout walls in advance for accurate spacing of surface bond patterns with uniform joint widths and to properly locate openings, movement type joints, returns and offsets. Avoid the use of less-than half-size units at corner, jambs and wherever possible at other locations. Lay-up walls plumb and true and with courses level, accurately spaced and coordinated with other work.
- H. Stopping and Resuming Work: Rack back 1/2 masonry unit length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly (if specified to be wetted), and remove loose masonry units and mortar prior to laying fresh masonry.
- I. Built-in Work: As the work progresses, built-in items specified under this and other sections of these specifications. Fill in solidly with masonry around built-in items. Fill space between hollow metal frames and masonry solidly with mortar.

3.03 MORTAR BEDDING AND JOINTING

- A. Mix mortar ingredients for a minimum of 5 minutes in a mechanical batch mixer. Use water clear and free of deleterious materials, which would impair the work. Do not use mortar, which has begun to set, or if more than 2-1/2 hours has elapsed since initial mixing. Re-temper mortar during 2-1/2 hour period as required restoring workability.
- B. Lay brick and other solid masonry units with completely filled bed and head joint; butter ends with sufficient mortar to fill head joints and shove into place. Do not slush head joints.
- C. Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on footings and foundation walls and in all courses of piers, columns and pilasters, and where adjacent to cells or cavities to be reinforced or to be filled with concrete or grout.
- D. Joints: Maintain joints widths shown, except for minor variations required to maintain bond alignment. If not shown, lay walls with 3/8" joints. Cut joints flush for masonry walls that are to be concealed or to be covered by other materials. Tool exposed joints slightly concave. Rake out mortar in preparation for application of caulking or sealant where shown.
- E. Remove masonry units disturbed after laying; clean and relay in fresh mortar. Do not pound corners at jambs to fit stretcher units that have been set in position. If adjustments are required, remove units, clean off mortar, and reset in fresh mortar.

3.04 CAVITY WALLS: Keep cavity clean of mortar droppings during construction. Strike joints facing cavity, flush.

- A. Tie exterior wythe to back-up with continuous horizontal joint reinforcing embedded in mortar joints at not more than 16 inches on center vertically.

- B. Place Masonry Mat continuously full height in exterior masonry cavity prior to construction of exterior wythe; follow manufacturer's installation instructions. Install horizontally between wall ties or joint reinforcement. Stagger end joints in adjacent rows. Butt adjacent pieces to moderate contact. Fit to perimeter construction and penetrations without voids. Use multiple layers at bottom of wall and above through-wall flashings when air space depth exceeds masonry mat thickness by more than 3/8 inch. Extend extra mat at least to top of base flashing.
 - C. Place Weep Vents in head joints at exterior wythe of cavity wall located immediately above ledges and flashing, spaced 24 inches on center, unless otherwise shown. Install with notched side down. Leave the side of the masonry units forming the vent space un-buttered and clear from mortar. Slide vent material into joint once the two masonry units forming the weep vent are in place. Install the Weep Vents as the wall is being erected so joints do not become filled with mortar or debris.
- 3.05 HORIZONTAL JOINT REINFORCING: Provide continuous horizontal joint reinforcing as shown and specified. Fully embed longitudinal side rods in mortar for their entire length with a minimum of cover of 5/8 inch on exterior side of walls and 1/2 inch at other locations. Lap reinforcement a minimum of 6 inches at ends of units. Do not bridge control and expansion joints with reinforcing except at wall openings. Provide continuity at corners and wall intersections by use of prefabricated "L" and "T" sections. Cut and bend units as directed manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures and other special conditions. Space continuous horizontal reinforcing as follows:
- A. For multi-wythe walls (solid or cavity) where continuous horizontal reinforcing also acts as structural bond or tie between wythes, space reinforcing as required by code but not less than 16 inches on center vertically.
 - B. For single-wythe walls, space reinforcing at 16 inches on center vertically, unless otherwise shown.
 - C. Reinforce masonry opening greater than 12 inches wide, with horizontal joint reinforcing placed in 2 horizontal joints approximately 8 inches apart, both immediately above the lintel and immediately below the sill. Extend reinforcing a minimum of 24 inches beyond jambs of the opening, bridging control joints where provided.
- 3.06 ANCHORING MASONRY WORK
- A. Provide anchoring devices of the type shown and as specified. If not shown or specified, provide standard type for facing and back-up involved. Anchor masonry to structural members where masonry abuts or faces such members to comply with the following:
 - B. Provide an open space not less than 1/2 inch in width between masonry and structural member, unless otherwise shown. Keep open space free of mortar or other rigid materials. Anchor masonry to structural members with metal ties embedded in masonry joints and attached to structure. Provide anchors with flexible tie sections unless otherwise shown. Space anchors as shown, but not more than 24 inches on center horizontally.
- 3.07 LINTELS: Install loose lintels of steel and other materials where shown.

3.08 CONTROL AND EXPANSION JOINTS

- A. Provide vertical expansion, control and isolation joints in masonry. Build-in related masonry accessory items as the masonry work progresses. Rake out mortar in preparation for application of caulking and sealants.
- B. Control Joint Spacing: If locations of control joints are not shown, place vertical joints spaced not to exceed 50'-0" on center for concrete masonry wythes if reinforced, or 30'-0" on center if not reinforced. Locate control joints at points of natural weakness in the masonry work.

3.09 FLASHING OF MASONRY WORK

- A. Provide concealed flashing in masonry work as shown. Prepare masonry surfaces smooth and free from projections, which might puncture flashing. Place through-wall flashing on bed of mortar and cover with mortar. Seal flashing penetrations with mastic before covering with mortar. Terminate flashing 1/2 inch from face of wall, unless otherwise shown. Extend flashing beyond edge of lintels and sills at least 4 inches and turn up edge on sides to form pan to direct moisture to exterior. Provide weep holes in the head joints of the first course of masonry immediately above concealed flashing, spaced 24 inches on center.
- B. Install reglets and nailers for flashing and other related Work where shown to be built into masonry Work.

3.10 REPAIR, POINTING AND CLEANING: Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged or if units do not match adjoining units as intended. Provide new units to match units and install with fresh mortar or grout, pointed to eliminate evidence of replacement.

- A. Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point up all joints at corners, openings and adjacent work to provide a neat uniform appearance, properly prepared for application of caulking or sealant compounds.
- B. Clean exposed brick masonry surfaces as recommended by BIA Technical Notes 20 "Cleaning Clay Products Masonry".
- C. Clean exposed CMU masonry by dry brushing at the end of each day's work and after final pointing to remove mortar spots and droppings.

END OF SECTION

SECTION 05120

STRUCTURAL STEEL

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Structural steel framing members, support members, with required bracing, welds, fasteners, base plates, bearing plates, anchor bolts and other related items necessary to complete Project indicated by Contract Documents unless specifically excluded.
- 1.02 RELATED SECTIONS
- A. Section 09050 – Color Design.
 - B. Section 09900 – Paints and Coatings.
- 1.03 SUBMITTALS
- A. Shop drawings shall conform to requirements of current AISC Specifications. Indicate sizes, spacing, connections, and location of structural members. Indicate net weld lengths and welded connections with AWS welding symbols.
 - B. Mill Test Reports shall be furnished; certifying that each shipment meets specified structural strength.
 - C. Welders' Certificates indicating that all welders employed on the Work are qualified operators, verifying AWS qualifications within the previous 12 months.
- 1.04 QUALITY ASSURANCE
- A. Structural steel shall be furnished in accordance with current edition of the American Institute of Steel Construction "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings".
 - B. Qualification of Welders: All welding shall be in accordance with the "Code of Arc and Gas Welding in Building Construction" of the American Welding Society. Certification that each welder is qualified in accordance with American Welding Society Code D1.1 shall be provided.

PART 2 PRODUCTS

- 2.01 STRUCTURAL STEEL MATERIALS: All structural steel shall conform to ASTM A-36, domestic manufacture, except tube sections, which shall conform to ASTM A-501. Unless shown otherwise on Drawings, all bolts shall conform to ASTM Specification A307. Where indicated on Drawings, high strength bolts shall conform to ASTM Specification A 325.
- A. Welds shall be E70XX Series electrodes for manual arc welding and grade SAW-1 for submerged arc process.
 - B. All bolts not indicated otherwise on the plans are 3/4 inch. All connections not noted otherwise on the Drawings shall be framed connections.

- C. Grout for base plates shall be precision, premixed, non-shrink and non-metallic in conformance with ASTM C827. Grout shall be easily workable as well as being made flowable with an initial setting time of not less than 45 minutes and shall meet the requirements of ASTM C191. Grout shall have a 14-day compressive strength of 6000 psi when mixed to its flowable state.
- 2.02 PAINT MATERIALS: Shop coat paint, ICI Devflex 4020, Rustoleum 769, Tnemec 99, Southern Coatings 476, or approved equal. Shop coat shall be compatible with finish coats specified in Section 09900 Paints and Coatings.

PART 3 EXECUTION

- 3.01 FABRICATION AND ERECTION: Fabricate and erect steel in accordance with the latest requirements of the American Institute of Steel Construction and the approved shop drawings. Fabrication shall not proceed until Project Architect's approval is obtained.
- A. Shop connections shall be welded. Field connections shall be bolted, unless welded connections are detailed. Welded connections shall be detailed consistent with requirements of the American Welding Society. Bolted connections shall be proportioned as shown in AISC Manual, using 3/4 inch unfinished bolts (A307), unless shown otherwise on Drawings.
 - 1. Shop and field welders shall have been recently certified as qualified structural welder according to requirements of the American Welding Society.
 - 2. Any splices not shown on the drawings shall be indicated clearly on the shop drawings and shall be made only with the Project Architect's approval.
 - B. Members shall be straight, plumb, and level so that the error does not exceed 1 to 1,000. During erection provide guys, stays, and braces to hold steel in position until the frame is permanently secured.
 - C. Neatly miter joints, weld full and grind welds smooth where steel shapes are used as finish members.
- 3.02 PAINTING
- A. Apply one shop coat of paint to all structural steel. After erection, touch up joints and abraded areas with the same brand of paint.
 - B. Areas around welded joints and members to be encased in concrete shall not be painted in the shop. Thoroughly clean scale and loose rust from steel prior to painting. Steel shall be dry when painted and paint shall be allowed to dry before material is handled.
 - C. All steel exposed to view shall be painted additional coats as specified in Section 09900.

END OF SECTION

SECTION 05500

METAL FABRICATION

PART 1 GENERAL

- 1.01 SECTION INCLUDES: All miscellaneous metal work. The Work includes, but is not limited steel lintels and miscellaneous framing & supports.
- 1.02 RELATED SECTIONS
- A. Section 09050 – Color Design.
 - B. Section 09900 - Paints and Coatings: Painting for all ferrous metal exposed to view.
- 1.03 SUBMITTALS: Submit shop drawings for shop fabricated items. Indicate profiles, sizes, materials connection details, attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, with plans, elevations, and details where applicable.

PART 2 PRODUCTS

- 2.01 MATERIALS: Structural shapes shall be standard sections conforming to the American Society for Testing Materials Specification A-36. Punch and drill as necessary for work of others. Provide all bearing plates and all anchors, bolts, and etc. The Work shall be true and free of twists, bends and open joints between component parts. Materials shall be thoroughly straightened in the shop before laid off or worked in any way, care being used to avoid injury to the material.
- A. Gray cast iron shall conform to ASTM A48-83, class 30. All castings shall be of uniform quality, free from blowholes, shrinkage defects, swells, cracks or other defects. Castings shall be free of fins, burrs and slag.
 - B. Expansion bolts shall be equal to Phillips Red Head or "cinch" bolts as manufactured by the National Lead Company. Hilti Fasteners, Rawlplug Company and Wej-it Corporation are acceptable manufacturers. Use toggle type bolts or similar for all anchorage into hollow construction.
 - C. Bolt or weld connections: Provide necessary lugs and brackets for anchorage. Welding shall be in accordance with current "Code of Fusion, Welding and Gas Cutting in Building Construction, Part A - Structural Steel" issued by the American Welding Society, both for fabrication and erection. All welders shall have certification, as a result of tests prescribed by the American Welding Society.
 - D. Detail metal Work for ample size, strength and stiffness and as indicated. Countersink and provide reinforcement where necessary; drill or punch holes for bolts and screws. At the proper time furnish the necessary templates, patterns and items of miscellaneous metal, such as sleeves, inserts and similar items to be built into adjoining Work.
 - E. Fabricate metal Work with sharp lines and angles, with smooth true surfaces and clean edges. Form exposed joints to exclude water. Furnish certificates from manufacturers stating that materials comply with the specification requirements.
 - F. Provide as necessary holes of proper number and spacing for the attachment of Work of other trades. Do not use cutting torch in field without permission of the Project Engineer.

- G. Anchor bolts, washers, nuts and clamps shall be furnished where indicated on the Drawings and where necessary for properly securing Work in place. All bolts and anchors used on the exterior of the building or built into exterior walls shall be cadmium plated. Miscellaneous angles and plates not indicated or specified otherwise shall not be less than 1/4 inch thick.
 - H. Shop paint and field touch up shall be ICI Devflex 4020, Rustoleum 769, Tnemec 99, Southern Coatings 476, or approved equal. Shop coat shall be compatible with finish coats specified in Section 09900 – Paints and Coatings.
 - I. Fastenings shall be invisible where possible. Where exposed, screws, bolts, and the like shall be vandal-proof. All welded exposed joints on steel manufactured items; etc. shall be ground smooth and filled to receive paint.
- 2.02 METAL PRIMER: Where materials come in contact with dissimilar materials which may cause harmful reaction, where exposed to moisture, or such as aluminum to cement mortar or concrete, the surface shall be protected by zinc chromate primer or approved paint.
- 2.03 LOOSE LINTELS: Provide loose steel lintels for openings and recesses in masonry walls and partitions. Weld adjoining members together to form a single unit where indicated. Provide a minimum of 8 inches bearing at each side of openings.
- 2.04 MISCELLANEOUS FRAMING AND SUPPORTS: Provide miscellaneous steel framing and supports which are not a part of structural steel framework, as required to complete Work.
- A. Fabricate miscellaneous units to sizes, shapes, and profiles indicated, or, if not indicated, of required dimensions to receive adjacent other work to be retained by framing. Except as otherwise indicated, fabricate from structural steel shapes, plates and steel bars of welded construction using mitered joints for field connection. Cut, drill and tap units to receive hardware and similar items.
 - B. Galvanize exterior miscellaneous frames and supports.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Perform cutting, drilling and fitting required for installation; set Work accurately in location, alignment and elevation measured from established lines and levels. Provide anchorage devices and fasteners where necessary for installation to other Work.
 - B. Set loose items on cleaned bearing surfaces, using wedges or other adjustments as required. Solidly pack open spaces with bedding mortar, consisting of 2 part Portland Cement to 3 parts sand and only enough water for packing and hydration, or use commercial non-shrink grout material.
- 3.02 Touch-up shop paint after installation. After cleaning field welds, bolted connections and abraded areas, apply same type paint as used in shop. Color to be selected from standard colors available. Use galvanizing repair paint on damaged galvanized surfaces.

END OF SECTION

SECTION 06100

ROUGH CARPENTRY

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Concealed wood grounds and blocking to frame openings, form terminations, to provide anchorage and / or support of other interior and exterior locations; plywood and rough hardware.
- 1.02 RELATED SECTIONS
 - A. Section 03100 - Concrete Forms and Accessories.
 - B. Section 06400 - Architectural Woodwork.
 - C. Section 08710 - Door Hardware.
- 1.03 COORDINATION: Fit carpentry Work to other Work; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow proper attachment of other Work.
- 1.04 QUALITY CONTROL: Factory mark each piece of lumber and plywood to identify the type, grade, agency providing the inspection service, the producing mill and other qualities as specified.
- 1.05 DELIVERY, STORAGE AND PROTECTION: Keep materials dry during delivery and storage. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood, and provide air circulation within stacks. Protect installed carpentry work from damage by work of other trades until Owner's acceptance of the Work. Contractor shall comply with manufacturer's required protection procedures.
- 1.06 PROJECT CONDITIONS: Installer must examine all parts of the supporting structure and the conditions under which the carpentry Work is to be installed, and notify the Contractor in writing of any conditions detrimental to the proper and timely completion of the Work. Do not proceed with the installation until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

PART 2 PRODUCTS

- 2.01 LUMBER: For each use, comply with the "American Softwood Lumber Standard" PS 20 by the U.S. Department of Commerce. Nominal sizes are shown or specified; provide actual sizes complying with the minimum size requirements of PS20 for the moisture content specified for each use. Provide dressed lumber, S4S, unless otherwise shown or specified. Provide seasoned lumber with 19 percent maximum moisture content at time of dressing and complying with dry size requirements of PS 20, unless otherwise specified.
- 2.02 FRAMING LUMBER
 - A. Where wood framing is shown or scheduled, provide lumber complying with grading rules which conform to the requirements of the "National Grading Rule for Dimension Lumber" of the American Lumber Standards Committee established under PS 20.
 - B. For Light Framing: Standard Grade.

- C. For Structural Framing: (6 inches and wider and from 2 inches to 4 inches thick), provide the following: No. 1 Grade; Douglas Fir (WCLB or WWPA), Southern Pine (SPIB). Fb (minimum extreme fiber stress in bending); 500 psi. E (minimum modulus of elasticity); 1,500,000 psi.

2.03 BOARDS

- A. Where lumber less than 2 inches in nominal thickness and 2 inches or more in nominal width is shown or specified, provide boards complying with dry size requirements of PS 20.
- B. Concealed Boards: Where boards will be concealed by other work, provide the following:
 - 1. Moisture Content: 19 percent maximum, mark boards "S- Dry".
 - 2. Species and Grade: Provide one of the following:
Southern Pine (SPIB) No. 2 boards of WCLB (any species) No. 3 boards.

2.04 PLYWOOD

- A. For each use, comply with the requirements for "Softwood Plywood/Construction and Industrial" PS 1 by the U.S. Department of Commerce.
- B. Concealed Plywood: Where plywood will be concealed by other work, provide 5/8-inch minimum thickness Interior Type plywood C-D Plugged Grade, unless otherwise specified or shown on Drawings. For backing panels for electrical or telephone equipment, provide fire-retardant treated Standard grade plywood with exterior glue.
- C. Exposed Plywood: Where plywood will be exposed to view, provide 5/8 inch minimum thickness Interior Type plywood C-D Plugged Grade, unless otherwise specified or shown on Drawings. Unless specifically stated otherwise, all exposed plywood shall be painted or stained from standard colors as selected by Project Architect.
- D. Exterior Plywood: Exterior type, medium density, C Grade for concealed faces.
 - 1. Roof sheathing: 3/4 - inch thick.
 - 2. Wall sheathing: 1/2 - inch thick.

- 2.05 ANCHORAGE AND FASTENING MATERIALS: For each use, select proper type, size, material and finish complying with the applicable Federal Specifications. Zinc electroplated steel fasteners for high humidity and treated wood locations. All nails shall be coated.

- 2.06 TREATED WOOD: Complete fabrication of treated items prior to treatment, wherever possible. If cut after treatment, coat cut surfaces with heavy brush coat of same fire-retardant chemical used for treatment. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

- A. Preservative Treatment: Where lumber or plywood is indicated as "Treated", or is specified herein to be treated, comply with the applicable requirements of the American Wood Preservers Institute (AWPI). Mark each treated item to comply with the AWP Quality Mark requirements for the specified requirements.
 - 1. Pressure-treat aboveground items with water-borne preservatives complying with AWPI P-2. After treatment, kiln-dry to maximum moisture content of 15 percent. Treat indicated items and the following:

- a. Wood cants, nailers, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers and waterproofing.
 - b. Wood sills, sleepers, blocking, furring stripping and similar concealed members in contact with masonry or concrete.
 - B. Fire-Retardant Treatment: Where "PR-S" lumber or plywood is shown or scheduled, comply with the AWPI Specification C-208 for pressure impregnation with fire-retardant chemicals to achieve a flame-spread rating of not more than 25 when tested in accordance with UL Test 723, ASTM E A4, or NFPA Test 355. Where treated items are indicated to receive a transparent or paint finish, use a fire-retardant treatment that will not bleed through or adversely affect bond of finish.
- 2.07 FELT: Refer to Section 07260 – Vapor Retarders for weather-resistive barrier on exterior face of wall sheathing.

PART 3 EXECUTION

- 3.01 INSTALLATION: Use only sound, thoroughly seasoned materials of the longest practical lengths and sizes to minimize jointing. Use materials free from warp that cannot be easily corrected by anchoring and attachment. Sort out and discard warped material and material with other defects that would impair the quality of the Work.
- A. Securely attach carpentry work to substrates by anchoring and fastening as shown and as required by recognized standards. Countersink nail heads on exposed carpentry work and fill holes.
 - B. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
- 3.02 ATTACHMENT AND ANCHORAGE
- A. Use common wire nails, except as otherwise shown or specified. Use finishing nails for finish Work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; pre-drill as required.
 - B. Plywood Sheathing: Panel ends and edges shall have spacing of 1/8 inch, unless otherwise indicated by the panel manufacturer. Nail 6 inches on center along supported panel edges and 12 inches on center at intermediate supports with 6d common nails for panels 1/2 -inch thick and 8d nails for panels 3/4 -inch thick.
- 3.03 WOOD GROUND NAILERS, BLOCKING, AND SLEEPERS: Provide wherever shown and where required for screeding or attachment of other work. Form to shapes as shown and cut as required for true line and level of work to be attached. Set true to line and level, plumb with intersections true to required angle. Coordinate location with other Work involved.
- A. Attach to substrates securely with anchor bolts and other attachment devices as shown as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown. Building into masonry; anchor to formwork before concrete placement.

- B. Provide grounds of dressed, preservative treated, key-beveled lumber not less than 1-1/2 inch wide and of the thickness required to bring face of ground to exact thickness of finish material involved. Remove temporary grounds when no longer required.
- 3.04 WOOD FURRING: Install plumb and level with closure strips at all edges and openings. Shim with wood as required.
- A. Suspended Furring: Provide of size and spacing shown, complete including hangers and all attachment devices. Level to a tolerance of 1/8 inch in 12 feet.
- 3.05 WOOD FRAMING
- A. Set wood framing accurately to required lines and levels. Provide framing members of sizes and on spacing shown, and frame openings as shown, or if not shown, comply with the recommendation of the "Manual for Housing Framing" of the National Forest Products Association. Cut, join, and tightly fit framing around other Work. Do not splice structural members between supports unless otherwise detailed.
 - B. Anchor and nail as shown, or if not shown, to comply with the "Recommended Nailing Schedule - Table 1 of the "Manual of House Framing" and other recommendations of the N.F.P.A.

END OF SECTION

SECTION 06175

WOOD TRUSSES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Single plane, metal connected wood trusses fabricated from conventional dimensional lumber.
- B. Design and fabricate wood trusses where shown on the Drawing and as needed for a complete and proper installation.

1.02 REFERENCES: The applicable portions of the current editions of the following standards are a part of these Specifications:

- A. National Design Specifications for Wood Construction published by the National Forest Products Association.
- B. Design Specifications for Metal Plate Connected Wood Trusses published by The Truss Plate Institute.
- C. American Society for Testing and Materials (ASTM).
 - 1. ASTM A446 Grade A.
 - 2. ASTM A525 Coating Destination G60.
- D. Timber Construction Manual published by American Institute of Timber Construction.

1.03 SUBMITTALS

- A. Shop Drawings: Submit shop drawings indicating all truss types, connections, framing members and accessories. Shop drawings shall bear the seal of a professional Engineer registered in the State of Mississippi.

1.04 QUALITY ASSURANCE

- A. Provide the services of a structural engineer registered to practice in the State of Mississippi to design the wood trusses and applicable temporary and permanent bracing to sustain the indicated loads for the spans, profiles and arrangements needed to complete the Work.
- B. Comply with provisions of all applicable standards and codes and the 1994 Standard Building Code.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Trusses, if stored prior to erection, shall be stored in a vertical position and protected from the weather. Handle with care to avoid damage.
- B. Erect and install trusses in accordance with Truss Manufacturer's approved shop drawings and installation instructions.
- C. Temporary construction loads that cause member stresses beyond design limits are not permitted.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All truss members - No. 2 kiln dried Southern Yellow Pine having a maximum moisture content of 19 percent. Top and bottom chords members shall be 2 inches by 6 inches minimum.
- B. Dimensional joist and truss lumber shall have the following minimum properties, unless noted otherwise on the Drawings:
 - 1. Bending stress ----- 1,000 psi
 - 2. Horizontal shear stress ----- 80 psi
- C. Connector plates shall be a minimum thickness of 0.036 inches and shall be manufactured from steel meeting the requirements of ASTM A446 Grade A, and shall be hot dipped galvanized according to ASTM A525 Coating Designation G60.
- D. Hurricane clips shall be equal to 18 gage galvanized steel framing anchor style number 1 as manufactured by Cleveland Steel Specialty Company.

2.02 DESIGN LOADS

- A. The dimensional wood roof framing shall be designed for the following loads, unless noted otherwise on the Drawings:
 - 1. Live load ----- 20 psf
 - 2. Top chord dead load ----- 10 psf
 - 3. Bottom chord bottom load ----- 10 psf

2.03 FABRICATION

- A. Trusses shall be manufactured by a company established to perform this Work. Manufacturing Company must have the Project Architect's prior approval.
- B. Size, stress and arrangement shall be determined by dimensions indicated on the Drawings. Each truss shall be custom designed to fit the dimensions indicated on the Drawings. Complete design calculations showing internal layout, member forces, and stress control points are to be furnished for each truss design. Design Calculations shall bear the seal of a professional Engineer registered in the State of Mississippi.

- 2.04 OTHER MATERIALS: Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Project Architect.

PART 3 EXECUTION

- 3.01 ACCEPTABLE INSTALLERS: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the Work.
- 3.02 EXAMINATION: Examine the areas and conditions under which Work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

- 3.03 PREPARATION: Erection bracing in addition to specified bridging is to be provided to keep the trusses straight and plumb as required to assure adequate lateral support for the individual truss and entire system until the sheathing material has been applied. The Contractor will give one week notification prior to enclosing the trusses to provide opportunity for inspection of the installation by the manufacturer's representative and the Project Architect.
- 3.04 INSTALLATION
- A. Coordinate as required with other trades to assure proper and adequate provision in the Work of those trades for interface with the Work of this Section.
 - B. Install the Work of this Section in strict accordance with the original design, pertinent requirements of agencies having jurisdiction, the Truss Plate Institute, and manufacturer's recommended installation procedures. Anchor all components firmly into position.
 - C. Hoist the trusses into position with proper bracing secured at designated lifting points. Exercise care to keep out-of-place bending of trusses to a minimum. Install temporary horizontal and cross bracing to hold trusses plumb and in safe condition until permanent bracing is installed. Install permanent bracing and related components prior to application of loads to trusses. Do not cut or remove any truss members
 - D. Roof truss anchorage shall be by hurricane clips. Clips shall allow horizontal nailing into the top plates. Hurricane slip type truss anchors shall be provided at each corner and at every truss bearing point. Where an anchored truss bears on an intermediate point, a truss anchor shall be installed at that bearing point.
 - E. Trusses to be set 24 inches on center maximum spacing.
 - F. Brace temporary and permanently to sustain a vertical position under construction and design loads. Block eaves and ridges to provide straight alignment of trusses

END OF SECTION

SECTION 07210

BUILDING INSULATION

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Building insulation for exterior walls, interior walls, and ceilings as shown on the Drawings and specified herein.
- 1.02 SUBMITTALS: Submit manufacturer's product and technical data for each type of insulation describing location, extent, material and method of fastening prior to installation for Project Architect's approval.
- 1.03 PRODUCT HANDLING: Protect the materials of this section before, during and after installation and to protect the installed work and materials of all other trades. In the event of damage, immediately make all repairs or replacements as necessary.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Equivalent products by the following manufacturers are acceptable:

- 1. Celotex Building Products, 4010 Boy Scout Blvd, Tampa, FL 33607, Tel. (813) 873-4000.
- 2. Dow Chemical Company, 200 Larkin Center, Midland, MI 48674, Tel. (800) 441-4369.
- 3. Johns Manville Corp, 717 17 Street, Denver, CO 80202, Tel. (303) 978-2531.
- 4. Owens Corning, One Owens Corning Parkway, Toledo, OH 43659, Tel. (800) 438-7465.
- 5. UC Industries, Inc., 137 East Ave., Suite 64, Tallmadge, OH 44278, Tel. (330) 630-6134.
- 6. United States Gypsum Company, 125 S. Franklin St., Chicago, IL 60606, Tel. (800) 874-4968.

B. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures.

- 2.02 BATT INSULATION: Provide glass fibers and resinous binders formed into flexible batts conforming to ASTM C 665, Type III, Class B with density not less than 1.5 lbs. Per cubic foot and an R value of 3.17 per inch of thickness at 75 degrees F. mean temperature, with aluminum foil and asphalt vapor barrier laminated to one face. Thickness of insulation shall be as shown on the Drawings.

- 2.03 SOUND ATTENUATION INSULATION: Similar to above specified insulation except manufacturer's standard unfaced batt insulation manufactured for sound attenuation.

2.04 ACCESSORIES

- A. Tape: Bright aluminum, self-adhering type, mesh reinforced, and two inches wide.

PART 3 EXECUTION

- 3.01 INSPECTION: Examine the areas and conditions where building insulation is to be installed and notify the Project Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the Project Architect.
- 3.02 INSTALLATION: Comply with manufacturer's instructions for the particular condition of installation in each case. If printed instructions are not available, or do not apply to the project conditions, consult the manufacturer's technical representative for specific recommendations before proceeding with the work.
- A. Extend insulation full thickness as shown over entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections, which interfere with placement.
 - B. Apply a single layer of insulation to the required thickness, unless a double layer is required, to make up the total thickness shown.
 - C. Set vapor barrier faced units with vapor barrier to inside of construction, except as otherwise shown. Do not obstruct ventilation spaces. All joints at vapor barriers shall be sealed with 4 inches wide, foil faced duct tape to prevent vapor and air migration.
 - D. Tape joints and ruptures in vapor barriers, using tape specified above, and seal each continuous area of insulation to surrounding construction so as to ensure vapor tight installation of the units.
 - E. Where insulation is impaled on stick clips, provide clips not less than 3 inches from corners or edges and not more than 12 inches on center.
 - F. Adhesive Application - per manufacturer's printed directions. Apply adhesive over entire back of insulation and on edges of insulation, except as noted below.
 - G. Fastener Installation - per manufacturer's printed directions. Install fasteners 12 inches on center each way. Use adhesive as specified herein per fastener manufacturer's recommendations.
- 3.03 BATT INSULATION: Install blanket fiberglass insulation with edges closely butted. Cut and fit insulation to closely fit intersecting or penetrating surfaces.
- A. Walls: Install sound batt insulation between the studs at all interior partitions. Attach to studs with staples, adhesive or method as recommended by manufacturer. Tape and seal small joints and punctures and replace insulation where large tears occur.
 - B. Ceilings: Install above ceilings continuous with vapor barrier down. Lay above gypsum board at bottom chord of wood trusses in method recommended by manufacturer. Tape and seal small joints and punctures and replace insulation where large tears occur.

END OF SECTION

SECTION 07260

VAPOR RETARDERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Vapor barrier under concrete floor slab.
- B. Concrete curing paper on top of freshly poured concrete floor slab. .
- C. Weather-resistive barrier on exterior face of wall sheathing.
- D. Floor protection paper used for positive protection of finished floors.

1.02 RELATED SECTIONS: Section 07650 - Flexible Flashing.

1.03 SUBMITTALS: Submit manufacturers technical product data, installation instructions and recommendations for products specified.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Drawings and specifications are based on products manufactured by Fortifiber Corporation, 300 Industrial Drive, Fernley, NV 89408. Tel. (800) 773-4777.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. Griffolyn ® Division, Reef Industries, Inc., 9209 Alameda Genoa Road, Houston, TX 77075. Tel: (800) 231-6074.
 - 2. Grace Construction Products, 62 Whittemore Avenue, Cambridge, Ma 02140. Tel: (800) 444-6459.
- C. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures.

2.02 VAPOR BARRIER: Membrane shall be a non-woven geo-textile laminated with polyethylene to a low-perm membrane, meeting ASTM E-1745-96 Class C Test Method, equal to "Moistop Plus".

2.03 CONCRETE CURING PAPER: Laminated tri directional glass fiber reinforced long fibered kraft curing papers with double coating of high-melting-point asphalt, meeting ASTM C-171 Test Method, equal to "Orange Label Sisalkraft".

2.04 WEATHER-RESISTIVE BARRIER: Membrane shall be a single ply, asphalt saturated kraft 60 minute Grade D breather type sheathing paper, meeting ASTM E-1677 Type I Test Method, equal to "Fortify".

2.05 FLOOR PROTECTION PAPER: Non-staining reinforced floor protection paper consisting of two heavy kraft sheets and glass reinforcing fibers laminated with a non-staining adhesive, meeting ASTM D 828 and ASTM D 781 Test Methods, equal to "Seekure".

PART 3 EXECUTION

- 3.01 PREPARATION: Ensure items that pass through building paper / membrane are properly and rigidly installed, substrate is free of projections and irregularities that may be detrimental to proper installation of building paper / membrane.
- 3.02 INSTALLATION
- A. The vapor barrier shall be unrolled over the thoroughly compacted subgrade and turned down at the inside perimeter of grade beams. Joints shall be sealed, watertight, with a pressure sensitive tape or mastic as recommended by the manufacturer, allowing a minimum overlap of 6 inches. Apply tape evenly over seams and rub out any wrinkles formed during application. Where pipes and conduits pass through the membrane, it shall be doubled in thickness and sealed as before specified for joints. Inspect the membrane thoroughly and repair all punctures immediately before placing concrete. Equipment, tools, and procedures that might puncture the membrane shall not be used while placing and finishing the concrete.
 - B. The concrete curing paper shall be unrolled over the entire surface once the concrete has set sufficiently hard to permit application without marring the surface. All joints shall be lapped 4 inches and sealed with a pressure sensitive tape. Apply tape evenly over seams and rub out any wrinkles formed during application. Ensure that all tears or penetrations are repaired.
 - C. The weather-resistive barrier shall be installed in weather-board fashion over approved exterior sheathing, lapping horizontal joints a minimum of 2 inches and lapping vertical joints a minimum of 6 inches. Lapped joints shall be taped with Fortify Tape. Tears and punctures shall be sealed with Fortify Tape and/or Moistop Sealant.
 - D. The floor protection paper shall be applied immediately after the floor covering is installed and until final completion and acceptance by the Project Architect. The paper shall be laid in the widest practical width with 6-inch laps to provide complete coverage of flooring. Joints shall be sealed with minimum 2 inch wide pressure sensitive tape
- 3.03 CLEANING: Inspect vapor barrier membrane thoroughly and keep clean. Remove any dirt, oils, mud, debris, etc. prior to placing concrete.

END OF SECTION

SECTION 07610

SHEET METAL ROOFING

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Factory formed, prefinished standing seam metal roof panels with concealed fasteners and related accessories, valleys, hips, ridges, eaves, corners, rakes, miscellaneous flashing and attaching devices as shown and / or required for a complete metal roofing system.
- 1.02 RELATED SECTIONS: Section 09050 – Color Design.
- 1.03 REFERENCES
 - A. ASTM A-525 General Requirements for Steel Sheet, Zinc-Coated (Galvanized)
 - B. ASTM A-653 Steel Sheet, Zinc-Coated (Galvanized) by Hot Dip Process, Structural Physical Quality.
 - C. ASTM E-1646: Static Water Infiltration
 - D. ASTM E-1680: Static Air Infiltration
 - E. Spec Data Sheet - Galvalume Sheet Metal by Bethlehem Corp.
 - F. SMACNA - Architectural Sheet Metal Manual
 - G. UL 90 Rating: Wind Uplift Approval Conforming to Underwriters Lab. (UL) Section 580 Specifications.
- 1.04 SUBMITTALS
 - A. Submit detailed drawings showing layout of panels, anchoring details, joint details, trim, flashing, and accessories. Show details of weatherproofing terminations, and penetrations of metal work. Indicate material type, profile, thickness, finish and color. Include copies of sample warranties.
 - B. Submit a two-foot by two-foot representative sample of each type of panel and accessory indicating panels, standing seams, closure, edge trim and flashing complete with factory finish and color if product is not one of those specified.
 - C. Submit results indicating compliance with minimum requirements of the Water Infiltration - ASTM E-1646 performance tests.
 - D. Submit sample copies of the Paint Finish Guarantee and Weather Tightness Warranty prior to installation for Project Architect's approval.
- 1.05 QUALITY ASSURANCE
 - A. Manufacturer: Company specializing in Architectural Sheet Metal Products with 10 years minimum experience.
 - B. Installer: Company specializing in Architectural Sheet Metal Products, with 5 years minimum experience, who has completed work similar to that indicated for this project and with a record of successful in-service performance. Submit identification of at least 3 projects of similar scope and complexity along with name, address, and telephone number of the Architect, Owner and General Contractor.

- 1.06 DELIVERY, STORAGE AND HANDLING: Upon receipt of panels and other materials, installer shall examine the shipment for damage and completeness. Panels should be stored on edge in a clean, dry place. One end shall be elevated to allow moisture to run off. Panels with strippable film must not be stored in the open exposed to the sun. Stack all materials to prevent damage and to allow for adequate ventilation.
- 1.07 WARRANTY
- A. Paint Finish: Paint finish shall have a 20-year guarantee against cracking, peeling and fade (Not to exceed 5 N.B.S. units).
- B. Weather Tightness: The entire installation (clips, panels, fasteners, rakes, eaves, ridge/valley flashing conditions, roof to wall conditions as well as all materials specified as supplied by the manufacturer) shall be guaranteed weather tight for a minimum of 20 years. This warranty shall be identified as neither Non-Depreciating, Non-prorated nor have exclusions that identify valleys, curbs, and flashings. Provide written warranty, signed by metal roofing manufacturer and his authorized installer, agreeing to replace / repair defective materials and workmanship during the warranty period.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Drawings and Specifications are based on products manufactured by Petersen Aluminum Corp., 1005 Tonne Road, Elk Grove Village, IL 60007. Tel: (800) 323-1960.
- B. Equivalent products by the following manufacturers are acceptable:
1. Architectural Building Components, P.O. Box 52488, Houston, TX 77086. Tel: (800) 423-1105.
 2. CENTRIA Roof Systems, 1005 Beaver Grade Road, Moon Township, PA 15108. Tel: (800) 759-7474.
 3. Copper Sales, Inc., 1001 Lund Blvd., Anoka, MN 55303, Tel: (800) 426-7737.
- C. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures.

2.02 SHEET MATERIALS

- A. Materials: Sheet Steel shall be PAC-CLAD 24 gage G-90 Galvanized ASTM A 653, or (24 gage prefinished Galvalume ASTM 792 Grade 50B with an AZ-50 coating).
- B. Finish: Finish shall be full strength (70% PVDF) Kynar 500 Fluorocarbon coating applied by the manufacturer on a continuous coil coating line. Top side dry film thickness of 0.70 to 0.90 mil over 0.25 to 0.35 mil prime coat, to provide a total dry film thickness of 0.95 to 1.25 mil. Bottom side shall be coated with primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesion, flexibility, and longevity as specified by the finish supplier.
- C. Color: Shall be selected by the Project Architect from manufacturer's full line of standard colors.
- D. Film: Strippable film shall be applied to the top side of the painted coil to protect the finish during fabrication, shipping and field handling. This strippable film shall be removed before installation.

2.03 ACCESSORY MATERIALS

- A. Concealed fastening clips: G-90 Galvanized steel, spaced 18-inches on center.

- B. Fasteners: 1-inch # 10 pancake head wood screw with a # 2 Phillips head size. Minimum 2 fasteners per clip.
 - C. Sealant: Extruded vinyl weatherseal
 - D. Roofing Felt: 30-pound asphalt saturated un-perforated organic felt, complying with ASTM D226, Type 1.
 - E. Leak Barriers: Peel and Stick Membrane shall be installed at valley, ridge, hip and eave areas. Membrane shall be equal to Certainteed Wintergard, Grace Ice and Watershield, Henry Perma-Seal PE, Owen-Corning Deck-Dri, or Tamko Moisture Guard.
- 2.04 FABRICATION
- A. Panels, 40 feet and less, shall be in one continuous length.
 - B. Panels fabricated by a portable roll former will not be approved.
 - C. All exposed adjacent flashing and accessories shall be of the same material and finish as the roof panels. All flashing, hem exposed edges on underside 1/2 inch. Fabricate in accordance with standard SMACNA procedures and details.
- 2.05 PREFORMED METAL ROOFING SYSTEM: Equal to Petersen Aluminum Corp. SNAP-CLAD panel system.
- A. System shall include, but is not limited to the following components:
 - 1. Standing Seam Metal Roof Panels with Striations.
 - 2. Preformed Metal Valley Flashing.
 - 3. Preformed Metal Hip Flashing.
 - 4. Preformed Metal Vented Ridge Cap.
 - 5. Concealed fastening clips and fasteners..
 - 6. Metal Fascia and Cladding.
 - 7. Miscellaneous Metal Trim Necessary for a Complete System Installation.
 - B. SNAP-CLAD roof panels with striations shall have 16 inches on center seam spacing, roll-formed in continuous lengths from eave to ridge, with a minimum standing seam height of 1-3/4 inches.
 - C. Certification shall be submitted, based on independent testing laboratory, indicating no measurable water penetration or air leakage through the system when tested in accordance with ASTM E-1646 and ASTM E-1680.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine wood trusses to ensure proper attachment to framing.
- B. Inspect roof structure to verify deck is clean and smooth, free of depressions, waves or projections, properly sloped to valleys or eaves.
- C. Verify roof openings, curbs, pipes, sleeves, ducts or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
- D. Installer shall examine substrate and conditions under which Work is to be performed and must notify Contractor in writing of unsatisfactory conditions. Do not proceed with installation until unsatisfactory conditions have been corrected in manner acceptable to Installer.

- 3.02 INSTALLATION OF UNDERLAYMENTS: Install using methods recommended by manufacturer in accordance with local building code.

- A. Eaves: Install Peel and Stick Membrane up the slope from eave edge a full 36 inches or 24 inches minimum beyond the interior "warm wall"; lap ends 6 inches and bond.
- B. Valleys: Install Peel and Stick Membrane a minimum of 36 inches wide centered on valley; lap ends 6 inches minimum and seal.
- C. Ridge / Hip: Install Peel and Stick Membrane a minimum of 36 inches wide centered on ridge / hip; lap ends 6 inches minimum and seal.
- D. Roofing Felt: Install one layer of 30-lb. roofing felt lapped, staggered, and applied horizontally from eave to ridge over 3/4-inch thick plywood sheathing. Run sheets horizontally lapped so water sheds; nail in place. Lap horizontal edges 2 inches minimum and 2 inches minimum over Peel and Stick Membrane. Lap ends 4 inches minimum; stagger end laps of each layer 36 inches minimum. Lap underlayment over valley protection 6 inches minimum. Repair or replace any torn felt to maintain a continuous membrane ahead of installation of metal roofing.
- E. Vent Pipes: At vent pipes, install a 24 inch minimum square piece of Peel and Stick Membrane lapping over roof deck underlayment; seal tightly to pipe.
- F. Vertical Walls: At vertical walls, install leak barrier membrane extending 6 inches minimum up the wall and 12 inches minimum on to the roof surface lapping over roof deck underlayment.
- G. Metal Drip Edge: At rake edges, install metal drip edge flashing over Peel and Stick Membrane and roof deck underlayment; set tight to rake boards; lap joints 2 inches minimum and seal with plastic cement; secure with nails.

3.03 INSTALLATION OF PANELS

- A. Comply with Drawings, manufacturer's instructions, and conform to standards set forth in the Architectural Sheet Metal Manual published by SMACNA, in order to achieve a watertight installation.
- B. Install panels in such a manner that horizontal lines are true and level and vertical lines are plumb.
- C. Install starter and edge trim before installing roof panels.
- D. Remove protective strippable film prior to installation of roof panels.
- E. Attach panels using manufacturer's standard clips and fasteners, spaced in accordance with approved shop drawings.
- F. Install sealants for preformed roofing panels as specified on shop drawings.
- G. Do not allow panels or trim to come into contact with dissimilar materials.
- H. Do not allow traffic on completed roof. If required, provide cushioned walk boards.
- I. Protect installed roof panels and trim from damage caused by adjacent construction until completion of installation.
- J. Thoroughly clean and touch-up any areas scarred during installation with a touch-up paint approved by panel manufacturer. Only minor scratches and fastener heads shall be touched-up; any other damaged material shall be replaced.

3.04 CLEANING

- A. Clean any grease, finger marks, or stains from the panels per manufacturer's recommendations.
- B. Remove all scrap and construction debris from the site.

END OF SECTION

SECTION 07650

FLEXIBLE FLASHING

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Self-adhesive flashing used to seal around exterior windows, doors, and where required to weatherproof the building.
- B. Waterproof membrane flashing used to seal around exterior door and window heads and sills, brick ledges, copings at masonry walls, common through-wall penetrations such as hose bibbs, vents, electrical boxes, exterior lights, and where required to waterproof the building.

- 1.02 SUBMITTALS: Submit manufacturer's technical product data, installation instructions and recommendations for product specified.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Drawings and specifications are based on product manufactured by Fortifiber Corporation, 300 Industrial Drive, Fernley, NV 89408. Tel. (800) 773-4777.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. Grace Construction Products, 62 Whittermore Avenue, Cambridge, Ma 02140. Tel: (800) 444-6459.
 - 2. Griffolyn ® Division, Reef Industries, Inc., 9209 Almeda Genoa Road, Houston, TX 77075. Tel: (800) 231-6074.
- C. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures.

- 2.02 SELF-ADHESIVE FLASHING: Membrane shall be a multi-layer composite employing polyethylene, fiberglass membrane and self-adhesive backing, meeting ASTM E-96 (Method B), ASTM F-1249, ASTM D-779 and ASTM D-828 Test Methods, equal to "Moistop E-Z Seal".

- 2.03 WATERPROOF MEMBRANE FLASHING: Membrane shall be a self-sealing SBS modified asphalt waterproof membrane laminated to high density, cross-laminated polyethylene film reinforcement and self-adhesive backing, meeting ASTM E-96, ASTM D-779, ASTM D-903-98, ASTM D-412 Test Methods, equal to "FortiFlash".

PART 3 EXECUTION

3.01 PREPARATION

- A. Ensure items that pass through membrane are properly and rigidly installed, substrate is free of projections and irregularities that may be detrimental to proper installation of membrane.

- B. Prior to installation, window, door flanges, brick ledges and base materials shall be dry and cleaned free of any dirt or other substances that may interfere with adhesion.

3.02 INSTALLATION

- A. The self-adhesive flashing shall first be applied at the sill of window openings. Moistop Sealant is then applied to the back of the window flanges and windows are installed. E-Z Seal flashing is next applied over the window flanges at jambs and then the head, completing the installation. Flashing around door openings is similar to window application. To apply, peel away the release paper and place E-Z Seal over the substrate or window and door flanges. Apply firm pressure along the entire adhesive strip to ensure a continuous seal.
- B. To apply FortiFlash flashing, peel away the release paper and press membrane firmly over substrate, applying sufficient pressure along the entire membrane to ensure a continuous seal. If adhesion is inadequate, prime the surface with a polymer-emulsion-based primer designed specifically for SBS self-adhered membranes, in accordance with the manufacturer's instructions.

- 3.03 CLEANING: Inspect membrane and substrate thoroughly and keep clean. Remove any dirt, oils, mud, debris, etc. prior to installation.

END OF SECTION

SECTION 07920

JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preparation of substrate surfaces to receive materials.
- B. Sealant and joint backing (backer rod) materials and installation in the following general locations (even though not shown on the Drawings):
 - 1. Exterior and interior wall joints, including control / expansion joints and abutting like or similar materials (in walls, ceilings, and roof construction) that have spaces between in excess of 3/16 inch (except where less restrictive tolerances are indicated or where the condition is specifically the responsibility of others).
 - 2. Abutting dissimilar materials, exterior and interior.
 - 3. Exterior and interior wall openings (including at perimeter doors, exterior thresholds, windows, louvers, and penetrations required by piping, ducts, and other service and equipment.
- C. Accessories: Including, but not limited to, primer, cleaner, backer rod, bond breaker, and masking tape.

1.02 RELATED SECTIONS: Section 01330 – Submittal Procedures and Section 09050 – Color Design.

1.03 DEFINITIONS: Wherever the words "caulk" or "seal" occur, they shall be interpreted to mean "effectively seal the indicated joint with a material to render it air and watertight." "Caulk" shall indicate the use of the interior materials specified hereinafter and "Seal" shall indicate the use of the exterior materials.

1.04 WORK OF OTHER SECTIONS: Caulking and sealing may be performed as Work of other Sections when specified. However, all Work shall conform to the requirements of this Section.

1.05 SUBMITTALS: Submit manufacturer's product data and installation instructions for each type of sealant required. Product data shall include chemical characteristics, limitations, and color availability.

1.06 QUALITY ASSURANCE

- A. Applicator: Company specializing in the work of this Section with minimum 3 years documented satisfactory experience.
- B. Manufacturer's Certificate: Provide manufacturer's letter of certification that products meet or exceed specified requirements and are appropriate for uses indicated.
- C. Installation: Conform to Sealant and Waterproofers Institute requirements.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver caulking and sealant material to the site in original unopened packages with manufacturer's labels, instructions and product identification and lot numbers intact and legible.

- B. Store materials under cover, protected from inclement weather and adverse temperature extremes, in original containers or unopened packages, in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Drawings and Specifications are based on products manufactured by Pecora Corporation, 165 Wambold Road, Harleysville, PA 19438. Tel: (800) 523-6688.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. Dow Corning Corporation, P.O. Box 994, Midland, MI 48686. Tel: (800) 322-8723
 - 2. GE Silicones, Hudson River Rd. Building 25-73, Waterford, NY 12188. Tel: (518) 233-2639.
 - 3. Sonneborn Building Products, 889 Valley Park Drive, Shakopee, MN 55379. Tel: (800) 433-9517.
- C. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures.

2.02 SEALANT TYPES AND USE SCHEDULE

- A. Type 1: Use for interior locations, sealing around windows, doors, louvers, drywall and other locations to be painted and where joints are less than 1/8 inch with none to slight movement anticipated: Pecora AC-20 + Silicone (Acrylic Latex Caulking Compound).
- B. Type 2: Use for exterior sealing at door, louver, and window frames at masonry, and other materials: Pecora 864 (one-part Architectural Silicone Sealant). Color(s) to be selected by the Project Architect from manufacturer's full range of standard Architectural colors plus 32 special Color-Flex Designer colors.

2.03 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Backer Rod: Open cell polyurethane foam or closed cell polyethylene foam, compatible with sealant, sized and shaped to provide proper compression upon insertion in accordance with manufacturer's recommendations.
- D. Bond Breaker: Pressure sensitive adhesive polyethylene, TEFLON, or polyurethane foam tape.
- E. Masking Tape: Pressure sensitive adhesive paper tape.

PART 3 EXECUTION

- 3.01 EXAMINATION: Installer must examine areas and conditions under which this Work is to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 PREPARATION

- A. Cleaning: Clean joint surfaces, using joint cleaner as necessary, to remove dust, dirt, oil, grease, rust, lacquers, laitance, release agents, moisture, frost or other matter that might adversely affect adhesion of sealant. Rake joints out to a depth equal to one-half the width.
- B. Masking: Mask areas adjacent to joints.
- C. Priming: If required, prime substrate surfaces following manufacturer's instructions.
- D. Mixing: When required, mix components of sealant materials in accordance with manufacturer's instructions to achieve required characteristics of sealant.

3.03 APPLICATIONS

- A. Mixing, application, surface condition, weather condition shall be as recommended by the manufacturer. Do not use material that has exceeded the recommended pot life.
- B. Install backing material in joints using blunt instrument to avoid puncturing. Do not twist the backing rod while installing. Install backing rod so that joint depth is 50 percent of joint width, but a minimum of 1/8-inch deep and a maximum of 3/8-inch deep.
- C. Apply sealant in joints using a pressure gun with nozzle cut to fit joint width. Ensure sealant is deposited in a uniform, continuous bead without gaps or air pockets.
- D. Tool joints to the required configuration within 10 minutes of sealant application. Remove masking materials immediately after tooling.

3.04 CLEANING AND REPAIRING

- A. Do not allow sealant or compounds to overflow or spill onto adjoining surfaces, or to migrate into voids of adjoining surfaces. Clean adjoining surfaces by whatever means necessary to eliminate evidence of spillage.
- B. When using flammable solvents, avoid heat, sparks and open flames. Provide necessary ventilation. Follow all precautions and safe handling recommendations from the solvent manufacturer and pertinent local, state and federal regulations.
- C. Leave finished work in a neat, clean condition with no evidence of spillovers onto adjacent surfaces.
- D. Repair or replace defaced or disfigured finishes.

- 3.05 CURE AND PROTECTION: Cure sealant and caulking compounds in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength, internal cohesive strength and surface durability. Advise Contractor of procedures required for cure and protection of joint sealers during construction period, so that they will be without deterioration or damage (other than normal wear and weathering) at Time of Completion.

END OF SECTION

SECTION 08210

WOOD DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Extent and location of each type of wood door is shown on the Drawings and in Schedules.
- B. Types of doors required include solid stile and rail wood.

1.02 RELATED SECTIONS

- A. Section 08800 – Glazing.
- B. Section 09050 – Color Design.

1.03 SUBMITTALS

- A. Product Data: Indicate door core material and construction; veneer species, type and characteristics.
- B. Shop drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, special blocking for hardware, identify cutouts for glazing and installation instructions. Indicate by transmittal form that copy of each instruction has been transmitted to the installer

1.04 QUALITY ASSURANCE: Comply with the requirements of the following standards unless otherwise indicated.

- A. Non-Fire Rated Wood Doors: NWMA Industry Standard I, S, 1 "Wood Flush Doors" of the National Woodwork Manufacturer's Association.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING: Protect wood doors during transit, storage and handling to prevent damage, soiling and deterioration. Comply with the "On-Site Care" recommendations of NWMA pamphlet "Care and Finishing of Wood Doors" and with manufacturer's instructions.

1.06 WARRANTY: Manufacturer to provide a written warranty covering the life of the installation.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Equivalent products by the following manufacturers are acceptable:
 - 1. Easley & Easley Millwork, Inc., P.O. Box 8577, Jackson, MS 39284. Tel. (601) 372-8881.
 - 2. Scanlon -Taylor Millwork Company, P.O. Box 5029, Jackson, MS 39296. Tel. (601) 362-5333.
 - 3. Southeastern Constructors, Inc., P.O. Box 1747, Brandon, MS 39043. Tel. (601) 825-9791.

- C. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures.
- 2.02 MATERIALS AND COMPONENTS: Provide wood doors complying with the applicable requirements of NEMA I. S. 1 for the kinds and types of doors indicated and as further specified. Provide manufacturer's standard 2 ply face panels, unless otherwise specified. Provide the same exposed surface material on both faces of each door, unless otherwise indicated.
- 2.03 GENERAL FABRICATION REQUIREMENTS
 - A. Wood Doors: Cut and trim openings through doors and panels. Comply with applicable requirements of referenced standards.
 - B. Light Openings: Factory cut openings. Trim openings for non-fire rated doors with solid wood moldings of profile shown.
- 2.04 STILE AND RAIL WOOD DOORS:
 - A. Fabricate wood doors in accordance with AWI Quality Standards, Section 1400.
 - B. Doors shall be AWI Premium Grade.
 - C. Wood specie shall be Custom Grade Spanish cedar.
 - D. Finishes: Provide finish complying with manufacturer's applicable standard finish specifications. Refer to Section 09900 – Paints and Coatings.
 - E. Transom and Side Panels: Where transom panels or side panels of wood are shown in same framing systems as wood doors, provide panels that match quality and appearance of associated wood doors, unless otherwise indicated. Fabricate matching panels with same construction, exposed surfaces and finish as specified for associated doors.
- 2.05 PREFITTING AND PREPARATION FOR HARDWARE: Comply with tolerance requirements of NWMA for pre-fitting. Machine doors for hardware requiring cutting of doors. Comply with final hardware schedules and doorframe approved Shop Drawings and with hardware templates and other essential information required ensuring proper fit of doors and hardware. Take accurate field measurements of hardware mortises in frames to verify dimensions and alignment before proceeding with machining.

PART 3 EXECUTION

- 3.01 EXAMINATION: Installer shall examine doorframes and verify that frames are correct type and have been installed for proper hanging of corresponding doors. Installer shall notify Contractor in writing of conditions detrimental to proper and timely installation of wood doors; do not proceed with installation until unsatisfactory conditions have been corrected. Install fire-rated doors in corresponding fire-rated frames in accordance with the requirements of NFPA No. 80.
- 3.02 PREPARATION: Condition doors to average prevailing humidity in installation area prior to hanging.

3.03 INSTALLATION

- A. Install wood doors in accordance with manufacturer's instructions and approved Shop Drawings. Fit doors to frame for proper fit and uniform clearance at each edge and machine for hardware. Seal cut surfaces after fitting and machining. Bevel non-fire rated doors 1/8 inch in 2 inches at lock and hinge edges. Bevel fire rated doors 1/16 inch in 2 inches at lock edge.
- B. Door Clearances: Fit to frames and machine for hardware for proper fit and uniform clearance at each edge. For non-fire rated doors, provide following clearances:
 - 1. 1/8 inch at jambs and heads.
 - 2. 1/8 inch at meeting stiles for pairs of doors.
 - 3. 1/2 inch from bottom of door to top of decorative floor finish or covering, except where threshold is shown or scheduled provide 1/4 inch clearance from bottom of door to top of threshold.
- C. Job Site Finished Doors: Requirements for finishing wood doors are in Section 09900 PAINTS AND COATINGS.

3.04 ADJUSTING AND CLEANING: Re-hang or replace doors that do not swing or operate freely. Refinish or replace doors damaged during installation.

3.05 PROTECTION OF COMPLETED WORK

- A. Installer shall advise Contractor of proper procedures required for protection of installed wood doors from damage or deterioration until acceptance of the Work.
- B. Doors damaged before acceptance of the Work shall be repaired or replaced.

END OF SECTION

SECTION 08550

WOOD WINDOWS

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Extent of wood windows is shown on Drawings and in Schedules. Types of wood windows required include exterior double hung window units.
- 1.02 RELATED SECTIONS
- A. Section 08800 – Glazing for glazing requirements of wood windows, including windows specified herein shall be factory pre-glazed.
 - B. Section 09050 – Color Design.
 - C. Section 09900 – Paints and Coatings
- 1.03 SUBMITTALS
- A. Product Data: Submit manufacturer's specifications, standard details, and installation recommendations for components of wood window units required for project, including data that products that have been tested comply with performances requirements.
 - B. Shop Drawings: Submit Shop Drawings for fabrication and installation of wood windows, including elevations, detail sections of typical composite members, anchorage, reinforcement, expansion provisions, and glazing.
- 1.04 QUALITY ASSURANCE: Comply with applicable provisions of AAMA/NWWDA 101/I.S. 2-97, Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood windows and Glass Doors.
- A. Manufacturer: Provide wood window units and framing system produced by a single firm with minimum 5 years successful experience in fabricating types required for this Project.
 - B. Performance and Testing: Fabricate components from manufacturer's stock systems which have been designed to comply with AAMA/NWWDA 101/I.S. 2-97, DP20.
 - C. Wind Loading: Fabricate exterior components from manufacturer's stock systems, which have been tested in accordance with ASTM E 330.
 - D. Weather Resistance: Fabricate exterior framing components from manufacturer's stock systems which have been tested to demonstrate permanent resistance to leakages as follows with test pressure differential of 10% of design loading.
 - E. Air infiltration: Maximum 0.15 cfm per square foot, tested in accordance with ASTM E 283.
 - F. Water infiltration: No uncontrolled water penetration, tested in accordance with ASTM E 547.
 - G. Field Measurement: Wherever possible, take field measurements prior to preparation of Shop Drawings and fabrication, to ensure proper fitting of work. However, proceed with fabrication and coordinate installation tolerances as necessary when field measurements might delay the Work.

- 1.05 DELIVERY, STORAGE, AND HANDLING: Deliver materials to job site in manufacturer or distributor's packaging undamaged complete with installation instructions. Store off ground, under cover, protected from weather and construction activities.
- 1.06 SPECIAL PROJECT WARRANTY: Provide written warranty signed by Manufacturer, Installer, and Contractor, agreeing to replace wood windows which fail in materials or workmanship within 3 years of Maintenance Release. Failure of materials or workmanship includes excessive leakage or air infiltration, excessive deflections, faulty operation, deterioration of construction in excess of normal weathering, and defects in hardware, weather-stripping, and other components of the Work.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Drawings and Specifications are based on Pella Window & Door Company, 6370 Cole Road, Ridgeland, MS 39157. Tel. (601) 956-9544.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. Andersen Windows, 100 Fourth Ave, North, Bayport, MN 55003. Tel. (800) 426-7691 ext. 2427.
 - 2. Eagle Window & Door, Inc, 375 E 9th St, Dubuque, IA 52004. Tel. (800) 453-3633.
 - 3. Marvin Windows & Doors, P.O. Box 100, Warroad, MN 56763. Tel (800) 346-5128.
- C. Substitutions shall fully comply with specified requirements and Section 01630 - Product Options and Substitution Procedures

- 2.02 FRAME: Select softwood, water-repellent, preservative-treated in accordance with NWWDA I.S. 4. Interior exposed surfaces clear pine; all exterior surfaces primed. Overall frame depth; 4-3/8 inches. Jamb liner shall be high-impact polyvinyl chloride backed by continuous hard-tempered aluminum springs.

- 2.03 SASH: Select softwood, water-repellent, preservative-treated in accordance with NWWDA I.S. 4. Interior exposed surfaces clear pine; all exterior surfaces factory-primed. Corners mortised and tenoned, glued and secured with metal fasteners. Sash thickness: 1-3/4 inches. Sash shall pivot between jambs without removal.

- 2.04 GLAZING SYSTEM: Quality float glass complying with ASTM C1036. Groove-glazed 5/8 inch. InsulShield® argon-filled multi-layer low-E coated. Units with Integral Light Technology only: Insulating glass shall contain foam muntin grid between the two panes of glass. Foam grid shall be adhered to the glass. Muntin bars shall be solid 7/8-inch wide pine, water-repellent, preservative-treated in accordance with NWWDA I.S. 4. Bars shall be adhered to both sides of the insulating glass with VHB acrylic adhesive tape and align with the foam grid. Exterior surfaces primed; interior surfaces unfinished, ready for site finishing.

- 2.05 Weatherstripping: Foam with 3-mil vinyl skin at head and waterstop bar at sill; thermal-plastic elastomer bulb with slip-coating set into upper sash for tight contact at checkrail. Secondary polyvinyl chloride leaf-type weatherstrip at bottom sash and sill. PVC jamb liner at sides of sash.

- 2.06 INSECT SCREEN: Full-size with black vinyl-coated 18/16 mesh fiberglass screen cloth complying with Fs L-S-125B and ANSI-SMA-1004, set in aluminum frame fitted to outside of window, supplied complete with all necessary hardware. Screen frame shall be backed enamel, white.
- 2.07 HARDWARE: Galvanized block-and-tackle balances connected to sash with polyester cord and concealed within the frame. Self-aligning recessed sash lock factory-installed. Sash lift furnished for field installation. Two sash locks and lifts on units with 3' 0-3/4" frame width or greater. Finish shall be backed enamel, champagne.
- 2.08 INTERIOR FINISH: Unfinished ready for site finishing.
- 2.09 FABRICATION: Required sizes for frame units, including profile requirements, are shown on drawings. Any variable dimensions are indicated, together with maximum and minimum dimensions required to achieve design requirements and coordination with other Work. Details shown are based upon standard details by manufacturer indicated. Similar details by other manufacturers listed will be acceptable, provided they comply with other requirements, including profile limitations.
 - A. Prefabrication: To greatest extent possible, complete fabrication assembly, finishing, hardware application, and other work before shipment to project site. Disassemble components only as necessary for shipment and installation.
 - B. Reinforcing: Install reinforcing as necessary for performance requirements.
 - C. Continuity: Maintain accurate relation of planes and angles, with hairline fit of contacting members.
 - D. Fasteners: Conceal fasteners wherever possible.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Comply with manufacturer's instructions and recommendations for installation of wood windows. Set units plumb, level, and true to line, without warp or rack of framing members. Anchor securely in place.
- B. Set sill members and other members in bed of compound as shown, or with joint fillers or gaskets as shown to provide weather-tight construction. Comply with requirements of Section 07920 for caulking and sealant.

3.02 ADJUSTING AND CLEANING: Adjust operating hardware to function properly, without binding, and to provide tight fit at contact points and weather-stripping.

- A. Clean completed system, inside and out, promptly after erection and installation of glass and sealants. Remove excess glazing and sealant compounds, dirt, and other substances from surfaces.
- B. Institute protective measures and other precautions required to assure that wood windows will be without damage or deterioration, other than normal weathering, at time of Maintenance Release.

END OF SECTION

SECTION 08800

GLAZING

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Glass and glazing for doors, windows and other glazed openings, interior and exterior locations.
- 1.02 RELATED SECTIONS
 - A. Section 08210-Wood Doors.
 - B. Section 08550-Wood Windows.
- 1.03 QUALITY ASSURANCE: Comply with recommendations of Flat Glass Marketing Association (FGMA) "Glazing Manual" and "Sealant Manual" except where more stringent requirements are indicated. Refer to those publications for definitions of glass and glazing terms not otherwise defined in this section or other referenced standards.
 - A. Prime Glass Standard: FS DD-G-45I.
 - B. Heat-Treated Glass Standard: FS DD-G-I403.
 - C. Safety Glass Standard: CPSC I6 CFR I20I.
- 1.04 DELIVERY, STORAGE, AND HANDLING: Protect glass during transit, storage and handling to prevent scratching or breakage of glass. Replace all broken glass.
- 1.05 PROJECT CONDITIONS: Meet with Glazier and other trades affected by glass installation, prior to beginning of installation. Do not perform work under adverse weather or job conditions. Install liquid sealant when temperatures are within lower or middle third of temperature range recommended by manufacturer.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Equivalent products by the following prime glass manufacturers are acceptable:
 - 1. AFGD, Inc., 1600 Parkwood Circle, Suite 300, Atlanta, GA 30339. Tel. (800) 766-2343.
 - 2. Guardian Industries Corp., 14600 Romine Road, Carleton, MI 48117. Tel. (800) 521-9040.
 - 3. Pilkington Libbey-Owens-Ford, P.O. Box 799, Toledo, OH 43697. Tel. (419) 246-6078.
 - 4. PPG Industries, Inc., One PPG Place, Pittsburgh, PA 15272. Tel. (800) 377-5267.
 - 5. Visteon Float Glass Operations, 17333 Federal Drive, Suite 230, Allen Park, MI 48101. Tel. (800) 521-6345.
- B. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures

2.02 INSULATING GLASS

- A. Material: Shall consist of organically sealed panes of glass enclosing a hermetically sealed dehydrated air space and complying with ASTM E 774 for performance classification indicated. Unless shown otherwise on Drawings, use this type glass for all exterior applications.
- B. Characteristics: Other requirements specified for glass characteristics, air space, sealing system, sealant spacer material, corner design and desiccant are as follows:
 - 1. Thickness of Each Pane: 1/4 - inch.
 - 2. Airspace Thickness: 1 inch Sealing System: Manufacturer's standard.
 - 3. Spacer Material: Manufacturer's standard metal.
 - 4. Desiccant: Manufacturer's standard, either molecular sieve or silica gel.
 - 5. Corner Construction: Manufacturer's standard.
 - 6. Exterior Pane: Gray tinted.
 - 7. Interior Pane: Clear.

2.03 LAMINATED CLEAR SAFETY GLASS: Two layers of 1/8 inch glass Type 1 (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select) with a 0.030 polyvinyl butyryl interlayer. Total thickness, 1/4 inch (plus). Unless shown otherwise on Drawings, use this type glass for all interior applications.

2.04 SETTING MATERIALS: Provide all necessary primers, sealants, channels, setting blocks, etc. with items to be glazed. Conform to requirements set forth in FGJA Glazing Manual.

PART 3 EXECUTION

3.01 GLAZING INSTALLATION

- A. Do not commence glazing Work until the required primers have been applied and have dried. Clean all surfaces to which setting materials are to be applied to assure that the materials properly adhere and seal.
- B. Experienced glaziers having highest quality workmanship shall perform all glazing. Glass shall be set without springing or forcing. Putty, glazing compound, stops and the like shall not project above the sight line. Exposed surfaces of putty and glazing compound shall be left straight, flat and clean. Corners shall be well formed.
- C. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.
- D. Apply clear glazing compound around perimeter and at all glass-to-glass connections of butt-glazing system. Compound shall be the type recommended by the glass manufacturer for this particular installation.

3.02 STANDARDS AND PERFORMANCE

- A. Watertight and airtight installation of each glass product is required, except as otherwise shown. Each installation must withstand normal temperature changes, wind loading, impact loading (for operating sash and doors), without failure including loss or breakage of glass, failure of sealant or gaskets to remain watertight and airtight, deterioration of glazing materials and other defects in the Work.

- B. Protect glass from edge damage during handling and installation, and subsequent operation of glazed components of the Work. During installation, discard units with significant edge damage or other imperfections.
- C. Glazing channel dimensions where shown are intended to provide for necessary bite on glass, minimum edge clearance, and adequate sealant thickness, with reasonable tolerances. Adjust as required by job conditions at time of installation.
- D. Comply with combined recommendations and technical reports by manufacturers of glass and glazing products as used in each glazing channel, and with recommendations of Flat Glass Marketing Association "Glazing Manual," except where more stringent requirements are indicated.

3.03 PREPARATION FOR GLAZING

- A. Clean glazing channel and other framing members to receive glass, immediately before glazing. Remove coatings that are not firmly bonded to substrate. Remove lacquer from metal surfaces where elastomeric sealants are used.
- B. Apply primer or sealant to joint surfaces where recommended by sealant manufacturer.

3.04 GLAZING

- A. Install setting blocks of proper size in sill rabbet, located 1/4 of glass width from each corner. Set blocks in thin course of heel-bead compound, if any.
- B. Provide spacers inside and out, of proper size and spacing, for glass sizes larger than 50 united inches, except where gaskets or pre-shimmed tapes are used for glazing. Provide 1/8" minimum bite of spacers on glass and use thickness equal to sealant width, except with sealant tape use thickness slightly less than final compressed thickness of tape.
- C. Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.
- D. Force sealant into channel to eliminate voids and to ensure complete "wetting" or bond of sealant to glass and channel surfaces.
- E. Tool exposed surfaces of glazing liquids and compounds to provide a substantial "wash" away from glass. Install pressurized tapes and gaskets to protrude slightly out of channel, so as to eliminate dirt and moisture pockets.
- F. Clean and trim excess glazing materials from glass and stops or frames promptly after installation, and eliminate stains and discoloration.
- G. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage to ensure that gasket will not "walk" out when installation is subjected to movement. Anchor gasket to stop with matching ribs, or by proven adhesives, including embedment of gasket tail in cured heel-bead.

3.05 CURE AND PROTECTION

- A. Protect glass from breakage immediately upon installation, by use of crossed streamers attached to framing and held away from glass. Do not apply markers to surfaces of glass. Remove nonpermanent labels and clean surfaces. Cure sealant for high early strength and durability.

- B. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.

3.06 CLEANING

- A. Wash and polish glass on both faces not more than 4 days prior to date scheduled for inspections intended to establish date of Substantial Completion in each area of Project. Comply with glass product manufacturer's recommendations for final cleaning.
- B. The General Contractor shall be responsible for removal of protective materials and cleaning with plain water, or water with soap or household detergent as approved by the glass manufacturer. The General Contractor shall be held responsible for damages resulting from the use of other cleaning material.

END OF SECTION

SECTION 09050 COLOR DESIGN

PART 1 GENERAL

- 1.01 SECTION INCLUDES: A coordinated comprehensive Color System in which requirements for materials specified in other Sections of this Specification and / or shown on the Drawings are identified for quality, color, finish, texture and pattern.
- 1.02 MANUFACTURER'S TRADE NAMES: Manufacture's trade names and number designations used herein identify colors, finishes, textures and patterns for materials and products specified in the technical sections of the Specifications. Wherever such products are referred for selection or approval in other sections, such products shall be understood to be referenced to this Section. If no selection is listed herein for products, the Project Architect shall be contacted for a color selection. Subject to approval of the Project Architect, products of other manufacturers will be considered, provided they are equivalent to the quality, colors, finishes, textures and patterns listed and meet the requirements of the Specifications and Drawings.
- 1.03 RELATED SECTIONS: Section 01330 – Submittal Procedures.
- 1.04 SAMPLES: Samples shall be submitted for approval prior to applying or installing any finishes or items that are not included in this Section. See appropriate technical Sections for submittal requirements. Upon receipt of samples, the Project Architect may make revisions to the Color schedule.

PART 2 PRODUCTS

- 2.01 MATERIALS: Materials are specified in other Sections of the Specifications. Any reference by trade name or manufacturer shall be considered as establishing a standard of quality and shall in no way limit competition.
- 2.02 MANUFACTURERS: The following manufacturers were used in preparing the Color Schedule:

SECTION / MATERIAL	MANUFACTURER / NUMBER & COLOR NAME	COLOR DESCRIPTION
• 02785 - Unit Pavers	Pavestone - Old Town Blend)	(tan & brown)
• 02785 - Mortar (For Pavers)	White	(white)
• 02800 - Metal Bench	DuMor - Green	(dark green)
• 02800 - Trash Receptacle	United Receptacle - Hunter Green	(dark green)
• 02800 - Pavilion (Steel)	Tnemec #49GR - Briquet	(black)
• 02800 - Water Hydrant	Murdock - Hunter Green	(dark green)
• 02800 - Bollard	Tnemec #49GR - Briquet	(black)
• 02800 - Granite	Cold Springs - Black	(black)
• 04200 - Brick	St. Joe (Match existing)	(orange-tan)
• 04200 - Mortar (For Brick)	White	(white)
• 05500 - Miscellaneous Steel	ICI #1178 Tavern Green (P1)	(dark green)
• 06400 - Architectural Woodwork	ICI #485 Eldorado Tan (P5)	(dark tan)
• 06400 - Plastic Lam Countertop	Formica #7014 - 58 Colorado Slate	(blue & gray)

- | | | |
|---------------------------------|---------------------------------------|-----------------|
| • 07610 - Metal Roofing | Petersen - Copper Penny | (bright copper) |
| • 07610 - Metal Trim | Petersen - Copper Penny | (bright copper) |
| • 07920 - Joint Sealants | Pecora (Match adjacent lighter color) | |
| • 08100 - Wood Dr Frames (Ext) | ICI #431 Antique Bisque (P3) | (tan) |
| • 08100 - Wood Dr Frames (Int) | ICI #485 Eldorado Tan (P5) | (dark tan) |
| • 08210 - Wood Doors & Windows | ICI #1178 Tavern Green (P1) | (dark green) |
| • 08710 - Door Hardware | Brass | (dark brown) |
| • 09250 - Gypsum (Walls) | ICI #2010 Shell White (P4) | (light beige) |
| • 09250 - Gypsum (Ceilings) | ICI #2010 Shell White (P4) | (light beige) |
| • 09650 - Resilient Floor | Armstrong #51928 Pebble Tan | (tan) |
| • 09650 - Rubber Base | Johnsonite #101 Seaweed | (light brown) |
| • 10400 - Specialty Signs (Ext) | Mohawk – green w/ white letters | (green & white) |

PART 3 EXECUTION

- 3.01 EXECUTION: Refer to execution requirements specified in other Sections of this Specification for the specific products listed. Any remaining colors, finishes, textures or patterns not included in this Color Design will be selected by the Project Architect upon written notification and subsequent submittals by the Contractor.

END OF SECTION

SECTION 09250

GYPSUM BOARD

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Gypsum board work with a tape-and-compound joint treatment system known as "drywall finishing" work.
- B. The types of Work required include the following:
 - 1. Gypsum board applied to wood framing and furring.
 - 2. Drywall finishing (joint tape-and-compound treatment).

1.02 SUBMITTALS: Submit manufacturers technical product data, installation instructions and recommendations for products specified.

1.03 QUALITY ASSURANCE

- A. Industry Standard: Comply with applicable requirements of GA-216 "Application and Finishing of Gypsum Board" by the Gypsum Association, except where more detailed or more stringent requirements are indicated including the recommendations of the manufacturer.
- B. Allowable Tolerances: 1/8 inch offsets between planes of board faces, and 1/4 inch in 8 ft. for plumb, level, warp and bow.
- C. Manufacturer: Obtain gypsum boards, framing and fasteners, trim accessories, adhesives and joint treatment products from a single manufacturer, or from manufacturers recommended by the prime manufacturer of gypsum boards.

1.04 PRODUCT HANDLING: Deliver gypsum drywall materials in sealed containers and bundles, fully identified with manufacturer's name, brand, type and grade; store in a dry, well ventilated space, protected from the weather, under cover and off the ground.

1.05 PROJECT CONDITIONS

- A. Installer must examine the substrates and the spaces to receive gypsum drywall, and the conditions under which gypsum drywall is to be installed; and shall notify the Contractor, in writing, of conditions detrimental to the proper and timely completion of the work. Do not proceed with the installation until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.
- B. Maintain ambient temperatures at not less than 55 degrees F., for the period of 24 hours before drywall finishing, during installation and until compounds are dry.

PART 2 PRODUCTS

2.01 GYPSUM BOARD PRODUCTS

- A. To the extent not otherwise indicated, comply with GA-216, as specified and recommended.

- B. Exposed gypsum board shall be Type X, fire rated type with tapered long edges and as follows:
 - 1. Edge Profile: Special rounded or beveled edge.
 - 2. Sheet Size: Maximum length available that will minimize end joints.
 - 3. Thickness: 5/8 inch, except where otherwise indicated.

2.02 TRIM ACCESSORIES

- A. Manufacturer's standard galvanized steel beaded units with flanges for concealment in joint compound including corner beads, edge trim and control joints; except provide semi-finishing type (flange not concealed) where indicated.
- B. Where metal moldings are specifically called out on the Drawings, provide the appropriate item from below:
 - 1. Edge Trim - USG No. 200-A.
 - 2. Control Joint - USG No. 093.

2.03 JOINT TREATMENT MATERIALS

- A. General: ASTM C 475; type recommended by the manufacturer for the application indicated, except as otherwise indicated.
- B. Joint Tape: Perforated type.
- C. Joint Compound: On interior work provide chemical hardening type for bedding and filling, ready-mixed vinyl-type or non-case in-type for topping. On exterior work provide water-resistant type.

- 2.04 MISCELLANEOUS MATERIALS: Provide auxiliary materials for gypsum drywall work of the type and grade recommended by the manufacturer of the gypsum board. Gypsum board fasteners shall comply with GA-216. Provide anti-corrosive type at exterior applications.

PART 3 EXECUTION

- 3.01 Install supplementary framing, runners, furring, blocking and bracing at opening and terminations in the Work, and at locations required to support fixtures, equipment, services, heavy trim, furnishings and similar work which cannot be adequately supported directly on gypsum board alone.
- 3.02 GENERAL GYPSUM BOARD INSTALLATION REQUIREMENTS
 - A. Meet at the project site with the installers of related work and review the coordination and sequencing of work to ensure that everything to be concealed by gypsum drywall has been accomplished, and that chases, access panels, openings, supplementary framing and blocking and similar provisions have been completed. In addition to compliance with GA-216, comply with manufacturer's instructions and requirements for fire resistance ratings (if any), whichever is most stringent.

- B. Install wall / partition boards vertically to avoid end- butt joints wherever possible. Form control joints and expansion joints with space between edges of boards, prepared to receive trim accessories.
- C. Install insulation as indicated, prior to gypsum board unless readily installed after board has been installed.
- D. Floating construction: Where feasible, including where recommended by manufacturer, install gypsum board with "floating" internal corner construction, unless isolation of the intersecting boards is indicated or unless control or expansion joints are indicated.
- E. Space fasteners in gypsum boards in accordance with manufacturer's recommendations.

3.03 INSTALLATION OF DRYWALL TRIM ACCESSORIES

- A. Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports. Otherwise, fasten flanges by nailing or stapling in accordance with manufacturer's instructions and recommendations.
- B. Install metal corner beads at external corners of drywall work.
- C. Install metal edge trim whenever edge of gypsum board would otherwise be exposed or semi-exposed. Provide type with face flange to receive joint compound except where semi-finishing type is indicated. Install L-type trim where work is tightly abutted to other work, and install special kerf-type where other work is kerfed to receive long leg of L-type trim. Install U- type trim where edge is exposed, revealed, gasketed, or sealant-filled (including expansion joints.) Install metal control joint (beaded type) where indicated or required for proper installation.

3.04 INSTALLATION OF DRYWALL FINISHING

- A. Apply treatment at gypsum board joints (both directions), flanges of trim accessories, penetrations, fastener heads, surface defects and elsewhere as required to prepare Work for decoration. Pre-fill open joints and rounded or beveled edges, using type of compound specified herein and recommended by manufacturer.
- B. Apply joint tape at joints between gypsum boards, except where a trim accessory is indicated.
- C. Apply joint compound in 3 coats (not including pre-fill of openings in base), and sand between last 2 coats and after last coat.
- D. Unless otherwise indicated, install drywall finishing at all gypsum board exposed to view and to receive finishes as specified. Where not exposed to view and above ceilings, sanding is not required.

- 3.06 PROTECTION OF WORK: Installer shall advise Contractor of required procedures for protection of the gypsum drywall Work from damage and deterioration during the remainder of the construction period.

END OF SECTION

SECTION 09900

PAINTS AND COATINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Painting and finishing of exterior and interior exposed items and surfaces throughout the project, except as otherwise indicated. Surface preparation, priming and finish coats specified in this Section are in addition to shop priming and surface treatment specified under other Sections of the Work.
- B. The Work includes field painting of exposed bare and covered pipes and ducts (including color coding), and of hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under the mechanical and electrical Work, except as otherwise indicated.
- C. "Paint" means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.
- D. Paint all exposed surfaces whether or not colors are designated in "schedules", except where the natural finish of the material is specifically noted as a surface not to be painted. Where items or surfaces are not specifically mentioned, paint these the same as adjacent similar materials or areas. If color or finish is not designated, the Project Engineer / MDOT Architect will select these from standard colors available for the materials system specified.

1.02 PAINTING NOT INCLUDED: The following categories of Work are not included as parts of the field-applied finish Work, or are included in other Sections of these Specifications.

- A. Shop Priming: Unless otherwise specified, shop priming of ferrous metal items is included under the various Sections for structural steel, miscellaneous metal, hollow metal work, and similar items. Also, for fabricated or factory-built mechanical and electrical equipment or accessories.
- B. Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer finishing is specified for such items as (but not limited to) plastic toilet enclosures, prefinished partition systems, acoustic materials, architectural woodwork and casework, finished mechanical and electrical equipment including light fixture, switch-gear and distribution cabinets, elevator entrance frames, door and equipment.
- C. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas, foundations spaced, furred areas, utility tunnels, pipe spaces, duct shafts and elevator shafts.
- D. Finished Metal Surfaces: Metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials will not require finish painting, unless otherwise indicated.
- E. Operating Parts and Labels: Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor and fan shafts will not require finish painting, unless otherwise indicated. Do not paint over any code-required labels, such as Underwriter's Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.

1.03 RELATED SECTIONS: Section 09050 – Color Design.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information including basic materials analysis and application instructions for each coating material specified.
- B. Samples: Submit color samples for selection by Project Engineer / MDOT Architect from full range of colors.

1.05 QUALITY ASSURANCE: On actual wall surfaces and other exterior and interior building components, duplicate painted finishes as specified. On at least 100 sq. ft. of surface as directed, provide full-coat finish samples until required sheen, color and texture is obtained; simulate finished lighting conditions for review of in-place Work.

1.06 DELIVERY AND STORAGE: Deliver all materials to the job site in original, new and unopened packages and containers bearing manufacturer's name and label, and the following information:

- 1. Name or title of material.
- 2. Fed. Spec. Number, if applicable.
- 3. Manufacturer's stock number and date of manufacturer.
- 4. Manufacturer's name.
- 5. Contents by volume, for major pigment and vehicle constituents.
- 6. Thinning instructions.
- 7. Application instructions.
- 8. Color name and number.

1.07 PROJECT CONDITIONS

- A. Apply water-base paints only when the temperature of surfaces to be painted and the surrounding air temperatures are between 50 degrees F. and 90 degrees F. unless otherwise permitted by the paint manufacturer's printed instructions.
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and the surrounding air temperatures are between 45 degrees F. and 95 degrees F. unless otherwise permitted by the paint manufacturer's printed instructions.
- C. Do not apply paint in snow, rain, fog or mist; or when the relative humidity exceeds 85 percent; or to damp or wet surfaces; unless otherwise permitted by the paint manufacturer's printed instruction. Painting may be continued during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Drawings and specifications are based on products manufactured by ICI Dulux Paints, 925 Euclid Ave., Cleveland, OH 44115. Tel. (800) 984-5444.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. Devoe - 925 Euclid Ave., Cleveland, OH 44115. Tel. (888) 265-6753.
 - 2. Benjamin Moore & Company, 51 Chestnut Ridge Road, Montvale, NJ 07645. Tel. (800) 344-0400.

3. Porter Paints, 400 S. 13th Street, Louisville, KY 40203. Tel. (800) 332-6270.
4. PPG Architectural Finishes, Inc., One PPG Place, Pittsburgh, PA 15272. Tel. (800) 441-9695.
5. Sherwin-Williams Company, 101 Prospect Ave., NW, Cleveland, OH 44115. Tel. (800) 321-8194.

C. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures

2.02 COLORS AND FINISHES

- A. Paint colors, surface treatments, and finishes will be selected from color chips submitted by contractor. Prior to beginning Work, the Project Engineer / MDOT Architect will select color chips for surfaces to be painted. Use representative colors when preparing samples for review. Final acceptance of colors will be from samples.
- B. Color Pigments: Pure, non-fading, applicable types to suit the substrates and service indicated. Lead content in the pigment, if any, is limited to contain not more than 0.5 percent lead, as lead metal based on the total non-volatile (dry-film) of the paint by weight.
- C. Paint Coordination: Provide finish coats which are compatible with prime paints used. Review other sections of these Specifications in which prime paints are to be provided to ensure compatibility of total coats system for various substrates. Upon request from other trades, furnish information on characteristics of finish materials provided for use, to ensure compatible prime coats are used. Provide barrier coats over incompatible primer or remove and reprime as required. Notify the Project Engineer / MDOT Architect in writing of any anticipated problems using specified coating systems with substrates primed by others.

2.03 MATERIAL QUALITY

- A. Provide the best quality grade of the various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying the manufacturer's identification as a standard, best grade product will not be acceptable. Proprietary names used to designate colors or materials are not intended to imply that products of the named manufacturers are required to the exclusion of equivalent products of other manufacturers.
- B. Provide undercoat paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer, and use only within recommended limits.

2.04 PAINT SYSTEMS: Provide the following paint systems for the various substrates, as indicated.

A. Exterior Paint Systems are as follows:

1. Ferrous Metal
 - 1st Coat – Waterborne Acrylic Primer – ICI Devflex # 4020
 - 2nd Coat – Waterborne Acrylic Semi Gloss Enamel – ICI Devflex # 4206
 - 3rd Coat – Waterborne Acrylic Semi Gloss Enamel – ICI Devflex # 4206
(First coat not required on items that are shop primed.)
Not less than 2.5 mils dry film thickness.
2. Zinc Coated Metal
 - 1st Coat – Waterborne Acrylic Primer – ICI Devflex # 4020
 - 2nd Coat – Waterborne Acrylic Semi Gloss Enamel – ICI Devflex # 4206
 - 3rd Coat – Waterborne Acrylic Semi Gloss Enamel – ICI Devflex # 4206
Not less than 2.5 mils dry film thickness.

3. Painted Woodwork
 - 1st Coat – Acrylic Primecoat – ICI Ultra-Hide # 2010
 - 2nd Coat – Acrylic Semi Gloss Enamel – ICI Dulux Professional # 2406
 - 3rd Coat – Acrylic Semi Gloss Enamel – ICI Dulux Professional # 2406
 - Not less than 2.5 mils dry film thickness.
- B. Interior Paint Systems are as follows:
 1. Gypsum Drywall
 - 1st Coat – Latex Primer – ICI Ultra-Hide # 1030
 - 2nd Coat – Alkyd Semi Gloss Enamel – ICI Ultra-Hide # 1516
 - 3rd Coat – Alkyd Semi Gloss Enamel – ICI Ultra-Hide # 1516
 - Not less than 2.5 mils dry film thickness.
 2. Zinc Coated Metal
 - 1st Coat – Waterborne Acrylic Primer – ICI Devflex # 4020
 - 2nd Coat – Waterborne Acrylic Semi Gloss Enamel – ICI Devflex # 4206
 - 3rd Coat – Waterborne Acrylic Semi Gloss Enamel – ICI Devflex # 4206
 - Not less than 2.5 mils dry film thickness.
 3. Ferrous Metal
 - 1st Coat – Waterborne Acrylic Primer – ICI Devflex # 4020
 - 2nd Coat – Waterborne Acrylic Semi Gloss Enamel – ICI Devflex # 4206
 - 3rd Coat – Waterborne Acrylic Semi Gloss Enamel – ICI Devflex # 4206
 - (First coat not required on items that are shop primed.)
 - Not less than 2.5 mils dry film thickness.
 4. Painted Woodwork
 - 1st Coat – Alkyd Enamel Undercoat – ICI Ultra-Hide # 1120
 - 2nd Coat – Alkyd Semi Gloss Enamel – ICI Ultra-Hide # 1516
 - 3rd Coat – Alkyd Semi Gloss Enamel – ICI Ultra-Hide # 1516
 - Not less than 2.5 mils dry film thickness.
 5. Stained Woodwork
 - 1st Coat – Oil Stain – ICI Woodpride # 1700
 - 2nd Coat – Polyurethane Satin Finish – ICI Woodpride # 1902
 - 3rd Coat – Polyurethane Satin Finish – ICI Woodpride # 1902

PART 3 EXECUTION

3.01 EXAMINATION

- A. Applicator must examine the areas and conditions under which painting Work is to be applied and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the Applicator. Starting of painting Work will be construed as the Applicator's acceptance of the surfaces and conditions within any particular area.
- B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to the formation of a durable paint film.

3.02 SURFACE PREPARATION: Perform preparation and cleaning procedures in strict accordance with the paint manufacturer's instructions and as herein specified, for each particular substrate condition. Remove all hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for the complete painting of the items and adjacent surfaces. Following completion of painting of each space or area, re-install the removed items by workmen skilled in the trades involved. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Schedule the cleaning and painting so that contaminants from the cleaning process will not fall onto wet, newly painted surfaces.

A. Ferrous Metals:

1. Clean ferrous surfaces, which are not galvanized or shop-coated, of oil, grease, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning.
2. Touch-up shop-applied prime coats wherever damaged or bare, where required by other Sections of these Specifications. Clean and touch-up with the same type shop primer.

B. Galvanized Surfaces: Clean free of oil and surface contaminants with acceptable non-petroleum based solvent.

C. Wood: Clean wood surfaces to be painted of all dirt, oil, or other foreign substances with scrapers, mineral spirits, and sandpaper, and dust off. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before application of the priming coat.

1. Prime, stain, or seal wood required being job-painted, immediately upon delivery to job. Prime edges, ends, faces, under sides, and backsides of such wood, including cabinets, counters, cases, paneling, etc. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood-filler. Sandpaper smooth when dry.
2. When transparent finish is required, use spar varnish for backpriming. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or equivalent sealer immediately upon delivery to project.

3.03 MATERIALS PREPARATION: Mix and prepare painting materials in accordance with manufacturer's directions. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue. Stir materials before application to produce a mixture of uniform density, and stir as required during the application of the materials. Do not stir surface film into the material. Remove the film and if necessary, strain the material before using.

3.04 APPLICATION

- A. Apply paint in accordance with the manufacturer's directions. Use applicators and techniques best suited for the substrate and type of material being applied. Apply additional coats when undercoats, stains or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance. Give special attention to insure that all surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.

- B. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular black paint. Paint the back- sides of access panels, and removable or hinged covers to match the exposed surfaces.
- C. Finish exterior doors on tops, bottoms and side edges the same as the exterior faces, unless otherwise indicated.
- D. Sand lightly between each succeeding enamel or varnish coat.
- E. Omit the first coat (primer) on metal surfaces that have been shop-primed and touch-up painted, unless otherwise indicated.
- F. Scheduling Painting: Apply the first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration. Allow sufficient time between successive coatings to permit proper drying. Do not re-coat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- G. Minimum Coating Thickness: Apply each material at not less than the manufacturer's recommended spreading rate, to establish a total dry film thickness as indicated or, if not indicated, as recommended by coating manufacturer.
- H. Electrical Work: Painting of electrical Work is limited to those items exposed in occupied spaces.
 - 1. Electrical items to be painted include, but are not limited to, the following;
 - a. Conduit and fittings.
 - b. Switchgear.
- I. Prime Coats: Apply a prime coat of material which is required to be painted or finished, and which has not been prime coated by others. Re-coat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.
- J. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, or other surface imperfections will not be acceptable.
- K. Transparent (Clear) Finishes: Use multiple coats to produce glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections. Provide satin finish for final coats, unless otherwise indicated.
- L. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint Work not in compliance with specified requirements.

3.05 CLEANING AND PROTECTION

- A. Cleaning: During the progress of the Work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each workday. Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- B. Protection: Protect Work of other trades, whether to be painted or not, against damage by painting and finishing Work. Correct any damage by others for protection of their Work, after completion of painting operations. At the completion of Work of other trades, touch-up and restore all damaged or defaced painted surfaces.

END OF SECTION

SECTION 10400

IDENTIFICATION DEVICES

PART 1 GENERAL

- 1.01 SECTION INCLUDES: Signage for room identification system, informational and directional signage.
- 1.02 RELATED SECTIONS: Section 09050 – Color Design.
- 1.03 SUBMITTALS: Submit manufacturer's technical data and installation instructions for each type of sign required.
 - A. Samples: Submit samples of each color and finish of exposed materials and accessories required for specialty signs. Project Engineer / MDOT Architect's review of samples will be for color and texture only. When requested, furnish full-size samples of specialty sign materials.
 - B. Shop Drawings: Submit Shop Drawings for fabrication and erection of specialty signs. Include plans, elevations, and large-scale details of sign wording and lettering layout. Show anchorage and accessory items.
- 1.04 QUALITY ASSURANCE: Provide each type of sign as a complete unit produced by a single manufacturer including necessary mounting accessories, fittings and fastenings.
- 1.05 DELIVERY, STORAGE, AND HANDLING: Deliver components correctly packed to prevent damage. Store in secure area out of weather. Handle per manufacturer's instructions.
- 1.06 WARRANTY: Provide manufacturer's standard one-year warranty covering manufacturing defects.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Drawings and Specifications are based on products manufactured by Mohawk Sign Systems, Inc., P.O. Box 966, Schenectady, NY 12301. Tel. (518) 370-3433. Local Supplier is West Architectural Specialties, Inc. Tel. (601) 982-1601.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. ASI Sign Systems, Inc., 3890 W. NW Hwy., Suite 102, Dallas, TX 75220. Tel. (800) 274-7732.
 - 2. Best Sign Systems, 1202 North Park Avenue, Montrose, CO 81401. Tel. (970) 249-2378.
 - 3. Scott Sign Systems, Inc., 7524 Commerce Pl., Sarasota, FL 34243. Tel. (800) 237-9447.
- C. Substitutions shall fully comply with specified requirements and Section 01630-Product Options and Substitution Procedures

2.02 SIGN SYSTEM

- A. Restroom Signage: Wall mounted Series 200A Sand carved, Helvetica letter style.

- B. Informational Signage: Wall mounted Series 200A Sand carved, Helvetica letter style.
- C. Directional Signage: Wall mounted Series 200A Sand carved, Helvetica letter style.
- D. Directional Signage: Suspended post mounted Series 200A (double sided) Sand carved, Helvetica letter style.

2.03 COMPONENTS

- A. Material: Approximately 1/8-inch thick melamine plastic laminate with contrasting core color. Melamine shall be non-staining, fire-retardant, self-extinguishing, and impervious to alkalis, alcohol, solvents, abrasives, boiling water and most acids.
- B. Fasteners: 0.030-inch thick, double face tape shall be used on wall signs. Aluminum or stainless steel attachment shall be used on suspended double face directional signs.
- C. Sizes are as indicated on sign schedule at the end of this Section.

2.04 BRAILLE AND TACTILE COPY: Comply with requirements of the Americans with Disabilities Act. Tactile copy to be raised 1/32-inch minimum from sign face. Glue-on or etched letters are not acceptable. Translation of copy into Braille shall be the responsibility of the manufacturer.

2.05 FINISHES – INTERIOR SIGNAGE

- A. Colors: Selected from manufacturer's standard.
- B. Surface Texture: Matte.

2.06 FONT: Shall be Helvetica Medium, unless noted otherwise. Font and required symbol size shall be as indicated and meet ADA requirements.

PART 3 EXECUTION

3.01 EXAMINATION: Installer shall examine the substrates and conditions under which the specialty signs are to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

3.02 INSTALLATION

- A. Install sign units and components at the locations shown or scheduled, securely mounted with concealed theft-resistant fasteners, unless otherwise indicated. Attach signs to substrates in accordance with the manufacturer's instructions, unless otherwise shown.
- B. Install level, plumb, and at the proper height. Cooperate with other trades for installation of sign units to finish surfaces. Repair or replace damaged units as directed by the Project Engineer / MDOT Architect.
- C. Position sign on wall surface 2 inches from strike side of doorframe and 60 inches high to center of sign from finish floor, typical unless indicated otherwise.

3.03 SCHEDULES

- A. Sign Type 1: 7 inches wide by 9 inches high wall mounted restroom sign, with appropriate gender, wheelchair symbol and Braille. (MEN – 2 required; WOMEN – 2 required).
- B. Sign Type 2: 36 inches wide by 6 inches high wall mounted restroom sign, with appropriate gender, both men & women, wheelchair symbol and no smoking symbol with “NO SMOKING” letters under the symbol. (RESTROOMS – 4 required).
- C. Sign Type 3: 36 inches wide by 6 inches high suspended post mounted, double sided, restroom sign, with appropriate gender, both men & women, wheelchair symbol and directional arrow as required. Posts to be 1” diameter x 20” long with 3-screw mounting plate for attachment to ceiling and 6” grove for sign. (RESTROOMS – 4 required).
- D. Sign Type 4: 36 inches wide by 6 inches high wall mounted informational sign, with 2 changeable insert panels. (INFORMATION – Two required). 12 inches wide by 2 inches high changeable insert panels. (8 a.m. – 5 p.m.; two required; 8 a.m. – 6 p.m.; two required).
- E. Sign Type 5: 8 inches wide by 8 inches high wall mounted informational sign, with round hole cutout for button. (PRESS BUTTON FOR SECURITY OFFICER – one required; PRESS BUTTON FOR WEATHER INFORMATION – one required).
- F. Sign Type 6: 24 inches wide by 6 inches high wall mounted informational sign, with appropriate symbol as required. (NO SMOKING – 2 required with symbol; NO PETS – 2 required with symbol; SECURITY – 3 required).
- G. Sign Type 7: 12 inches wide by 6 inches high wall mounted informational sign. (EMPLOYEES ONLY – 7 required).

END OF SECTION

SECTION 16010

ELECTRICAL GENERAL REQUIREMENTS

PART 1 GENERAL

1.01 SCOPE

- A. This Division and the accompanying electrical drawings cover furnishing all labor, equipment and materials and performing all operations in connection with the installation of complete electrical systems as documented.
- B. There are many interfaces between the work involved with this Division and the work in other Divisions, particularly with Division 15. Be aware of the responsibilities at the interfaces.
- C. The plans and specifications are considered cooperative and complimentary.

1.02 DEFINITIONS

- A. Provide: furnish, install, connect, test, demonstrate and leave operational.
- B. Wiring: wire or cable installed in raceway with all required boxes, fittings, connectors, etc.
- C. Work: materials completely installed, including the labor involved.
- D. Raceway: Galvanized rigid steel conduit (GRC), electrical metallic tubing (EMT), Intermediate metal conduit (IMC), schedule 40 Polyvinyl Chloride (PVC), flexible steel (FLX), sheathed flexible steel (SLT).

1.03 CODES AND REGULATIONS

- A. All work shall comply with all local laws, ordinances and regulations applicable to the electrical installation, applicable building codes and with the requirements of the National Electrical Code (NEC), Vol. 70 of the N.F.P.A.
- B. Where different sections of any of the aforementioned codes and regulations, the Specifications and/or the Drawings require different materials, methods of construction, or other requirements, the most restrictive shall govern. In any conflict between a general provision and a special provision, the special provision shall govern.
- C. Obtain all permits and licenses, and pay all fees as required for execution of the Contract. Arrange for necessary inspections required by the city, county, state and other authorities having jurisdiction and present certificates of approval to the Owner or his designated representative.
- D. Under no circumstances will asbestos, or asbestos related materials, be allowed on this project. Should any be found on the project they will be reported in writing.
- E. Communicate with all required utility offices to meet utility schedules and regulations. Acquire services to avoid project delays.

1.04 SITE VISIT

- A. All interested parties shall visit the site and thoroughly familiarize themselves with the local conditions in advance of any project activity.

- B. No allowances will be made for lack of knowledge of job conditions.

1.05 DRAWINGS AND SPECIFICATIONS

- A. The Electrical Drawings are diagrammatic, and are not intended to show the exact location of raceways, outlets, boxes, bends, sleeves, couplings or other such elements.
- B. The Drawings and Specifications shall both be considered as part of the Contract. Any work or material shown in one and omitted in the other, or which may fairly be implied by both or either, shall be provided in order to give a complete job.
- C. Should conflicts exist between the Drawings and Specifications, the Specifications shall govern.
- D. Refer to the Architectural, Structural and Mechanical plans and details for dimensions, and fit the work to conform to the details of building construction. The right is reserved to shift any switch, receptacle, ceiling outlet or any other outlet a maximum of 10'-0" from its location as shown before it is permanently installed, without incurring additions to the Contract in time or cost.
- E. All conduit and wiring shown on the Electrical Drawings shall be provided under this Division regardless of its function.

1.06 DEVIATIONS

- A. No deviations from the drawings and specifications shall be made without the full knowledge and consent of the Owner and/or Engineer.
- B. If it is found that existing conditions make desirable a modification in requirements covering any particular item, report such item to the Owner and/or Engineer for his decision and instructions.

1.07 MECHANICAL EQUIPMENT LOADS

- A. The horsepower, wattage (or amperes) of mechanical equipment indicated is the estimated requirement of equipment furnished under another Division. All wiring, protective devices and disconnect switches shall be of the voltage, size and ampacity for the actual equipment installed. In no case shall these items be of smaller capacity than those indicated.
- B. Coordinate with other trades and provide suitable equipment so that the above requirements shall be met without incurring additions to the Contract in time or cost.
- C. The Contractor shall provide suitable disconnecting means in conformance with the requirements of the NEC, for all items or equipment utilized on the project no matter how, or by whom, furnished. However, duplication, or redundancy, is not required.

PART 2 PRODUCTS

2.01 STANDARDS FOR MATERIALS AND WORKMANSHIP

- A. All material shall be new and shall bear the inspection label of Underwriter's Laboratories, Inc. (UL).

- B. The published standards and requirements of the National Electrical Manufacturer's Association (NEMA), the American National Standards Institute (ANSI), the Institute of Electrical and Electronic Engineers (IEEE) and the American Society of Testing Materials (ASTM) shall govern and apply where applicable.
- C. Specified catalog numbers and trade or manufacturers names are intended to describe the material, devices, or apparatus desired for type, style and quality. Similar materials of other manufacturers, if of equal quality, capacity or character may be substituted in conformity with the provisions of the General and Supplementary Conditions. Substitutions require "prior approval."
- D. Where 3 or more manufacturers are named, one of the named manufacturers shall be used.
- E. Where, in the opinion of the designer, no equal exists then "no equal" will be stated.

2.02 SHOP DRAWINGS

- A. Shop drawings shall be submitted for the following equipment and items suitably bound, and marked, and with contents of no less than one specification section, as indicated below, per individual submission. Submittals not called for herein and/or submittals pertaining to the actual construction process will not be reviewed.

I. SECTION 16100

- 1. Conduit and fittings
- 2. Wire and cable
- 3. Junction boxes
- 4. Pull boxes
- 5. Supporting devices
- 6. Wire connection

II. SECTION 16200

- 1. Circuit breakers
- 2. Panelboards
- 3. Disconnect switches
- 4. Fuses
- 5. Distribution Panel Breaker

III. SECTION 16300

- 1. Lighting Fixtures
- 2. Lamps
- 3. Ballast
- 4. Lamps and Diffusers

- B. Shop drawings and/or catalog data submittals on all items of equipment and materials shall be submitted in conformity with requirements of the General and Supplementary Conditions. Do not submit more than the required number of sets.
- C. A submittal including a list of the manufacturers of the principal items of material: wire, conduit, connectors, panelboards, switchboards, motor control centers, generators, etc., shall be submitted prior to the first shop drawing submission and within 30 days of contract award.

- D. All material lists and shop drawing submittals shall include a stamped indication signifying that the submittals have been previously reviewed for compliance with the Contract Documents, that all coordination required prior to field installation has occurred and that the material being submitted is approved for installation. The stamped indication shall include the name of the contracting firm, the date of the review and the signature of the contractor. The Engineer will not review the shop drawing submittals without the contractor's stamped approval already on the shop drawings. The responsibility of complying with the Contract Documents will not be relieved by the Engineer's review.
- E. All pricing is to be based upon the products, manufacturers, and processes described in the Contract Documents. Requests for approval of substitutions shall be written and delivered to the Owner and/or Engineer's office no later than 10 days before bid date.
- F. Samples of all materials proposed for use shall be presented to the Owner and/or Engineer for his approval when requested.

2.03 AS-BUILT (RECORD) DRAWINGS

- A. Maintain on the job site at all times during construction a set of "As-Built" mylar sepias with all changes during construction marked thereon. Include any sketches or "marked-up" drawing prints as may be generated on the job site to assist in recording the changes.
- B. The "As-Built" sepias shall show all changes and deviations from the Contract Drawings including relocation of outlets, conduit and equipment. Record final dimensioned locations of switchboards, panelboards, transformers, disconnect switches, etc. Make sufficient measurements to locate all underground conduit.
- C. At the completion of construction, the sepia drawings, sketches and mark-up prints shall be presented to the Owner and/or Engineer.

2.04 MAINTENANCE AND INSTRUCTION MANUALS: Submit to the Owner and/or Engineer, upon completion of the work, three (3) copies of maintenance and instruction manuals for equipment provided.

2.05 SUBMISSION OF DRAWINGS: Submission of Engineers drawings for shop drawings and unaltered Engineer's drawings for "As-Built" will not be acceptable.

PART 3 EXECUTION

3.01 COORDINATION

- A. Conduit, outlets, equipment or lighting fixtures are located in any area, coordinate the space requirements with all trades. Such shall be arranged so that space conditions will allow all trades to install their work, and will also permit access for future maintenance and repair.
- B. Conduit and equipment installed at variance with the above requirements shall be relocated and/or revised to conform with the above requirements without incurring additions to the Contract.
- C. Coordination of space requirements with all trades shall be performed so that:
 - 1. No piping or ductwork, other than electrical, shall be run within 42" of panelboards, switchboards or transformers.

2. No pipes or ducts that operate at a temperature in excess of 120 degrees F. shall be installed nearer than 3" to any electrical conductor.

3.02 PROTECTION OF MATERIALS

- A. All conduit and other openings shall be kept protected to prevent entry of foreign matter. Fixtures, equipment, and apparatus shall be kept covered for protection against dirt, water, chemical or mechanical damage before and during construction.
- B. The original finish, including shop coat of paint of fixtures, apparatus or equipment that has been damaged shall be restored without incurring additions to the Contract in time or price.

3.03 HOUSEKEEPING PADS: The contractor shall provide 4" minimum height concrete pad, integral with floor, under all floor mounted electrical equipment or apparatus.

3.04 CUTTING AND PATCHING: The Contractor is responsible for all cutting and patching, including escutcheon plates where necessary, whether or not such cutting and patching is shown or indicated.

3.05 ACCESS TO ELECTRICAL ITEMS: The contractor is responsible for maintaining access to all concealed electrical equipment, apparatus, or devices whether, or not, shown or indicated. Where access panels are required, refer to Owner or Engineer for approved means, methods and appearance.

3.06 ELECTRICAL ROOMS AND CLOSETS

- A. Doors to electric rooms and closets shall open outward. If in conflict with Arch. drawings refer to Owner or Engineer for resolution.
- B. Manufacturer's equipment shall not be larger than that dimensioned, or scaled, on plans. Conflicts shall be brought to the attention of the Owner, or Engineer for resolution prior to order.
- C. Clear working space in electric rooms and closets shall be no less than that required by the N.E.C.
- D. The contractor shall submit for review, prior to construction or purchase of any equipment, scaled drawings of electrical rooms, closets, or spaces showing, in detail, his planned installation locations of the equipment he intends to purchase. These shall clearly show compliance with A,B, and C above.

3.07 TESTS

- A. Upon completion of the electrical work, conduct an operating test in the presence of the Engineer or his designated representative.
- B. The installation shall be demonstrated to operate in accordance with the Contract Documents. Any material or workmanship which does not meet with the approval of the Engineer shall be removed, repaired or replaced as directed without incurring additions to the Contract in time or cost.
- C. Furnish all instructions, tools and personnel required for the test. Have sufficient tools and personnel available to remove panel covers, coverplates, etc., as required for proper inspection. Provide suitable test equipment.

- 3.08 DEMONSTRATION AND INSTRUCTIONS: Present to the Owner and/or Engineer or his designated representative a physical demonstration and oral instructions for proper operation and maintenance of electrical equipment and systems installed.
- 3.09 GUARANTEE
- A. All systems and components shall be provided with a one-year guarantee from the time of final acceptance. The guarantee shall cover all materials and workmanship. During this guarantee period, all defects in materials and workmanship shall be corrected without incurring additions to the Contract. The correction shall include all required cutting, patching, repainting, or other work involved, including repair or restoration of any damaged sections or parts of the premises resulting from any fault included in the guarantee.
- B. In addition to this general guarantee, present to the Owner and/or Engineer any other guarantees or warranties from equipment or system manufacturers. These supplemental guarantees or warranties shall not invalidate the general guarantee.

END OF SECTION

SECTION 16100

BASIC MATERIALS AND METHODS

PART 1 GENERAL

1.01 DESCRIPTION

- A. All work specified in this Section shall comply with the provisions of Section 16010.
- B. This Section covers the basic electrical materials and installation methods that are applicable to Division 16.

PART 2 PRODUCTS

2.01 CONDUIT

- A. Galvanized rigid steel conduit (GRC) shall be low carbon, hot-dipped galvanized and to meet UL Standards and shall have threaded joints.
- B. Flexible metal conduit (FLX) shall be flexible steel conduit tubing and shall meet Underwriters Laboratories Standard for Flexible Steel Conduit.
- C. Steel conduit approved manufacturers are Allied, Southwire, Triangle, Republic, Wheatland and Pittsburg.

2.02 CONDUIT FITTINGS

- A. GRC conduit fittings shall be zinc-coated, ferrous metal and taper threaded type.
- B. Conduit connections to switchboards, motor control centers, transformers, panels, cabinets, and pull boxes with specific grounding requirements, shall have grounding wedge lugs between the bushing and the box or locknuts designed to bite into the metal.
- C. Each conduit end shall be provided with either an insulated throat connector or separate locknut and insulated bushing. Bushing shall be installed before any wire is pulled.
- D. Conduit fittings approved manufacturers are Raco, Steel City, O.Z Gendy, Thomas & Betts, Efcor and Appleton.

2.03 CONDUCTORS: Conductors shall be copper of 98% conductivity, 600 volt insulation. Sizes specified are AWG gauge for No. 4/0 and smaller and circular mils (MCM) for all sizes larger than No. 4/0. Conductors No. 10 and smaller shall be solid and type "THHN" or THWN" insulation. No. 8 and larger shall be stranded and type "THHN" or "THWN" insulation.

2.04 OUTLETS

- A. Outlet boxes and covers shall be of such form and dimensions as to be adapted to their specified usage, locations, size and quantity of conduit, and size and quantity of conductors entering the boxes. In special "Fire Rated" partitions, outlets shall comply with ASTM No. E119.

- B. Flush ceiling outlets for surface or pendant mounted lighting fixtures shall be one-piece 4" square or octagonal pressed steel boxes. Boxes for devices in unfinished masonry walls or stud walls shall be pressed steel, square corner, sectional switch boxes, or shall be 4" square box with a square cornered tile wall cover, set flush with masonry construction. Boxes in concrete ceiling slab shall be octagonal, shallow concrete boxes. Welded boxes are not acceptable. Steel boxes shall be used with all steel conduit and type AC or MC cable. Boxes used in conjunction with ENT shall conform with the foregoing except shall be made of a high heat-resistant plastic suitable for fixture support and shall be specifically designed for use with ENT.
- C. All outlet boxes in plaster or masonry walls or ceiling shall be provided with plaster rings.
- D. Junction boxes and all outlets not indicated as containing wiring devices or lighting fixtures shall have covers. Covers for outlets in walls shall be as specified for wall switches and receptacles.
- E. Outlet boxes exposed to the weather and outlet boxes for vaportight lighting fixtures and devices shall be of cast corrosion resistant type.
- F. Outlet box approved manufacturers are Appleton, Racor, Steel City or Crouse-Hinds.

2.05 DISCONNECT SWITCHES

- A. Disconnect switches shall be "heavy-duty" type enclosed switches of quick-make, quick-break construction. Switches shall be horsepower rated for 600 volts AC as required. Lugs shall be UL listed for copper and aluminum cable.
- B. Padlocking provisions shall be provided for padlocking in the "Off" position.
- C. Switches shall be furnished in NEMA I General Purpose enclosure unless noted otherwise. Switches located on the exterior of the building or in "wet" locations shall have NEMA 3R enclosures.
- D. Fused disconnect switches shall have rejection type fuse clips with dual element, current limiting fuses of rating shown.

2.06 FUSES

- A. Provide all fuses. All fuses shall be of the same manufacturer. All fuses shall be of the high interrupting rating (200,000 Amps), current limiting type. Fuses shall be provided for each fuse cutout and the specified quantity of fuses shall be furnished for spares.
- B. Circuits 0 to 600 ampere shall be protected by rejection type, current limiting type. All dual-element fuses shall have separate overload and short-circuit elements. Fuse shall incorporate element having a 284 degree F. melting point alloy and shall be independent of the short-circuit clearing chamber. The fuse must hold 500% of rated current for a minimum of 10 seconds and be listed by Underwriter's Laboratories, Inc., with an interrupting rating of 200,000 amperes RMS symmetrical. The fuses shall be UL Class RK-1.
- C. Furnish and turn over to the Owner a minimum of one (1) set of spare fuses (set consisting of three fuses) for each type and rating of fuse used. When the number of fuse sets of the same type and rating actually installed exceeds five (5) sets, furnish an additional spare set of fuses for each five (5) or fraction thereof.
- D. Provide a cabinet in which to store all spare fuses.

PART 3 EXECUTION

3.01 CONDUIT

- A. Rigid steel shall be used for service entrance and all feeders and branch circuits where exposed to damage.
- B. GRC shall be used for all underground feeders.
- C. Conduit shall be continuous from outlet to outlet, from outlet to cabinet, junction box and pull box. Conduit shall enter and be secured to all boxes, etc., in such a manner that each system will be electrically continuous from service to all outlets. All conduit from cabinets and junction boxes shall terminate in approved outlet boxes or conduit fittings. Conduit connections to any box which has no threaded hub shall be double locknotted.
- D. Provide junction boxes or pull boxes where shown and where necessary to avoid excessive runs or too many bends between outlets. The conduit sizes shown may be increased if desired to facilitate the pulling of cables.
- E. All conduit shall be concealed unless indicated otherwise. Install exposed conduit parallel with or at right angles to the building walls and support from walls or ceilings at intervals required by Code with approved galvanized iron clamps or hangers. Concealed conduit above the ceiling shall be supported independent of ceiling construction. Where ceilings of lay-in type are used, conduit must be installed high enough to permit removal of ceiling panels and lighting fixtures. Use threaded rods and hangers consisting of double-nutted threaded rods and "Unistrut" channels or angles of 12 gauge minimum steel for supporting multiple conduit.
- F. Minimum size conduit for branch circuits shall not be smaller than 1/2". Home runs shall extend from outlets shown to panel designated. Home runs shown shall not be combined. Home run conduit shall not be smaller than 3/4".
- G. At couplings, conduit ends shall be threaded so that they meet in the coupling. Right and left hand couplings shall not be used.
- H. Provide watertight conduit hubs on conduit terminating in a box or cabinet exposed to the weather.

3.02 FLEXIBLE CONDUIT:

- A. PVC extruded cover flexible conduit shall be used in making short flexible connections to rotating or vibrating machinery or equipment. The flexible conduit at these locations shall be as short as possible, but shall have a minimum length of 12".
- B. A green stranded bonding jumper shall be installed outside of all flexible conduit that extends directly from a non-flex conduit to a rotating or vibrating machine. Where a junction box is used, the green stranded bonding jumper shall be installed inside the flexible conduit and attached to the junction box and to the machine. When the bonding jumper is installed outside of the flexible conduit, plastic wire straps shall be used 6" o.c. to secure the jumper to the flexible conduit.

3.03 WIRING

- A. All conductors shall be installed in conduit. No conductors shall be pulled into the conduit until the conduit system is complete.

- B. Conductors shall be continuous from outlet to outlet and from outlet to junction box or pull box. All splices and joints shall be carefully and securely made to be mechanically and electrically solid with pressure type connectors. Where connection is made to any terminals of more than 30 amperes capacity and where conductors larger than No. 10 AWG are connected to any terminal, copper terminal lugs shall be bolted to the conductors. Where multiple connections are made to the same terminal, individual lugs for each conductor shall be used.
 - C. Each conduit shall have a minimum of two (2) conductors pulled in unless that particular conduit is noted as being for systems other than electrical circuitry and/or future use or unless noted otherwise.
 - D. Conductors for lighting and receptacle circuits shall have color coded jackets. The wiring shall be color coded with the same color used with its respective phase throughout the entire job as follows:
 - E. The feeder and service entrance conductors shall be color coded by the use of colored plastic tape applied within 6" of each conductor end.
 - F. Branch circuit conductors shall not be smaller than No. 12 AWG and where the home run from center of load exceeds 100'-0", the conductors from home run outlet to panel shall be No. 10 AWG minimum.
 - G. Branch circuit wiring which supplies more than one fluorescent fixture through wireway of other fixtures shall be rated for use at 105 degrees C.
 - H. For branch circuits terminating in outlet without device, leave minimum of 12" of slack wire coiled for connection of equipment.
 - I. All conductors shall be identified with proper circuit numbers at terminals, junction boxes and at panelboards within 6" of conductor ends.
 - J. Stranded conductors, #10 and smaller, shall be terminated at screw type terminals with fork type insulated wire terminals applied with manufacturer's tool.
 - K. Conductor sizes are generally indicated in schedules and riser diagrams, otherwise follow rules of N.E.C.
- 3.04 GROUNDING
- A. Ground connections shall be in accordance with the 1993 National Electrical Code.
 - B. Provide an insulated green bonding jumper from the grounding lug of all receptacles to a clip or a sheet metal screw in the outlet box. The ground wire installed behind the device mounting screws will not be acceptable.
- 3.05 CONNECTION TO EQUIPMENT: Equipment furnished by the Owner or under other Sections, such as mechanical, signs, kitchen equipment, etc., will be installed by others. Provide electrical service and make the electrical circuit connection to this equipment.
- 3.06 EQUIPMENT ANCHORING: All items of electrical equipment, such as switchboards, panelboards, etc., shall be securely anchored to the building structure. The anchoring shall be accomplished by utilizing a minimum size of 3/8" steel anchor bolts in the structure and to the item of equipment. A minimum of two (2) anchor bolts shall be provided on each side of each item of equipment with the following exceptions:

Exception No. 1: If the equipment manufacturer includes more than two (2) anchor holes per side in the base or base frame of the equipment item, then there shall be one anchor for each anchor hole.

Exception No. 2: If the equipment manufacturer recommends a particular quantity greater than two (2) per side, then that quantity of anchors shall be provided.

END OF SECTION

SECTION 16200

SERVICE AND DISTRIBUTION

PART 1 GENERAL

1.01 DESCRIPTION

- A. All work specified in this Section shall comply with the provisions of Section 16010.
- B. Provide a complete electrical distribution system to 5 feet outside of the building per the drawings. The system shall include conduit stub-outs for the secondary service entrance, feeders, panelboards, etc., to provide a complete system.
- C. All distribution switchgear (branch circuit panelboards, etc.) shall be the unit responsibility of one manufacturer. All component parts of the above listed items shall be of the same manufacturer except where a written request for a deviation from this requirement has been approved prior to bid date.
- D. Shop drawings for equipment specified in this Section shall show that all specified requirements have been incorporated.
- E. All floor mounted distribution equipment shall be mounted on a 4" high concrete pad.

1.02 SECONDARY ELECTRICAL SERVICE

- A. The secondary service to the building shall be 120/208 volts, 1 phase, 3 wire, 60 Hertz AC, provided under another contract. Provide all conduit stub-out(s) and pull string(s) to a point 5 feet out from the building from indicated panelboard(s).
- B. The contractor shall provide ground rods, ground cables, and ground wires, so as to provide a complete grounding system as per NEC 250.

PART 2 PRODUCTS

2.01 BRANCH CIRCUIT PANELBOARDS

- A. Panelboards (panels) shall be general purpose enclosures and shall be surface or flush mounted as indicated. Panels shall be of the automatic circuit breaker type, factory assembled by the manufacturer of the circuit breakers. Panels shall be for the voltage indicated with the quantity of poles and ampacity of circuit breakers shown.
- B. Boxes and trim shall be made from code gauge steel. Boxes shall be of sufficient size to provide a minimum gutter space of 4" on all sides. Boxes shall be minimum 20" width and 5-3/4" depth.
- C. Hinged door covering all device handles shall be included in all panel trim. Doors shall have flush-type cylinder lock and catch, except that doors over 48" in height shall have auxiliary fasteners at top and bottom of door in addition to flush-type cylinder lock and catch. Door hinges shall be concealed. All locks shall be keyed alike. Directory frame and card having a transparent cover shall be furnished with each panel door.
- D. Trims for flush panels shall overlap the box by at least 3/4" all around. Surface trims shall have the same width and height as the box. Trims shall be mountable by a screwdriver without the need for special tools. After installation, trim mounting mechanism or hardware shall not be accessible when panel door is closed and locked.
- E. All exterior and interior steel surfaces of the trim shall be cleaned and finished with gray

paint over a rust-inhibiting phosphatized coating.

- F. All interiors shall be completely factory assembled with protective devices, wire connectors, and shall be so designed that devices may be changed without machining, drilling or tapping.
- G. Interiors shall be so designed that devices can be replaced without disturbing adjacent units and without removing the main bus connectors.
- H. Bus bars for the mains shall be of tin plated aluminum sized in accordance with U.L. Standards. Full size bars shall be included. Bus bar taps for panels with single pole branches shall be arranged for sequence phasing of the branch circuit devices.
- I. Phase bussing shall be full height without reduction. Cross and center connectors shall be of the same material as the bus.
- J. The neutral bus shall utilize set-screws to bond the neutral wire to the neutral bus through holes drilled in the neutral bar. A sheet copper neutral bus utilizing flathead screws to hold the neutral wires will not be acceptable.
- K. Spaces for future devices shall be included as indicated and shall be bussed for the maximum rated device that can be fitted into them.
- L. All circuit breakers shall be manually operated, thermal-magnetic, automatic, of the ampacity and poles as indicated. They shall be quick-make, quick-break, both on manual and automatic operation. Breakers shall be over-the-center toggle operating type, with the handle going to a position between ON and OFF to indicate automatic tripping. All multi-pole breakers shall have internal common trip. Breakers shall have a minimum of 22,000 RMS symmetrical amperes interrupting capacity unless designated otherwise. The breakers furnished shall be determined by the specifications and by the minimum U.L. labeled RMS symmetrical amperes interrupting capacity at circuit voltage. All circuit breakers shall be bolted on and rigidly braced.
- M. Panels having sub-feed lugs for feeding through shall have 8" minimum extra gutter space at the lug end and on one side.
- N. Each panel as a complete unit shall have a short-circuit current rating equal to or greater than the equipment rating indicated.
- O. Panels shall be as manufactured by Square D, Westinghouse, ITE/Siemens, or General Electric.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide a typewritten directory under plastic for all panelboards with spares marked in pencil.
- B. Provide all necessary hardware to level and secure the switchgear as required by the manufacturer's instructions. Make all electrical connections for supply and load circuits and leave in operating condition.
- C. Clean enclosure of all switchgear of all foreign matter, including dust.

END OF SECTION

SECTION 16300

LIGHTING

PART 1 GENERAL

1.01 DESCRIPTION:

- A. All work in this Section shall comply with the provisions of Section 16011.
- B. Provide all lighting fixtures and lamps as specified herein and as shown.
- C. All lamps shall be operating at the time of the final inspection.
- D. Confirm exact locations of all lighting fixtures by coordination with the Architectural and electrical plans.
- E. Confirm ceiling type at pavilions before ordering lighting fixtures.
- F. Each lighting fixture shall have been tested and certified for proper operation by the fixture manufacture for the type mounting called for.
- G. Lamps and ballasts shall be compatible.

PART 2 PRODUCTS

2.01 LAMPS:

- A. The type lamps shall be as specified with each lighting fixture and shall be suitable for use in the fixture for which it is specified.
 - 1. The lamp catalog number is given as a standard of the quality and performance required. Equal lamps by General Electric, Sylvania or Phillips/Westinghouse will be acceptable. When a lamp manufacturer's name is used along with the catalog number in the lighting fixture schedule, it is considered unequaled by any other lamp and shall not be substituted. The lamp performance with energy conserving ballasts furnished under this Section shall be certified by a nationally recognized independent testing laboratory.
 - 2. Energy conserving and standard (non-energy conserving) fluorescent lamps shall be by the same manufacturer.
- B. Fluorescent Lamps:
 - 1. Fluorescent lamps shall be as specified in Lighting Fixture Schedule, or 3500 K.
 - 2. Lamps shall be listed by manufacturer as suitable for use on the ballasts intended for use.
- C. High Intensity Discharge (HID) lamps shall be the voltage and type specified in the lighting fixture schedule.

2.02 BALLASTS:

- A. Provide ballasts of the proper voltage rating to match the circuit voltage from which the units are supplied.
 - B. Fluorescent ballasts shall be the high power factor type, Class "A" sound rating, non-PCB, CBM certified and shall have an automatic resetting thermostat to provide Class P ballast protection.
 - C. Energy conserving fluorescent ballasts shall be CBM certified for full light output. Energy conserving rapid start lamp ballasts shall have an average input wattage of 86 watts when operating two (2) F40T12 rapid start fluorescent lamps in ambient of 77 F. Energy conserving ballasts shall be CBM certified for operation of standard fluorescent lamps as well as energy conserving lamps specified herein.
 - D. Ballasts for High Intensity Discharge (HID) lamps shall be Constant Wattage Autotransformer (CWA) type or equal type with 90% minimum power factor. Low or normal power factor (NPF) ballast shall not be used.
 - E. Ballast for Octron or other T-8 lamps shall be electronic ballast as manufactured by Howard Industries, Advance or equal.
- 2.03 DIFFUSERS: All wraparound lenses shall be virgin acrylic, one-piece and injection molded.
- 2.04 LIGHT FIXTURE TYPES:
- A. Most lighting outlets are lettered or groups of outlets are indicated by a letter.
 - B. Each lighting fixture shall have a manufacturer's label affixed and shall comply with the requirements of all authorities having jurisdiction.
 - C. The lighting fixtures that are indicated by the letters shall be as indicated on the Lighting Fixture Schedule.
- 2.05 LIGHTING CONTROL:
- A. Provide a Photo/Control system for exterior lighting. Photocontrol shall operate contactor(s) to energize the circuits whenever natural lighting falls below 25 footcandles.
 - B. Provide 20A multipole contactors as required to control exterior lighting.

PART 3 EXECUTION

- 3.01 SUPPORT OF LIGHTING FIXTURES: All pavilion lighting shall be surface mounted on the ceiling. The fixtures shall be supported in a manner that will insure the fixture weight being equally distributed from each support and the fixture remaining in a level position.
- 3.02 AIMING OF ADJUSTABLE LIGHT FIXTURES: All fixtures with lamp position, tilt, shutters, rotation, or other types of adjustment shall be rough adjusted at the time of installation. The Engineer or his representative will determine the final inspection. Fixtures serving areas where daylighting is predominant will be adjusted after sunset.

END OF SECTION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-244-1

CODE: (SP)

DATE: 06/04/2004

SUBJECT: Tree Pruning

PROJECT: STP-0010-01(093) 103316 -- Jackson County

Section 907-244, Tree Pruning, is added to and becomes a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-244 -- TREE PRUNING

907-244.01--Description. This work shall consist of selective removal of existing tree branches and growth, to improve the visual appearance, site conditions regarding future maintenance, and overall health of existing trees on the site. The selection of trees to be pruned shall be determined by the Engineer. Extents to which pruning is required shall be in accordance with this specification to the satisfaction of the Engineer.

907-244.01.1--Qualifications. Contractor shall be licensed as a tree surgeon by the State of Mississippi, and having a minimum of two consecutive years experience in this area of work, having performed similar work. Contractor shall provide a minimum of three references and a list of similar project with the Client's names, addresses, and telephone number, when requested by the Engineer.

907-244.01.2--Field Investigation. Contractor shall visit the job site and become familiar with the nature and location of the work, existing conditions, and other conditions that he will be obligated to operate in the performance of the work.

907-244.02--Materials. Pruning seal shall be an asphaltum paint, formulated for the specific purpose of being used as a seal for tree cuts. Material shall be an aerosol or brush applied material. Submit six copies of manufacturer's product data for review and approval of the Engineer.

907-244.03--Construction Requirements.

907-244.03.1--Pruning. Using tools satisfactory for work of this nature, remove all dead wood, insignificant sucker growth, material causing strain on limbs and trunks, and all limbs that are in conflict with limbs of other trees or with buildings. Remove lower limbs of trees that may interfere with street, or parking lot, traffic or with the Department's maintenance vehicles. Where street traffic is not a concern, prune lower limbs to a clearance of eight feet.

Do not cut limbs at the base flush with the main trunk. Cuts shall be made outside of the collar of the limb at its intersection with the main trunk. This shall also apply to dead limbs which are removed.

Seal all cuts two (2) inches in diameter or greater, and any cuts which have been previously cut or broken, with asphaltum tree paint. Liquid applied paint shall require one coat. Aerosol paint shall require two (2) coats.

907-244.03.2--Clean Up. Remove all limbs, leaves, and pruning debris, and dispose of material to the satisfaction of the Engineer.

907-244.04--Method of Measurement. Tree Pruning of the size of tree specified will be measured per each as noted on the drawings or as selected by the Engineer. Diameter of trees shall be as measured four and one-half feet (4 1/2') above ground at the base of the tree.

Separate measurement for payment will not be made of any individual unit, operation, or incidental item involved in the work.

907-244.05--Basis of Payment. Tree Pruning as prescribed above shall be paid for at the contract unit price per each, which price shall be full compensation for furnishing all materials and supplies, for performing all work necessary, and for all equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

907-244-A: Tree Pruning, Size - per each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-258-1

CODE: (SP)

DATE: 06/04/2004

SUBJECT: Miscellaneous Rest Area Facilities

PROJECT: STP-0010-01(093) / 103316 -- Jackson County

Section 907-251, Miscellaneous Rest Area Facilities, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction.

SECTION 907-251 -- MISCELLANEOUS REST AREA FACILITIES

907-258.01--Description. This item shall consist of constructing and installing concrete picnic tables and benches, wooden picnic tables and benches, charcoal grills, drinking fountains, trash receptacles, sewage dump station, sign (masonry and stone), cast stone benches, pavilion, and survey monument, each complete in place, in accordance with these Specifications and in reasonably close conformity with the locations, lines, grades, configurations, dimensions and other requirements shown on the plans or established.

907-258.02--Materials.

- A. General. Unless otherwise stipulated, the materials used in this construction, in addition to the general requirements of these Specifications and the plans shall conform to the provisions and requirements prescribed in the sections of the Standard Specifications for the several items which constitute the complete structure.

All items will require approval by the Engineer from the manufacturer. Submit six (6) copies of brochures or shop drawings for approval prior to ordering manufactured items. Other items may require testing as directed by the Engineer.

- B. Concrete Picnic Table and Benches.

1. Concrete. Concrete for table top, seat top, and end supports shall be Class "A" Concrete. Concrete for table slabs will be paid for as concrete sidewalks - Pay Item No. 907-608.
2. Reinforcing Steel. Reinforcing steel shall conform to Section 711.
3. Paint for Table top and Seats. Paint or coating for table top and seats shall be an approved chlorinated rubber paint conforming to or exceeding Federal Specifications Number TT-P-91-D.

- C. Wooden Picnic Tables. Wooden Picnic Tables shall be the model number 238-6GT, 6

feet long with galvanized pipe frame and treated wood top and seats, as manufactured by Iron Mountain Forge, Farmington, Missouri, or approved equal.

Picnic tables shall be secured to the concrete with lead shields, anchors, or other means as approved by the Engineer.

D. Charcoal Grill.

1. Charcoal Grill. Charcoal Grill shall be the Model 200-X Rotating Grill with post as manufactured by Iron Mountain Forge, Farmington, MO 63640, or approved equal. Post shall be set within a Class C concrete footing, size as recommended by manufacturer.

E. Drinking Fountain.

1. Waste Pipe. Waste pipe shall be of the size and type as shown on the plans and shall be standard PVC drain waste and vent piping.
2. Drain Pipe. Drain pipe shall be the size shown on the plans and shall conform to or exceed Commercial Standard CS 272-65 or CS 272.65.
3. Drinking Fountain. The drinking fountain shall be designed similar to the details shown on the plans, freeze-proof, and conforming to approved Handicapped Standards by the Engineer.
4. Concrete. Concrete, unless otherwise specified, shall be paid for as sidewalk, and have an approved exposed aggregate finish to match the finish on the adjacent sidewalk.
5. Valves (Stop and Drain). The cut-off valve shall be a standard brass stop and drain cut-off valve of the proper size and type as shown on the plans.

F. Trash Receptacle.

1. Trash Receptacle. The trash receptacle shall be the Aspen Series R-38 Standard with hinged top, leveling devices, galvanized metal liner, and hardware to secure the receptacle to the sidewalk, Empire Green in color with desert brown stone panels, model #R-38HT-202, as manufactured by United Receptacle, Inc., Pottsville, PA 17901-0870, or approved equal.
2. Concrete. Concrete, unless otherwise specified, shall be paid for as sidewalk, and have a finish to match the finish on the adjacent sidewalk.

G. Water Hydrant.

1. Water Hydrant. Steel body, self – closing, anti – freezing hydrant with heavy

stainless operating springs, with $\frac{3}{4}$ inch supply as the model M-175 hydrant as manufactured by Murdock, Cincinnati, OH 45204, or approved equal. Color shall be selected by the Engineer.

2. Concrete. Concrete unless otherwise specified shall be paid for as sidewalk and have an approved exposed aggregate finish to match the finish on the sidewalk.
3. Valves (Stop and Drain). The cut-off valve shall be standard brass stop and drain cut-off valve of the proper size and type as shown on the plans.

H. Travel Trailer Sewage Dump Station (Modifications).

1. Sewage Dump Station. The sewage dump station shall be constructed similar to the details shown on the plans, with Schedule 40 galvanized steel pipe and fittings complete with vacuum breaker, and hose, in accordance with the plan details, and State Health Department min. standards.
2. Concrete. Concrete unless otherwise specified shall be Class "B" conforming to Section 804 of the Standard Specifications and have an approved trowel finish.
3. Stand Pipe. Water stand pipe shall be standard galvanized Schedule 40 of the size shown on the plans.
4. Vent Pipe. Vent pipe shall be standard galvanized Schedule 40 of the size shown on the plans.
5. Signs. The signs shall be designed as shown on the details on the plans, constructed of .080 aluminum or 14 Ga. galvanized steel. the signs shall be manufactured by an approved sign company. Submit shop drawings.

I. Cast Stone Bench. Cast stone benches shall be constructed from the same material or an approved equal material as concrete picnic tables and benches.

J. Sign (Masonry and Stone).

1. Brick and Mortar. Brick and mortar shall be produced by the same manufacturer(s), and the be same type and kind (including bullnose and watertable units), and shall match the existing brick used on the Welcome Center Building, or approved equal.
2. Concrete Masonry Units. Hollow non-load bearing, light-weight aggregate, concrete masonry units conforming to ASTM C331-64T. Units shall be normal modular size for typical $\frac{3}{8}$ inch mortar joint.
3. Concrete. Concrete unless otherwise specified shall be Class "B" conforming to Section 804 of the Standard Specifications.

4. Reinforcing Steel. Reinforcing steel shall conform to Section 711.

5. Precast Architectural Panel.

a. General:

Cement: Portland Cement conforming to ASTM C-150, Type I or III.

Fine and coarse aggregate: Conform to ASTM C-33. Variations from aggregate gradations are permissible for the facing mix.

Reinforcement shall conform to ASTM C-185 for welded wire fabric.

Hot-dip galvanizing shall conform to ASTM A-153

Anchoring devices, inserts, etc., shall be either galvanized or corrosion resistant types approved by the Architect and as detailed on the drawings.

b. Textures and Finishes.

Precast architectural concrete shall be honed finish, lightly textured, approximating finish of limestone, with color as selected by Owner and Architect.

c. Fabrication.

Precast architectural concrete shall be sufficiently reinforced to withstand conditions on the sign, including handling and erection stresses. Deformed bars with 1 inch or less clearance to an exterior face shall be galvanized.

Fabricate units straight, smooth, and true to size and shape, with exposed edges and corners precise and square unless otherwise indicated.

Provide reglets, slots, holes, and other accessories in units to receive cramps, dowels, reglets, waterstops, flashings, and other similar work as indicated.

Arises, inscriptions and details shall be faithfully executed to the Engineer's design.

Mark each precast item to correspond to identification mark on shop drawings.

Location of anchors, inserts and blockouts shall be +/- 3/8 inch from center line of location shown on drawings.

At welded connections apply rust-inhibitive coating on damaged areas, same as

shop-applied material. Use galvanizing repair coating on galvanized surfaces.

d. Mixes.

Standard 6 inch by 12 inch cylinder strength of precast concrete shall not be less than 5,000 psi at 28 days when tested in accordance with ASTM C-39.

Absorption shall not be less than 3 percent and not more than 7 percent when tested in accordance with ASTM C-97.

Minimum thickness of facing mix shall be 1 1/2 inches thick.. Backup concrete may be made with grey cement and aggregates conforming to requirements for cast-in-place concrete.

e. Joint Material. Joint material shall be as recommended by the precast architectural concrete manufacturer, and as approved by the Engineer.

6. Letters and Symbols. Letters, including custom letters, and symbols shall be brass, in the shapes and sizes noted on the drawings, as manufactured by Metal Arts, A. R. K. Ramos, or Matthews.

The Engineer will provide camera ready art work of the symbols and custom letters to the Contractor for the manufacturer.

Method(s) of attaching letters and symbols to precast architectural concrete panel shall be approved by the Engineer.

K. Pavilion:

1. Masonry Components, Concrete, and Cast Stone. Masonry components, concrete, and cast stone shall conform to the specifications described in Sign (Masonry and Stone), above.
2. Steel. Steel shall be provided in the shapes, sizes, and fabricated as noted on the drawings.

Steel shall receive the following paints/ coatings, all as manufactured by Tnemec Company, Inc., Kansas City, MO, or approved equal, and applied in strict accordance with the manufacturer's written instructions.

First Shop Coat (primer)	90-97 Tneme Zinc	2.5 – 3.5 Mils Dry Film Thickness
Field Spot Primer (if necessary)	90-97 Tneme Zinc	2.5 – 3.5 Mils Dry Film Thickness
Second Field Coat	74 Endura-Shield*	2.0 – 2.5 Mils Dry Film Thickness

Third Field Coat	74 Endura-Shield*	2.0 – 2.5 Mils Dry Film Thickness
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*Color of second and third field coat shall be selected by the Engineer.

3. Metal Roof. Copper roofing sheet, 16 ounce per square foot, with 1-1/2 inch standing seam "S" lock located 16 inches on center. Contractor shall design fabrication and fastening of the system for an I-60 wind uplift rating, using the purlins as noted on the drawings.

Product data for materials, and fastening devices as well as shop drawings noting assembly and finished product appearance shall be submitted for review and approval of the Engineer. Minimum of 5 copies of each required.

Roof panel system shall be guaranteed by the manufacturer for a period of 5 years.

4. Display Panel. The display panel shall be an exterior rated panel, with a top hinged impact resistant acrylic cover, cylinder lock and gas cylinder cover supports; baked on enamel finish, metal back with magnetic back (interior); for wall mounting, in a 40 inch high by 60 inch wide size, as the Modulex Wide Profile as manufactured by ASI Sign Systems, or approved equal.

Color of panel shall be selected by the Engineer.

Mounting of panel to metal work shall be reviewed with and approved by the Engineer.

L. Survey Monument.

1. Masonry Components and Concrete. Masonry components and concrete shall conform to the specifications described in Sign (Masonry and Stone), above.
2. Granite. Polished (finish) granite veneer, in the thickness as noted on the drawings. Color shall be selected by the Project Architect. Granite shall be as manufactured by Cold Spring Granite, Marietta, GA 30062, or approved equal. Method of attachment to masonry and devices for attachment shall be reviewed with and approved by the Engineer.

- M. Bollard. Pipe shall be schedule 40 steel pipe, in the size as noted on the drawings. Finial shall be the Linn Park Finial, as manufactured by Robinson Iron, Alexander City, AL 35011-1119, or approved equal. Pipe and finial shall be painted the same as steel for the Pavilion, noted above. Class B concrete required for pipe infill.

- N. Metal Bench. Garden – Style all – steel bench, 6 feet long, color – green, as Bench 118 series as manufactured by DuMor, Inc., Mifflintown, PA 17059-0142, or approved equal.

907-258.03--Construction Requirements.

- A. General. The method of construction, unless otherwise stipulated, shall conform to the provisions and requirements where applicable, prescribed in the standard specifications with the additions shown hereafter. All work shall be performed in a good workmanlike manner, to the satisfaction of the Engineer.
- B. Concrete Picnic Tables and Benches. Concrete picnic tables and benches shall be constructed to the detailed dimensions shown on the plans. The handling and placing of concrete shall conform to Subsection 804.10. The top and edge surfaces of the table and benches shall receive a slick smooth finish.

The concrete shall be free of honeycomb and air pockets and in no case have a slump greater than one and one-half inches.

The ground under the slab shall be graded or shaped and compacted when necessary to insure a smooth, firm foundation for the slab. The ground adjacent to the slab shall be sloped to drain away from the slab in a manner so as to preserve the natural shape of the terrain as close as possible.

The concrete slab shall be poured around the table and benches in place and correctly aligned. Care shall be taken to place the expansion joint material around the top and bench supports as shown on the plans in a neat, secure manner. The slab shall be sloped to drain and receive an approved exposed aggregate finish to match the finish on the sidewalk.

The placing and fastening of reinforcement shall conform to Subsection 805.05.

The table shall be located as shown on the plans and as directed by the Engineer.

- C. Wooden Picnic Tables and Metal Benches. Wooden picnic tables and metal benches shall be located and secured in an approved manner as shown on the plans and as directed by the Engineer.
- D. Charcoal Grill. The charcoal grill with concrete footing shall be installed in accordance with the manufacturer's written instructions.
- E. Drinking Fountain. The drinking fountain shall be installed by skilled plumbers, concrete finishers, and workmen in an approved manner to the satisfaction of the Engineer, to the dimensions and details shown on the plans, or approved by the Engineer.

The fountain drain shall be located to drain to the existing drain field or an approved ditch as directed by the Engineer.

The concrete base shall be constructed as shown on the plans or as directed by the

Engineer. The concrete will be paid for under separate pay item for that class of concrete.

- F. Trash Receptacle. The trash receptacle shall be installed on and secured to a square concrete pad 4 inches thick, with outside dimensions 6 inches greater than the width of the trash receptacle, in locations designated by the Engineer.

The excavation when required to place the trash receptacle into the ground shall be disposed of as directed by the Engineer.

The concrete shall be placed and finished to match the adjacent sidewalk. On locations adjacent to existing sidewalks, top of concrete pad for the receptacle shall meet flush with existing walk. Slope elevation of pads no more than 1/8 inch per foot in order that water will not stand.

The method to secure the trash receptacle to the concrete pad shall be submitted to the Engineer for approval.

- G. Water Hydrant. The water hydrant shall be installed in accordance with the manufacturer's written instructions and the drawings.

- H. Cast Stone Bench. The cast stone benches shall be a similar design and size as shown on the plans (submit brochures or shop drawings).

The benches shall be secured to the sidewalk or bench pad in an approved manner with epoxy cement or other approved cement, to the satisfaction of the Engineer.

- I. Travel Trailer Sewage Dump Station. The travel trailer sewage dump station shall be constructed by skilled plumbers, concrete finishers, and workmen in an approved manner to the satisfaction of the Engineer, to the details and dimensions shown on the plans.

- J. Sign (Masonry and Stone), Pavilion, and Survey Monument.

The excavation required to place the sign, pavilion, and survey monument into the ground shall be disposed of as directed by the Engineer.

The concrete base shall be constructed as shown on the plans or as directed by the Engineer. The placing and fastening of reinforcement shall conform to Subsection 805.05.

Concrete Masonry Unit and Brick construction shall be in accordance with Section 611, and to the satisfaction of the Engineer.

Set precast architectural concrete panels straight, plumb, level, and square. Clean exposed facings to remove dirt and stains which may be on the units after erection and completion of joint treatments. Wash and rinse in accordance with precast

manufacturer's recommendations. Protect other work from damage due to cleaning operations. Do not use cleaning materials or processes which could change the character of exposed concrete finishes.

Attach letters and symbols in accordance with the drawings, approved shop drawings, and to the satisfaction of the Engineer.

Construct pavilion and survey monument straight, plumb, level, and square, in accordance with the drawings and to the satisfaction of the Engineer. Grind welds smooth prior to painting/ coatings application.

- K. Bollard. Construct plumb and in accordance with the drawings to the satisfaction of the Engineer. Grind welds smooth prior to painting/ coatings application.

907-258.04--Method of Measurement. Miscellaneous rest area facilities, constructed and complete in accordance with the requirements of the contract, and accepted, will be measured by the unit quantity per each.

A unit of concrete picnic tables and benches shall consist of one table, two benches, the concrete slab shall be as indicated on the plans.

A unit of wooden picnic tables shall consist of one table with benches, and the devices to secure the table when required.

A unit of metal benches shall consist of one bench, and the devices to secure the bench when required.

A unit of cast stone bench shall consist of one bench seat and three bench supports.

A unit of travel trailer sewage dump station shall consist of one tower, one drain, signs and concrete as shown in the plan details.

A unit of sign (masonry and stone) shall consist of all concrete, steel, masonry elements, letters, as symbols shown on the plans.

A unit of drinking fountain shall consist of all concrete, steel, masonry elements, piping, plumbing elements, and drains as shown on the plans.

A unit of pavilion and survey monument shall consist of concrete (not including sidewalk), steel (painted), metal roof, masonry elements, granite, re-location of survey monument, and display panel as applicable and as shown on the plans.

A unit of charcoal grill shall consist of the grill complete with steel post and concrete footing, located where shown on the plans and installed in accordance with manufacturer's directions.

A unit of water hydrant shall consist of the hydrant complete with connection to water supply, piping, cut off valve, drain and drain line (where shown), and concrete footing, located where shown on the plans and installed in accordance with manufacturer's directions.

A unit of bollard shall consist of steel pipe with finial, and concrete for footing and infill, as shown on the plans.

Separate measurement for excavation and other individual items will not be made, it being understood that the cost thereof is included in one contract price bid per complete items.

907-258.05--Basis of Payment. Charcoal grills, drinking fountains, concrete picnic tables and benches, wooden picnic tables, trash receptacles, water hydrants, travel trailer sewage dump station, sign (masonry and stone), cast stone benches, pavilion, survey monument, and bollard, each unit shall be paid for at the contract unit price bid per each, which price shall be full compensation for furnishing all materials and supplies; for performing all work necessary for each completed unit; and for all equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-258-A: Charcoal Grill	- per each
907-258-B: Drinking Fountain	- per each
907-258-C: Concrete Picnic Table and Benches	- per each
907-258-D: Wooden Picnic Table and Benches	- per each
907-258-E: Trash Receptacle	- per each
907-258-F: Water Hydrant	- per each
907-258-G: Travel Trailer Sewage Dump Station	- per each
907-258-H: Cast Stone Bench	- per each
907-258-I: Sign, Masonry and Stone	- per each
907-258-J: Metal Bench	- per each
907-258-K: Bollard	- per each
907-258-L: Pavilion	- per each
907-258-M: Survey Monument	- per each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-259-1

CODE: (SP)

DATE: 06/04/2004

SUBJECT: Site Amenities

PROJECT: STP-0010-01(093) / 103316 -- Jackson County

Section 907-259, Site Amenities, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction.

SECTION 907-259 -- SITE AMENITIES

907-259.01--Description. This item shall consist of installing unlighted and lighted bollards, flag pole lights, sign lights and column uplights, each complete in place, in accordance with these Specifications and in reasonably close conformity with the locations, lines, grades, configurations, dimensions and other requirements shown on the plans or established.

907-259.02--Materials.

A. General. Unless otherwise stipulated, the materials used in this construction, in addition to the general requirements of these specifications and the plans, shall conform to the provisions and requirements prescribed in the sections of the Standard Specifications for the several items which constitute the complete structure.

All items will require approval by the Engineer from the manufacturer. Submit six (6) copies of brochures or shop drawings for approval prior to ordering manufactured items. Other items may require testing as directed by the Engineer.

B. Unlighted Bollard.: Bollards shall be the Charleston Model Number B01/CH44/12/DTL-CA DB/DBB, as manufactured by Holophane or approved equal.

C. Lighted Bollards: Bollards shall be Charleston Model Number BOL/CH44/12/DT/L-CA/DB/S100/208-PEC2-DBB, , as manufactured by Holophane or approved equal.

D. Flag Pole Lights: Bollards shall be Model Number DF7-SP(W/ST) – HFL 250 HPS-208-BRP as manufactured by GARDCO or approved equal.

E. Sign Lights: Sign lights shall be Model Number DF7-SP(W/ST) – HFL-175-208-BRP as manufactured by GARDCO or approved equal.

F. Fluorescent Light @ Kiosk: Fluorescent lights (2'x4"-2 lamp) shall be Model Number SWN 232 120 ½ LT as manufactured by DAY-BRITE or approved equal.

G. Weatherproof GFCI Receptacle: Commercial specification grade 20A 125V GFCI receptacle(s) shall be as manufactured by Hubbell or approved equal. Color shall be black and verified with Architect.

907-259.03--Construction Requirements. The Contractor shall provide and install site amenities in accordance with the drawings, special provisions, and the standard specifications. All work shall be performed in a good workmanlike manner, to the satisfaction of the Engineer.

907-259.04--Method of Measurement. Site Amenities of the type specified, constructed and complete in accordance with the requirements of the contract, will be measured by the unit quantity per each.

907-259.05--Basis of Payment. Uplighted bollards, lighted bollards, flag pole lights, sign lights and column lights shall be paid for at the contract unit price bid per each, which price shall be full compensation for furnishing all materials and supplies; for performing all work necessary for each completed unit; and for all equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-259-A: Lighting Assembly, Nonlighted Bollard	- per each
907-259-B: Lighting Assembly, Bollard	- per each
907-259-C: Lighting Assembly, Flag Pole Lighting	- per each
907-259-D: Lighting Assembly, Sign Lighting	- per each
907-259-E: Lighting Assembly, Kiosk	- per each
907-259-F: Weatherproof GFCI Receptacle	- per each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-282-1

CODE: (SP)

DATE: 05/11/2004

SUBJECT: Irrigation System

Section 907-282, Irrigation System, is hereby added to and made a part of the 2004 Edition of the Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-282 -- IRRIGATION SYSTEM

907-282.01--Description. Lawn and shrub bed irrigation systems shall be constructed to the grades and conforming to the areas and locations shown on the plans.

Irrigation lines shown on the plans are essentially diagrammatic. Specific locations of equipment shall be established by the Contractor at the time of construction. Exceed spacing of heads as shown on the plans only with the permission of the Engineer.

907-282.01.1--Irrigation Operations. Irrigation operations shall be performed by a firm having a minimum of two consecutive years experience in this area of work and having installed other jobs of similar size and scope. Contractor shall provide a minimum of three references and a list of similar projects with the Client's names, addresses, and telephone numbers, when requested by the Engineer.

907-282.01.2--Field Investigations: The Contractor shall visit the job site and become familiar with the nature and location of the work, existing conditions, and other conditions that will be obligated to operate in the performance of the work.

907-282.01.3--Substitutions and Submittals. Substitutions shall be made only with the written approval of the Engineer. Substitutions will not be considered prior to opening of bids. Substitution of an irrigation head shall be accompanied by a Contractor prepared piping diagram noting pipe sizes, pressure loss calculations, and head locations necessary to achieve the desired watering provided by the system as designed.

The Contractor shall submit seven copies of manufacturer's product data of materials specified herein for review and approval by the Engineer.

907-282.01.4--Department's Instruction and Maintenance Data. General: The Contractor shall furnish the following instructions and maintenance data. Final Acceptance will not be made until the Work has been reviewed and approved by the Engineer.

- 1) As-built plans: Two sets, noting exact locations of elements and changes to the plans in red.

- 2) Operation Manual: Two copies, bound in 1-inch diameter three ring binders, indexed and tabbed for easy reference, and labeled on spine and cover. Manual to include:
 - A. Approved submittals,
 - B. Installation instructions, including mounting details for control valves.
 - C. Operating Instructions, including winterization procedures, recommended operation sequence, frequency, and length of operation cycle, as per relationship to estimated absorption rate, evaporation rate and anticipated GPM.
 - D. Maintenance Instructions: Items requiring manufacturer's product data and installation instructions. Complete warranty information, mail to manufacturer, and provide copies to the Department.
- 3) Extra Stock: In addition to the installed system, provide one sprinkler head of each size and type, one valve key (per valve) for operating manual valves, one key per valve box, two wrenches for each type of head cover, and two wrenches for removing and installing each type of head.

907-282.02--Materials.

907-282.02.1--General: Materials shall be new and without flaws or defects, and of quality and performance as specified. Overages at completion are property of the Contractor, and are to be removed from the site.

Materials and equipment specified by "Proprietary Specification" as manufactured by a particular company, etc., shall be for the express purpose of establishing minimum acceptable performance requirements. Acceptable manufacturers shall include:

- A. The Toro Company - Irrigation Division
- B. Rain Bird Sales, Inc. - Turf Division
- C. Hunter Irrigation

The provision of providing other acceptable manufacturer's as potential substitutions shall not disregard the requirements of paragraph Subsection 907-282.01.3.

907-282.02.2--Delivery and Storage. Damaged materials will not be accepted. Any packaged materials shall be delivered to the site in the original, unopened containers. Materials delivered to site prior to actual usage shall be stored in a place not to interfere with other trades or construction operations and protected from damage by weather or other elements as needed.

907-282.02.3--Pipe and Pipe Fittings.

907-282.02.3.1--Plastic Piping. Plastic pipe shall be Class 160 SDR 26 - ASTM D2241 Polyvinyl Chloride (PVC) pipe NSF approved. Pipe up to and including 2½ inches in diameter shall have bell and socket joints. Pipe greater than 2½ inches in diameter shall have snap connections with rubber gasket joints.

907-282.02.3.2--Sleeves. Sleeves shall be of the size noted on the plans, and shall be schedule 40 PVC pipe.

907-282.02.3.3--Plastic Fittings and Risers. Plastic fitting and risers shall be Schedule 40 or Schedule 80 PVC. Risers above finished grade shall receive two coats of black exterior semi-gloss enamel paint.

907-282.02.3.4--PVC Solvent Cement. PVC solvent cement shall meet the requirements of ASTM Designation: D 2564.

907-282.02.3.5--Polyethylene Pipe and Fittings. Polyethylene pipe and fittings shall be installed between supply lines and heads. Thick wall, flexible, polyethylene pipe, with fittings that have male barbs on one end and either male or female screw ends opposite shall be used. Glue fittings and female barb adapters shall not be allowed. Pipe and fittings shall be Toro Funny Pipe and Fittings as manufactured by Toro-Irrigation Division, Riverside, California, or an approved equal.

907-282.02.4--Valves.

907-282.02.4.1--Electric Control Valves. Electric control valves shall be PEB Series as manufactured by Rain Bird Sprinkler Mfg. Corp., Glendora, California, or approved equal.

Water-tight connectors shall be provided using Scotch Lock or Rain Bird Snap Tight connectors with sealant for wiring connections at electric valves.

Valve box for electric valves shall be the 12-inch Standard Box with snap lock cover as manufactured by Ametek, Plymouth Products Division, Sheboygan, WI 53082, or an approved equal.

907-282.02.4.2--Quick Couplers. Quick couplers, each with Key and Hose Swivel, shall be the 44 Series Coupler and Coupler Key, and SH series swivel hose connector, as manufactured by Rain Bird Sprinkler Mfg. Corp., Glendora, CA, or approved equal.

Quick couplers shall be installed inside a valve box as noted on the plans.

907-282.02.4.3--Isolation Valves. Gate valves shall be manufactured in accordance with AWWA C500 and shall have a rated water working pressure of 200 PSI. Gate valves shall be iron body, bronze mounted, double disc, parallel seat, non-rising stem type. Each valve shall have "O" ring type stem seal, standard 2-inch AWWA square operating nut, and shall be opened by COUNTER-CLOCKWISE stem rotation. Except where otherwise specified, indicated, or required for the application involved, gate valves ends shall be AWWA Specification C111 mechanical joint type, with plain rubber gaskets. Gate valves shall be manufactured by Waterous, Clow, or an approved equal.

One (1) key for every three valves installed shall be provided.

With each valve, install a valve box which shall be standard cast iron two-piece 5¼-inch inside shaft diameter screw adjustable type, consisting of a cover marked "WATER", and upper telescoping section, and a lower section. Where necessary to provide extra depth, provide cast iron extension pieces as required.

907-282.02.5--Sprinkler Heads.

907-282.02.5.1--Full or Part Circle Pressure Regulating Pop-Up Fixed Spray Sprinkler.

These sprinklers shall be 1800 Series sprinklers with pressure regulators and nozzles as manufactured by Rain Bird Sprinkler Mfg. Corp., Glendora, California, or approved equal.

907-282.02.5.2--Full or Part Circle Pop-up Gear Driven Rotor Sprinkler. These sprinklers shall be R-50 and 3500 Series sprinklers with the Seal-A-Matic anti-drainage check valve feature (SAM) as manufactured by Rain Bird Sprinkler Mfg. Corp., Glendora, California, or approved equal.

907-282.02.6--Control Wire. Control Wire and common wire shall be a minimum AWG 14 size, copper wire suitable for direct burial.

907-282.02.7--Low Point Drains. Low-point drains shall be an Automatic Valve model number 290-02 as manufactured by Toro, or an approved equal. The Contractor shall provide two drains at the lowest points of each zone, with each atop an 8-inch by 8-inch by 8-inch area of coarse gravel.

907-282.02.8--Automatic Controller. Automatic controllers shall be a Model ESP-LX+ controller with lockable cabinet, as manufactured by Rain Bird Sprinkler Mfg. Corp., Glendora, California, or approved equal. With each controller, the Contractor shall provide one Automatic Rain/ Freeze Switch, the Mini-Click 2 Rain Sensor #502, as manufactured by Glen Hilton, or approved equal.

907-282.03--Construction Requirements.

907-282.03.1--Pressure/ Flow Test. Immediately after installation of meters, and before installing pipe, the Contractor shall test and provide written results to the Engineer of the static pressure, dynamic pressure, and gallons per minute. Tests shall be performed at the beginning tap or meter and note as such on the written results.

The Contractor shall receive approval from the Engineer to proceed with construction along with proposed revisions (if required due to test results) prior to installation.

907-282.03.2--Execution and Trenching. Trenches shall be excavated to pipe grade depth. The width of trench shall be at least 3 1/2 inches. Any over-excavation shall be backfilled and hand tamped prior to installing piping. In soils containing rock or other hard material that may

damage the pipe, the trench shall be excavated deeper than required and backfilled to pipe grade with selected fine earth or sand. The trenches shall be kept free of obstructions and debris that would damage pipe.

More than one pipe may utilize the same trench, however, pipe arrangement in the trench shall remain continuous throughout the run of pipe/ trench and the amount of cover shall not be reduced to accommodate additional pipe.

907-282.03.3--Piping System.

907-282.03.3.1--Cover. Pipe system cover shall be as follows:

Lawn and planting areas:	14 inches below finish grade
Roadways:	36 inches below finish grade
Parking areas:	24 inches below finish grade

907-282.03.3.2--Clearances. A minimum 1-inch vertical clearance shall be maintained between lines crossing at an angle greater than 45 degrees.

907-282.03.4--Piping Erections.

907-282.03.4.1--Threaded Plastic Pipe. Do not use solvent cement on threaded joints. Threaded joints are to be wrapped with Teflon tape. When threaded pipe is used, material shall be Schedule 80 PVC.

907-282.03.4.2--Cemented Joints for PVC Bell End Pipe and PVC Pipe with Socket Fittings. These joints shall meet the requirements of ASTM Designation: D 2855.

907-282.03.5--Valves. Values shall be installed plumb to within 1/16 inch. Scotch Lock connectors shall be installed to wiring in accordance with the manufacturer's written instructions. A 2-foot section, beginning at the Scotch Lock connection, is to be wrapped around a minimum 1/2-inch diameter pipe to protect against electrical surges from lightning..

907-282.03.6--Sprinklers. Sprinklers shall be installed plumb to within 1/16 inch. Heads along walks and curbs shall be set flush to within 1/8 inch. Other heads shall be set as per details and plans.

907-282.03.7--Control Wire. Control wire shall be buried in the same pipe trench, and bundle and tape together at not more than 10-foot intervals.

907-282.03.8--Backfill: Do not backfill until system, or that portion thereof, has been tested and approved. Trench shall be filled to within three inches of top with excavated soil and water to compact soil. Fill the top three inches of the trench with existing topsoil in planting areas and wheel roll until compaction of backfill is same as surrounding soil.

907-282.03.9--Electrical Connections. Electrical connections shall be in strict accordance with the latest edition of the National Electrical Code. Contractor shall provide the electrical connection to the system as designated on the plans and as specified herein. Splices to electrical wire between the controller to valves or power supply shall be made within watertight junction boxes.

907-282.03.10--Automatic Controller. Location and installation of the automatic controller shall be as per plans, and approved by Engineer prior to installation.

Rain-Freeze device shall be located where approved by the Engineer.

907-282.03.11--Flushing. Following installation of piping, risers and valves, but prior to installation of sprinkler heads, the piping system shall be thoroughly flushed under a full head of water. Flushing shall continue for three minutes through the furthestmost valve. After flushing, the risers shall be capped.

907-282.03.12--Testing. The tests shall be performed in the presence of the Engineer.

907-282.03.12.1--Pressure Test. The Contractor shall hydrostatically test the main piping system between meter and valves in place prior to backfilling. A minimum pressure of 50 PSI shall be maintained without pumping for period of one hour. The test shall be considered acceptable if no leakage or loss of pressure is evident during test period. Any leaks shall be repaired. Retests shall be performed until test pressure can be maintained for duration of test. It is assumed that a water supply with a 50-PSI pressure is available on site, wherein no mechanical pumping equipment is required.

907-282.03.12.2--Operation Test. At the conclusion of pressure test, sprinkler heads shall be installed and entire system tested for operation under normal operating pressure. Heads shall be adjusted as noted on plans. The entire system shall then be retested. Test is acceptable if the system operates in a satisfactory manner, with uniform coverage of areas to be irrigated.

907-282.03.13--Guarantee. The Work shall be guaranteed for one year from date of final acceptance against defects in material, equipment and workmanship. The Contractor shall repair damage to the premises resulting from leaks or other defects in material, equipment and workmanship to the satisfaction of the Department. Repairs, if required, shall be done promptly at no cost to the Department.

907-282.03.14--Final Acceptance. Final acceptance shall be in accordance with Section 105 of the Standard Specifications.

907-282.04--Method of Measurement.

907-282.04.1--Sprinkler Heads. Sprinkler heads, accepted in place, will be measured per each for the type of head specified, including nozzle.

Excavation, fittings to lateral pipe including risers, if necessary, adjustment of spray pattern, setting to proper grade, and backfilling, will not be measured for separate payment.

907-282.04.2--Piping. Piping, as noted on the plans and as adjusted by the Contractor in the field, will be measured per linear foot for each size specified.

Miscellaneous fittings, PVC cleaner and glue, and operations necessary to fit and contour pipe to the trench will not be measured for separate payment.

907-282.04.3--Sleeves. Sleeves, as noted on the plans and as adjusted by the Contractor in the field, will be measured per linear foot for each size specified.

Boring under existing pavement, miscellaneous fittings, PVC cleaner and glue, and operations necessary to install the sleeves will not be measured for separate payment.

907-282.04.4--Valve Control Wire. Valve control wire, as needed for power supply and control of the electric control valves from the electric controllers, shall be measured per linear foot.

Miscellaneous fittings, water-tight junction boxes, if necessary, and curling of wire at valves will not be measured for separate payment.

907-282.04.5--Trench Excavation and Backfill. Trench excavation and backfill, as needed for piping and wiring, will be measured per linear foot.

Depth or width of trench will not be considered for separate payment.

907-282.04.6--Meter with Meter Box. Meters with meter box, complete and in place, will be measured per each.

Connection to existing tap, cut off valves, meter deposit, or backfilling will not be measured for separate payment.

907-282.04.7--Electric Controller. Electric controllers, complete and in place, will be measured per each.

Connection to power supply, installation of rain-freeze switch, rigid galvanized conduit above grade with straps, ground rod and ground wire will not be measured for separate payment.

907-282.04.8--Electric Control Valve, Isolation Valve, and Quick Coupler Valve. Electric control valves, isolation valves, and quick coupler valves, complete and in place, will be measured per each.

Excavation, installation of valve box, backfilling, scotch lock protectors, and connection to valve wiring will not be measured for separate payment.

907-282.05--Basis of Payment.

907-282.05.1--Sprinkler Heads. Accepted quantities for each type of sprinkler head will be paid for at the contract unit price per each. Prices paid shall be full compensation for completing the work.

907-282.05.2--Piping and Sleeves. Accepted quantities for each size of piping will be paid for at the contract unit price per linear foot. Prices paid shall be full compensation for completing the work.

907-282.05.3--Valve Control Wire and Trench Excavation and Backfill. Accepted quantities for valve control wire and trench excavation and backfill will be paid for at the contract unit price per linear foot. Prices paid shall be full compensation for completing the work.

907-282.05.4--Meter with Meter Box, Electric Controller, Electric Control Valve, Isolation Valve, and Quick Coupler with Key and Hose Swivel: Accepted quantities for meter with meter box, electric controller, electric control valve, isolation valve and quick coupler will be paid for at the contract unit price per each. Prices paid shall be full compensation for completing the work.

Payment will be made under:

907-282-A: Sprinkler Head, <u>Type</u>	- per each
907-282-B: Piping, <u>Size</u>	- per linear foot
907-282-C: Sleeves <u>Size</u>	- per linear foot
907-282-D: Valve Control Wire	- per linear foot
907-282-E: Trench Excavation and Backfill	- per linear foot
907-282-F: Meter with Meter Box, <u>Size</u>	- per each
907-282-G: Electric Controller, <u>Type</u>	- per each
907-282-H: Electric Control Valve, <u>Size</u>	- per each
907-282-I: Isolation Valve, <u>Size</u>	- per each
907-282-K: Quick Coupler with Key and Hose Swivel	- per each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-288-1

CODE: (SP)

DATE: 06/04/2004

SUBJECT: Site Grading

PROJECT: STP-0010-01(093) / 103316 - - Jackson County

Section 907-288, Site Grading, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-288 -- SITE GRADING

907-288.01--Description. This work shall consist of grading, shaping, excavating, filling, and dressing around the completed facilities and other areas within the site as specified or as deemed necessary by the Engineer to provide a pleasing appearance and adequate drainage.

Ordinarily under this specification, site grading, no more than two feet of excavating and filling will be required.

907-288.02--Blank.

907-288. 03--Construction Requirements.

907-288.03.1--Equipment. Equipment used shall be approved tractors conforming to Subsection 108.05 and capable of performing the work in an approved manner to the satisfaction of the Engineer. The equipment shall be of the type to provide a smooth, uniform finish to the surface of the ground when finish grading is performed without leaving undesirable track or other equipment marks on the finished ground.

907-288.03.2--Construction Methods. At the earliest practical time, as determined by the Engineer, this work shall proceed, provided favorable soil moisture conditions exist for construction.

On areas specified or determined by the Engineer to receive topsoil, appropriate adjustment shall be made during the grading and dressing operation such that the finished section after placing the topsoil will conform to typical section shown on the plans or established by the Engineer. Immediately following the grading and dressing of the areas to receive topsoil, the Contractor shall spread the topsoil on all such areas as directed by the Engineer.

Areas within the site required by the Engineer to be site graded only shall be graded, shaped, and dressed meeting the approval of the Engineer.

The planting of the vegetation as required and in accordance with the contract shall follow

immediately on the topsoil, if specified, and site graded areas.

Desirable vegetation including trees shall not be damaged or destroyed by the Contractor's operations.

907-288.04--Method of Measurement. Acceptable areas of site grading will be measured by the square yard.

907-288.05--Basis of Payment. Site grading, measured as prescribed above, will be paid for at the contract unit price bid per square yard, which price shall be full compensation for the necessary grading, shaping, excavating, filling, and dressing all materials within the limits of the work necessary for properly grading the site, and for completing all incidentals thereto, and for all equipment, tools labor, supplies, and incidentals necessary to complete the work.

Payment will be made under:

907-288-A: Site Grading - per square yard

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-304-1

CODE: (SP)

DATE: 06/10/2004

SUBJECT: Crushed Stone Granular Material

Section 907-304, Granular Courses, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-304.02--Materials. After the first paragraph of Subsection 304.02.1 on page 183, add the following:

Gradation requirements for crushed stone granular material shall meet the following:

Percent By Weight Passing Square Mesh Sieves

Sieve Size	Percent Passing by Weight
1 1/2 inch	100
1 inch	90 - 100
1/2 inch	62 - 90
No. 4	30 - 65
No. 10	15 - 40
No. 200	3 - 16

Granular material, RAP shall be milled recycled asphalt pavement and shall be visually inspected by the Engineer to insure it is free from chunks and deleterious materials. Unless otherwise specified, density shall be achieved by two passes of an approved roller and density tests will not be required.

907-304.05--Basis of Payment. Add the "907" prefix to pay items 304-D and 304-E on page 187.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-611-2

CODE: (SP)

DATE: 05/12/2004

SUBJECT: Unit Pavers

Section 611, Brick Masonry, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as amended by this special provision is applicable to Unit Pavers Only.

907-611.01--Description. This work shall consist of providing and installing unit pavers upon a structural granular base and sand leveling bed, complete, with the locations, grades, lines, configurations, dimensions and other requirements shown on the plans or established in the field.

907-611.02--Materials.

907-611.02.1--General. All materials used in this construction shall be approval by the Engineer. The Contractor shall submit six (6) copies of brochures and color charts for approval prior to ordering manufactured items. Other items may require testing as directed by the Engineer.

907-611.02.2--Granular Material. Granular material shall be Class 3 Group C granular material conforming to the requirements of the Standard Specifications.

907-611.02.3--Sand Laying Course. Sand for bedding and joints shall conform to ASTM Designation: C 33 meeting the following requirements.

<u>Sieve Size</u>	<u>Percent Passing</u>
3/8 inch	100
No. 4	95 to 100
No. 8	85 to 100
No. 16	50 to 85
No. 30	25 to 60
No. 50	10 to 30
No. 100	2 to 10

907-611.02.4--Unit Pavers. Materials shall meet the following requirements: Average compressive strength exceeding 8,000 psi; Average absorption rate of less than 5 percent; and minimum 2-3/8 inch thickness. Pattern, size, and texture shall be as noted on the drawings. Color shall be selected by the Engineer, however, pigment in pavers shall conform to ASTM Designation: C 979. Pavers used for handicap ramps shall have truncated domes as required by the Americans with Disabilities Act (ADA). Pavers shall be as manufactured by Pavestone Company, Austin, TX, or approved equal.

Sand swept in between pavers on handicap ramps shall be treated with Surebond SB-1370 Joint Sand Stabilizer/ Masonry Sealer, as manufactured by Surebond East, Camden NC 27921, or approved equal.

907-611.02.5--Concrete Band. Concrete bands shall meet the following requirements:

Class B Concrete shall conform to the requirements of the Standard Specifications.

Expansion Joint shall be 1/2-inch thick bituminous fiber expansion joint material, ASTM Designation: D 1751, or Preformed Asphaltic Expansion Joints conforming to the Standard Specifications for Preformed Expansion Joint Fillers for Concrete (Nonextruding and Resilient Types) AASHTO Designation: M 213 for bituminous types.

907-611.02.6--Sealant. The sealant shall be a clear, waterproofing and stain repellant sealant, manufactured for application on unit pavers. The Contractor shall submit six (6) copies of literature for approval prior to ordering the sealant. The sealant shall not reduce the abrasion (traction) capabilities of the unit pavers.

907-611.03--Construction Requirements.

907-611.03.1--Examination. The Contractor shall verify that the substrate is level, smooth, capable of supporting pavers and imposed loads, and ready to receive work of this Special Provision. The Contractor shall verify that the gradients and elevations of the substrate are correct.

907-611.03.2--Granular Material Base. The Contractor shall construct the base to the grades and in the thickness required as delineated on the drawings and in accordance with the Standard Specifications.

907-611.03.3--Sand Laying Course. Sand shall be spread to a maximum depth of one inch. The sand mix shall be compacted to a 95% standard proctor density. The course shall serve as the leveling bed for the pavers; however, elevations should be +1/4 inch to allow for final rolling/compaction following installation of pavers.

907-611.03.4--Unit Pavers. The Contractor shall perform the following items of work:

Install paver units in the pattern as noted on the drawings, from straight reference edge, with hand tight joints and uniform top surface.

Place half units, special shaped or cut units, and pre-cast units at edge and interruptions. Maintain tight evenly spaced joints. Make lines true to intended paving geometry.

Maximum Joint Gap: 1/8 inch. Leave open throughout installation.

Upon completion of installation uniformly tamp, or roll, pavers to required grade.

Sprinkle sand over surface, sweep into joints and moisten. Top of finished joint shall be 1/2 inch below paver. Secure sand in handicap ramps with joint sand stabilizer/ masonry sealer in strict accordance with the manufacturer's written instructions.

Apply clear sealant to pavers and elastomeric joint material at the appropriate time(s) that work will not be damaged by paver finishing operations. Materials shall be installed in strict accordance with the manufacturer's written instructions.

907-611.03.5--Protection of Finished Work. The Contractor shall not permit traffic over unprotected paver surface. The paver surface shall be protected with a layer of excess sand, sheets of plywood sheathing, or other method acceptable to the Engineer.

907-611.03.6--Cleaning. Soiled surfaces shall be cleaned using a cleaning solution; Do not harm pavers, joint materials, or adjacent surfaces. Non-metallic tools shall be used in cleaning operations. Surfaces shall be rinsed with clean water. Paving surfaces shall be broom cleaned. Excess sand shall be disposed of properly.

907-611.04--Method of Measurement. Unit Pavers, complete in place and accepted, will be measured by the square foot.

Concrete Band, complete in place and accepted, will be measured by the linear foot.

Costs associated with excavation required for granular material and concrete band, granular material, and sand laying course will not be measured for separate payment.

907-611.05--Basis of Payment. Unit Pavers shall be paid for at the contract unit price bid per square foot, which price shall be full compensation for furnishing all materials and supplies; for performing all work necessary for each completed unit; and for all equipment, tools, labor and incidentals necessary to complete the work.

Concrete Band shall be paid for at the contract unit price bid per linear foot, which price shall be full compensation for furnishing all materials and supplies; for performing all work necessary for each completed unit; and for all equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-611-D: Unit Pavers - per square foot

907-611-E: Concrete Band - per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-626-4

CODE: (SP)

DATE: 06/10/2004

SUBJECT: Thermoplastic Markings

Section 626, Thermoplastic Traffic Markings, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-626.02--Materials. After the first paragraph of Subsection 626.02.1 on page 443, add the following:

Blue-ADA thermoplastic marking material shall meet the requirements of Subsection 720.02 with the exception that the color shall be blue-ADA.

907-626.04--Method of Measurement. After the last paragraph of Subsection 626.04 on page 446, add the following:

Thermoplastic Legend, Handicap Symbol of the color specified will be measured per each as determined by actual count in place.

907-626.05--Basis of Payment. Delete the first sentence under Subsection 626.05 on page 446 and substitute the following:

Thermoplastic traffic markings will be paid for at the contract unit price per mile, linear foot, square foot or each, as applicable, which shall be full compensation for completing the work.

Add the following pay items after pay item 626-G on page 446.

907-626-G: Thermoplastic Detail Stripe, Blue-ADA	- per linear foot
907-626-H: Thermoplastic Legend, Blue-ADA	- per square foot
907-626-H: Thermoplastic Legend, Handicap Symbol, <u>Color</u>	- per each

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 of 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 Contract 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 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.

SECTION 905 -- PROPOSAL (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 05/17/2004

SECTION 905

PROPOSAL (Sheet No. 2- 1)

CONSTRUCTION NECESSARY FOR SITE IMPROVEMENTS TO THE JACKSON COUNTY WELCOME CENTER, KNOWN AS FEDERAL AID PROJECT NO. STP-0010-01(093) / 103316, IN THE COUNTY OF JACKSON, 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		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
DIRECT PAY ITEMS									
(10)	201-B		6 acre		Clearing and Grubbing				
(20)	202-A		lump sum		Removal of Obstructions	XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
(30)	202-B		958 linear foot		Removal of Curb, All Types				
(40)	202-B		398 square yard		Removal of Concrete Pavement, All Depths				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 2)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(50)	202-B		1,231 square yard		Removal of Concrete Sidewalk				
(60)	202-B		9 each		Removal of Trees, Less Than or Equal to 10 inches				
(70)	203-EX	(E)	907 cubic yard		Borrow Excavation, AH, LVM, Class B9				
(80)	203-G	(E)	599 cubic yard		Excess Excavation, LVM, AH				
(90)	211-B	(E)	70 cubic yard		Topsoil for Slope Treatment, Contractor Furnished				
(100)	211-C	(E)	30 cubic yard		Topsoil for Plant Holes, Contractor Furnished				
(110)	211-D	(E)	342 cubic yard		Topsoil for Plant Pits, Contractor Furnished				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 3)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(120)	212-B		14,452 square yard		Standard Ground Preparation				
(130)	213-B		4 ton		Combination Fertilizer, 13-13-13				
(140)	213-B		1 ton		Combination Fertilizer, 8-8-8				
(150)	213-C		1 ton		Superphosphate				
(160)	213-D		1 ton		Ammonium Nitrate				
(170)	214-A		5 acre		Seeding, Bermudagrass				
(180)	214-A		400 pound		Seeding, Annual Ryegrass				

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 4)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(190)	215-A			5 ton	Vegetative Materials for Mulch				
(200)	216-B			253 square yard	Solid Sodding, Centipede				
(210)	217-A			180 square yard	Ditch Liner				
(220)	221-A	(S)		39 cubic yard	Portland Cement Concrete Paved Ditch				
(230)	907-222-A			2 acre	Wildflower Seeding				
(240)	230-A			7 each	Shrub Planting, Dwarf Yaupon Holly				
(250)	230-A			4 each	Shrub Planting, Sasanqua Camellia Red				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 5)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(260)	230-A		84 each		Shrub Planting, Indian Hawthorn				
(270)	230-A		222 each		Shrub Planting, Kurume Azalea 'Red'				
(280)	230-A		699 each		Shrub Planting, Little Leaf Boxwood				
(290)	230-A		27 each		Shrub Planting, Pittosporum				
(300)	230-A		14 each		Shrub Planting, Fountain Grass				
(310)	230-A		29 each		Shrub Planting, Possumhaw Holly				
(320)	230-A		147 each		Shrub Planting, Crimson Fountain Grass				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 6)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(330)	230-A		41 each		Shrub Planting, Gumpo Azelea				
(340)	230-A		14 each		Shrub Planting, Baby's Breath Spirea				
(350)	230-A		24 each		Shrub Planting, Maiden Grass				
(360)	230-A		3 each		Shrub Planting, Dwarf Palmetto				
(370)	230-A		23 each		Shrub Planting, Vanhoutte Spirea				
(380)	230-A		3,866 each		Shrub Planting, Asiatic Jasmine				
(390)	230-A		3,447 each		Shrub Planting, Lilac Beauty Liriope				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 7)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(400)	230-A		1,123 each		Shrub Planting, Silvery Sunproof Liriope				
(410)	230-A		128 each		Shrub Planting, Parsoni Juniper				
(420)	230-B		14 each		Tree Planting, Willow Oak				
(430)	230-B		7 each		Tree Planting, Water Oak				
(440)	230-B		5 each		Tree Planting, Live Oak				
(450)	230-B		6 each		Tree Planting, Southern Red Oak				
(460)	230-B		4 each		Tree Planting, Common Bald Cypress				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 8)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(470)	230-B		14 each		Tree Planting, Dahoon Holly				
(480)	230-B		12 each		Tree Planting, American Holly				
(490)	230-B		20 each		Tree Planting, Crape Myrtle				
(500)	230-B		14 each		Tree Planting, Saucer Magnolia				
(510)	230-B		24 each		Tree Planting, Star Magnolia				
(520)	230-B		3 each		Tree Planting, Sweetbay Magnolia				
(530)	907-230-C		340 linear foot		Bed Edging				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 9)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(540)	907-230-D		23,000 square foot		Bed Preparation				
(550)	907-230-E		215 cubic yard		Type V Mulch				
(560)	232-A		1 M		Fertilizer for Woody Plant Material, Tablet, 21 gram				
(570)	232-A		6 M		Fertilizer for Woody Plant Material, Tablet, 10 gram				
(580)	233-A		106 cubic yard		Tree Bark Mulch, Type I				
(590)	234-A		1,786 linear foot		Temporary Silt Fence				
(600)	235-A		12 bale		Temporary Erosion Checks				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 10)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(610)	907-236-PP			2 each	Silt Basin, Type A Modified				
(620)	907-242-A			lump sum	Guardhouse	XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
(630)	907-243-A			48 each	Landscape Mowing				
(640)	907-244-A			8 each	Tree Pruning, Greater Than 8 inches to 16 inches				
(650)	907-258-E			6 each	Trash Receptacle				
(660)	907-258-F			4 each	Water Hydrant				
(670)	907-258-F			1 each	Lighting Assembly, Sign Lighting				

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 11)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(680)	907-258-I			1 each	Sign, Masonry and Stone				
(690)	907-258-J			10 each	Metal Bench				
(700)	907-258-K			4 each	Bollard				
(710)	907-258-L			1 each	Pavilion				
(720)	907-259-A			4 each	Lighting Assembly, Nonlighted Bollard				
(730)	907-259-B			28 each	Lighting Assembly, Bollards				
(740)	907-259-C			2 each	Lighting Assembly, Flag Pole Lighting				

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 12)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(750)	907-259-E			2 each	Lighting Assembly, Kiosk				
(760)	907-259-F			1 each	Weatherproof GFCI Receptacle				
(770)	907-282-A			88 each	Sprinkler Head, 1812-PRS-15Q				
(780)	907-282-A			87 each	Sprinkler Head, 1812-PRS-15H				
(790)	907-282-A			19 each	Sprinkler Head, 1812-PRS-15F				
(800)	907-282-A			18 each	Sprinkler Head, 1812-PRS-15EST				
(810)	907-282-A			14 each	Sprinkler Head, 1812-PRS-15SST				

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 13)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(820)	907-282-A		24 each		Sprinkler Head, R50-SAM-R+-1.5				
(830)	907-282-A		60 each		Sprinkler Head, R50-SAM-R+-3.0				
(840)	907-282-A		19 each		Sprinkler Head, R50-SAM-R+-4.0				
(850)	907-282-A		38 each		Sprinkler Head, R50-SAM-R+-6.0				
(860)	907-282-A		6 each		Sprinkler Head, T-4-PC-22-.65				
(870)	907-282-A		30 each		Sprinkler Head, T-4-PC-T22-1.3				
(880)	907-282-A		11 each		Sprinkler Head, T-4-FC-T22-2.5				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 14)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(890)	907-282-B		2,330 linear foot		Piping, 1/2" Diameter				
(900)	907-282-B		1,971 linear foot		Piping, 3/4" Diameter				
(910)	907-282-B		988 linear foot		Piping, 1" Diameter				
(920)	907-282-B		1,278 linear foot		Piping, 1 1/4" Diameter				
(930)	907-282-B		621 linear foot		Piping, 1 1/2" Diameter				
(940)	907-282-B		811 linear foot		Piping, 2" Diameter				
(950)	907-282-B		25 linear foot		Piping, 2 1/2" Diameter				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 15)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(960)	907-282-C		236 linear foot		Sleeves, 4"				
(970)	907-282-C		120 linear foot		Sleeves, 6-inch Diameter				
(980)	907-282-D		13,109 linear foot		Valve Control Wire				
(990)	907-282-E		23,534 linear foot		Trench Excavation and Backfill				
(1000)	907-282-G		1 each		Electric Controller, 32 Station				
(1010)	907-282-H		2 each		Electric Control Valve, 1"				
(1020)	907-282-H		2 each		Electric Control Valve, 1 1/2"				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 16)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(1030)	907-282-H		21 each		Electric Control Valve, 2"				
(1040)	907-282-J		7 each		Isolation Valve, 3"				
(1050)	907-282-K		10 each		Quick Coupler Key with Hose and Swivel				
(1060)	907-288-A		323 square yard		Site Grading				
(1070)	907-290-PP		1 each		Relocation of Veteran's Monument				
(1080)	907-290-PP		1 each		Relocation of Survey Monument				
(1090)	907-290-PP		2 each		Relocation of Flag Pole - Per Plans				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 17)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(1100) 304-A		(GY)	316 cubic yard		Granular Material, LVM, Class 3, Group C				
(1101) 304-A		(GY)	60 cubic yard		Granular Material, LVM, Class 6, Group D				
(1110) 907-304-E		(GY)	937 cubic yard		Granular Material, LVM, Crushed Stone				
(1120) 403-A		(B) (A1)	248 ton		Hot Mix Asphalt, MT, 9.5-mm mixture				
(1130) 403-A		(B) (A1)	495 ton		Hot Mix Asphalt, MT, 19-mm mixture				
(1140) 403-A		(B) (A1)	330 ton		Hot Mix Asphalt, MT, 12.5-mm mixture				
(1150) 409-A			5,384 square yard		Geotextile Fabric For Underseal, Type V				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 18)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(1160) 413-B			3,243 linear foot		Cleaning and Sealing Joints				
(1170) 413-C			811 linear foot		Cleaning and Sealing Cracks				
(1180) 501-A		(C)	1,684 square yard		8" Reinforced Cement Concrete Pavement, Type P, Broom Finish				
(1190) 503-C			958 linear foot		Saw Cut, 4-inch				
(1200) 503-C			600 linear foot		Saw Cut, 8-inch				
(1210) 603-CA		(S)	64 linear foot		24" Reinforced Concrete Pipe, Class III				
(1220) 603-CA		(S)	96 linear foot		12" Reinforced Concrete Pipe, Class III				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 19)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(1230) 603-CE		(S)	72 linear foot		29" x 18" Concrete Arch Pipe, Class A III				
(1231) 603-CF		(S)	2 each		29" x 18" Concrete Arch Pipe End Section				
(1240) 603-CB		(S)	6 each		12" Reinforced Concrete End Section				
(1250) 603-CB		(S)	2 each		24" Reinforced Concrete End Section				
(1260) 907-607-AA			24 linear foot		Ornamental Iron Fence				
(1270) 907-607-BB			1 each		Ornamental Gate, 6-foot Wide				
(1280) 608-B		(S)	570 square yard		Concrete Sidewalk, With Reinforcement				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 20)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(1290) 609-C		(S)	1,447 linear foot		Concrete Curb, Integral, Type 1				
(1300) 609-D		(S)	410 linear foot		Combination Concrete Curb and Gutter Type 1				
(1310) 907-611-D			17,091 square foot		Unit Pavers				
(1320) 907-611-E			3,225 linear foot		Concrete Band				
(1330) 907-626-G			2,200 linear foot		Thermoplastic Detail Stripe, Blue-ADA				
(1331) 907-628-G			1,300 linear foot		Cold Plastic Detail Stripe, White, 4" Equivalent Length				
(1332) 626-G			1,450 linear foot		Thermoplastic Detail Stripe, White				

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 21)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(1333) 626-G			310 linear foot		Thermoplastic Detail Stripe, Yellow				
(1334) 907-626-H			155 square foot		Thermoplastic Legend, Blue-ADA				
(1335) 907-628-G			1,315 linear foot		4" Cold Plastic Detail Stripe, White				
(1340) 628-H			350 square foot		Cold Plastic Legend, White				
(1350) 907-630-PP			7 each		Handicap Parking Sign with Post				
(1360) 682-A			635 linear foot		Underground Branch Circuit, AWG 10, 3 Conductor				
(1370) 682-A			510 linear foot		Underground Branch Circuit, AWG 8, 3 Conductor				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 22)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(1380) 682-A			1,430 linear foot		Underground Branch Circuit, AWG 2, 3 Conductor				
(1390) 682-A			80 linear foot		Underground Branch Circuit, AWG 12, 3 Conductor				
(1400) 682-A			310 linear foot		Underground Branch Circuit, AWG 8, 2 Conductor				
(1410) 682-B			100 linear foot		Underground Branch Circuit, Jacked or Bored, AWG 2, 3 Conductor				
(1420) 682-D			4 each		Underground Pull Box				
(1430) 683-B			11 each		Lighting Assembly, Low Mast, Type 30-1-8-250				
(1440) 684-A			3 cubic yard		Pole Foundation, 18" Diameter				

(06/03/2004)

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 23)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
(1450) 684-B 3 linear Slip Casing, 18" Diameter foot									

SUBTOTAL - DIRECT PAY ITEMS.....\$ _____

SECTION 905

STP-0010-01(093) / 103316

PROPOSAL (Sheet No. 2- 24)

Jackson County

REF. NO.	PAY ITEM NO.	ADJ. CODE	APPROX. QUANTITY	UNIT	DESCRIPTION	UNIT PRICE		ITEM TOTAL	
						DOLLAR	CENT	DOLLAR	CENT
DEPENDENT PAY ITEMS									
(1460) 618-A				lump sum	Maintenance of Traffic	XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
(1470) 620-A				lump sum	Mobilization	XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
(1480) 699-A				lump sum	Roadway Construction Stakes	XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	XXXX		
						XXXXXXXXXXXX	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.8 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.

COMBINATION BID PROPOSAL

I. This proposal is tendered as one part of a Combination Bid Proposal utilizing option ____* of Subsection 102.11 on the following contracts:

* Option to be shown as either (a), (b), or (c).

<u>Project No.</u>	<u>County</u>	<u>Project No.</u>	<u>County</u>
1. _____	_____	6. _____	_____
2. _____	_____	7. _____	_____
3. _____	_____	8. _____	_____
4. _____	_____	9. _____	_____
5. _____	_____	10. _____	_____

- A. If option (a) has been selected, then go to II, and sign Combination Bid Proposal.
- B. If option (b) has been selected, then complete the following, go to II, and sign Combination Bid Proposal.

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. _____	_____ _____	_____ _____	_____ _____	_____ _____	

SECTION 905 - COMBINATION BID PROPOSAL (Continued)

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)

SECTION 902

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 _____

Signed and sealed in the presence of:
(names and addresses of witnesses)

Executive Director

Secretary to the Commission

Award authorized by the Mississippi Transportation Commission in session on the _____ day of _____, _____, Minute Book No. _____, Page No. _____.

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 projects(s) in the State of Mississippi as mentioned in said contract in accordance with the Contract Documents 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

SECTION 903 - CONTINUED

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, 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)

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: STP-0010-01(093) / 103316

COUNTY: JACKSON COUNTY

LOCATION: JACKSON COUNTY WELCOME CENTER.

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