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SM No. CNH0056011101

PROPOSAL AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

10

Mill & Overlay approximately 10 miles on SR 25 from SR 471 to SR 43 and approximately 1 mile on Sandhill Rd. from the east end of the 4-Lane section to the west end of the 4-Lane section, known as Federal Project No. NH-0056-01(110) / 108604301 in Rankin County.

Project Completion: 186 Working Days

(STATE DELEGATED)

NOTICE

**BIDDERS MUST COMPLETE AN ONLINE REQUEST
FOR PERMISSION TO BID THIS PROJECT.**

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

**SECTION 900
OF THE CURRENT
2017 STANDARD SPECIFICATIONS
FOR ROAD AND BRIDGE CONSTRUCTION
JACKSON, MISSISSIPPI**

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION
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PROJECT: NH-0056-01(110)/108604301 - Rankin

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OF SECTION 905 AS ADDENDA)

05/26/2021 02:52 PM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 901 - ADVERTISEMENT

Electronic bids will be received by the Mississippi Transportation Commission at 10:00 o'clock A.M., Tuesday, June 22, 2021, from the Bid Express Service and shortly thereafter publicly read on the Sixth Floor For:

Mill & Overlay approximately 10 miles on SR 25 from SR 471 to SR 43 and approximately 1 mile on Sandhill Rd. from the east end of the 4-Lane section to the west end of the 4-Lane section, known as Federal Project No. NH-0056-01(110) / 108604301 in Rankin County.

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

The Mississippi Department of Transportation hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, age, disability, religion or national origin in consideration for an award.

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

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

Contractors may request permission to bid online at <http://shopmdot.ms.gov> at no cost. Upon approval, Contractors shall be eligible to submit a bid using Bid Express at <http://bidx.com>. Specimen proposals may be viewed and downloaded online at no cost at <http://mdot.ms.gov> or purchased online at <http://shopmdot.ms.gov> at a cost of Ten Dollars (\$10.00) per proposal plus a small convenience fee. Cash or checks will not be accepted as payment.

Bid bond, signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent, with Power of Attorney attached, 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.

JEFFREY C. ALTMAN
ACTING EXECUTIVE DIRECTOR

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1

CODE: (IS)

DATE: 03/01/2017

SUBJECT: Governing Specifications

The current (2017) 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 within this proposal. Copies of the specification book may be purchased from the MDOT Construction Division, or online at shopmdot/default.aspx?StoreIndex=1.

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 2004 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 2017 Edition of the Standard Specifications.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2

CODE: (IS)

DATE: 03/01/2017

SUBJECT: Status of Right-of-Way

Although it is desirable to have acquired all rights-of-way and completed all railroad agreements, utility adjustments and work to be performed by others prior to receiving bids, sometimes 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 possible unacquired rights-of-way, relocations, railroad agreements and utilities adjustments which have not been completed.

The status of right-of-way acquisition, utility adjustments, encroachments, potentially contaminated sites, railroad facilities, improvements, and asbestos contamination are set forth in the following attachments.

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

STATUS OF RIGHT-OF-WAY

NH-0056-01(110)

108604/301000

Rankin County

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

None.

STATUS OF POTENTIALLY CONTAMINATED SITES

NH-0056-01(110)

108604-301000

Rankin County

October 14, 2020

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

NH-0056-01(110)

108604-301000

Rankin County

October 14, 2020

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.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
Inter-Departmental Memorandum

TO: Trudi Loflin
ROW Division

DATE: October 14, 2020

FROM: Christopher M. Nail
District Five

SUBJECT OR PROJECT NO: NH-0056-01(110) / 108604-301000
ROW Certification Documents

INFORMATION COPY TO:

COUNTY: Rankin

Project File
Construction Division
Chief Engineer

District Status Report

1. STATUS OF RIGHT OF WAY: No new ROW required.
2. RIGHT OF WAY CLEARANCE: There are no visible encroachments that conflict with construction.
3. STATUS OF AFFECTED RAILROAD OPERATING FACILITIES: No railroads affected.
4. STATUS OF REQUIRED UTILITY RELOCATIONS: There are no known utility conflicts. Permits showing the approximate location of utilities within or along the ROW are on file with the Department. The Department cannot and does not warrant that this information is complete and accurate. The contractor must coordinate directly with the involved utility owners to have underground utility lines field located in advance of construction.
5. STATUS OF CONSTRUCTION AGREEMENT: None required

CMN:cmn

Improvements to be included in Notice to Bidders to be removed by the Construction Contractor
FMS Construction Project No: 108604-301000
External ROW No: NH-0056-01(110)

Parcel No:
Station No:
Property Owner:
Description/Pictures:

NA

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3

CODE: (SP)

DATE: 01/17/2017

SUBJECT: Final Clean-Up

Immediately prior to final inspection for release of maintenance, the Contractor shall pick up, load, transport and properly dispose of all litter from the entire highway right-of-way that is within the termini of the project.

Litter shall include, but not be limited to, solid wastes such a glass, paper products, tires, wood products, metal, synthetic materials and other miscellaneous debris.

Litter removal is considered incidental to other items of work and will not be measured for separate payment.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 9

CODE: (IS)

DATE: 03/01/2017

SUBJECT: Federal Bridge Formula

Bidders are hereby advised that the latest revision of Federal Highway Administration Publication No. FHWA-HOP-06-105, **BRIDGE FORMULA WEIGHTS**, dated August 2006, 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://www.ops.fhwa.dot.gov/Freight/publications/brdg_frm_wgths/bridge_formula_all_rev.pdf

An on line **BRIDGE FORMULA WEIGHTS CALCULATOR** is available at

http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc_page.htm

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 13

CODE: (IS)

DATE: 03/01/2017

SUBJECT: Safety Edge

Bidders are hereby advised that the Shoulder Wedge (Safety Edge) specified in Section 401, Asphalt Pavements, shall only apply to the top two (2) lifts of asphalt. Open Graded Friction Courses (OGFC) are not to be considered a lift as it pertains to safety edge. Attached is a drawing showing the safety edge. Note that the shoulder dimensions in the bottom two drawings will be less than three feet (3').



MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 113

CODE: (SP)

DATE: 04/18/2017

SUBJECT: Tack Coat

Bidders are advised that in addition to the products listed on the Department's APL as referenced in Subsection 401.03.1.2 on page 256, the Contractor may use one of the following as a tack coat.

- CSS-1
- CSS-1h
- SS-1
- SS-1h

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 296

CODE: (SP)

DATE: 07/25/2017

SUBJECT: Reduced Speed Limit Signs

Bidders are advised that when the plans or contract documents require the speed limit on a project to be reduced, the Contractor shall begin work within 48 hours of installing the reduced speed limit signs. Should the Contractor not start work or have no plans to start work within 48 hours of installing the signs, the reduced speed limit signs shall be covered and existing speed limit signs uncovered.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 445

CODE: (SP)

DATE: 10/10/2017

SUBJECT: Mississippi Agent or Qualified Nonresident Agent

Bidders are hereby advised of the requirements of Subsections 102.08, 103.05.2, and 107.14.2.1 of the *2017 Standard Specifications for Road and Bridge Construction* as it refers to bonding agents. Proposal guaranties, bonds, and liability insurance policies must be signed by a **Mississippi Agent or Qualified Nonresident Agent.**

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 446

CODE: (SP)

DATE: 10/18/2017

SUBJECT: Traffic on Milled Surface in Urban Areas

Bidders are hereby advised that when the main lanes of a roadway are fine milled, traffic will be allowed to run on a milled surfaces for up to five (5) calendar days. The Contractor will be assessed a penalty of **\$5,000 per calendar day** afterwards until the milled surfaces are covered with the next lift of asphalt. It shall be the Contractor's responsibility to ensure that the milling operations do not commence until such time as forecasted weather conditions are suitable enough to allow the placement of the asphalt pavement after the milling operations.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 516

CODE: (IS)

DATE: 11/28/2017

SUBJECT: Errata and Modifications to the 2017 Standard Specifications

| <u>Page</u> | <u>Subsection</u> | <u>Change</u> |
|-------------|-------------------|--|
| 16 | 102.06 | In the seventh full paragraph, change “Engineer” to “Director.” |
| 33 | 105.05.1 | In the sixth sentence, change “Contract Administration Engineer” to “Contract Administration Director.” |
| 34 | 105.05.2.1 | In subparagraph 2, change “SWPPP, ECP” to “SWPPP and the ECP” |
| 35 | 105.05.2.2 | In subparagraphs 2, add “ and” to the end of the sentence. In subparagraph 3, remove “, and” and add “.”. |
| 90 | 109.04.2 | In the last paragraph of subparagraph (a), place a period “.” at the end of the sentence. |
| 93 | 109.04.2 | In the last paragraph of subparagraph (g), place a period “.” at the end of the sentence. Also, in the first paragraph of subparagraph (h), place a period “.” at the end of the sentence. |
| 97 | 109.07 | Under ADJUSTMENT CODE, subparagraph (A1), change “HMA mixture” to “Asphalt mixtures.” |
| 98 | 109.11 | In the third sentence, change “Engineer” to “Director.” |
| 219 | 308.04 | In the last sentence of the last paragraph, change “Contractor’s decision” to “Engineer’s decision.” |
| 300 | 405.02.5.9 | In the first sentence of the second paragraph, change “Hot Mix Asphalt” to “Asphalt Mixtures.” |
| 502 | 630.01.1 | In the first paragraph, change “ <u>AASHTO</u> ” to “ <u>AASHTO’s LRFD</u> ”. |
| 636 | 646.05 | Change “each” to “per each” for the pay item units of payment. |
| 640 | 656.02.6.2 | In item 7), change “down stream” to “downstream”. |
| 688 | 630.03.2 | Change the subsection number from “630.03.2” to “680.03.2.” |

725 702.08.3 In the second sentence of the first paragraph, change “hot-mix” to “asphalt.”

954 804.02.13.1.6 In the definition for “M” in the % Reduction formulas, change “paragraph 7.3” to “paragraph 5.3.”

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 977

CODE: (IS)

DATE: 07/25/2018

SUBJECT: DUNS Requirement for Federal Funded Projects

Bidders are advised that the Prime Contractor must maintain a current registration in the System for Award Management (<http://www.sam.gov>) at all times during this project. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (<http://www.dnb.com>) is one of the requirements for registration in the System for Award Management.

Bidders are also advised that prior to the award of this contract, they MUST be registered, active, and have no active exclusions in the System for Award Management.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1225

CODE: (SP)

DATE: 11/13/2018

SUBJECT: Early Notice to Proceed

Bidders are advised that if an early notice to proceed is allowed by the Department and the Contractor experiences problems or delays between the early notice to proceed date and the original notice to proceed date, this shall not be justification for any monetary compensation or an extension of contract time.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1226

CODE: (IS)

DATE: 11/16/2018

SUBJECT: Material Storage Under Bridges

Bidders are advised that Subsection 106.08 of the Standard Specifications allows the Contractor to store materials and equipment on portions of the right-of-way. However, the Contractor will not be allowed to store or stockpile materials under bridges without written permission from the Project Engineer. The Contractor shall submit a detailed request of all proposed materials to be stored under bridges to the Engineer a minimum of 14 calendar days prior to anticipated storage. This detail shall include, but not limited to, bridge location, material type, material quantity, and duration of storage. The Project Engineer and any other needed Division will review this information and determine whether to grant approval. The Contractor shall not store any material under any bridge without written approval from the Project Engineer.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1241

CODE: (IS)

DATE: 11/27/2018

SUBJECT: Fuel and Material Adjustments

Bidder's attention is brought to the last paragraph of Subsection 109.07 of the Standard Specifications which states that no fuel or material adjustment will be made after the completion of contract time. Any fuels consumed or materials incorporated into the work during the monthly estimate period falling wholly after the expiration of contract time will not be subject a fuel or material adjustment.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1963

CODE: (SP)

DATE: 9/23/2019

SUBJECT: Guardrail Pads

Bidders are hereby advised that prior to construction of the guardrail pads, the Contractor shall coordinate with the guardrail Subcontractor to determine the guardrail pad dimensions necessary to meet MASH compliance.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2206

CODE: (IS)

DATE: 01/14/2020

SUBJECT: MASH Compliant Devices

Bidders are hereby advised that compliance associated with the requirements of meeting either the National Cooperative Highway Research Program (NCHRP) Report 350 or the Manual for Assessing Safety Hardware (MASH) for installations of certain traffic control devices and permanent safety hardware devices (guardrails, guardrail terminals, permanent portable barriers, cast-in-place barriers, all other permanent longitudinal barriers, crash cushions, cable barriers, cable barrier terminals, bridge rails, bridge rail transitions, all other terminals, sign supports, and all other breakaway hardware) as listed throughout the Standard Specifications and/or the Standard Drawings, or both, is now replaced with the requirements of meeting the 2016 version of MASH after December 31, 2019. This change applies to new permanent installations and to full replacements of existing installations.

At the preconstruction conference or prior to starting any work on the project, the Contractor shall submit a letter stating that the traffic control devices and permanent safety hardware devices as outlined within the paragraph above that are to be used on the project are certified to meet MASH 2016.

When a MASH 2016-compliant device does not exist for the new permanent installations and/or full replacement installations of permanent safety hardware devices, as listed above, a MASH 2009-compliant or a NCHRP 350-compliant device may be proposed by the Contractor for the project. A written request for such instances must be submitted by the Contractor either at the preconstruction conference or prior to starting any work on the project. The Contractor shall submit the following items to the Project Engineer: (1) a detailed list of the proposed devices and locations thereof; and (2) certification letters indicating that the proposed devices are compliant with either MASH 2009 or NCHRP 350.

When a MASH 2016-compliant device does not exist for the temporary work zone traffic control devices (Category 1, Category 2, and Category 3 devices), a MASH 2009-compliant or a NCHRP 350-compliant device may be proposed by the Contractor for the project. Temporary work zone traffic control devices (Category 1, Category 2, and Category 3 devices) that are MASH 2009-compliant or NCHRP 350-compliant that have been in use prior to December 31, 2019, and that have a remaining service life may be proposed for use throughout their normal service life on the project by the Contractor. For either of these scenarios for temporary work zone traffic control devices, a written request must be submitted by the Contractor either at the preconstruction conference or prior to starting any work on the project. The Contractor shall submit the following items to the Project Engineer: (1) a detailed list of the proposed devices and locations thereof; and (2) certification letters indicating that the proposed devices are compliant with either MASH 2009 or NCHRP 350.

Work will only be allowed to proceed after the Department has granted written concurrence(s) with the proposed request(s) as listed above.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2273

CODE: (SP)

DATE: 02/12/2020

SUBJECT: Mississippi Special Fuel Tax Law

Bidder's attention is brought to the second paragraph of Subsection 107.02 of the Standard Specifications which states that all Contractors and Subcontractors must comply with all requirements contained in the Mississippi Special Fuel Tax Law, Section 27-55-501, *et seq.* Attached are two Fact Sheets provided by the Mississippi Department of Revenue (MDOR) with additional information.

Gasoline and Dyed Diesel Used for Non-Highway Purposes

Mississippi provides a reduced rate for gasoline and dyed diesel used for non-highway purposes. The reduced rates are 6.44 cents per gallon and 5.75 cents per gallon of gasoline or dyed diesel. These fuels are generally taxed at 18 cents per gallon if for on road use.

Gasoline Used for Non-Highway Purposes

You may be entitled to a refund of 11.56 cents per gallon (making this an equivalent to a tax rate of 6.44 cents per gallon) if you desire to purchase gasoline to be used off road. The gasoline must be used for agricultural, maritime, industrial, manufacturing, domestic or non-highway purposes only.

Examples of non-highway include gasoline used in boats, golf carts, machinery used for manufacturing or farm equipment used exclusively in plowing, planting or harvesting farm products.

Refund Gasoline User

The refund is based on the amount of gallons used. Before a refund is issued, you are required to...

1. Obtain a refund gasoline user's permit and a certificate for refund booklet from the Department of Revenue;
2. Have a storage tank marked "REFUND GASOLINE"; and,
3. Purchase the gasoline from someone who holds a refund gasoline dealer's permit.

No refund will be allowed for gasoline used in motor vehicles owned or operated by a government entity or used in Mississippi government contracts.

Refund Gasoline Dealer

You must obtain a refund gasoline dealer's permit from the Department of Revenue before selling refund gasoline. At no time should the gasoline be delivered to a tank that is not properly marked. The gasoline must be dyed a distinctive mahogany color at the time of delivery.

The Department of Revenue may waive the dye requirement if the dye may cause damage to the equipment. The refund gasoline user is required to obtain the waiver from the Department of Revenue.

Dyed Diesel Used for Non-Highway Purposes

Unlike gasoline, you are not required to apply for a refund if you desire to purchase dyed diesel to be used off road. Mississippi provides a reduced rate of 5.75 cents per gallon on dyed diesel used off road. Diesel used on road is subjected to 18 cents per gallon. Dyed diesel used in motor vehicles owned or operated by a government entity or used in Mississippi government contracts will be subjected to 18 cents per gallon.

Dyed Diesel Used on the Highway

Any person who purchases, receives, acquires or uses dyed diesel for highway use will be liable to pay 18 cents per gallon and subject to a penalty in the amount of \$1000.

Identifying Dyed Diesel

Storage facilities for dyed diesel must be plainly marked "NONHIGHWAY DIESEL FUEL" or "NONHIGHWAY KEROSENE". Retailers are also required to mark all pumps or dispensing equipment.



Special Fuel Used on Government Contracts

State and Local Government Contracts

Special fuel purchased, acquired or used in performing contracts with the State of Mississippi, counties, municipalities or any political subdivision is taxed at a rate of 18 cents per gallon. Special fuel includes but is not limited to the following:

- Dyed diesel fuel;
- Kerosene;
- Undyed diesel fuel; and,
- Fuel oil.

State and local government contracts include construction, reconstruction and maintenance or repairs of projects such as roads, bridges, water systems, sewer systems, buildings, drainage canals and recreational facilities. The Department of Revenue may require contractors to remit the excise tax directly to the state in lieu of paying the tax to a distributor.

Special Fuel Direct Pay Permit

Contractors that remit the excise tax to the state will be issued a Special Fuel Direct Pay Permit. This permit relieves the distributor from collecting the tax and requires the contractor to file a monthly special fuel return. The distributor should include the contractor’s permit number on all invoices that are related to tax-free sales.

The contractor is required to furnish a surety or cash bond guaranteeing the payment of the excise tax prior to receiving the Special Fuel Direct Pay Permit. The Department of Revenue may accept a contractors tax bond if the bond covers the excise tax levied on special fuel.

Special Fuel Distributors

If the contractor does not have a Special Fuel Direct Pay Permit, distributors are required to collect the 18 cents excise tax and remit the tax to the Department of Revenue. The additional 12.25 cents levied on special fuel (excluding undyed diesel) should be reported on schedules 5F and 5G of the special fuel return.

Environmental Protection Fee

Special fuel distributors are required to collect the environmental protection fee even if the contractor has a Special Fuel Direct Pay Permit. The fee is levied at 4/10^{ths} of a cent per gallon. The fee is suspended or reinstated when the trust fund has exceeded or fallen below the obligatory balance.

Penalties

Any person who knowingly and willfully purchases untaxed fuel for use in equipment utilized on a road or highway construction site in this state is guilty of a misdemeanor and, upon conviction, shall be fined not less than \$1,000 or more than \$100,000, or imprisoned in the county jail for not more than one year, or both.



MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 2278

CODE: (SP)

DATE: 03/04/2020

SUBJECT: Smoothness Tolerances

Bidders are hereby advised that the smoothness tolerances for this project shall meet the requirements of a Category C project according to Subsection 403.03.2.1. Bidders are responsible for the collection of a preliminary smoothness profile prior to any work being performed.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO NOTICE TO BIDDERS NO. 2611

DATE: 05/02/2020

The goal is 6 percent for the Disadvantaged Business Enterprise. All Bidders are required to submit Form OCR-481 for all DBEs. Bidders are advised to check the bid tabulation link for this project on the MDOT website at:

https://mdot.ms.gov/portal/current_letting

Bid tabulations are usually posted by 3:00 pm on Letting Day.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2611

CODE: (IS)

DATE: 05/21/2020

SUBJECT: Disadvantaged Business Enterprises In Federal-Aid Highway Construction

This contract is subject to the "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Title 49, Code of Federal Regulations, [Part 26](#)." 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, or national origin.

ASSURANCES THAT CONTRACTORS MUST TAKE

MDOT will require that each contract which MDOT signs with a sub-recipient or a Contractor, and each subcontract the Prime Contractor signs with a Subcontractor, includes the following assurances:

“The Contractor, sub-recipient or Subcontractor shall not discriminate on the basis of race, color, sex, or national origin 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 49 CFR 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, sex, or national origin. 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 has 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. In this case, 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.

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.

If the percentage of the contract that is proposed for DBEs is 1% or greater, the Contractor shall agree to meet or exceed the contract goal on the last bid sheet of the proposal.

All Bidders shall submit to the Office of Civil Rights Form OCR-481, signed by the Prime Contractor and the DBE Subcontractors, no later than the 3rd business day after opening of the bids.

Form OCR-481 is available on the MDOT website at www.mdot.ms.gov under the Civil Rights tab, or by calling 601-359-7466.

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 to be completed by the DBE subcontractor 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, to MDOT Contract Administration Division prior to bid opening, 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 to MDOT Contract Administration Division prior to bid opening, shall be just cause for rejection of the proposal. Award may then be made to the next lowest responsive bidder or the project may be re-advertised.

GOOD FAITH EFFORTS

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.
- (9) Whether the bidder has written notification to certified DBE Contractors soliciting subcontracting for items of work in the contract.
- (10) Whether the bidder has a statement of why an agreement was not reached.
- (11) 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.

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 "Moving Ahead for Progress in the 21st Century Act (MAP-21)" and applicable requirements of "Title 49, Code of Federal Regulations, Part 26" that the bidder has made a good faith effort to meet the contract goal for DBE participation for which this proposal is submitted.

DIRECTORY

A list of “Certified DBE Contractors” which have been certified as such by the Mississippi Department of Transportation and other Unified Certification Partners (UPC) can be found on the Mississippi Department of Transportation website at www.mdot.ms.gov. The list is in the top left corner of the current Letting Calendar under Contracts & Letting. The DBE firm must be certified at the time the project is let and approved by MDOT to count towards meeting the DBE goal.

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. The good faith efforts outlined previously in this document still apply. The replacement DBE must be a DBE who was on the Department's list of "Certified DBE Contractors" when the job was let, and who is still active. 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.

PRE-BID MEETING

A pre-bid meeting will be held in the [Commission Room on the 1st Floor](#) of the [MDOT Administration Building](#) in Jackson, 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.

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.
- (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 sixty percent (60%) 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. The participation of a DBE Firm cannot be counted towards the Prime Contractor's DBE goal until the amount being counted towards the goal has been paid to the DBE.

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) **All Bidders** must submit to the Office of Civil Rights for approval, Form OCR-481 (DBE Commitment) no later than the 3rd business day after opening of the bids to satisfy the Department and that adequate good faith efforts have been made to meet the contract goal. For answers to questions regarding Form OCR-481, contact the MDOT Office of Civil Rights at (601) 359-7466.
- (3) Bidder must include OCR-485 information with their bid proposal listing all firms that submitted quotes for material supplies or items to be subcontracted. OCR-485 information must be **signed and** included with the bid proposal. If the OCR-485 information is not included as part of bid proposal, your bid will be deemed irregular.

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

If the contract goal established by MDOT in this proposal is 1% or greater, it must be met 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, before the final estimate is paid and the project is closed out, the Prime 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 all Contractors / Suppliers over the life of the contract. 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-03-05-02-483. 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 Prime Contractor will submit to the Project Engineer OCR-484 that 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 the form to the monthly estimate before forwarding to the Contract Administration Division for further processing. Failure of the Contractor to submit the OCR-484 will result in the estimate not being processed and paid.
- (5) OCR-485: ALL BIDDERS must submit signed form with bid proposal of all firms that submitted quotes for material supplies or items to be subcontracted. If the OCR-485 information is not included as part of bid proposal, the bid will be deemed irregular.
- (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. The low Bidder should return this form to MDOT with the OCR-481 form, or can also be returned with the Permission to Subcontract Forms (CAD-720, CAD-725 and CAD-521).

DBE Forms, can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at www.mdot.ms.gov under the Civil Rights tab.

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 or recover an amount equal to the unmet portion of the DBE goal which may include additional monetary penalties as outlined below based on the number of offenses and the severity of the violation as determined by MDOT.

| | | | | | |
|-------------------------|------------------------------|----|---------------------------|----|---|
| 1 st Offense | 10% of unmet portion of goal | or | \$5,000 lump sum payment | or | Both |
| 2 nd Offense | 20% of unmet portion of goal | or | \$10,000 lump sum payment | or | Both |
| 3 rd Offense | 40% of unmet portion of goal | or | \$20,000 lump sum payment | or | \$20,000 lump sum payment and debarment |

(4) Debar the Contractor involved from bidding on MDOT federally funded projects for a period of up to 12 months after notification by certified email.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2782

CODE: (SP)

DATE: 8/13/2020

SUBJECT: DBE Pre-Bid Meeting

Due to the COVID-19 pandemic and the Department not allowing visitors in the Administration Building at this time, the DBE Pre-Bid Meeting referenced on Page 5 of Notice to Bidders No. 2611 will be held by **video conference only**. The meeting will be held at 2:00 P.M. on the day preceding the date of the bid opening using Zoom video conferencing software. Anyone interested in participating can download Zoom and connect to the meeting at the below link.

<https://zoom.us/j/5548736403?pwd=SDh5S2hQSE5pNG5FOEkzR3NsUnBYQT09>

Password (if prompted): 272147

For those unable to participate via Zoom, the below teleconference number may be used instead.

1-888-227-7517

Conference Code: 404496

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2812

CODE; (SP)

DATE: 09/01/2020

SUBJECT: Traffic Signal and ITS Components

Bidders are hereby advised that all products selected for use on this project shall be in compliance with 2 CFR 200.216. No telecommunication and video surveillance equipment or services shall be manufactured by the following companies: Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, Dahua Technology Company, and any subsidiary or affiliate of these entities.

The Contractor shall provide a Certification Statement that the referenced product(s) is not manufactured by any of the following: Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, Dahua Technology Company, and any subsidiary or affiliate of these entities. (as per 2 CFR 200.216)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2895

CODE: (SP)

DATE: 10/14/2020

SUBJECT: Exploratory Joint Cleanout

Bidders are hereby advised that work on this project shall consist of exploratory investigation of bridge joints to determine the appropriate level of repair and will include removal of any trash and debris (including, but not limited to, compacted dirt, vegetation and trash) located at any depth within the joint. Costs of this work will be absorbed in the cost of other items of work if further joint repair work is not required.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2954

CODE: (SP)

DATE: 12/01/2020

SUBJECT: Reflective Sheeting for Signs

Bidders are hereby advised that the retroreflective sign sheeting used for signs on this project shall be as listed below and shall meet the requirements of Subsection 721.06.

Temporary Construction Signs

Temporary traffic control (orange) sign sheeting shall be a minimum Type IX Fluorescent Orange sheeting as shown in Special Provision 907-721.

Permanent Signs

Permanent signs, except signs on traffic signal poles/mast arms, shall be as follows:

- Brown background sheeting on guide signs shall be a minimum Type VIII sheeting,
- Green and blue background sheeting on guide signs shall be a minimum Type IX sheeting, and
- All white, yellow, red, fluorescent yellow, and fluorescent yellow/green sheeting shall be Type XI sheeting.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 – NOTICE TO BIDDERS NO. 3117

CODE: (SP)

DATE: 02/23/2021

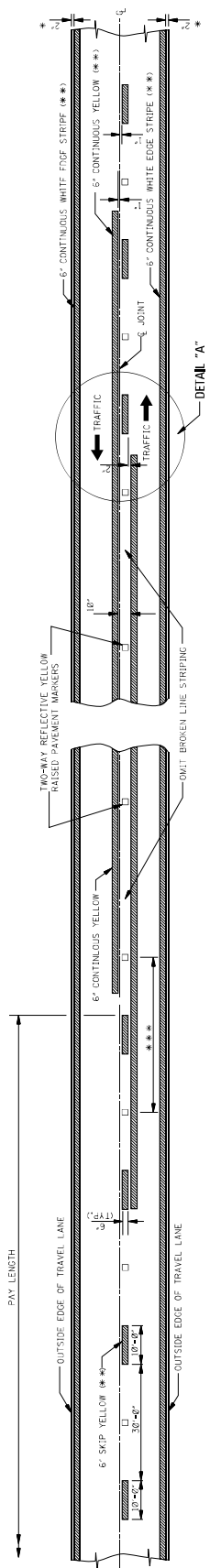
SUBJECT: Standard Drawings

Standard Drawings attached hereto shall govern appropriate items of required work.

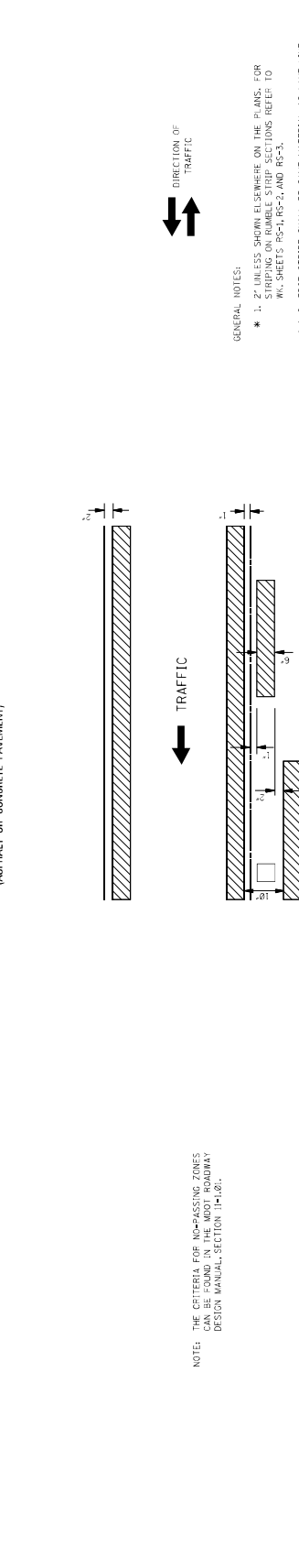
Larger copies of Standard Drawings may be purchased from:

MDOT Plans Print Shop
MDOT Shop Complex, Building C, Room 114
2567 North West Street
P.O. Box 1850
Jackson, MS 39215-1850
Telephone: (601) 359-7460
or FAX: (601) 359-7461
or e-mail: plans@mdot.state.ms.us

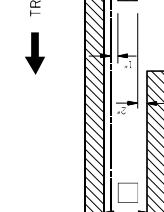
| | |
|----------------|-------------|
| STATE MISS. | PROJECT NO. |
|----------------|-------------|



TWO-WAY TRAFFIC
(ASPHALT OR CONCRETE PAVEMENT)



4-LANE WITH ONE-WAY TRAFFIC



TRAFFIC

GENERAL NOTES:

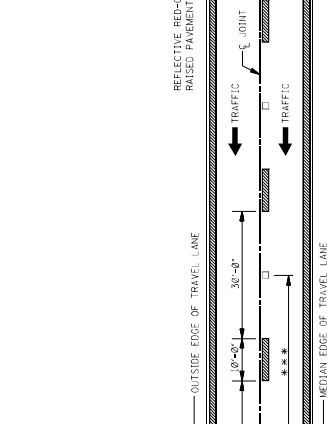
- * 1. UNLESS SHOWN OTHERWISE ON THE PLANS, FOR ALL PAVEMENT MARKINGS REFER TO THE STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION, MISSISSIPPI DEPARTMENT OF TRANSPORTATION, 2008 EDITION, SECTION 202.
- ** 2. EDGE STRIPE SHALL BE SAME MATERIAL AS LANE-LINE STRIPE. FOR PLASTICS AS INDICATED IN PAY ITEMS, USE 48-0207 (REFLECTIVE RAISED PAVEMENT MARKERS).
- *** 3. WIDTH OF REFLECTIVE RAISED PAVEMENT MARKERS IS AS FOLLOWS:

| TANGENT SECTIONS | URBAN AREA | RURAL AREA |
|--------------------|--------------|--------------|
| 40'-0" | 4.00"-0.00" | 3.00"-0.00" |
| 40'-0" | 4.00"-0.00" | 3.00"-0.00" |
| INTERCHANGE LIMITS | 10'-0"-0.00" | 1'-00"-0.00" |

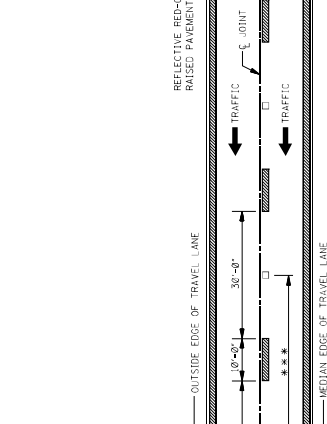
* NOTE: ON THE MAIN FACILITY, REFLECTIVE REPAIRED RAISED PAVEMENT MARKERS ON A 48-0207 SPACING WILL BE REQUIRED ON LANE LINES THROUGH ALL INTERCHANGE AREAS BEGINNING 100 FEET BEFORE THE INTERCHANGE AND ENDING 100 FEET AFTER THE END OF THE ENTRANCE RAMP TAPER.

4. PAVEMENT MARKERS SHALL BE HIGH PERFORMANCE REFLECTIVE RAISED PAVEMENT MARKERS AS LISTED IN THE MOST APPROVED SOURCE OF MATERIALS.*

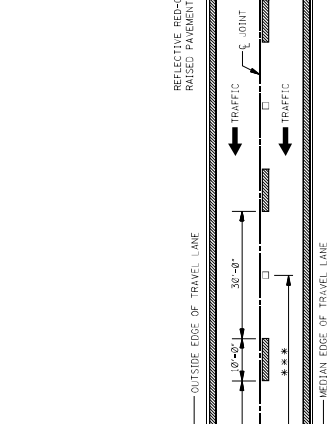
DETAIL "A"



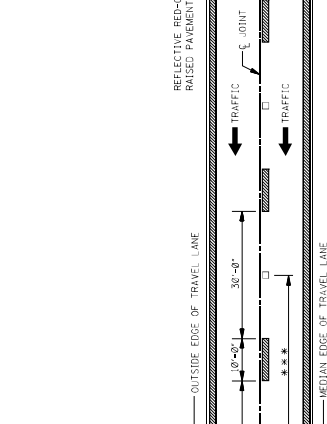
DETAIL "A"



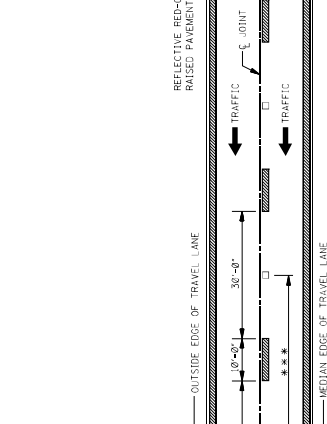
DETAIL "A"



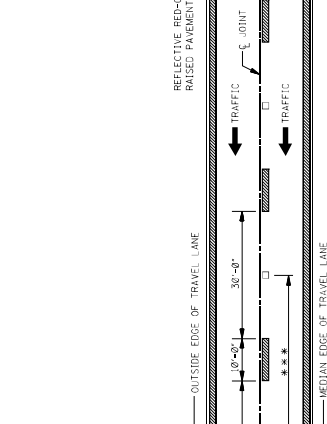
DETAIL "A"



DETAIL "A"



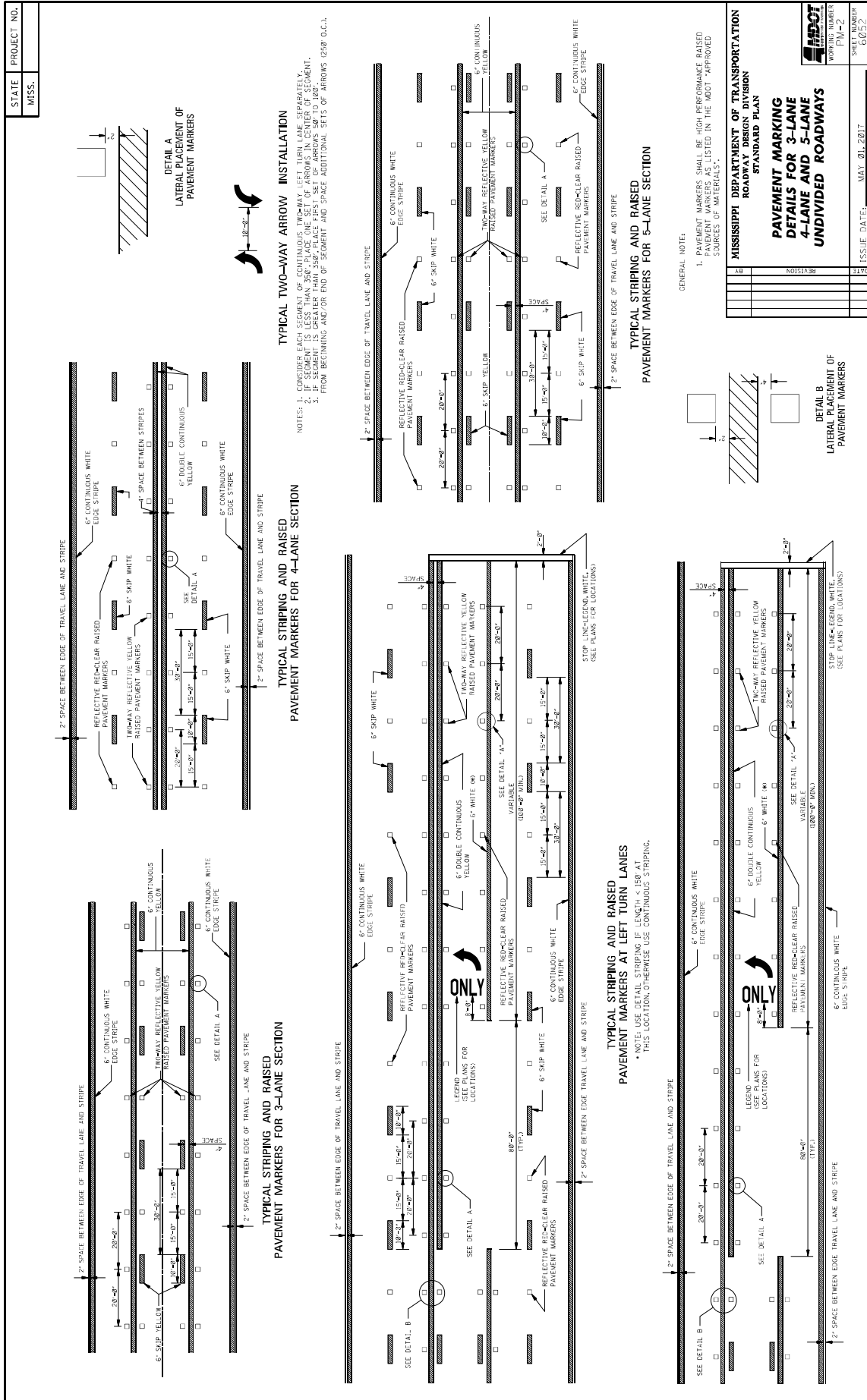
DETAIL "A"



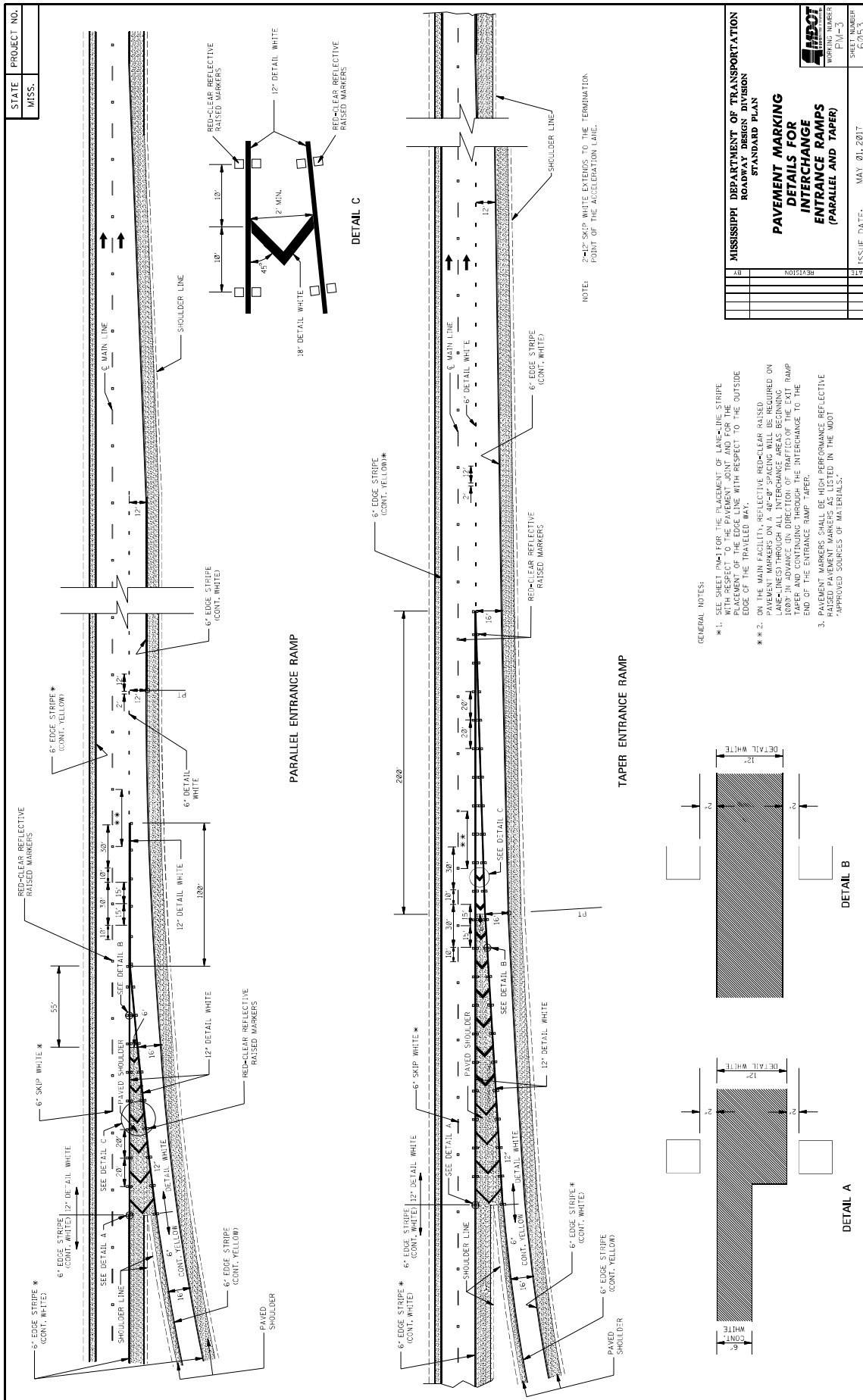
| | | | | | | |
|------|----------|----|-------------|--------------|--------------|------|
| DATE | REVISION | BY | ISSUE DATE: | MAY 01, 2017 | SHEET NUMBER | 0001 |
|------|----------|----|-------------|--------------|--------------|------|

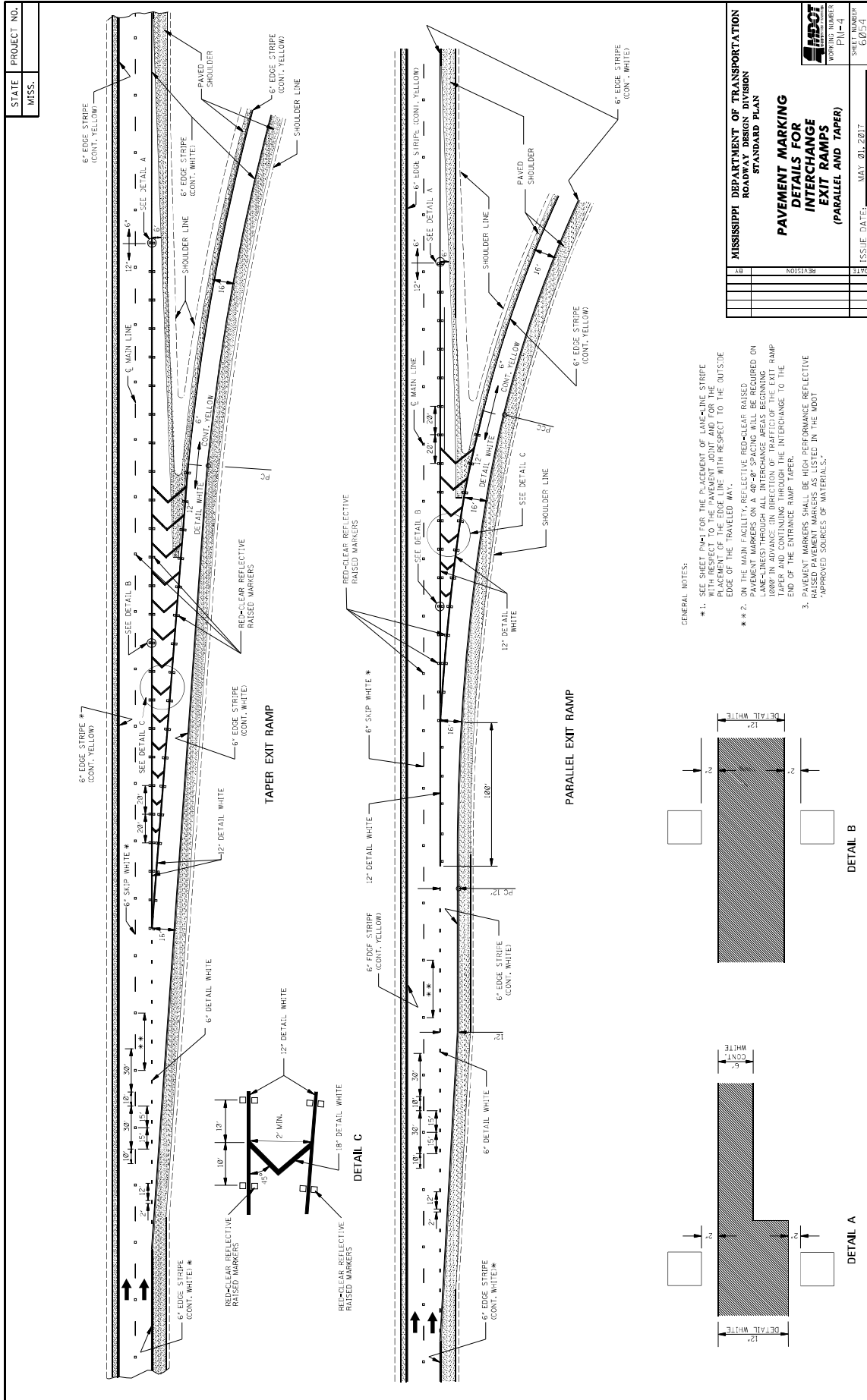


MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
PAVEMENT MARKING
2-LANE AND 4-LANE
DIVIDED ROADWAYS

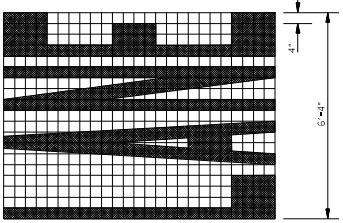


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|---|----------------------|
| MISSISSIPPI DEPARTMENT OF TRANSPORTATION | |
| ROADWAY DESIGN DIVISION | |
| STANDARD PLAN | |
| PAVEMENT MARKING | |
| DETAILS FOR 3-LANE | |
| 4-LANE AND 3-LANE | |
| UNDIVIDED ROADWAYS | |
| SHEET NUMBER P-2 | SHEET TOTAL 60/52 |
| ISSUE DATE: MAY 20, 2017 | |

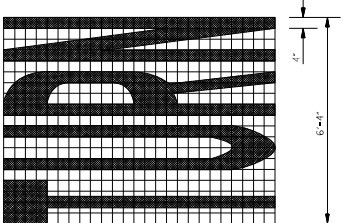




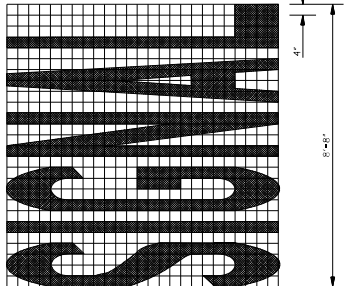
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| STATE MISS. | PROJECT NO. | | |
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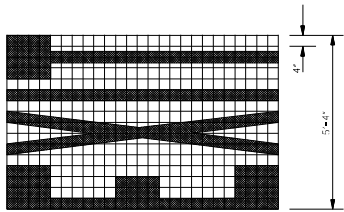
6'-4" x 4"



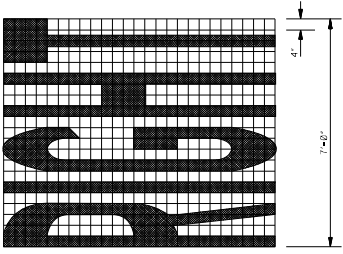
8'-4" x 4"



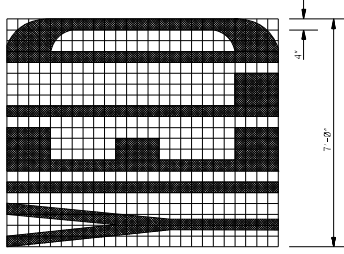
8'-4" x 4"



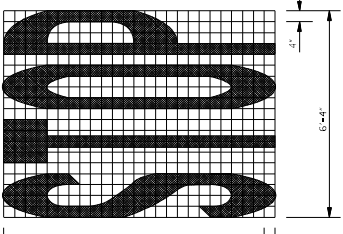
8'-4" x 5'-4"



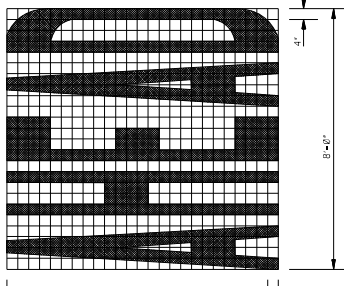
8'-4" x 7'-0"



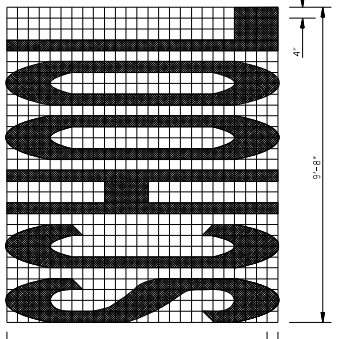
8'-4" x 7'-0"



8'-4" x 6'-4"



8'-4" x 8'-0"



8'-4" x 9'-8"

GENERAL NOTES:

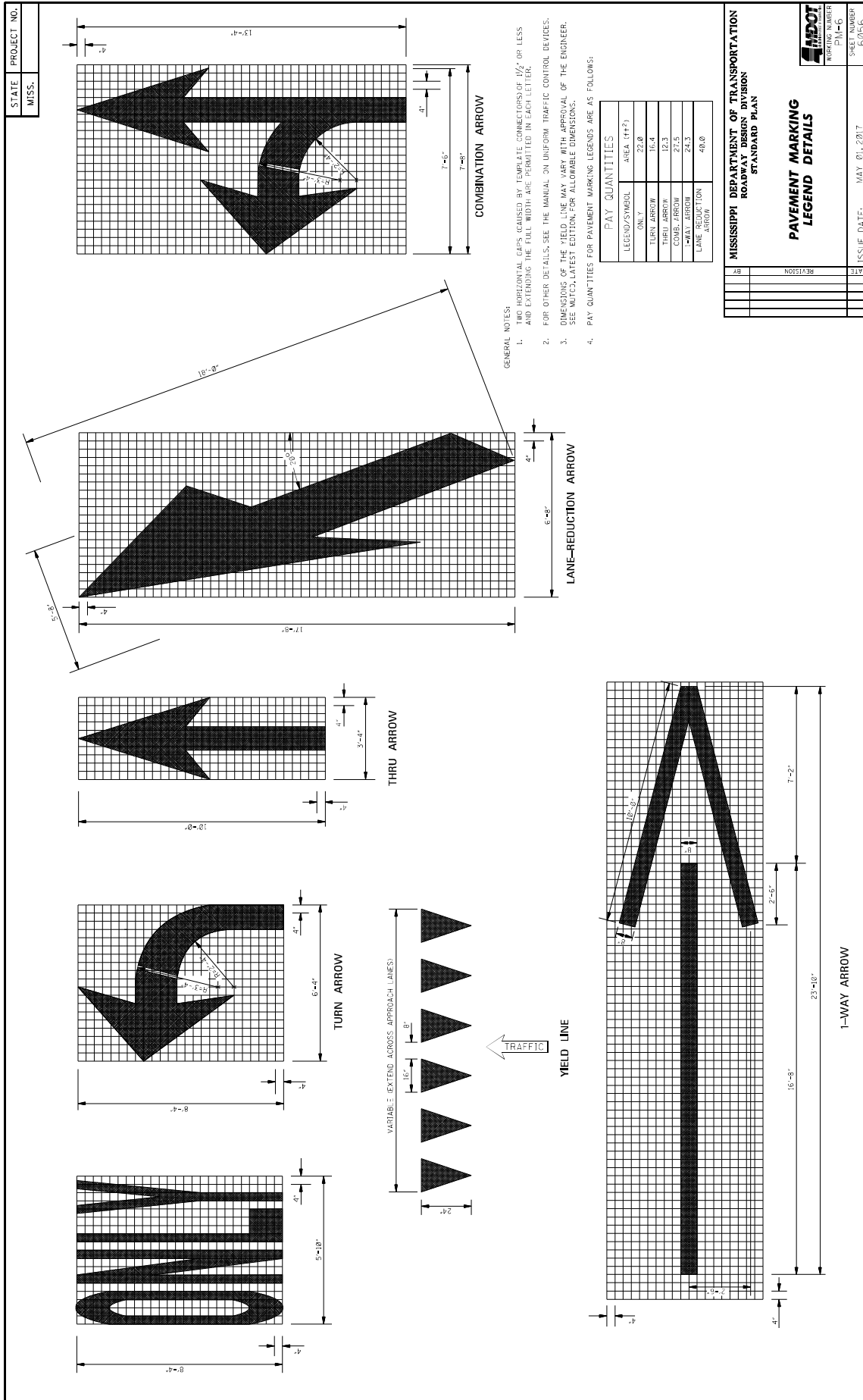
- TWO HORIZONTAL GAPS (CAUSED BY TEMPLATE CONNECTIONS) OF 1/4" SHALL BE SHOWN EXTENDING FULL WIDTH OF LETTERS.
- FOR OTHER DETAILS, SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- PAY QUANTITIES FOR PAVEMENT MARKING LEGENDS ARE AS FOLLOWS:

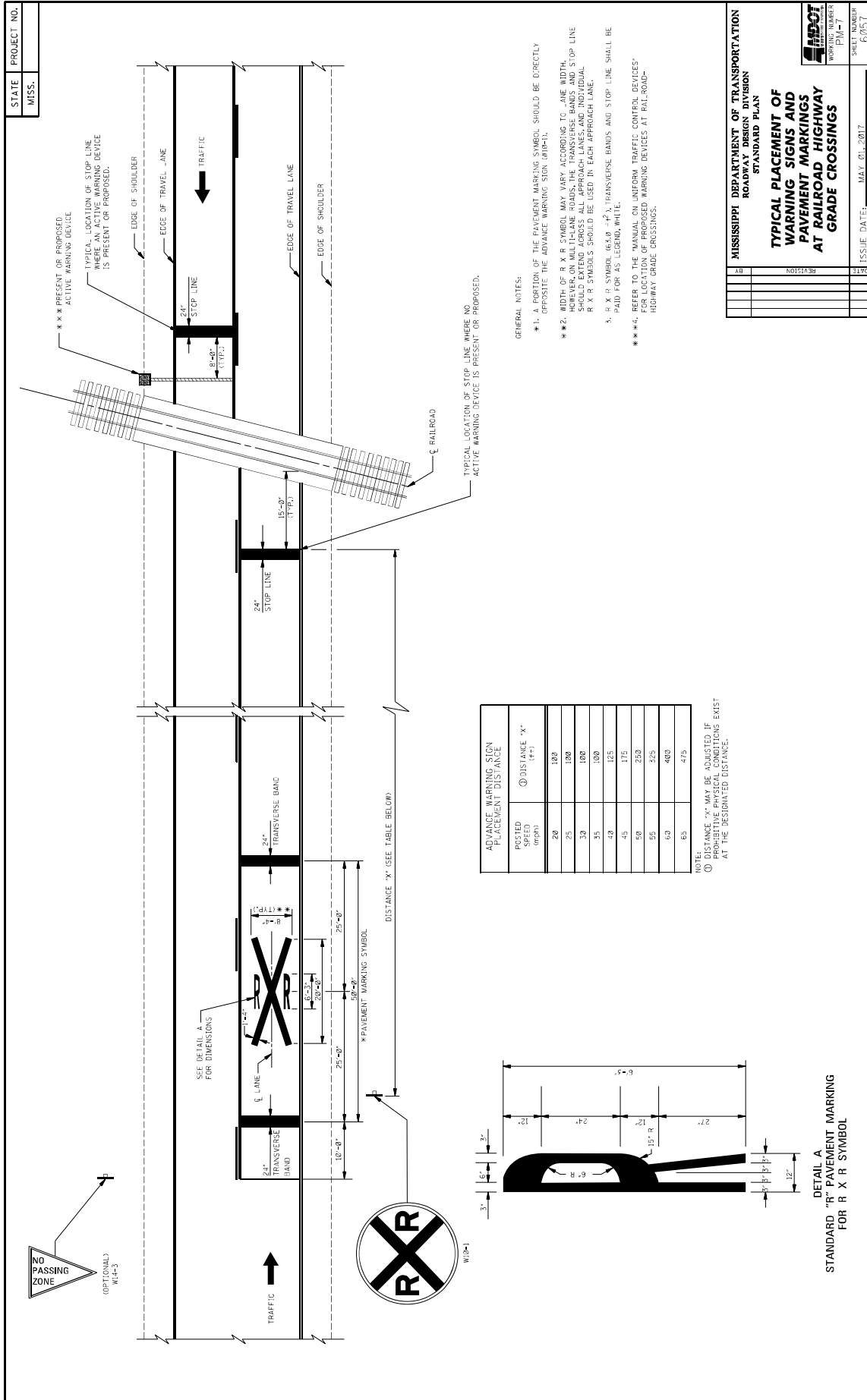
| LEGEND | AREA (sq ft) |
|--------|--------------|
| STOP | 246.6 |
| RIGHT | 286.6 |
| LEFT | 195.5 |
| YIELD | 227.2 |
| AHEAD | 322.4 |
| YIELD | 268.8 |
| EXIT | 182.5 |
| SIGNAL | 322.5 |
| SCHOOL | 352.2 |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

**PAVEMENT MARKING
LEGEND DETAILS**

ISSUE DATE: MAY 01, 2017

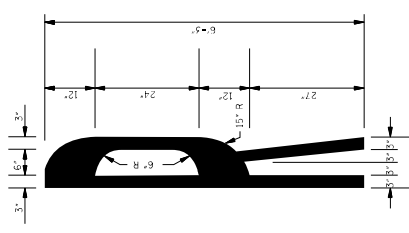




- GENERAL NOTES:
- **1. A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W14-3).
 - **2. WIDTH OF 'R' SYMBOL MAY VARY ACCORDING TO LANE WIDTH. SYMBOLS SHOULD EXTEND ACROSS ALL APPROACH LANES AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
 - **3. 'R' X 'R' SYMBOL (65.0' - 75') TRANSVERSE BANDS AND STOP LINE SHALL BE PAID FOR AS LEGEND WHITE.
 - **4. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR LOCATION OF PROPOSED WARNING DEVICES AT RAILROAD-HIGHWAY GRADE CROSSINGS.

| POSTED SPEED (mph) | ADVANCE WARNING SIGN PLACEMENT DISTANCE (ft) |
|--------------------|--|
| 20 | 100 |
| 25 | 100 |
| 30 | 100 |
| 35 | 100 |
| 40 | 125 |
| 45 | 175 |
| 50 | 250 |
| 55 | 325 |
| 60 | 400 |
| 65 | 475 |

NOTE: DISTANCE 'X' MAY BE SHORTER IF PROTECTIVE PHYSICAL CONDITIONS EXIST AT THE DESIGNATED DISTANCE.



DETAIL A
STANDARD "R" PAVEMENT MARKING
FOR R X R SYMBOL

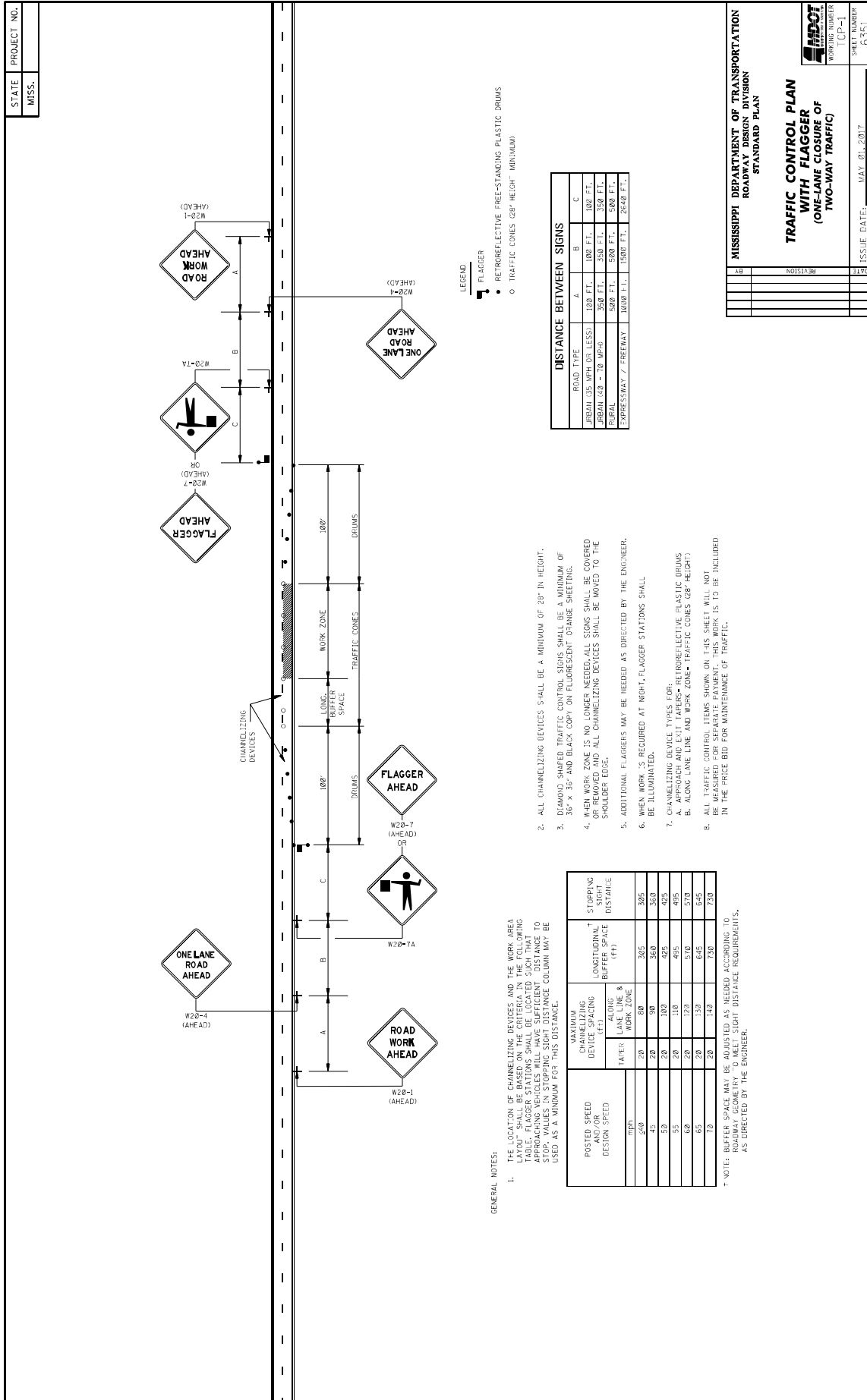
STATE PROJECT NO.
MISS.

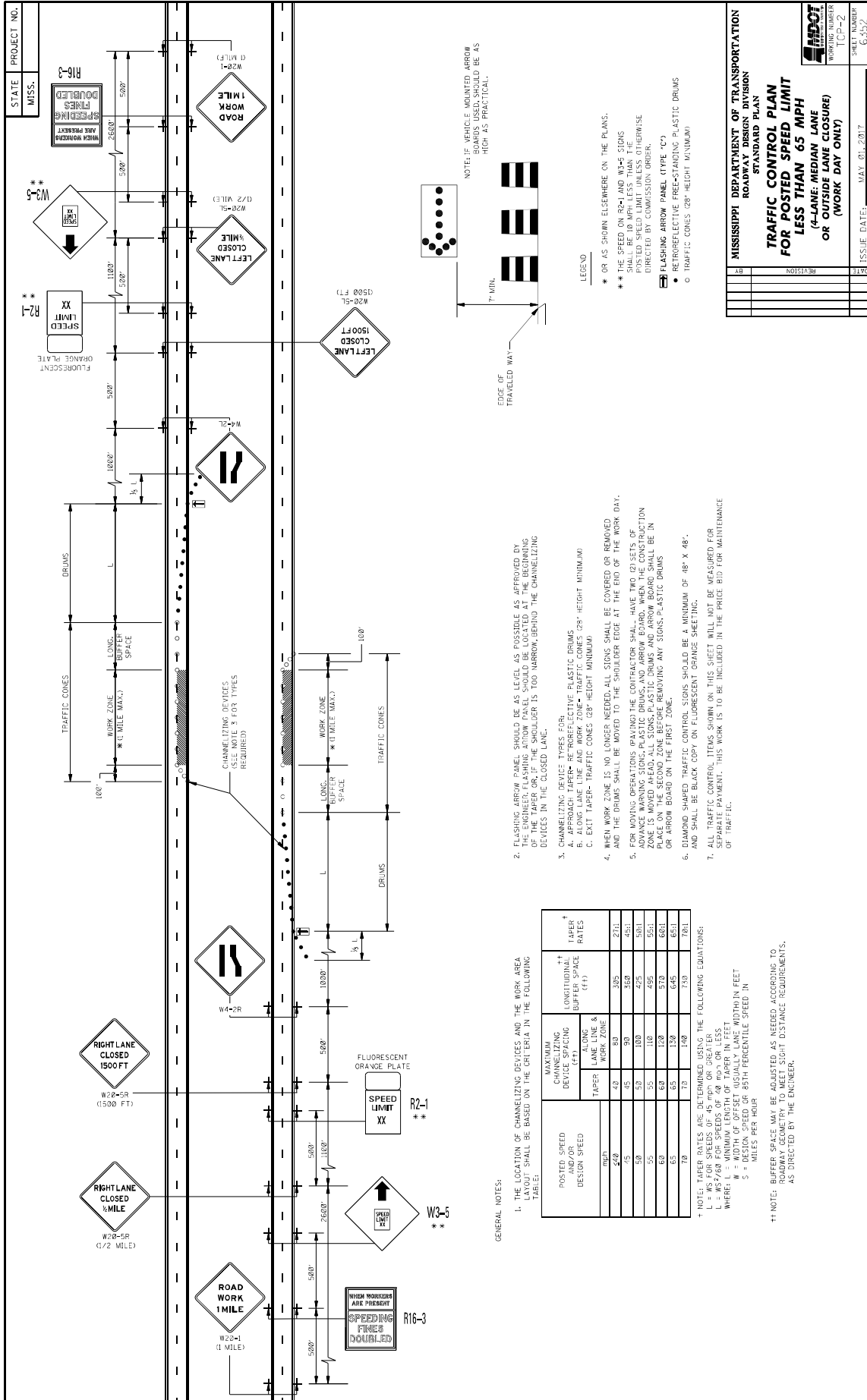
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TYPICAL PLACEMENT OF WARNING SIGNS AND PAVEMENT MARKINGS AT RAILROAD HIGHWAY GRADE CROSSINGS

WORKING NUMBER: P10-7
SHEET NUMBER: 60511

ISSUE DATE: MAY 01, 2017





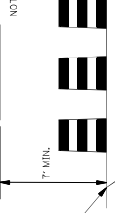
GENERAL NOTES:

1. THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE:
- | POSTED SPEED AND/OR DESIGN SPEED | MAXIMUM CHANNELIZING DEVICE SPACING (FT) | | LONGITUDINAL BUFFER SPACE (FT) | TAPER RATES |
|----------------------------------|--|-----------|--------------------------------|-------------|
| | LANE LINE & WORK ZONE | WORK ZONE | | |
| 70 | 42 | 80 | 305 | 27:1 |
| 55 | 45 | 90 | 350 | 45:1 |
| 50 | 50 | 100 | 425 | 50:1 |
| 55 | 55 | 110 | 495 | 55:1 |
| 60 | 60 | 120 | 570 | 60:1 |
| 65 | 65 | 130 | 645 | 65:1 |
| 70 | 70 | 140 | 730 | 70:1 |
- † NOTE: TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:
 L = MS FOR SPEEDS OF 45 MPH OR GREATER
 L = MS FOR SPEEDS OF 30 MPH OR GREATER
 WHERE: L = MINIMUM LENGTH OF TAPER IN FEET
 S = DESIGN SPEED OR 85TH PERCENTILE SPEED IN MILES PER HOUR
- †† NOTE: BUFFER SPACE MAY BE ADJUSTED AS NEEDED ACCORDING TO ROADWAY GEOMETRY TO MEET SIGHT DISTANCE REQUIREMENTS, AS DIRECTED BY THE ENGINEER.

2. FLASHING ARROW PANEL SHOULD BE AS LEVEL AS POSSIBLE AS APPROVED BY THE ENGINEER. THE PANEL SHOULD BE LOCATED AT THE END OF THE WORK DAY OF THE TAPER OR, IF THE SHOULDER IS TOO NARROW, BEHIND THE CHANNELIZING DEVICES IN THE CLOSED LANE.
3. CHANNELIZING DEVICES: TYPE: F30.
 A. APPROACH TAPER- RETROREFLECTIVE PLASTIC DRUMS
 B. ALONG LANE LINE AND WORK ZONE- TRAFFIC CONES (28" HEIGHT MINIMUM)
 C. EXIT TAPER- TRAFFIC CONES (28" HEIGHT MINIMUM)
4. WHEN WORK ZONE IS NO LONGER NEEDED, ALL SIGNS SHALL BE COVERED OR REMOVED.
5. FOR MOVING OPERATIONS (PAVING) THE CONTRACTOR SHALL HAVE TWO (2) SETS OF ADVANCE WARNING SIGNS- PLASTIC DRUMS AND ARROW BOARD. WHEN THE CONSTRUCTION ZONE IS MOVED AHEAD, ALL SIGNS- PLASTIC DRUMS AND ARROW BOARD SHALL BE IN PLACE ON THE SECOND ZONE BEFORE REMOVING ANY SIGNS- PLASTIC DRUMS OR ARROW BOARD ON THE FIRST ZONE.
6. DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHOULD BE A MINIMUM OF 48" X 48" AND SHALL BE BLACK COPY ON FLUORESCENT ORANGE SHEETING.
7. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

LEGEND

- * OR AS SHOWN ELSEWHERE ON THE PLANS.
- ** THE SPEED ON R2-1 AND W3-5 SIGNS SHALL BE 10 MPH LESS THAN THE POSTED SPEED LIMIT UNLESS OTHERWISE DIRECTED BY COMMISSION ORDER.
- ▢ FLASHING ARROW PANEL (TYPE "C")
- RETROREFLECTIVE FREE-STANDING PLASTIC DRUMS
- TRAFFIC CONES (28" HEIGHT MINIMUM)



STATE PROJECT NO. MISS. R16-3

W20-3R (1500 FT) RIGHT LANE CLOSED 1500 FT

W20-5P (1/2 MILE) RIGHT LANE CLOSED 1/2 MILE

W20-1 (1 MILE) ROAD WORK 1 MILE

W20-5L (1/2 MILE) LEFT LANE CLOSED 1/2 MILE

W20-1L (1500 FT) LEFT LANE CLOSED 1500 FT

W4-2R

W3-5

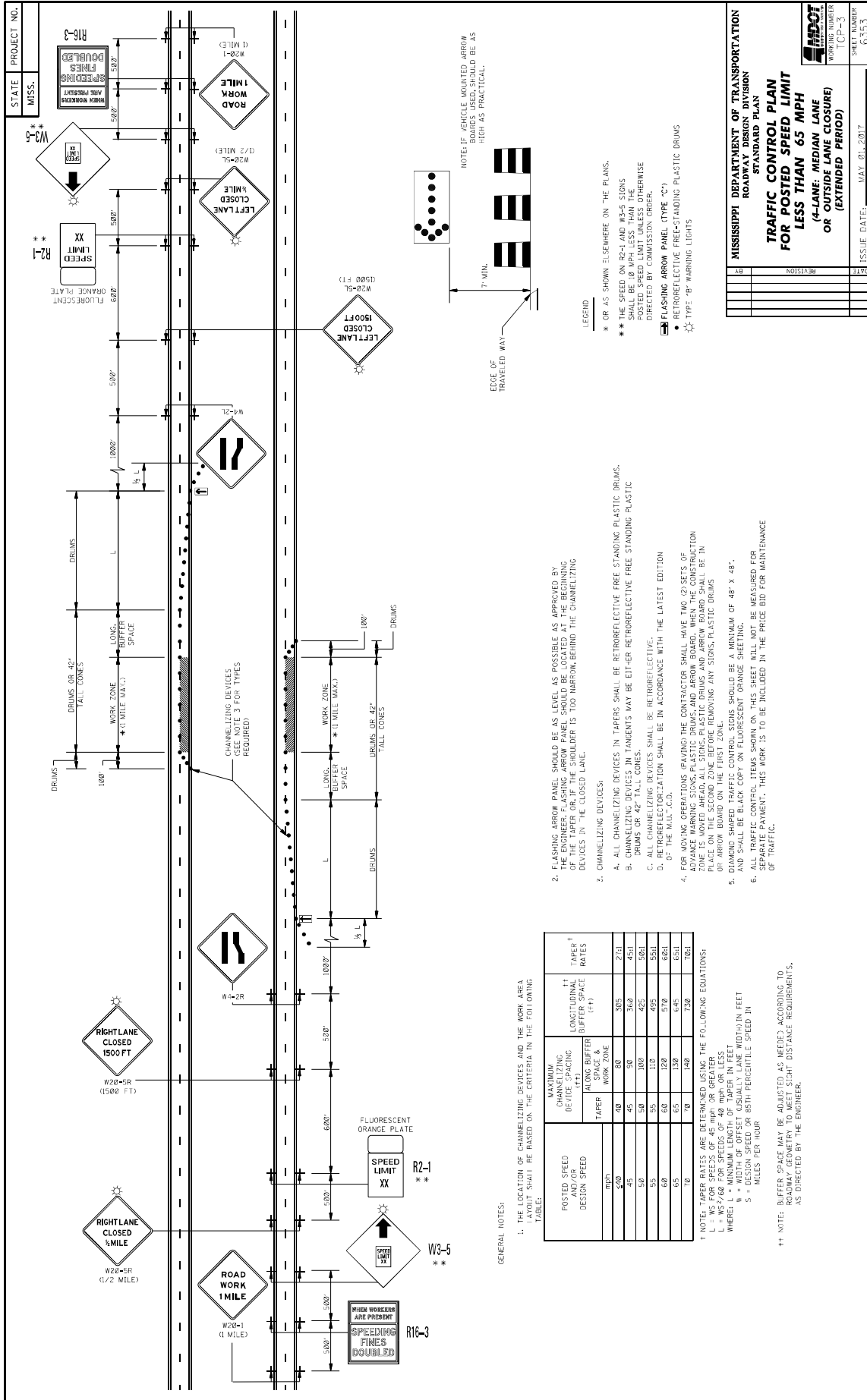
R2-1

R16-3

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
 ROADWAY DESIGN DIVISION
 STANDARD PLAN
**TRAFFIC CONTROL PLAN
 FOR POSTED SPEED LIMIT
 LESS THAN 65 MPH**
 (4-LANE; MEDIAN LANE
 OR OUTSIDE LANE CLOSURE)
 (WORK DAY ONLY)

ISSUE DATE: MAY 01, 2017

WORKING NUMBER: 1CP-2
 SHEET NUMBER: 6252



GENERAL NOTES:

1. THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE:

| POSTED SPEED DESIGN SPEED | MAXIMUM CHANNELIZING DEVICE SPACING (FT) | | LONGITUDINAL BUFFER SPACE (FT) | TAPER RATES |
|---------------------------|--|-----------|--------------------------------|-------------|
| | ALONG BUFFER | WORK ZONE | | |
| 10 | 40 | 80 | 305 | 2:1 |
| 20 | 45 | 90 | 360 | 4:1 |
| 30 | 50 | 100 | 420 | 5:1 |
| 35 | 55 | 110 | 495 | 5:1 |
| 40 | 60 | 120 | 570 | 6:1 |
| 45 | 65 | 130 | 645 | 6:1 |
| 50 | 70 | 140 | 720 | 7:1 |

† NOTE: TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:
 L = AS FOR SPEEDS OF 45 MPH OR GREATER
 L = WS/60 FOR SPEEDS OF 40 MPH OR LESS
 WHERE: W = WIDTH OF OFFSET (USUALLY LANE WIDTH) IN FEET
 S = DESIGN SPEED OR 85TH PERCENTILE SPEED IN MILES PER HOUR

†† NOTE: BUFFER SPACE MAY BE ADJUSTED AS NECESSARY ACCORDING TO ROADWAY GEOMETRY TO MEET SIGHT DISTANCE REQUIREMENTS, AS DIRECTED BY THE ENGINEER.

- FLASHING ARROW PANEL SHOULD BE AS LEVEL AS POSSIBLE AS APPROVED BY THE ENGINEER. FLASHING ARROW PANEL SHOULD BE LOCATED AT THE BEGINNING OF THE WORK ZONE. BUFFER SPACE SHOULD BE 100 FEET BEHIND THE CHANNELIZING DEVICES IN THE CLOSED LANE.
- CHANNELIZING DEVICES:
 - ALL CHANNELIZING DEVICES IN TAPERS SHALL BE RETROREFLECTIVE FREE STANDING PLASTIC DRUMS.
 - DRUMS OR 42" TALL CONES.
 - ALL CHANNELIZING DEVICES SHALL BE RETROREFLECTIVE.
 - RETROREFLECTORIZATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE M.I.T.C.O.
- FOR WORKING DRUMS, TAPERS THE CONTRACTOR SHALL HAVE TWO (2) FEET OF CHANNELIZING DEVICES (STANDING PLASTIC DRUMS AND ARROW BOARD). THE CONSTRUCTION ZONE IS MOVED AHEAD ALL STANDING PLASTIC DRUMS AND ARROW BOARD SHALL BE IN PLACE ON THE SECOND ZONE BEFORE REMOVING ANY STANDING PLASTIC DRUMS OR ARROW BOARD ON THE FIRST ZONE.
- ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

- LEGEND
- * OR AS SHOWN ELSEWHERE ON THE PLANS.
 - ** THE SPEED ON R2-1 AND R2-2 SIGNS SHALL BE 10 MPH LESS THAN THE POSTED SPEED LIMIT UNLESS OTHERWISE DIRECTED BY COMMISSION ORDER.
 - ◆ FLASHING ARROW PANEL (TYPE 'C')
 - RETROREFLECTIVE FREE-STANDING PLASTIC DRUMS
 - TYPE 'B' WARNING LIGHTS

STATE PROJECT NO. MISS.

WORKERS ARE PRESENT
SPEEDING FINES DOUBLED
R16-3

W3-5

RIGHT LANE CLOSED 1/2 MILE
W26-5R (1/2 MILE)

RIGHT LANE CLOSED 1500 FT
W26-5R (1500 FT)

ROAD WORK 1 MILE
W20-1 (1 MILE)

LEFT LANE CLOSED 1/2 MILE
W20-5L (1/2 MILE)

LEFT LANE CLOSED 1500 FT
W20-5L (1500 FT)

ROAD WORK 1 MILE
W20-1 (1 MILE)

LEFT LANE CLOSED 1/2 MILE
W20-5L (1/2 MILE)

LEFT LANE CLOSED 1500 FT
W20-5L (1500 FT)

DRUMS OR 42" TALL CONES

WORK ZONE

LONG. BUFFER SPACE

CHANNELIZING DEVICES (SEE NOTE 3 FOR TYPES REQUIRED)

DRUMS OR 42" TALL CONES

EDGE OF TRAVELED WAY

7' MIN.

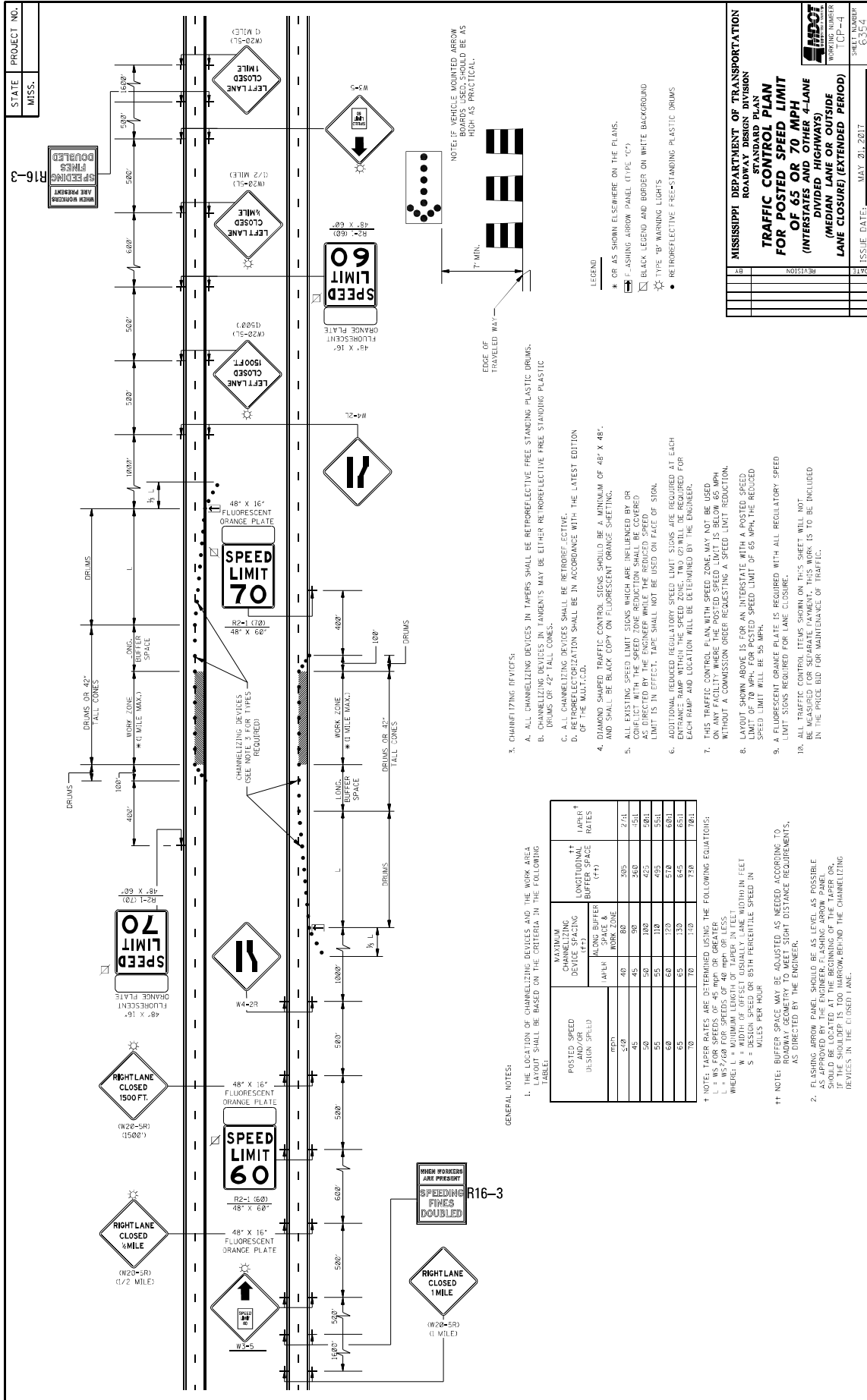
NOTE: IF VEHICLE MOUNTED ARROW BOARDS USED, SHOULD BE AS HIGH AS PRACTICAL.

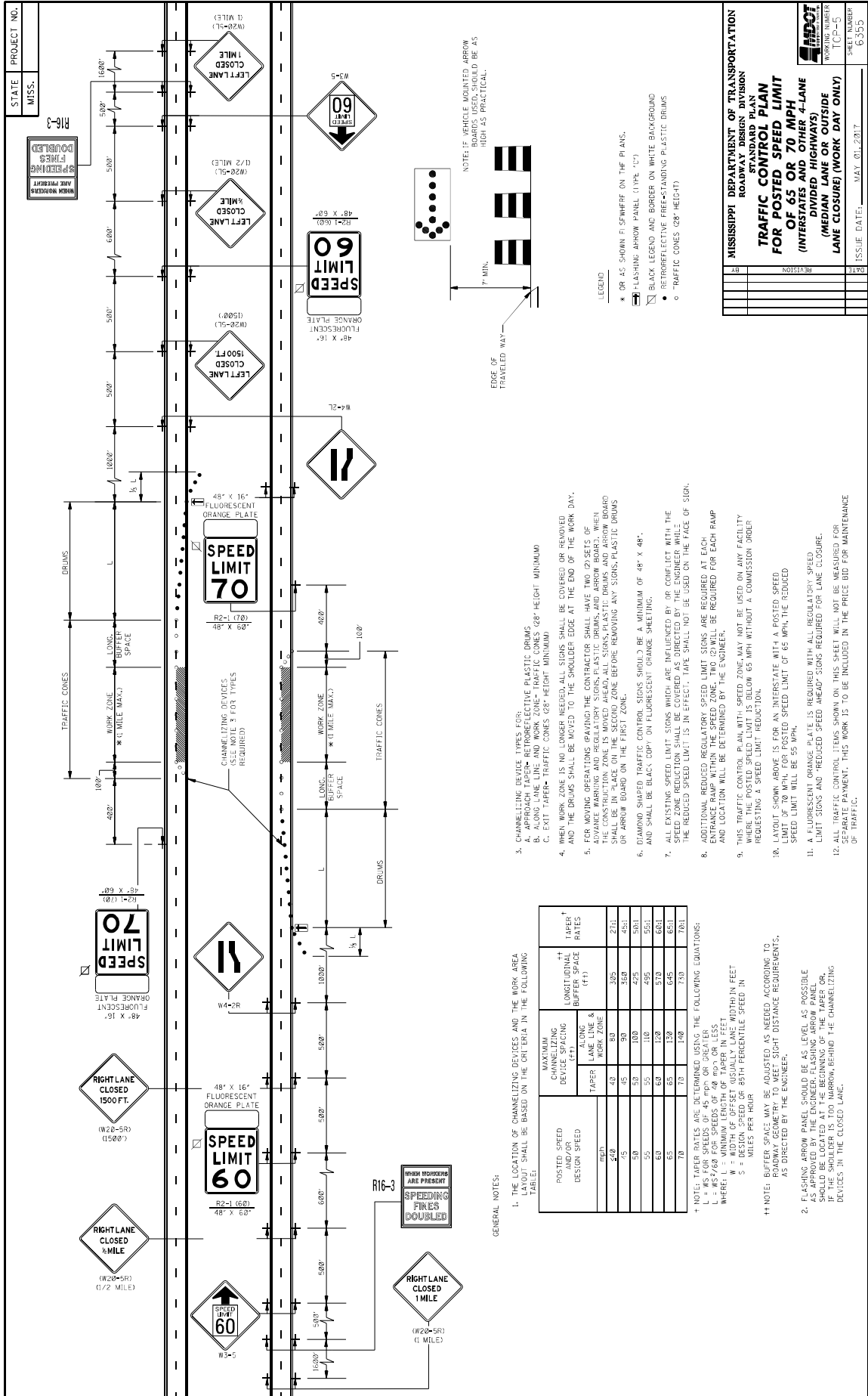
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
TRAFFIC CONTROL PLAN
FOR POSTED SPEED LIMIT
LESS THAN 65 MPH
(4-LANE, MEDIAN LANE
OR OUTSIDE LANE CLOSURE)
(EXTENDED PERIOD)

ISSUE DATE: MAY 01, 2017

WORKING NUMBER
TCP-3

SHEET NUMBER
6253





GENERAL NOTES:

- THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE:
- | POSTED SPEED AND/OR DESIGN SPEED (mph) | MAXIMUM CHANNELIZING DEVICE SPACING (FT) | | LONGITUDINAL BUFFER SPACE (FT) | TAPER RATES |
|--|--|--------------------------|--------------------------------|-------------|
| | LANE LINE & WORK ZONE | LANE LINE & BUFFER SPACE | | |
| 40 | 42 | 80 | 305 | 27:1 |
| 45 | 45 | 90 | 350 | 45:1 |
| 50 | 50 | 100 | 425 | 50:1 |
| 55 | 55 | 110 | 495 | 55:1 |
| 60 | 60 | 120 | 570 | 60:1 |
| 65 | 65 | 130 | 645 | 65:1 |
| 70 | 70 | 140 | 730 | 70:1 |
- † NOTE: TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:
 L = WS FOR SPEEDS OF 45 MPH OR GREATER
 L = WS FOR DESIGN SPEEDS OF 65 MPH OR GREATER
 WHERE: L = MINIMUM LENGTH OF TAPER IN FEET
 W = WIDTH OF OFFSET (USUALLY LANE WIDTH) IN FEET
 S = DESIGN SPEED OR 85TH PERCENTILE SPEED IN MILES PER HOUR
- †† NOTE: BUFFER SPACE MAY BE ADJUSTED AS NEEDED ACCORDING TO LOCAL RIGHT-OF-WAY DISTANCE REQUIREMENTS, AS DIRECTED BY THE ENGINEER.

- FLASHING ARROW PANEL SHOULD BE AS LEVEL AS POSSIBLE AND SHOULD BE LOCATED AT THE BEGINNING OF THE TAPER OR IF THE SHOULDER IS TOO NARROW BEHIND THE CHANNELIZING DEVICES IN THE CLOSED LANE.

- CHANNELIZING DEVICE TYPES FOR:
 - APPROACH TAPER- RETROREFLECTIVE PLASTIC DRUMS
 - ALONG LANE LINE AND WORK ZONE- TRAFFIC CONES (28" HEIGHT MINIMUM)
 - EXIT TAPER- TRAFFIC CONES (28" HEIGHT MINIMUM)
- WHEN WORK ZONE IS NO LONGER NEEDED, ALL SIGNS SHALL BE COVERED OR REVOLVED AND THE DRUMS SHALL BE MOVED TO THE SHOULDER EDGE AT THE END OF THE WORK DAY.
- FOR MOVING OPERATIONS (PAVING) THE CONTRACTOR SHALL HAVE TWO (2) SETS OF ADVANCE WARNING AND REGULATORY SIGNS, PLASTIC DRUMS, AND ARROW BOARDS. WHEN THE CONTRACTOR IS MOVING, THE ADVANCE WARNING AND REGULATORY SIGNS, PLASTIC DRUMS, AND ARROW BOARDS SHALL BE IN PLACE ON THE SECOND ZONE BEFORE REMOVING ANY SIGNS, PLASTIC DRUMS OR ARROW BOARD ON THE FIRST ZONE.
- DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHOULD BE A MINIMUM OF 48" X 48".
- ALL EXISTING SPEED LIMIT SIGNS WHICH ARE INDICATED BY AN ORANGE LETTER WITH THE SPEED ZONE REDUCTION SHALL BE COVERED AS DIRECTED BY THE ENGINEER WHILE THE REDUCED SPEED LIMIT IS IN EFFECT. TAPE SHALL NOT BE USED ON THE FACE OF SIGN.
- ADDITIONAL REVOLVED REGULATORY SPEED LIMIT SIGNS ARE REQUIRED AT EACH ENTRANCE RAMP WITHIN THE SPEED ZONE. TWO (2) WILL BE REQUIRED FOR EACH RAMP AND LOCATION WILL BE DETERMINED BY THE ENGINEER.
- THIS TRAFFIC CONTROL PLAN WITH SPEED ZONE MAY NOT BE USED ON ANY FACILITY REQUESTING A SPEED LIMIT REDUCTION.
- LAYOUT SHOWN ABOVE IS FOR AN INTERSTATE WITH A POSTED SPEED LIMIT OF 70 MPH. FOR POSTED SPEED LIMIT OF 65 MPH, THE REDUCED SPEED LIMIT WILL BE 55 MPH.
- A FLUORESCENT ORANGE PLATE IS REQUIRED WITH ALL REGULATORY SPEED LIMIT SIGNS AND "REDUCED SPEED AHEAD" SIGNS REQUIRED FOR LANE CLOSURE.
- ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

STATE PROJECT NO.
MISS.

WORKING NUMBER
ICP-5

SHEET NUMBER
03500

WING BARRICADES

- WING BARRICADES ARE TYPE II; BARRICADES ERECTED ON THE SHOULDER OF A ROADWAY OR RESTRICTED ROADWAY. WING BARRICADES MAY BE USED AS A MOUNTING FOR THE ADVANCE WARNING SIGNS OR FLASHERS.
- WING BARRICADES SHOULD BE USED:
 - IN ADVANCE OF A CONSTRUCTION PROJECT EVEN WHEN NO PART OF THE ROADWAY IS ACTUALLY CLOSED.
 - IN ADVANCE OF ALL BRIDGE OR CULVERT WIDENING OPERATIONS.

BARRICADE CLOSING A ROAD

BARRICADE CHARACTERISTICS

| | I | II | III |
|---|------------------------|------------------------|---|
| WIDTH OF RAIL ** | 8" MIN. - 12" MAX. | 8" MIN. - 12" MAX. | 8" MIN. - 12" MAX. |
| LENGTH OF RAIL ** | 24" MIN. | 24" MIN. | 48" MIN. |
| WIDTH OF STRIPE * | 6" | 6" | 6" |
| HEIGHT | 36" MIN. | 36" MIN. | 60" MIN. |
| NUMBER OF RETROREFLECTORIZED RAIL FACES | 2 (ONE EACH DIRECTION) | 4 (TWO EACH DIRECTION) | 3 IF FACING TRAFFIC IN ONE DIRECTION 4 IF FACING TRAFFIC IN TWO DIRECTIONS |

* 1. FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.
** 2. BARRICADES INTENDED FOR USE ON EXPRESSWAYS, FREEWAYS AND OTHER HIGH SPEED ROADWAYS, SHALL HAVE A MINIMUM OF 270 IN² OF REFLECTIVE AREA FACING TRAFFIC.

STANDARD BARRICADES

- THE MARKING FOR BARRICADE RAILS SHALL BE ORANGE AND WHITE (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).
- RAIL STRIPE SHALL BE 6 INCHES, EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.
- DO NOT PLACE SANDBAGS OR OTHER DEVICES TO PROVIDE MASS ON THE BOTTOM RAIL THAT WILL BLOCK VIEW OR RAIL FACE.
- FOR ADDITIONAL INFORMATION OR DETAILS, SEE METHOD, LATEST EDITION.
- BARRICADES ARE CLASSIFIED BY FHWA AS CATEGORY II WHEN ZONE DEVICES WHICH REQUIRE SUCCESSFULLY CRASH TESTED. A LIST OF CRASHWORTHY BARRICADES AND OTHER CATEGORY II DEVICES CAN BE FOUND ON FHWA'S WEBSITE: http://safety.fhwa.dot.gov/roadway_dept/pafety_guidance/road_hardware/cat2.cfm

CHEVRON SIGN DETAIL

- A CHEVRON SIGN CONSISTS OF A BLACK CHEVRON TYPE MARKING ON AN ORANGE BACKGROUND AND SHALL POINT IN THE DIRECTION OF TRAFFIC FLOW.
- THE CHEVRON SIGN SHALL BE MOUNTED ON CRASHWORTHY SUPPORT.
- CHEVRON SIGNS MAY BE USED TO SUPPLEMENT OTHER STANDARD DEVICES WHERE ONE OR MORE LANES ARE CLOSED FOR CONSTRUCTION OR MAINTENANCE. THEY SHOULD BE PLACED APPROXIMATELY 2' - 40' BEHIND THE LANE TRANSITION STRIPE.

PLASTIC DRUM STRIPING DETAIL

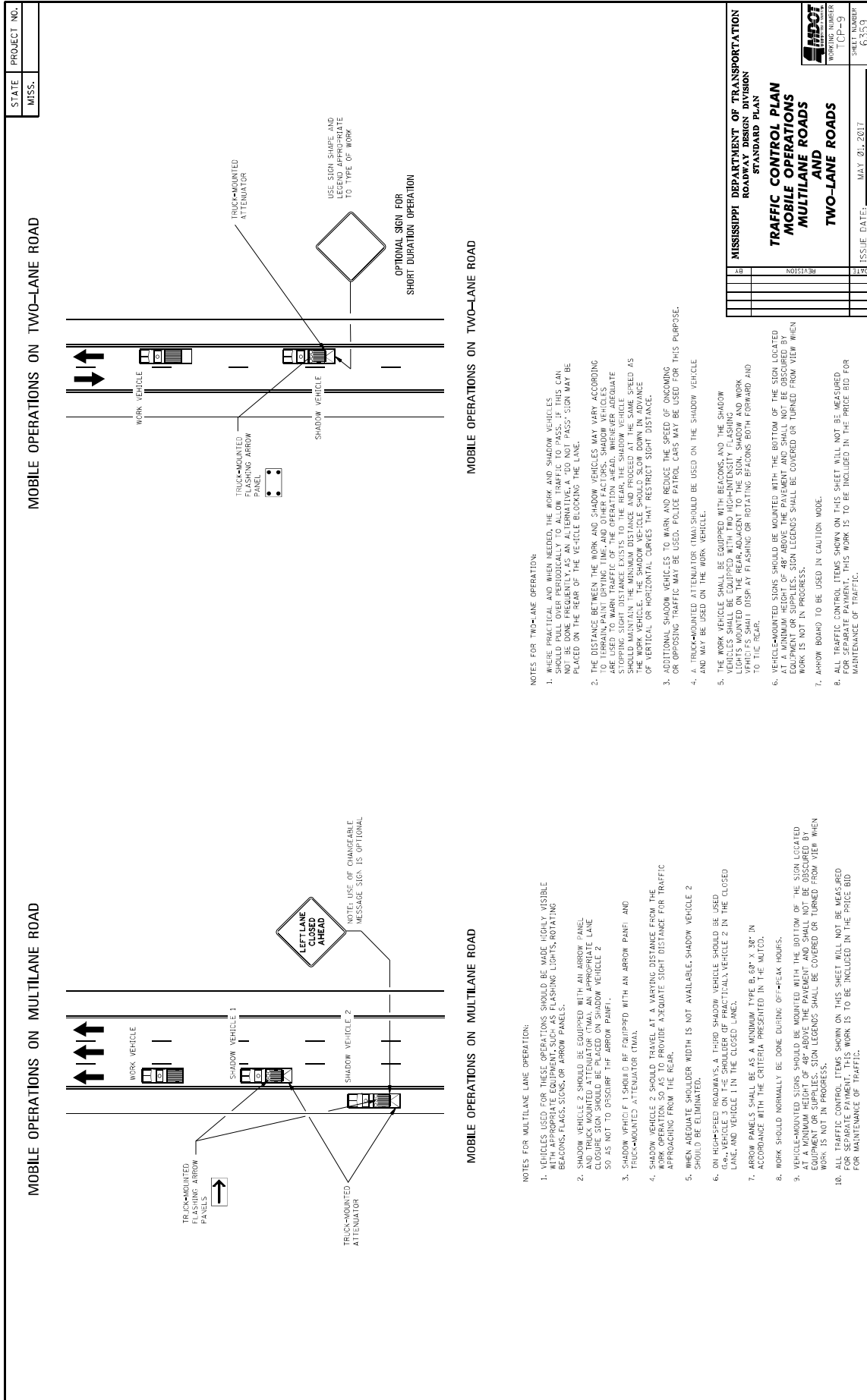
- PLASTIC DRUMS SHALL BE ON END AND USED AS AN EXPEDIENT METHOD FOR TRAFFIC CHANNELIZATION. THE COLOR AND MARKING OF DRUMS SHALL BE CONSISTENT WITH MARKING STANDARDS. THE DRUMS SHALL BE PAINTED OR MARKED WITH RETROREFLECTIVE STRIPES (2 ORANGE & 2 WHITE) 6" WIDE.
- DRUMS SHOULD NEVER BE PLACED IN THE ROADWAY WITHOUT WARNING SIGNS.
- WHERE PRACTICAL PLASTIC DRUMS SHOULD BE PLACED NO CLOSER THAN 3'-0" FROM THE EDGE OF TRAVELED LANE.

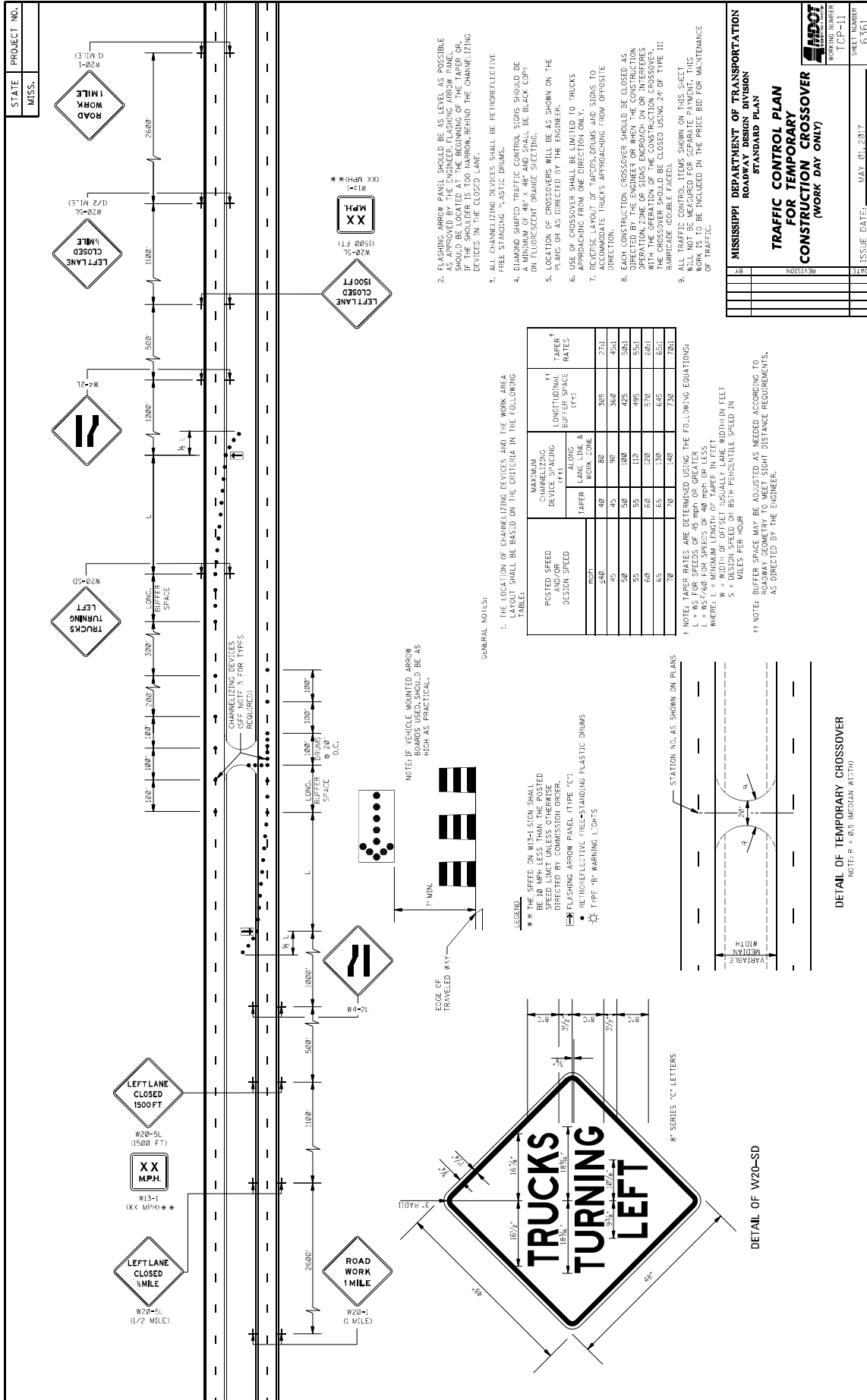
TYPE 3 OBJECT MARKER (OM-3R)

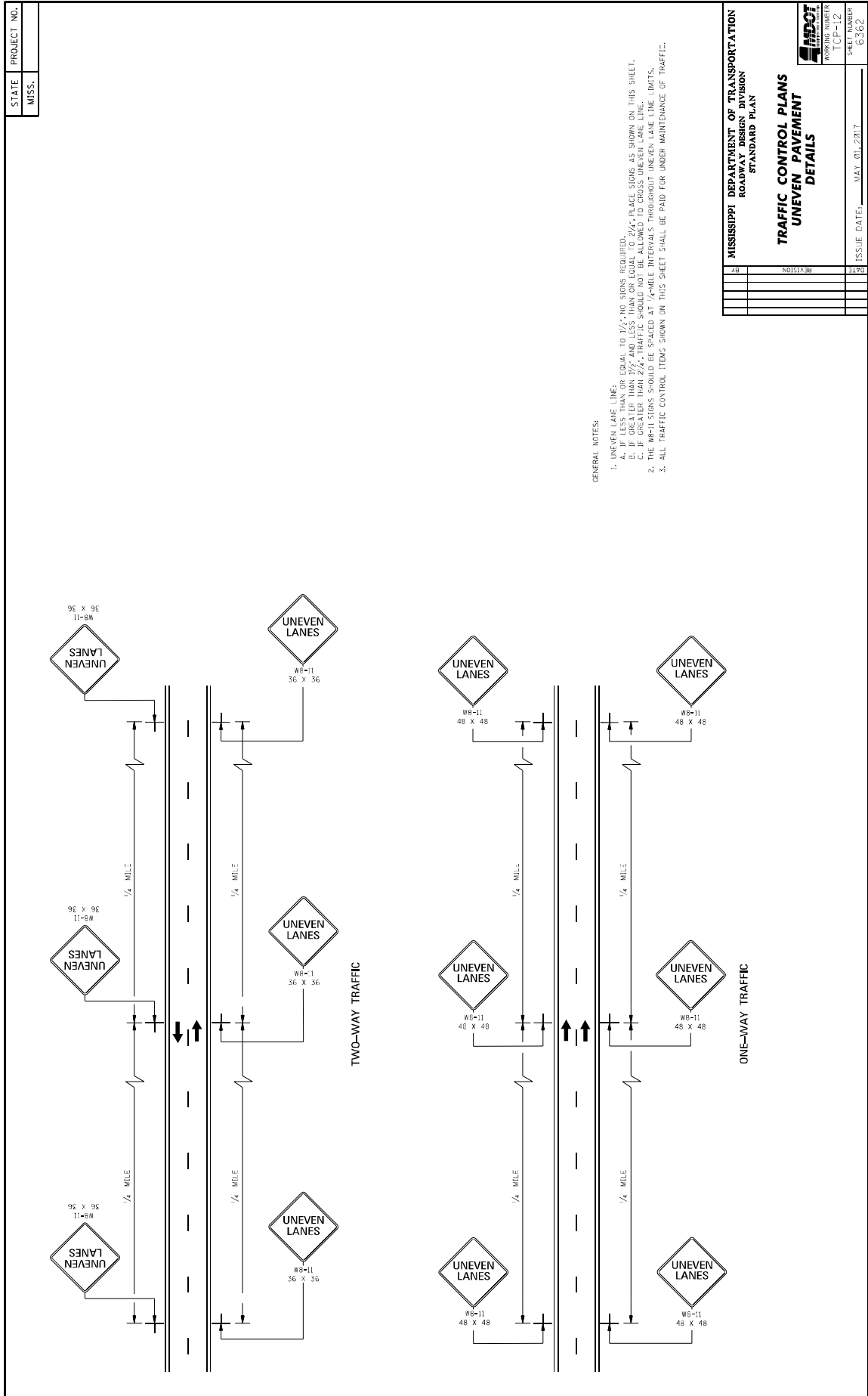
- TYPE 3 OBJECT MARKERS SHALL BE USED AT ALL EXPOSED BRIDGE ABUTMENTS AND AT OTHER LOCATIONS AS DETERMINED NECESSARY BY THE ENGINEER.
- THE OM-3R IS SIMILAR EXCEPT THE STRIPES SLOPE DOWNWARD FROM THE UPPER LEFT SIDE TO THE LOWER RIGHT SIDE AND SHALL BE PLACED ON THE LEFT SIDE OF THE OBJECT.
- THE INSIDE EDGE OF THE MARKER SHALL BE IN LINE WITH THE INNER EDGE OF THE OBSTRUCTION.

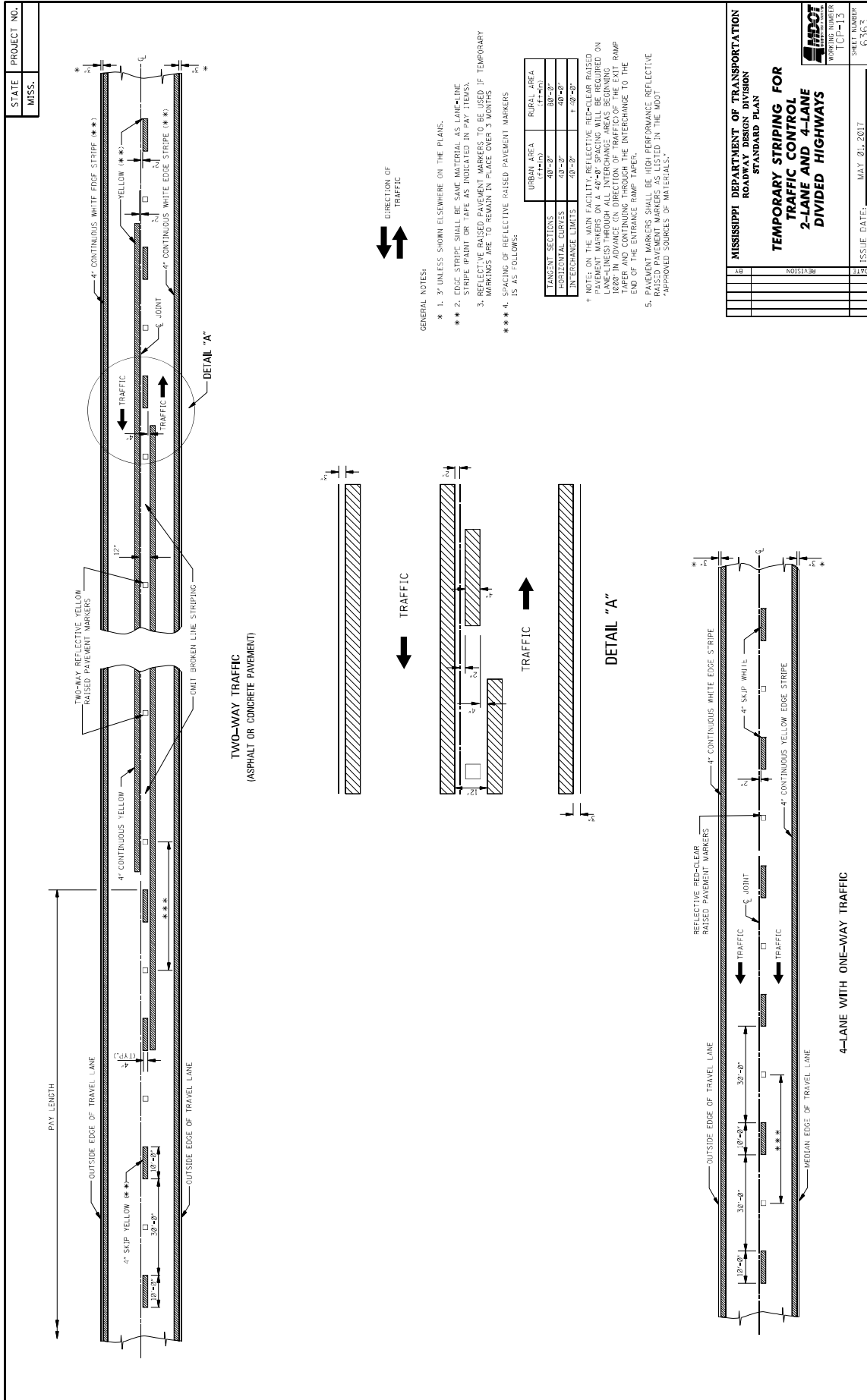
**MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
HIGHWAY SIGN AND
BARRICADE DETAILS
FOR CONSTRUCTION
PROJECTS**

| | |
|----------|--------------------------|
| DATE | ISSUE DATE: MAY 20, 2017 |
| REVISION | |

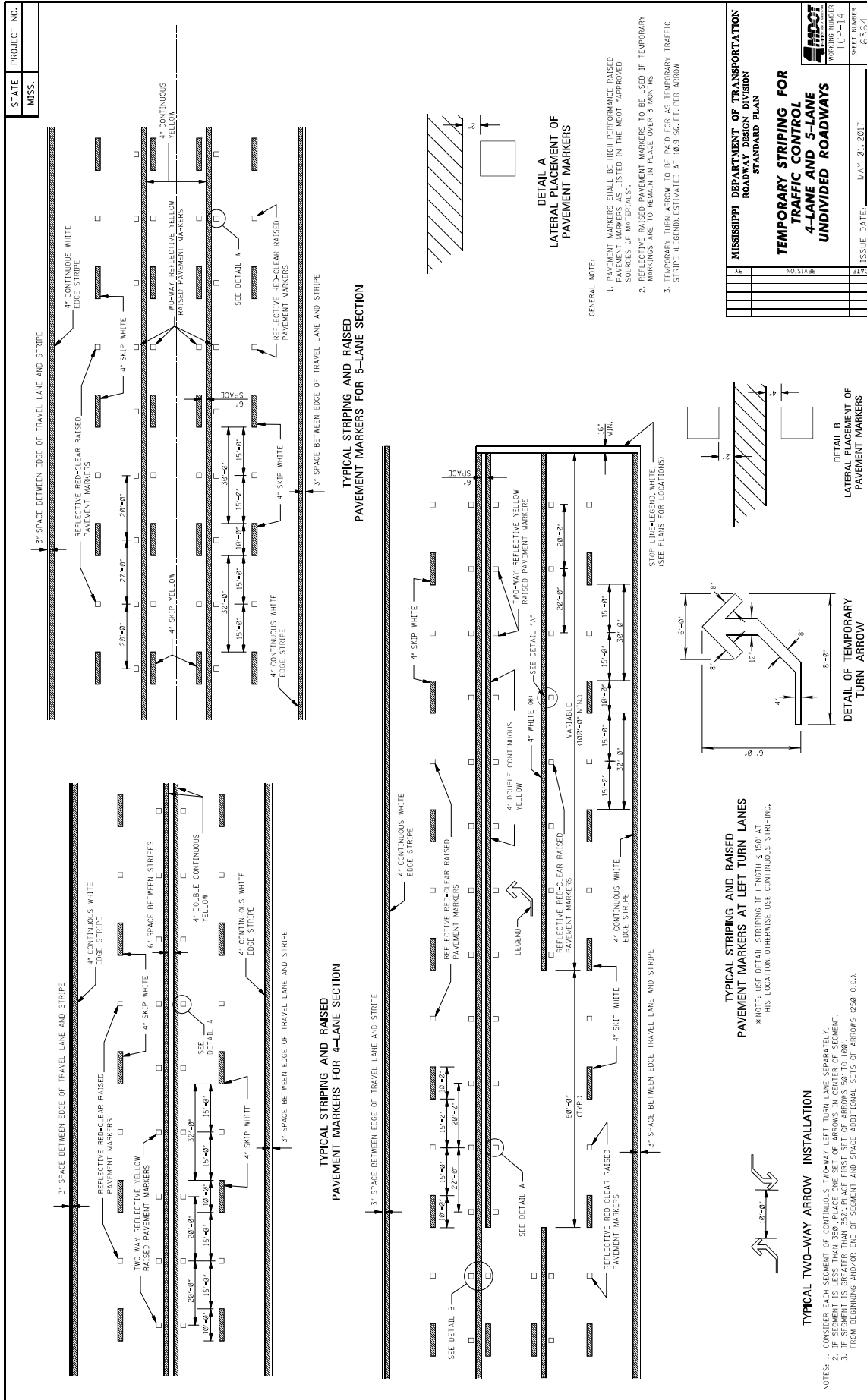


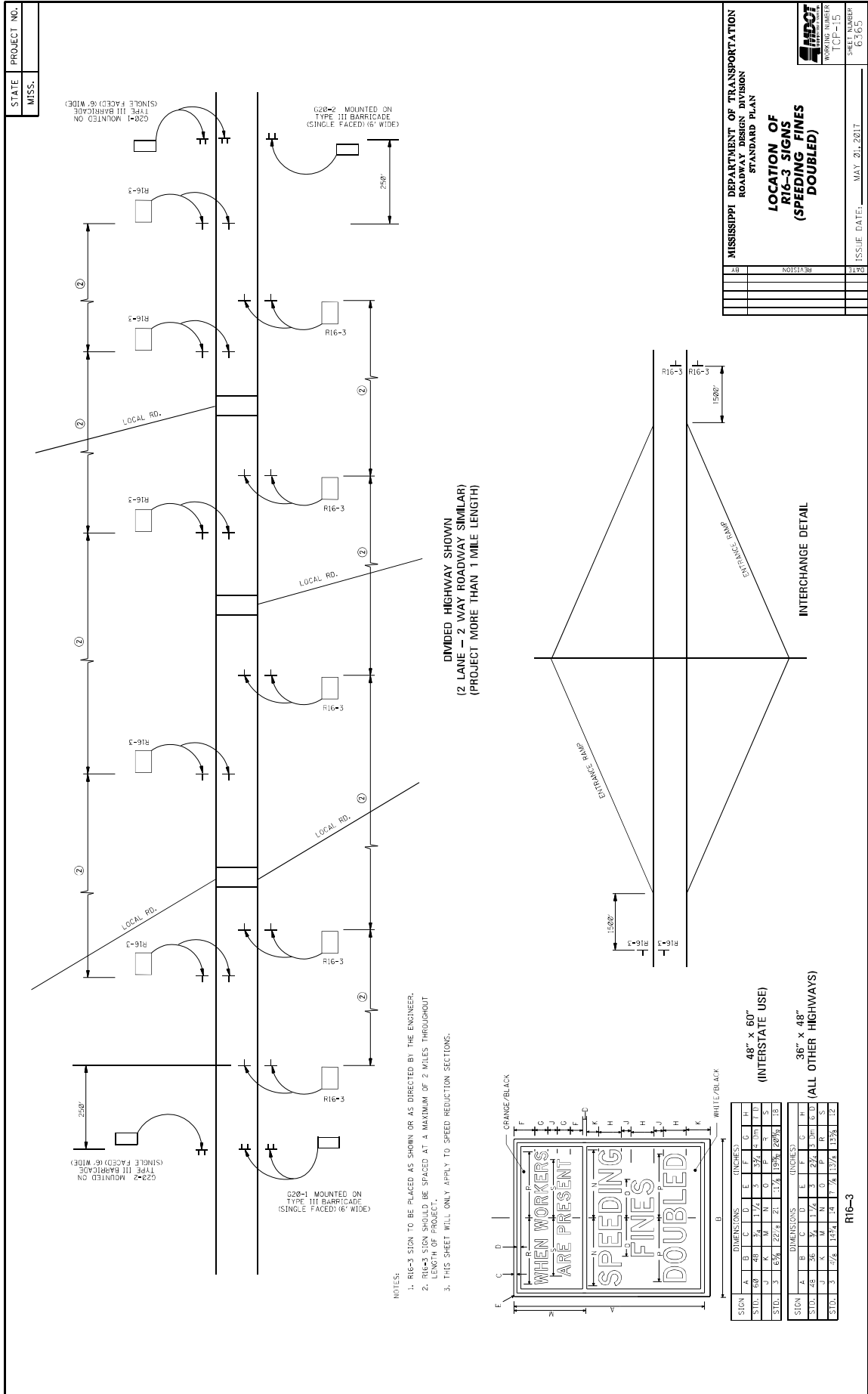






| | |
|---|--------------------------|
| MISSISSIPPI DEPARTMENT OF TRANSPORTATION | |
| ROADWAY DESIGN DIVISION | |
| STANDARD PLAN | |
| TEMPORARY STRIPING FOR | |
| 2-LANE AND 4-LANE | |
| DIVIDED HIGHWAYS | |
| WORKING NUMBER TCP-13 | SHEET NUMBER 636C |
| REVISION | ISSUE DATE: MAY 01, 2017 |



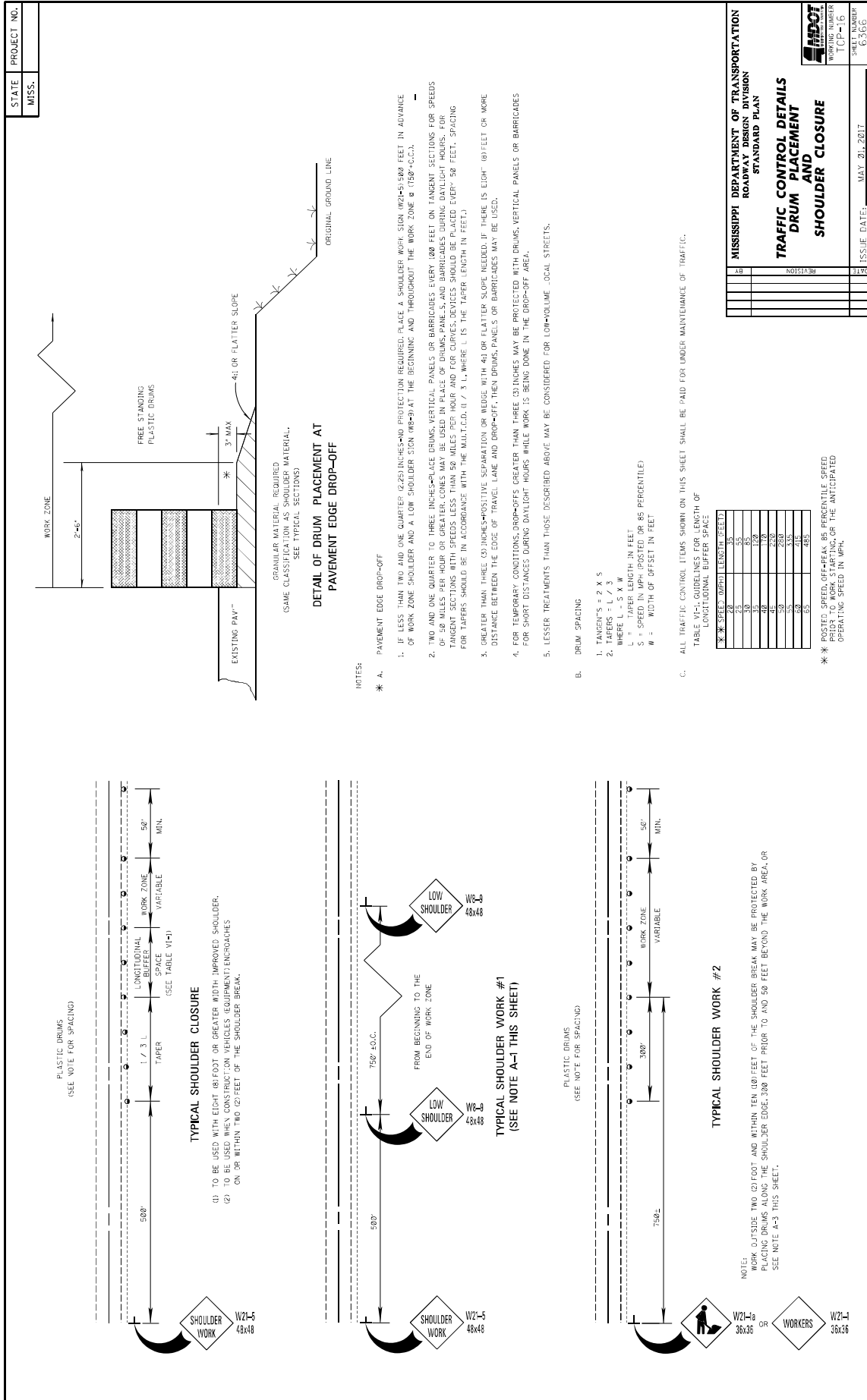


STATE PROJECT NO.
MISS.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
**LOCATION OF
R16-3 SIGNS
(SPEEDING FINES
DOUBLED)**

ISSUE DATE: MAY 20, 2017
SHEET NUMBER
ICP-15
63163

- NOTES:
1. R16-3 SIGN TO BE PLACED AS SHOWN OR AS DIRECTED BY THE ENGINEER.
 2. R16-3 SIGN SHOULD BE SPACED AT A MAXIMUM OF 2 MILES THROUGHOUT LENGTH OF PROJECT.
 3. THIS SHEET WILL ONLY APPLY TO SPEED REDUCTION SECTIONS.



MISSISSIPPI DEPARTMENT OF TRANSPORTATION
 ROADWAY DESIGN DIVISION
 STANDARD PLAN

**TRAFFIC CONTROL DETAILS
 DRUM PLACEMENT
 SHOULDER CLOSURE**

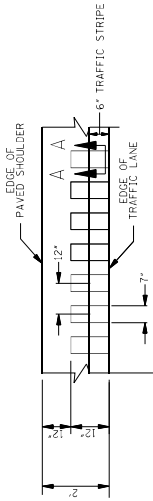
WORKING NUMBER
 TCF-16

ISSUE DATE: MAY 20, 2017

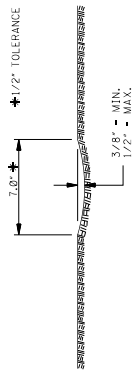
REVISION

GENERAL NOTES

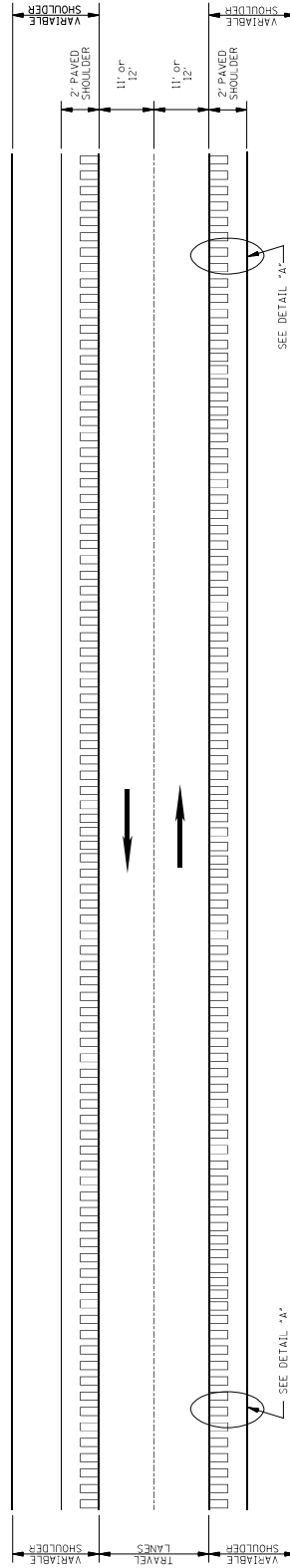
1. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO ALL PAVED SHOULDERS OF ALL PAVED SHOULDERS ON THIS PROJECT.
2. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO ALL EXISTING AND NEW ROADS, INCLUDING OTHER INTERSECTIONS IN NORMAL SHOULDER WIDTH AS DIRECTED BY THE ENGINEER.
3. COST TO BE PAID FOR USING APPROPRIATE PAY ITEMS.
4. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO:
 - A. MAINLINE
 - B. INTERSECTING ROADWAY IF OVERLAP OR RECONSTRUCTED BEYOND NORMAL MAINLINE R.O.W.
 - C. ANY ROADWAY WITH EXISTING RUMBLE STRIPES PRIOR TO CONSTRUCTION.
5. DO NOT USE WHERE TRAVEL LANE IS LESS THAN 11' WIDE.



SECTION "A-A"



SECTION "A-A"



PLAN

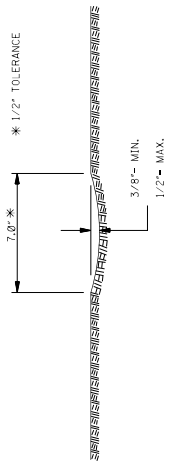
NOT TO SCALE

| | |
|---|-----------------------------|
| MISSISSIPPI DEPARTMENT OF TRANSPORTATION | |
| ROADWAY DESIGN DIVISION | |
| STANDARD PLAN | |
| RUMBLE STRIPES 2-LANE HIGHWAYS (ASPHALT LANES, 2-FT ASPHALT SHOULDERS) | |
| DATE | ISSUE DATE: AUGUST 01, 2017 |
| BY | |
| REVISION | |
| 508 | |
| DATE | |
| REVISION | |
| 508 | |
| DATE | |
| REVISION | |
| 508 | |

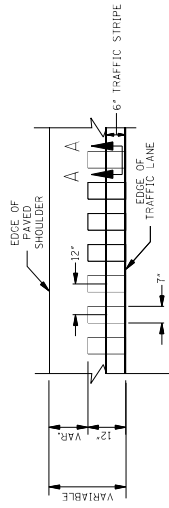
MDOT
 PROJECT NUMBER
 3117-1
 DRAWING NUMBER
 606-4

GENERAL NOTES

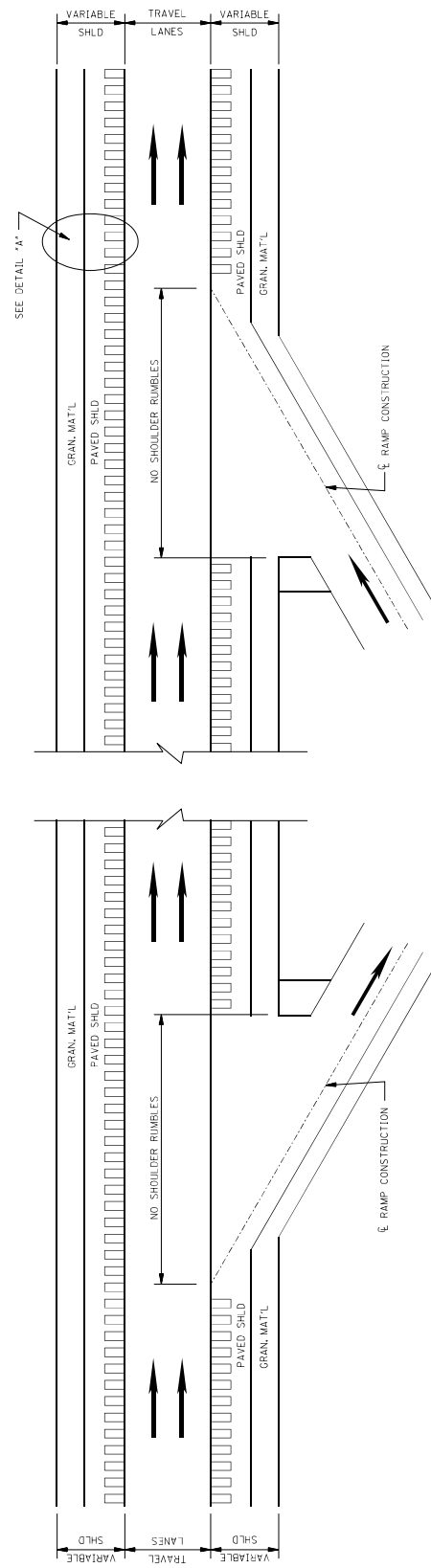
1. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO LEFT SHOULDER AND ALL PAVED SHOULDERS ON THIS PROJECT.
2. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO THE TRAFFIC LANE, TRAVEL LANES, AND OTHER INTERSECTIONS IN NORMAL SHOULDER WIDTH AS DIRECTED BY THE ENGINEER.
3. COST TO BE PAID FOR USING APPROPRIATE PAY ITEMS.
4. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO:
 - A. MAINLINE
 - B. INTERSECTING ROADWAY IF OVERLAD OR RECONSTRUCTED BEYOND NORMAL MAINLINE R.O.W.
 - C. ANY ROADWAY WITH EXISTING RUMBLE STRIPES PRIOR TO CONSTRUCTION.



SECTION "A-A"

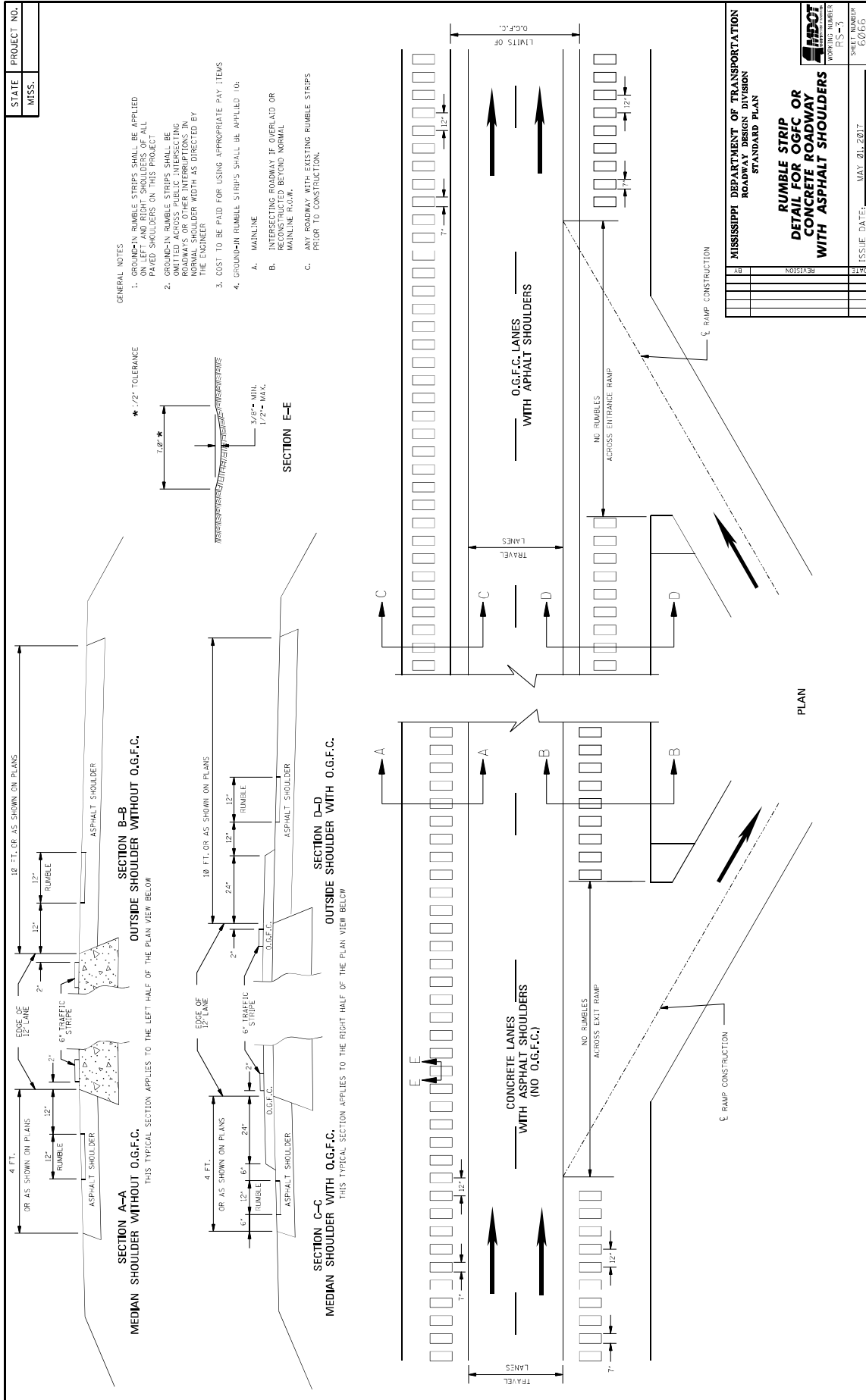


DETAIL "A"



PLAN
NOT TO SCALE
DETAILS OF
RUMBLE STRIPES

| | | | |
|---|----------|-------------|-----------------|
| MISSISSIPPI DEPARTMENT OF TRANSPORTATION | | | |
| ROADWAY DESIGN DIVISION | | | |
| STANDARD PLAN | | | |
| RUMBLE STRIPES 4-LANE HIGHWAYS (ASPHALT LANES, 2-FT OR WIDER, ASPHALT SHOULDERS) | | | |
| DATE | REVISION | FIG. NUMBER | NUMBER |
| | | RS-2 | 6065 |
| ISSUE DATE: | | | AUGUST 01, 2017 |



MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3374

CODE: (SP)

DATE: 5/17/2021

SUBJECT: Contract Time

PROJECT: NH-0056-01(110) / 108604301 -- Rankin County

The completion of work to be performed by the Contractor for this project will not be a specified date but shall be when all allowable working days are assessed, or any extension thereto as provided in Subsection 108.06. It is anticipated that the Notice of Award will be issued no later than July 13, 2021 and the date for Notice to Proceed / Beginning of Contract Time will be August 12, 2021.

Should the Contractor request a Notice to Proceed earlier than August 12, 2021 and it is agreeable with the Department for an early Notice to Proceed, the requested date will become the new Notice to Proceed date. Regardless of whether or not an early Notice to Proceed is granted, contract time will start at the original Notice to Proceed date.

All requests for an early Notice to Proceed shall be sent to the Project Engineer who will forward it to the Contract Administration Division.

186 Working Days have been allowed for the completion of work on this project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3375

CODE: (SP)

DATE: 05/06/2021

SUBJECT: Scope of Work

PROJECT: NH-0056-01(110) / 108604301 -- Rankin County

The contract documents do not include an official set of construction plans but may, by reference, include some Standard Drawings when so specified in a Notice to Bidders entitled, "Standard Drawings".

A general description of the work required on the project is to mill and overlay approximately 10 miles of existing asphalt pavement on SR 25 in Rankin County beginning at the north end of the bridge over SR 471 (BOP Station 657+01) and ending at the pavement joint 2,027 feet north of the bridge over SR 43 (EOP Station 1190+93), and mill and overlay approximately 1 miles of existing asphalt pavement on Sandhill Road beginning on the east end of 4-lane section (BOP Station 0+00) and ending on the west end of 4-lane section (EOP Station 55+14). Details of specific work are mentioned in the following sections.

Project wide work on this project is from Station 657+01 (BOP) to Station 1190+93 (EOP) on SR 25, and Station 0+00 (BOP) to Station 55+14 (EOP) on Sandhill Road.

Prior to beginning the milling and overlay operations, any failed areas in the existing pavement shall be removed full depth and repaired full depth using 12.5-mm, HT, Leveling asphalt. Other repairs may be necessary as field conditions require and as directed by the Engineer. After failures have been repaired, some corrective leveling and milling efforts will be required to correct the slope throughout the project. After corrective measures are complete, the top 2" of existing asphalt on both Mainline lanes shall be milled and overlaid using 2" of 12.5-mm, HT, asphalt. Where the cross slope is not equal to 2%, the thickness of the overlay/milling efforts shall be adjusted to correct the cross slope.

General Notes: These general notes are applicable to all sites.

Milling

Milling/paving will not begin until an **approved** asphalt mix design has been received, nor until such time that, in the opinion of the Engineer, weather conditions have been consistently suitable enough to allow placement of the asphalt pavement after the milling operations.

The reclaimed asphalt pavement (RAP) material removed by the milling operation shall become the property of the Contractor.

Where milling is required, the Contractor shall provide outlets in the existing shoulders at sufficient intervals to prevent pooling or standing water on the milled surface, the cost of which shall be absorbed in other items bid.

Milling and paving operations shall be performed such that a -2% slope from centerline is provided in normal crown roadway sections. Superelevation through curves shall be maintained as it currently exists or improved as directed. Where slope correction is required correction will be made by milling, paving, or combination thereof as directed by the Engineer.

Milling of driveway pads shall be conducted in a manner to prevent gouging or otherwise affecting the roadway pavement structure and slope. Milling of driveway pads shall not be done in simultaneous path with main line milling.

Traffic will be allowed to run on the milled surface for a maximum of five (5) days. Any surface not covered before the allowable time will result in a fine for any full or partial day exceeding five (5) days. Fine milling shall be performed in accordance with the attached drawings. This work shall be applied on all mainline tie-ins, driveway pads, county roads, and etc. Traffic will be allowed to run on all milled tie-ins not exceeding thirty (30) days.

Temporary pavement joints (paper joints) shall be at least three (3) paper-widths long shall be used at all milled tie-ins and shall be adequately maintained.

Paving

Prior to beginning the milling and overlay operations, any failed areas in the existing pavement shall be removed full depth (9½” and variable) and repaired with 12.5-mm, HT, Leveling asphalt. Payment for removal of failed areas shall be made under pay item 202-B: Removal of Asphalt Pavement, Failed Areas. Payment for saw cutting of failed areas shall be paid under pay item 503-C: Saw Cut, Full Depth. Milling full depth shall also be an acceptable means of removing failed areas, as directed by the Engineer, should the Contractor elect not to saw cut, thus eliminating payment under the saw cut pay item. Milling for removal of failed areas shall be paid under pay item 202-B: Removal of Asphalt Pavement, Failed Areas. Other repairs may be necessary as field conditions require and as directed by the Engineer.

If traditional excavation methods are used, the removal area shall first be saw cut full depth including concrete, where applicable, to create a neat line and prevent damage to the adjacent pavement structure. Payment for saw cuts will be made using the appropriate items. If milling techniques are used, the area will not require saw cuts but care should be exercised to create a neat removal line and to prevent damaged to the adjacent pavement structure. If saw cuts are used in conjunction with milling, payment will be made using the appropriate pay items. Payment will not be made for saw cuts that are not performed.

Grade and profile distortions due to high volume change (HVC) soils will be corrected using 12.5-mm, HT, Leveling asphalt in the locations listed in the attached tables. Most locations will require multiple lifts to obtain the desired grade. Traffic will not be allowed to cross any lane line drop-offs exceeding 2¼” per sheet TCP-14. Additionally, both lanes shall be brought up evenly the same day to prevent possible ponding. Per Sheet TCP-16, traffic is allowed to run

near a 3-inch drop-off on the shoulder during the daylight hours if drums and low shoulder signs are placed accordingly. All shoulders shall be pulled up daily prior to removing the lane closures and opening both lanes to traffic. If milling is used for slope or profile correction, joint differentials shall conform to the same provisions.

Publicly maintained roads and streets should be milled and paved to the existing right-of-way. Privately owned entrances shall be paved to the shoulder line as per the included typical drawing. Pads shall be shaped horizontally and vertically to prevent excessive drop-offs. All residential pads exceeding a 2-inch drop off from the edge of pavement to the pad shall be corrected before the end of the day using paper joints to minimize damage to vehicles.

Granular Shoulder Material

Where applicable, the existing shoulders shall be raised to match the new pavement elevation by placing variable depth granular material on the existing shoulders. Placement of the granular material on the finished asphalt course shall not be permitted. The material shall be bladed, rolled, and compacted to a finished slope of four percent (4%). Placement of this material shall be performed to provide a uniform and compacted shoulder with a minimum depth and width of material placed. Shoulders with adequate shoulder material in place shall be bladed to a slope of four percent (4%). Shoulder blading will not be measured for payment and all costs shall be included in the cost of other items bid.

The Contractor shall on a daily basis, pull shoulder material up to edge of asphalt to maintain a 2-inch or less drop off. Granular material (Class 5 Group C) shall be provided around residential pads to prevent shoulder drop-offs as directed and shall be placed in a timely manner. Drop-offs exceeding 2½" shall be corrected within two (2) calendar days of placement of pad. Stabilizer aggregate shall be used as directed by the Engineer.

Removal of the existing shoulder material shall be coincident with the milling/overlaying operation to prevent the possible ponding of water. No payment will be made for blading or removal of the existing shoulder material. Any material excavated from the existing shoulder shall be used to raise the existing shoulder to match the new pavement elevation and any surplus material shall be spread along the edge of the shoulders, fore slopes, or other adjacent areas as directed by the Engineer. The cost associated with surplus material shall be absorbed in other items bid. Material which cannot be placed in adjacent areas and deemed to be excess excavation by the Engineer shall be removed under pay item 203-G: Excess Excavation.

Temporary and Permanent Pavement Markings

Temporary traffic stripe shall be required immediately after the required overlay/milling and prior to opening area to traffic. Temporary stripe shall be placed in the same location and configuration as the permanent stripe.

If temporary stripe is offset, the Contractor shall conduct operations in a manner to insure the final temporary stripe is placed at the required location of the permanent stripe. If removal of temporary offset stripe is required in order to achieve the correct location and alignment of permanent stripe, the cost of removal will be absorbed in other items bid. Placing double temporary centerline will not be allowed.

Temporary striping shall conform to finished stripe specifications for alignment, neatness, and straightness.

All permanent striping will be thermoplastic double-drop. Edge lines shall be placed to accommodate the lane widths shown on the applicable typical sections unless prevented by field conditions. Thermoplastic pavement marking thickness shall be a minimum of 90 mils. for center lines, edge lines, lane lines, gore areas, turnouts, and County Roads. All other thermoplastic pavement markings shall be a minimum of 120 mils.

The use of short strips of traffic tape will not be allowed unless approved by the Engineer.

Permanent pavement markers shall be placed in accordance with the attached drawings and Standard Drawings. Two-way yellow markers shall be placed on two-way roads. Two-way clear markers shall be placed on County Roads as shown on attached drawings.

Rumble stripe shall be placed throughout the project according to standard specifications and per attached drawing. Payment for rumble stripe shall be made under pay item 423-A: Rumble Stripe, Ground in.

The face of all existing undisturbed curbs shall be painted with at least two (2) coats of white traffic paint with glass beads being required in the top coat. The cost associated with the painting of new or existing curb is to be included in other items bid.

Guardrail

Guard rail pads and shoulders shall be paved with 12.5-mm, HT, asphalt prior to placement of the new guard rail. Guardrail pads shall extend two feet (2') behind the guardrail post at all existing guardrail locations maintaining guardrail height requirements. Prior to placement of the guardrails and asphalt, 3" and variable depth of existing shoulder material shall be removed. Any excess material excavated from the existing shoulder shall be used to raise the existing shoulder to match the new pavement elevation and shall be spread along the edge of the shoulders, fore slopes, or other adjacent areas as directed by the Engineer. The cost associated with excess material shall be considered an absorbed item.

The existing guard rail and terminal end sections shall be removed and replaced as directed. The new guard rail shall be placed in the same location as the existing railing and height shall meet the approved departmental standards (currently 25" to center). All guard rail removed shall be delivered to Carthage Maintenance at no additional cost to the State. A 24-hour notice shall be given before delivery. Any removed metal post, hardware, concrete anchors, and wooden posts shall be disposed of by the Contractor at no additional cost to the State. All voids left by post shall be filled and compacted as directed by the Engineer prior to placing the new asphalt pad. Payment for the removal and replacement of guard rail and terminal end sections shall be made under the appropriate pay items for guard rail and terminal ends.

Guardrail lengths are based on terminal end length of 37.5'. If terminal of length other than this is used, an adjustment in w-beam length is required.

Delineators will be required on all guardrails within the project. Existing guardrail delineators shall be removed and replaced. The cost of delineator removal shall be included in the price of other items bid.

Permanent Signs

Permanent signs as listed on the attached tables shall be replaced. Unless otherwise listed in the attached tables, existing posts, anchors, angles/bars, and other components shall be reused. The Contractor shall use new bolts, screws, washers, nuts, etc. of the required sizes in the installation of signs. If required as part of the sign replacement activities, all post, pipe, and I-beam lengths in these plans are estimated. Post lengths for all signs shall be verified in the field by the Contractor prior to fabrication. Installation dates shall be clearly written in bold black markings on the back bottom half off all signs with a permanent marking stick that is waterproof, fade resistant, and marks on wet or dry surfaces. If existing sign posts or footings are to be replaced, the existing posts and footings are to be removed and the area backfilled and compacted in accordance with Section 203 of the Standard Specifications. Removal of sign, post, and footing and backfilling will be paid using the removal of sign pay item.

Object markers at bridge approaches and other locations shall be replaced as shown in the attached table. Cost of removal of object markers shall be included in the cost of other items bid.

Delineators shall be required at all crossovers. Existing delineators shall be removed and replaced under pay item 630-F: Delineators, Flexible Post Mounted, Crossover, Type I Yellow. All labor, equipment, and materials associated with removal of existing delineators shall be absorbed into other items bid.

Traffic Signals

Vehicle loop detectors at Holly Bush Road intersection shall be replaced with radar detection sensors, radar units shall be installed per manufacturer’s recommendations. Existing EPAC Controllers shall be replaced with new controllers and existing EPAC controllers shall be salvaged and delivered to MDOT Signal Shop (601-359-1493). It is the responsibility of the Contractor to coordinate delivery of existing EPAC controllers with MDOT personnel to MDOT signal shop. The Contractor shall also be responsible for transferring existing controller data to the new controllers. Contractor may remove existing detection loop cable, if necessary. Cable quantities may be adjusted based on radar locations per manufacturer recommendations. Removal of vehicle loop detection cable shall be absorbed in other bid items.

Traffic Control

The Contractor shall erect and maintain construction signing and provide all signs and traffic control devices necessary to safely maintain traffic around and through the work areas in accordance with the Traffic Control Plan and the MUTCD. The cost shall be included in the price bid for pay item 618-A: Maintenance of Traffic. Fluorescent orange sheeting shall be used on all construction and traffic control signs except those designated in the plans to be black legend and border on white background. Standard roadside construction signs and barricades will be paid for using the appropriate pay items.

Roadside construction signs, barrels, etc. shall be placed in accordance with the attached drawings or as directed by the Engineer. W20-1 signs shall be placed on all public road approaches as shown or as directed.

The Contractor shall on a daily basis, remove all debris from within the roadway and a 30-foot clear zone which, in the opinion of the Engineer, is a hazard to the traveling public. This activity shall begin with the beginning of work or the beginning of the contract time, whichever comes first. No direct payment will be made for the debris removal; the cost shall be included in the prices of other items bid. Failure of the Contractor to remove the debris as prescribed herein shall be just cause for withholding the monthly progress estimate payment or suspending active operations until the debris is satisfactorily removed by the Contractor.

Potholes that may exist shall be patched in a timely manner from the date of Notice to Proceed until the date of the Final Maintenance Release. Cracks of significant depth or depressions in the existing surface which, in the opinion of the Engineer, may cause reflection cracking shall be filled with asphalt pavement immediately prior to overlay operations. Costs of patching of potholes shall be included in the cost of Maintenance of Traffic.

Miscellaneous Notes

It shall be the responsibility of the Contractor to protect existing structures such as pipes, inlets, aprons, bridges, etc. from damage which might occur during construction. The Contractor shall replace or repair, as directed by the Engineer, any structures damaged by the Contractor during the life of the contract. No payment will be made for replacement or repair of damaged items.

Any signs, mailboxes, etc. that are in conflict with construction of this project shall be removed and relocated by the Contractor as directed by the Engineer. Any costs accrued by these conflicts shall be absorbed in other items bid.

Incidental work such as removing vegetation, shaping and compacting shoulders, removing and resetting signs and/or mailboxes, removing excess asphalt material, project clean-up, and other items of incidental work necessary to complete the project will not be measured for separate payment. Cost for incidental work will be absorbed in the price of other items bid.

Existing raised pavement markers shall be removed prior to beginning the overlay operation. All costs associated with removing the existing pavement markers shall be included in the price of other items bid.

Prior to the final inspection, bridges, islands, and areas with curb shall be swept/cleaned. Care should be taken to prevent milled asphalt, asphalt debris, vegetative/granular debris, etc. from entering drainage structures or clogging other drainage ways. Disposal of material will not be measured for separate payments.

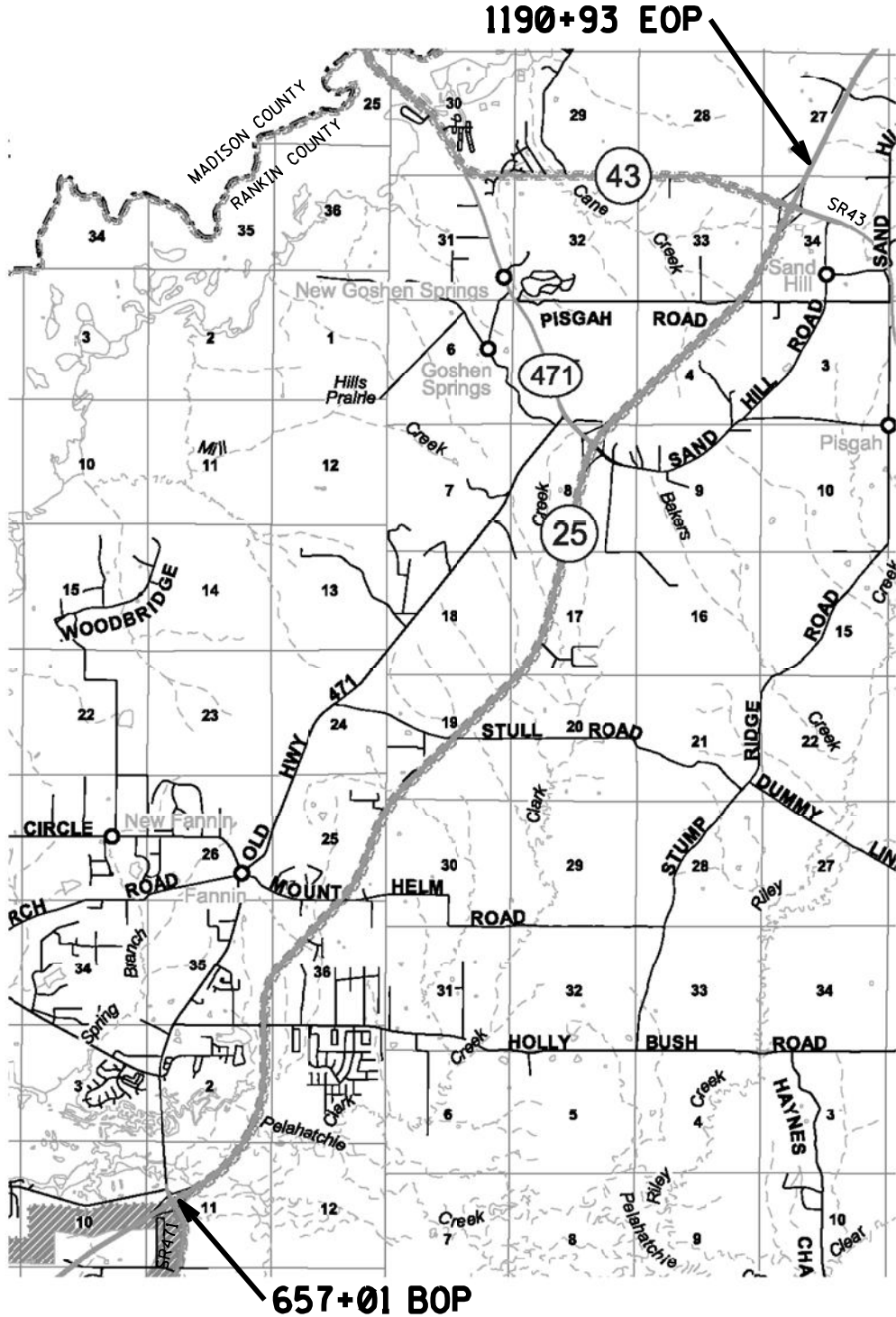
Grassing will be required at edge drain outlets and around pads. Grassing areas shall be paid under pay item 225-A: Grassing.

All existing joints on Bridges 22.2A, 22.2B, 13.3A, and 13.3 shall be removed and replaced with preformed joint seal. Appropriate bid items necessary to complete construction of new joints have been provided, except the removal of existing joints material which will be absorbed in pay item 907-808-A: Joint Repair. All material, labor, and equipment required for epoxy mortar mix shall be included in 907-808-A: Joint Repair.

Edge drain work shall be required in various locations on the project. Specific locations are listed in the tables provided. All work shall be done according to specifications and paid for using the appropriate pay items provided in the contract.

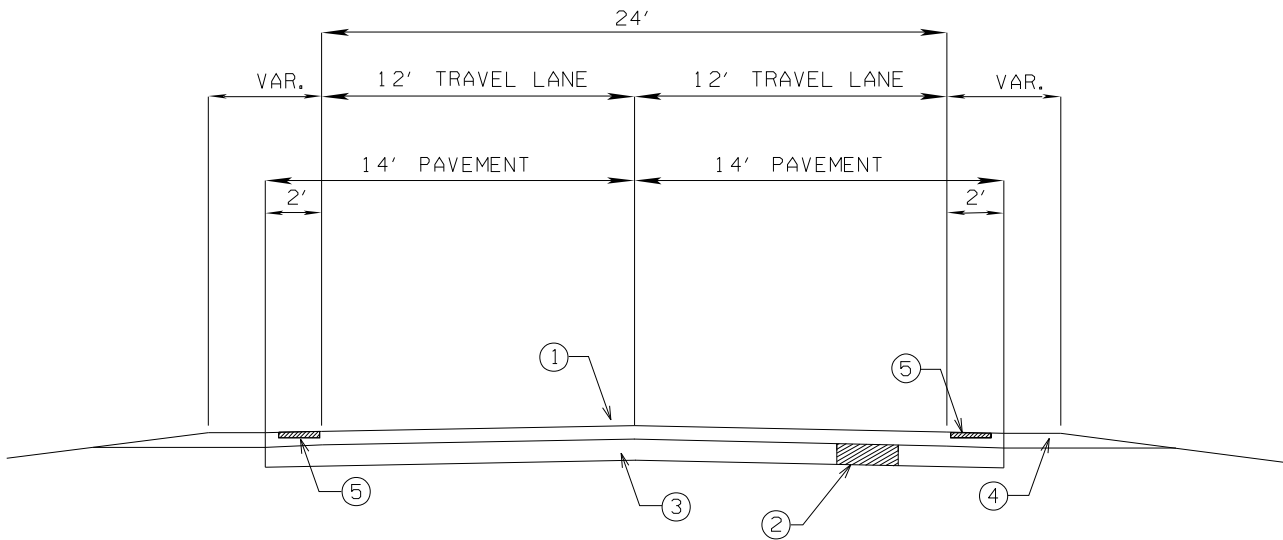
Existing guard post shall be removed and replaced according to specifications. Payment for all work, materials, and labor shall be paid for using the appropriate 606 pay items.

SR25 OVERLAY PROJECT FROM 471 TO SR 43 RANKIN COUNTY 108604/301000



RANKIN COUNTY TYPICAL SECTION SR 25 OVERLAY

BOP 657+01 EOP 1190+93



- ① Mill & Overlay 2" asphalt pavement 12.5mm,HT
- ② Failed areas to be removed and back filled with asphalt pavement 12.5mm,HT Leveling as directed.
- ③ Existing Pavement Structure
- ④ Cl. 5, GRP. C As Required
- ⑤ Rumble Stripe Required
- ⑥ Variable Depth Profile Milling And/Or Leveling Required at Locations as Directed By The Engineer

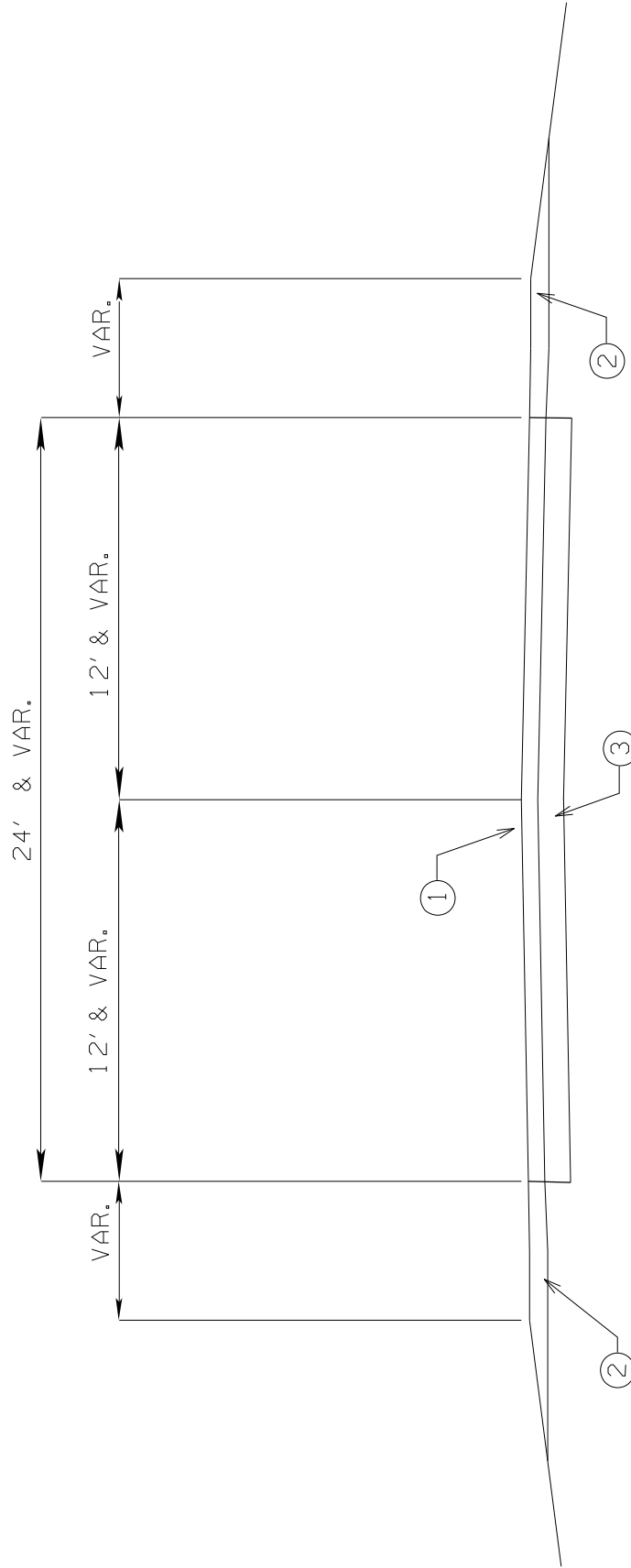
EXISTING PAVEMENT STRUCTURE

NORTHBOUND: 14" & VARIABLE ASPHALT OVER 6" CLAY GRAVEL OR 8" LIME TREATED BASE

SOUTHBOUND: 16" & VARIABLE ASPHALT OVER 6" CALY GRAVEL OR 8" LIME TREATED BASE

*SOME AREAS MAY CONTAIN 24" & VARIABLE ASPHALT DUE TO PREVIOUSLY PLACE LEVELING LIFTS

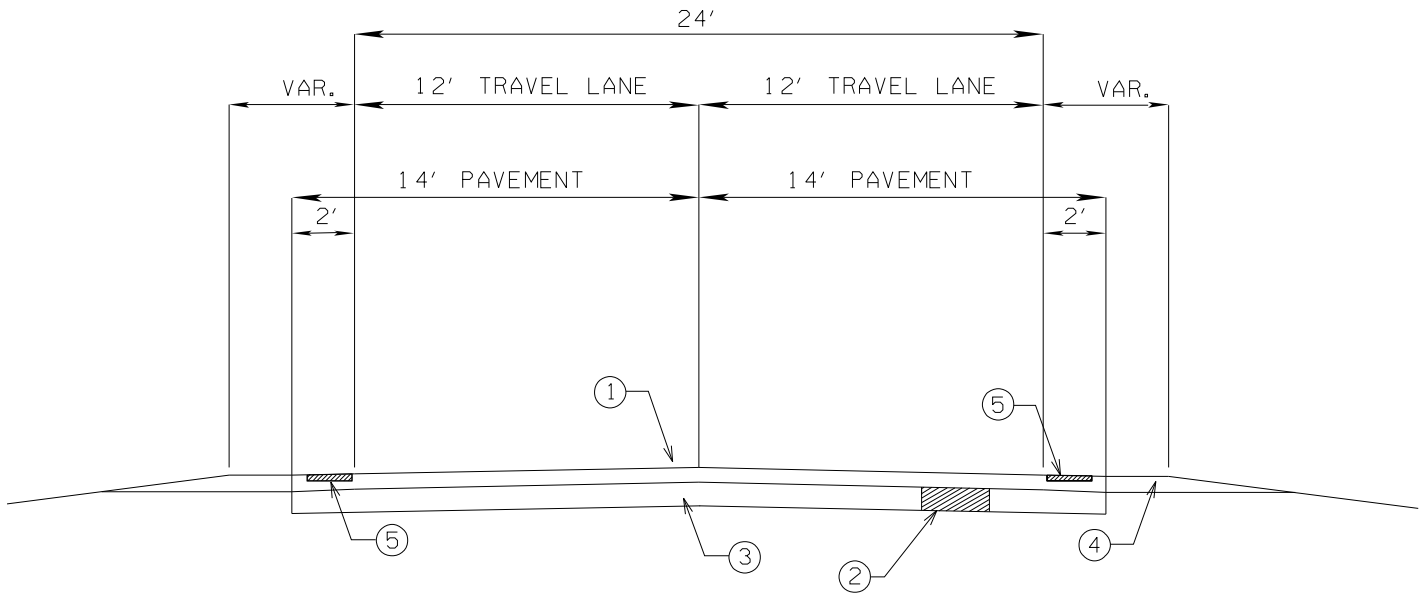
108604/301000
 RANKIN COUNTY
 SR 25 OVERLAY
 COUNTY ROADS



- ① Mill and Overlay 2" asphalt pavement 12.5mm,HT
- ② Cl. 5, GRP. C As Required
- ③ Existing Pavement Structure

RANKIN COUNTY TYPICAL SECTION SR 25 OVERLAY

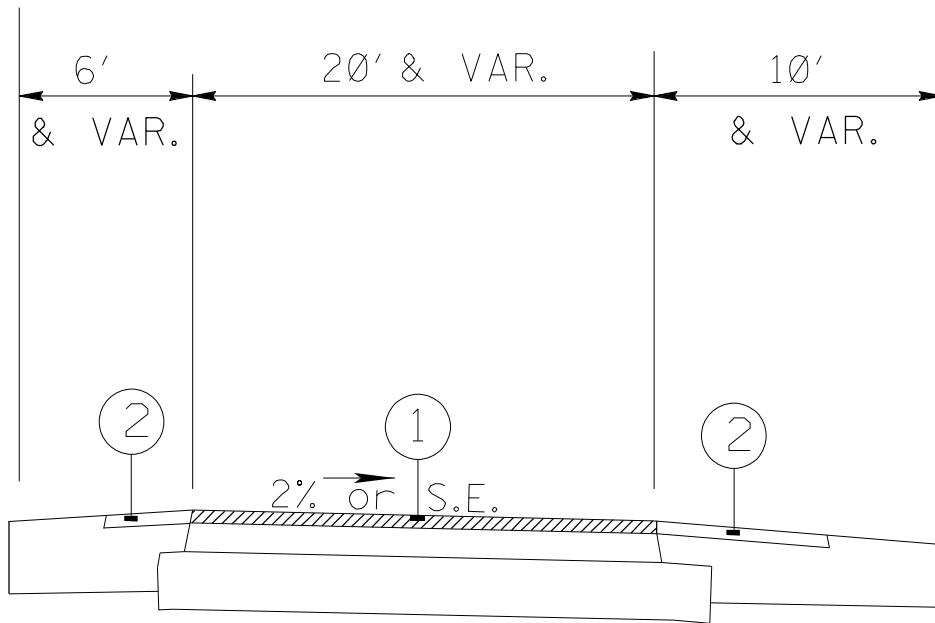
BOP 0+00 EOP 55+14
SR 471 (SANDHILL RD)



- ① Mill & Overlay 2" asphalt pavement 12.5mm,HT
- ② Failed areas to be removed and back filled with asphalt pavement 12.5mm,HT Leveling as directed.
- ③ Existing Pavement Structure
- ④ C1.5, GRP. C As Required
- ⑤ Rumble Stripe Required

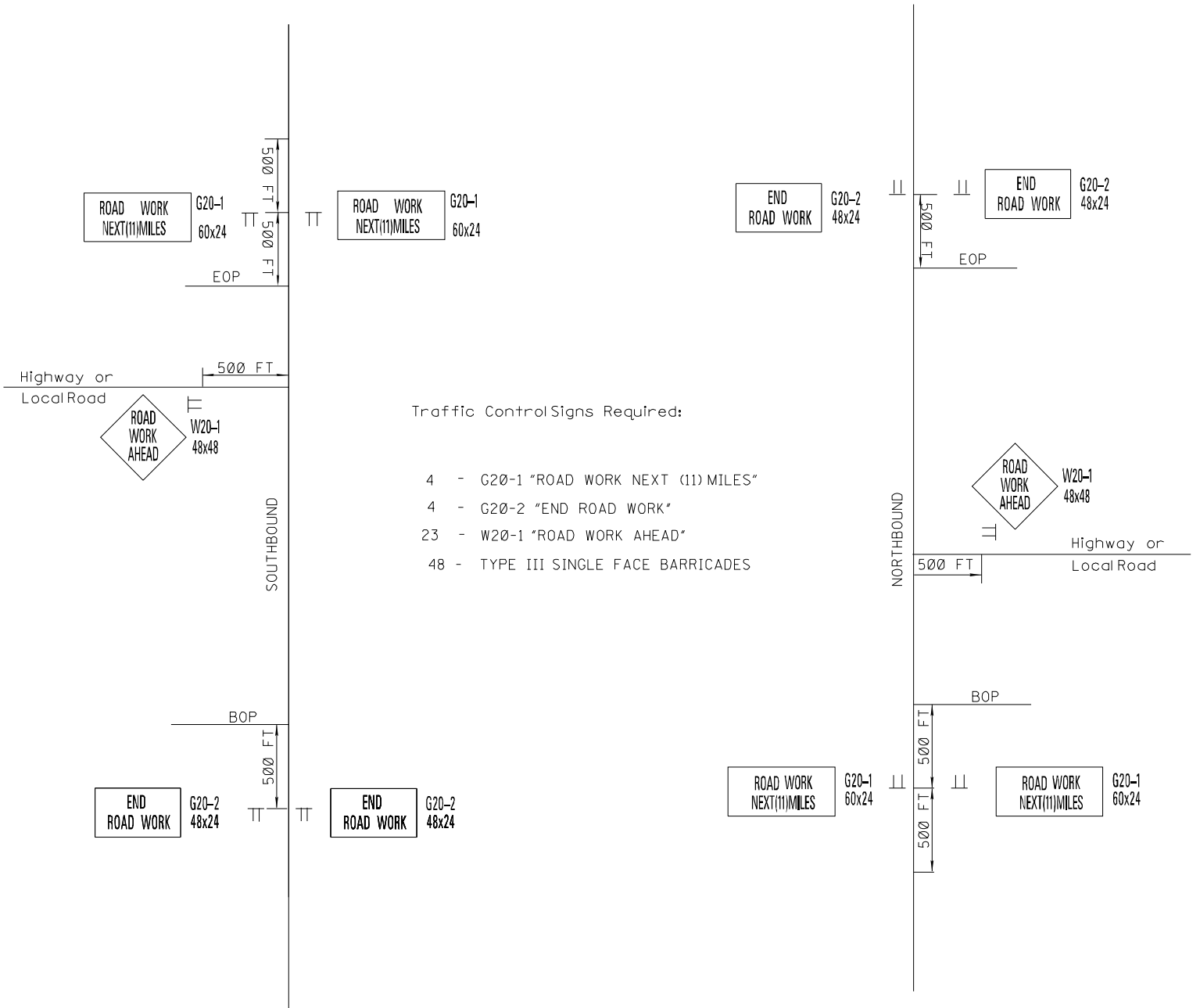
SR 471/SR 25 RAMPS
HWY 25 RANKIN COUNTY

(UNCURBED SECTION)



- ① 2" FINE MILLING AND REPLACE WITH 2" HMA, 12.5mm Mix, HT
- ② VAR. DEPTH GRANULAR MATERIAL, CLASS 5 GROUP C REQUIRED

13
 CONSTRUCTION SIGNING DETAIL
 SR 25 OVERLAY
 RANKIN COUNTY

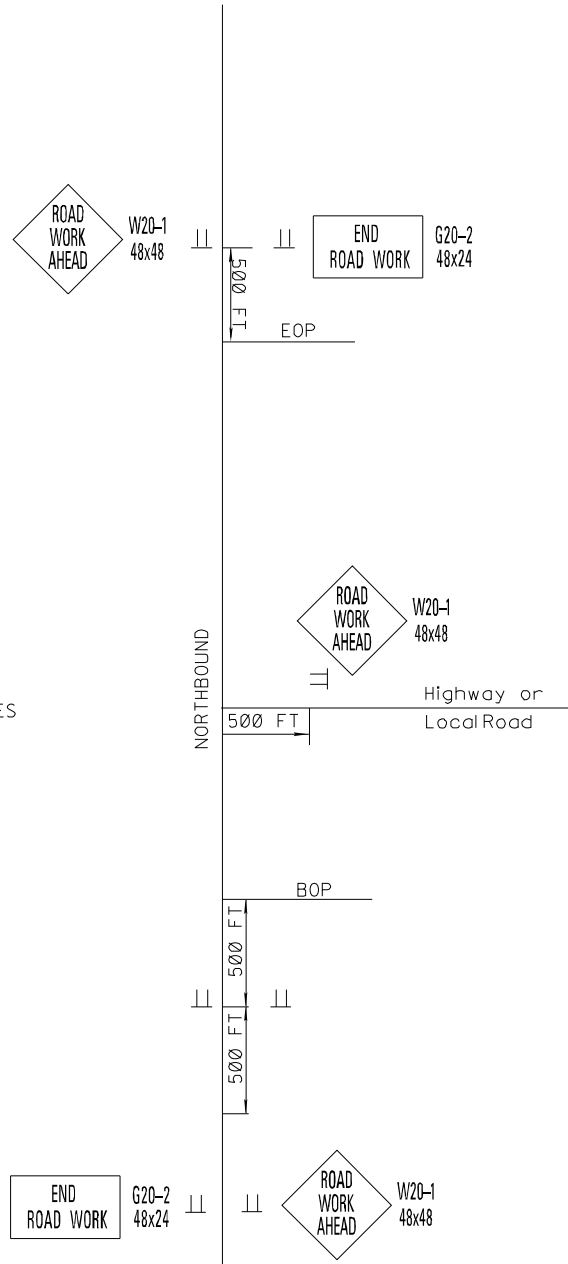


NOTES: One (1) W20-1 "ROAD WORK AHEAD" Sign is Required at each Local Road, Street, Ramps or Highway Entering the Project.
 G20-1 and G20-2 signs mounted on Type III Single Faced Barricade.

CONSTRUCTION SIGNING DETAIL
SR 25 OVERLAY
RANKIN COUNTY
SR 471

Traffic Control Signs Required:

- 2 - G20-2 "END ROAD WORK"
- 8 - W20-1 "ROAD WORK AHEAD"
- 24 - TYPE III DOUBLE FACE BARRICADES



NOTES: One (1) W20-1 "ROAD WORK AHEAD" Sign is Required at each Local Road, Street, Ramps or Highway Entering the Project.
W20-1 and G20-2 signs on SR471 mainline mounted on Type III DOUBLE Faced Barricade.

| STA # | Lane | 12.5mm, HT, Asphalt Pavement, Leveling 403-B001 | | | |
|-------------------|------|---|-------|--|----------|
| | | Length | Width | | TONS |
| 810+00 - 830+00 | SB | 2000 | 28 | | 957.30 |
| 925+50 - 966+00 | SB | 4050 | 28 | | 1126.72 |
| 1020+00 - 1063+00 | SB | 4300 | 28 | | 1624.69 |
| 828+25 - 873+75 | NB | 4550 | 28 | | 1471.17 |
| 925+75 - 965+00 | NB | 3925 | 28 | | 1100.24 |
| 1005+25 - 1066+25 | NB | 6100 | 28 | | 2589.85 |
| 1107+00 - 1144+25 | NB | 3725 | 28 | | 1251.75 |
| 777+00 - 793+00 | NB | 1600 | 28 | | 1016.32 |
| 777+00 - 793+00 | SB | 1600 | 28 | | 1775.90 |
| 880+00 - 899+00 | NB | 1900 | 28 | | 1402.15 |
| 880+00 - 899+00 | SB | 1900 | 28 | | 1353.00 |
| 909+00 - 920+00 | NB | 1100 | 28 | | 523.69 |
| 1005+00 - 1019+00 | SB | 1400 | 28 | | 792.41 |
| 1086+00 - 1105+00 | SB | 1900 | 28 | | 1535.82 |
| TOTAL: | | | | | 18521.01 |

108604/301000
SR 25 From SR 471 to SR 43
Rankin County

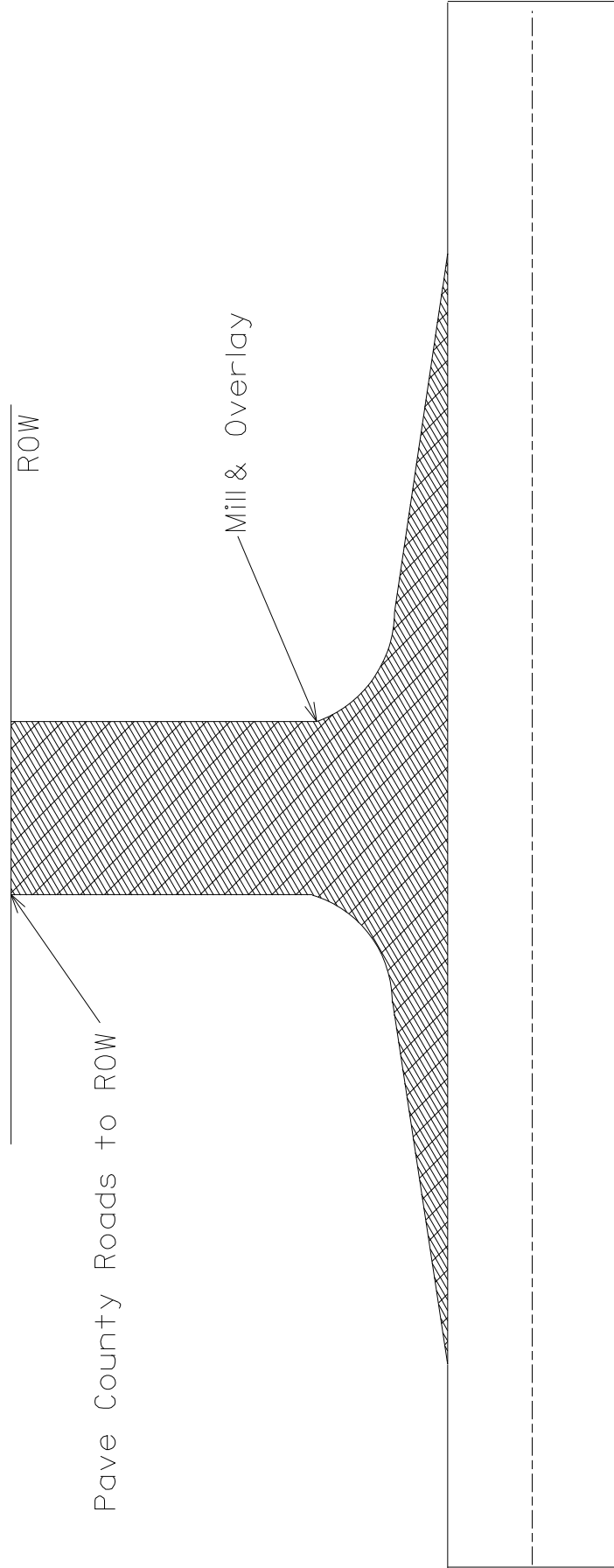
| STA. # | 6" Perforated Sewer Pipe 605-0005 | 6" Non- Perforated Sewer Pipe 605-P004 | Filter Mat'l Type "A" 605-W001 | Filter Mat'l Type "B" 605-W002 | Geotextile for Sub. Drainage, Type III 605-AA001 |
|---------|---|--|--------------------------------------|--------------------------------------|--|
| 943+00 | 300 | 40 | 19.14 | 20.82 | 227.79 |
| 947+00 | 200 | 40 | 12.76 | 13.88 | 151.86 |
| 1084+00 | 200 | 40 | 12.76 | 13.88 | 151.86 |
| TOTAL: | 700 | 120 | 44.66 | 48.58 | 531.51 |

| TRAFFIC SIGNAL RADAR DETECTION CHART | | | | | | | | | |
|--------------------------------------|-------------------------|---------|---------------------|---------------------|--------------------|------------------|---|-----------------------------|-------------|
| Intersection | Detection Zone Location | Phase # | Detection Zone Size | STOPBAR Radar Units | Advance Radar Unit | Radar Cable (ft) | Existing Controller Type | Existing Pole Configuration | |
| MS 25 at Holly Bush Road | SB Left Turn Lane | 1 | 6'X50' | 1 | | 350 | Existing M34 Controller (New Controller Required) | Woodpole Spanwire | |
| | SB Thru Lanes | 6 | 445' from STOPBAR | | 1 | 350 | | | |
| | NB Left Turn Lane | 5 | 6'X50' | 1 | | 240 | | | |
| | NB Thru Lanes | 2 | 445' from STOPBAR | | 1 | 240 | | | |
| | WB Left Turn/Thru Lanes | 3 | 6'X50' | 1 | | 430 | | | |
| | EB Left Turn/Thru Lanes | 4 | 6'X50' | 1 | | 170 | | | |
| | Total | | | | 4 | 2 | | | 1780 |

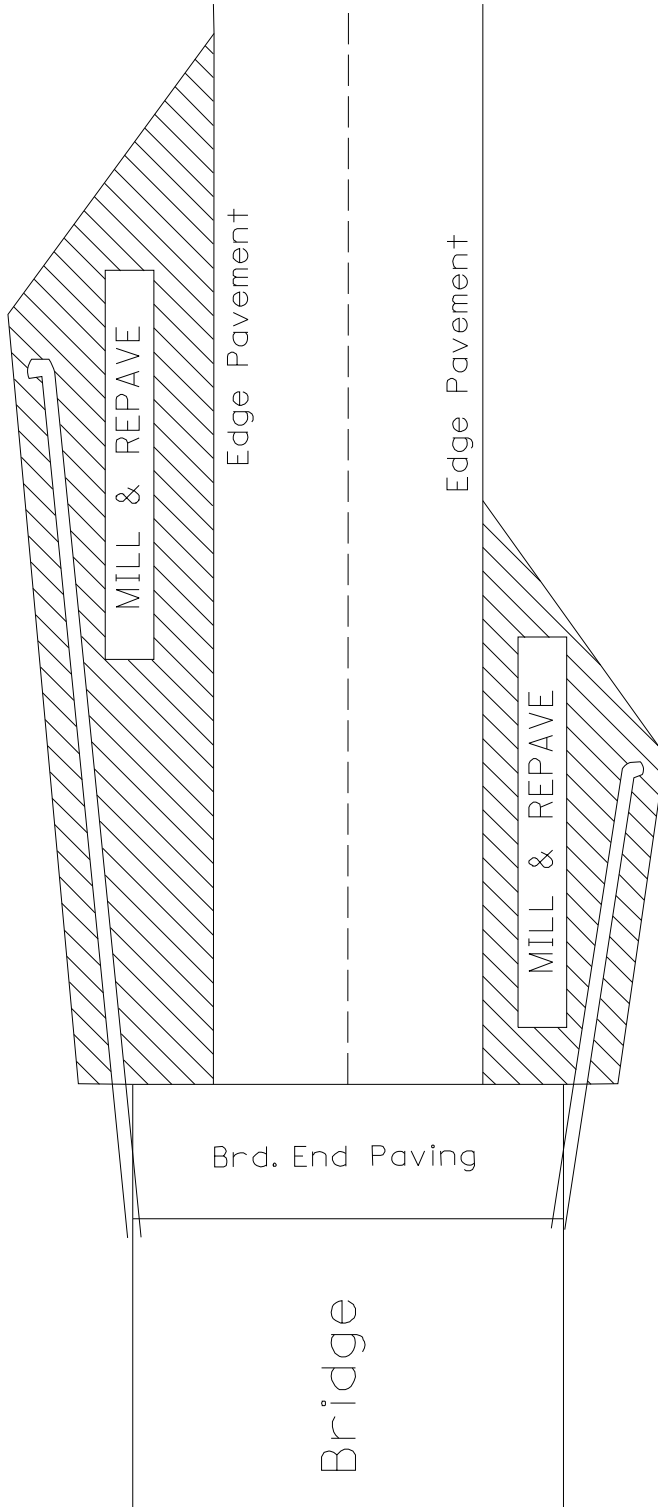
Rankin COUNTY - 108604/301000

| STATION | | GUARDRAIL | | TANGENT | | Cable Anchor | | BRIDGE END SECTION | | | DELINEATORS | | GUARDRAIL | | REMARKS |
|----------------|----|------------------|----------------|--------------------------------|-------------------|-------------------------------|------------------------|--------------------|---------------|---------------|---------------|------------|-------------|----------------------------|---------------|
| | | LOCATION (L/R/T) | (W-BEAM) (L/F) | THIRIE BEAM TRANS. SECT. (L/F) | THIRIE BEAM (L/F) | Faired TERMINAL END SECT (EA) | TERMINAL END SECT (EA) | TYPE "A" (EA) | TYPE "C" (EA) | TYPE "F" (EA) | TYPE "H" (EA) | WHITE (EA) | YELLOW (EA) | Type 3 Object Markers (EA) | |
| 657+01 | Lt | 150 | | | 1 | | | | | | | 7 | | 206 | Hwy. 25 |
| | Rt | 150 | | | 1 | | | | | | | 7 | | 206 | |
| 701+08 | Lt | 150 | | | 1 | | | | | | | 7 | | 206 | Hwy. 25 |
| | Rt | 150 | | | 1 | | | | | | | 7 | | 206 | |
| 705+48 | Lt | 150 | | | 1 | | | | | | | 7 | | 206 | Hwy. 25 |
| | Rt | 150 | | | 1 | | | | | | | 7 | | 206 | |
| 1165+81 | Lt | 150 | | | 1 | | | | | | | 7 | | 206 | Hwy. 25 |
| | Rt | 150 | | | 1 | | | | | | | 7 | | 206 | |
| 1171+95 | Lt | 150 | | | 1 | | | | | | | 7 | | 206 | Hwy. 25 |
| | Rt | 150 | | | 1 | | | | | | | 7 | | 206 | |
| 19+17 | Lt | 150 | | | 1 | | | | | | | 7 | | 206 | Sandhill Road |
| | Rt | 150 | | | 1 | | | | | | | 7 | | 206 | |
| 23+00 | Lt | 150 | | | 1 | | | | | | | 7 | | 206 | Sandhill Road |
| | Rt | 150 | | | 1 | | | | | | | 7 | | 206 | |
| TOTAL = | | 2100 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 14 | 49 | 49 | 14 | 2884 | |
| | | L.F. | EA. | LF. | EA. | EA. | EA. | EA. | EA. | EA. | EA. | EA. | EA. | LF. | |

SR 25
LOCAL ROAD MILL & OVERLAY
FROM SR 471 TO SR 43
RANKIN COUNTY
108604/301000

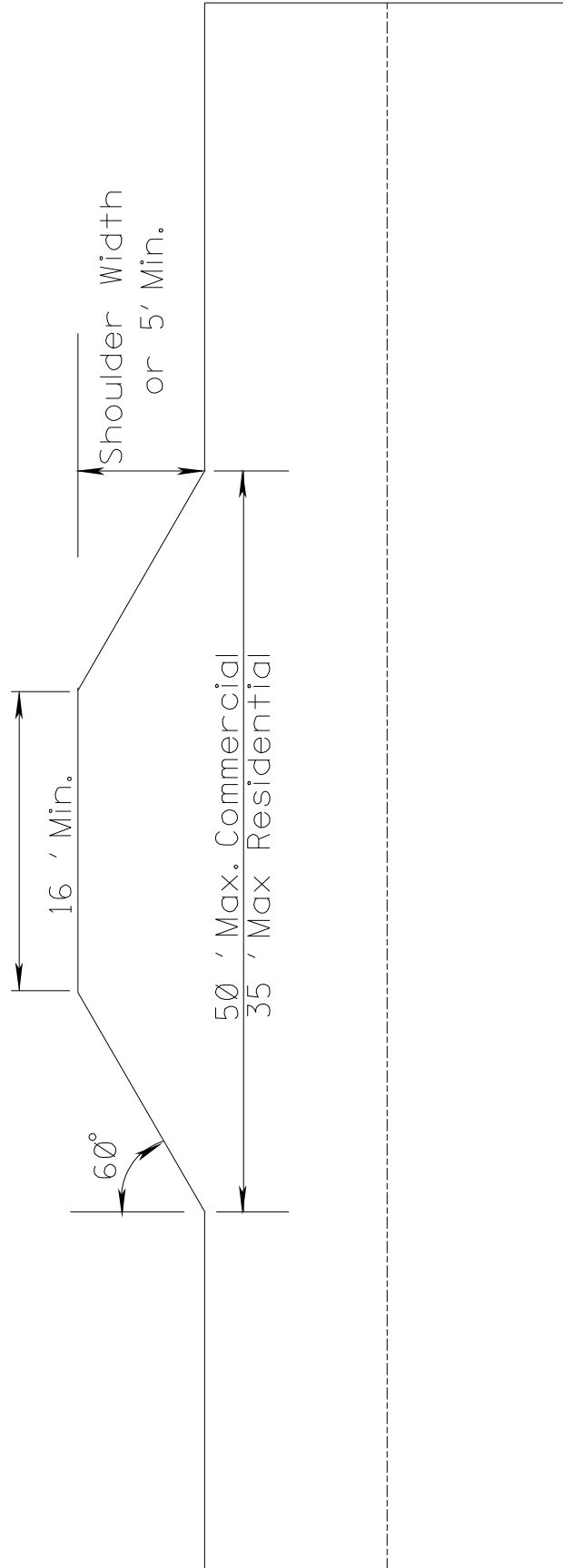


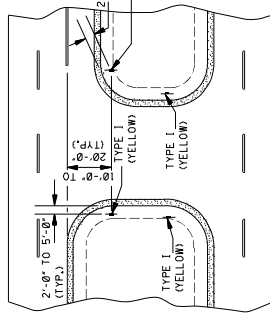
REMOVE & REPAVE BRIDGE GUARDRAIL PAD
108604/301000
RANKIN COUNTY
SR 25 OVERLAY
FROM 471 TO SR 43



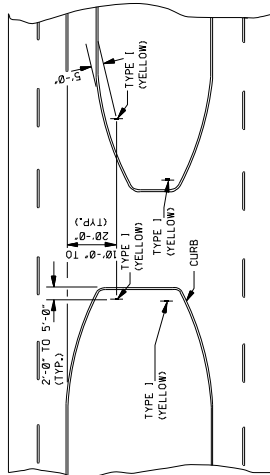
108604/301000
RANKIN COUNTY
SR 25 OVERLAY
FROM 471 TO SR 43

TYPICAL RAMP/PAD DETAIL

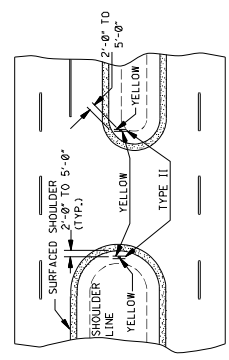




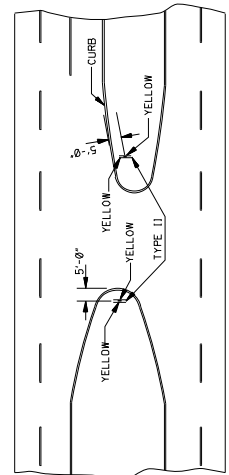
TYPICAL DELINEATION AT A CROSSOVER WITH USABLE SHOULDERS AND A MEDIAN WIDTH OVER 42'-0"



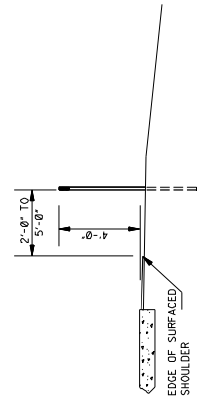
TYPICAL DELINEATION AT A CURBED CROSSOVER WITH A MEDIAN WIDTH OVER 42'-0"



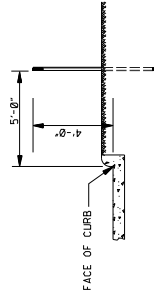
TYPICAL DELINEATION AT A CROSSOVER WITH USABLE SHOULDERS AND A MEDIAN WIDTH OF 42'-0" OR LESS



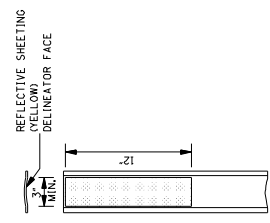
TYPICAL DELINEATION AT A CURBED CROSSOVER WITH A MEDIAN WIDTH OF 42'-0" OR LESS



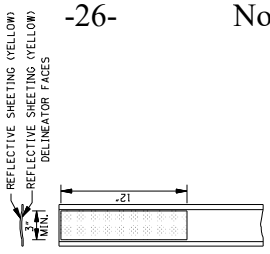
DELINEATOR MOUNTING ON CROSSOVER WITH USABLE SHOULDER



DELINEATOR MOUNTING ON CURBED CROSSOVER



DETAIL OF TYPE I FLEXIBLE POST DELINEATOR



DETAIL OF TYPE II FLEXIBLE POST DELINEATOR

NOTE: CARBONITE'S CURV-FLEX DELINEATOR POSTS ARE SHOWN. OTHER FLEXIBLE POSTS THAT HAVE BEEN APPROVED FOR LISTING IN THE DEPARTMENT'S "APPROVED SOURCE OF MATERIALS" MAY BE FURNISHED.

NOTE: PLACE DELINEATORS NO MORE THAN 28'-0" FROM EDGE OF TRAVEL LANES EDGES.

- GENERAL NOTES:
1. THE UNIT PRICE OF DELINEATOR INCLUDES COST(S) OF DELINEATOR FACE(S), POST, HARDWARE AND INSTALLATION.
 2. DELINEATOR FACE WILL BE ENCAPSULATED LENS REFLECTIVE SHEETING.
 3. POST REQUIRING THE INSTALLATION OF A BASE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
 4. THE COLOR OF DELINEATORS SHALL BE THE COLOR OF THE ADJACENT EDGELINE PER MUTCD SECTION 3F.03.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

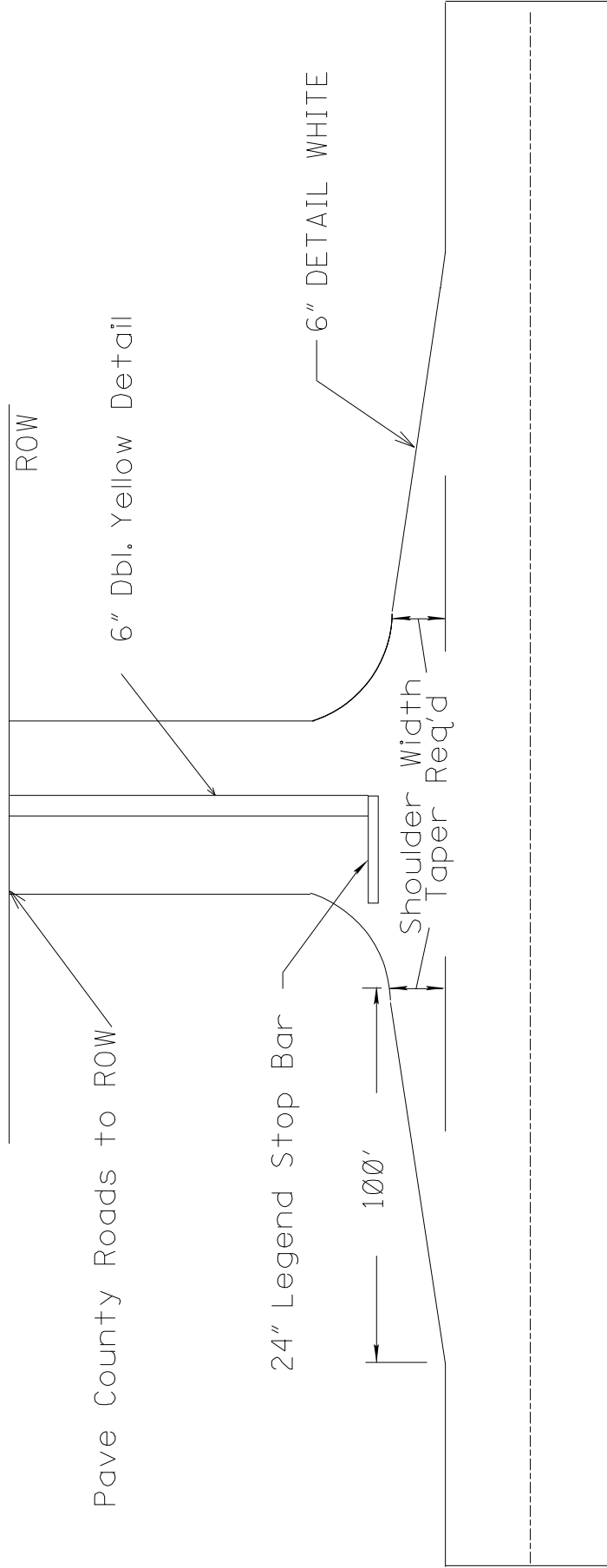
TYPICAL CROSSOVER DELINEATION

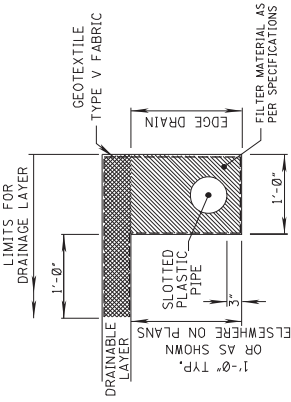
ISSUE DATE: AUGUST 01, 2017
SHEET NUMBER 6316

| DATE | REVISION |
|------|----------|
| | |
| | |
| | |

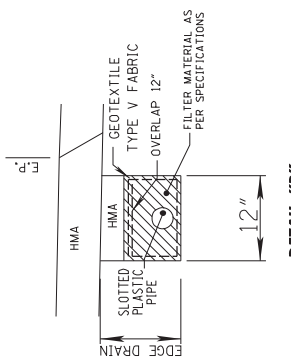
108604/301000
RANKIN COUNTY
SR25 OVERLAY
FROM 471 TO SR 43

Typical Section - County Roads

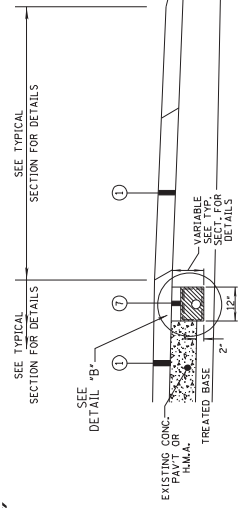




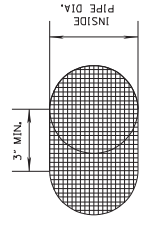
DETAIL "A"



DETAIL "B"



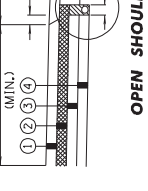
EDGE DRAIN ADDED TO EXISTING FACILITY



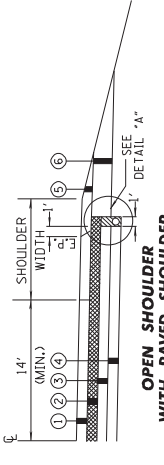
DETAIL OF RODENT SCREEN

3X3 GALVANIZED HARDWARE CLOTH 0.063 WIRE OR EQUAL FORMED TO FIT SNUG TO INSIDE OF PIPE. SCREEN SHALL BE INSTALLED ON EDGE DRAIN ABSORBED IN PAY ITEM 807-808-66G (EDGE DRAIN OUTLET/VENT, COMPLETE IN PLACE) (SEE NOTE 6 EDD-2)

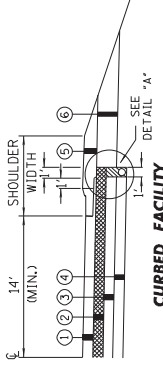
NOTES:
 URBAN EDGE DRAIN OUTLETS TO TIE INTO INLETS. ALL COSTS SHALL BE COVERED UNDER OUTLET/VENT PAY ITEMS.
 EDGE DRAINS SHALL BE REQUIRED ONLY ON THE LOW SIDE OF SUPERELEVATION.
 .365 C.Y. CLASS "C" CONCRETE REQUIRED FOR 5' X 3' APRON.
 FOR MORE DETAILS SEE SHEET EDD-2



OPEN SHOULDER DETAIL

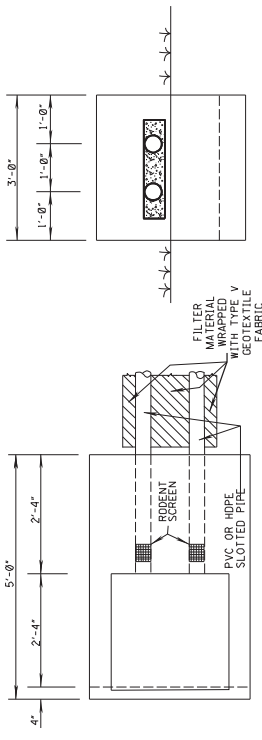


OPEN SHOULDER WITH PAVED SHOULDER DETAIL

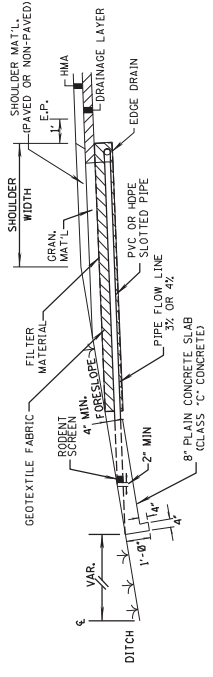


CURBED FACILITY DETAIL

- ① HMA
- ② DRAINABLE LAYER
- ③ LEA GRANULAR OR CRUSHED AGGREGATE
- ④ CHEMICALLY TREATED SUB-GRADE
- ⑤ SHOULDER GRANULAR
- ⑥ UNTREATED GRANULAR
- ⑦ 3" HOT MIX ASPHALT



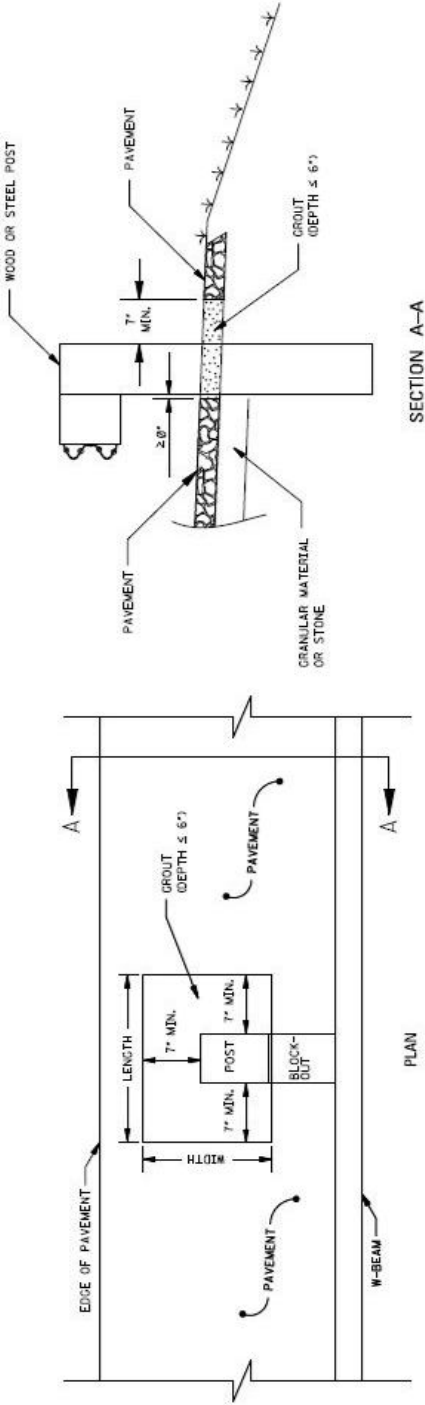
DETAIL OF DUAL EDGEDRAIN OUTLET APRON



DETAIL OF EDGEDRAIN OUTLET APRON

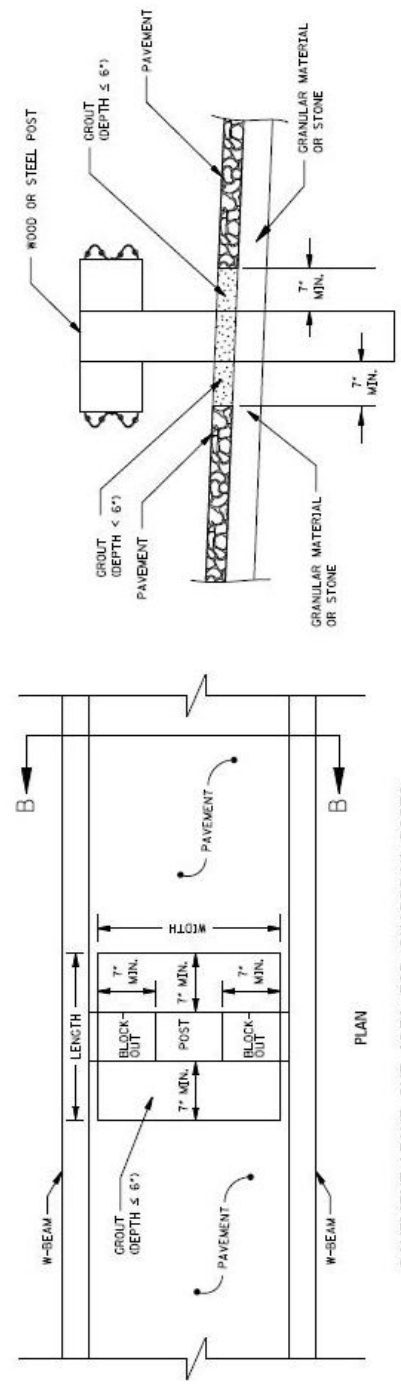
| | |
|--|----------------------|
| MISSISSIPPI DEPARTMENT OF TRANSPORTATION | |
| EDGE DRAIN DETAIL | |
| CONCRETE APRON AND RODENT SCREEN | |
| PRELIMINARY | NOT FOR CONSTRUCTION |
| PROJECT NUMBER | EDD-1 |
| SHEET NUMBER | 97 |
| DATE | DESIGN TEAM UPDATE |
| CHECKED | DATE UPDATE |
| BY | DATE UPDATE |
| REVISION | DATE UPDATE |
| PROJECT NO. | UPDATE |
| STATE | MISS. |
| FMS CON: | UPDA/UPDATE |

Guardrail Post Installation in Paved Areas



PAVEMENT LEAVE-OUT AREA FOR GUARDRAIL POSTS
SINGLE-FACED GUARDRAIL

| POST | MIN. PAV'T LEAVE-OUT AREA | |
|----------------|------------------------------|------------------------------|
| | SINGLE-FACED LENGTH (IN.) | DOUBLE-FACED LENGTH (IN.) |
| 6" x 6" WOOD | 20 | 22 |
| 6" x 6" WOOD | 20 | 22 |
| 10" x 10" WOOD | 24 | 24 |
| #6 x 3 STEEL | 18 | 18 |



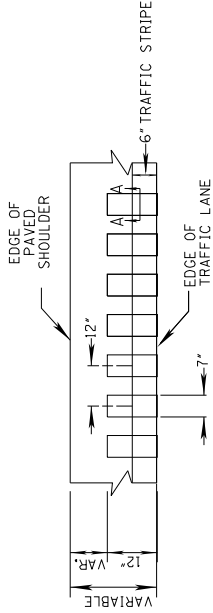
PAVEMENT LEAVE-OUT AREA FOR GUARDRAIL POSTS
DOUBLE-FACED GUARDRAIL

GENERAL NOTES

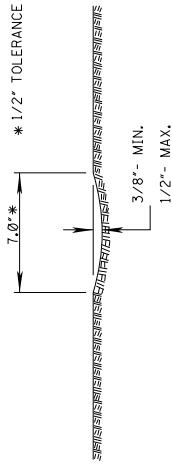
1. GUARDRAIL POSTS SHALL NOT BE COMPLETELY SURROUNDED BY PAVEMENT. THE AREA BEHIND AND LATERAL OF THE POST SHALL HAVE A MINIMUM 7" CLEARANCE FROM THE PAVEMENT. THIS AREA SHALL BE FILLED WITH A LOW STRENGTH GROUT WITH A MAXIMUM 28 DAY COMPRESSIVE STRENGTH OF 120 PSI.
2. GROUT SHALL BE INSTALLED AT A DEPTH EQUAL TO THE SURROUNDING PAVEMENT UP TO A MAXIMUM OF 6". IF DIFFERENCE SHALL BE GREATER THAN 6", THE GRANULAR MATERIAL SHALL BE FILLED IN WITH SHOULDER GRANULAR MATERIAL.
3. COST OF GROUT SHALL BE ABSORBED IN THE COST OF OTHER ITEMS BID.
4. PAVEMENT LEAVE-OUT AREAS ARE REQUIRED FOR STEEL AND WOOD POSTS.
5. STANDARD EMBEDMENT DEPTHS STILL APPLY, MEASURED FROM THE TOP OF THE PROJECTED PAVEMENT SURFACE.

| | |
|-------|-------------|
| STATE | PROJECT NO. |
| MISS. | |

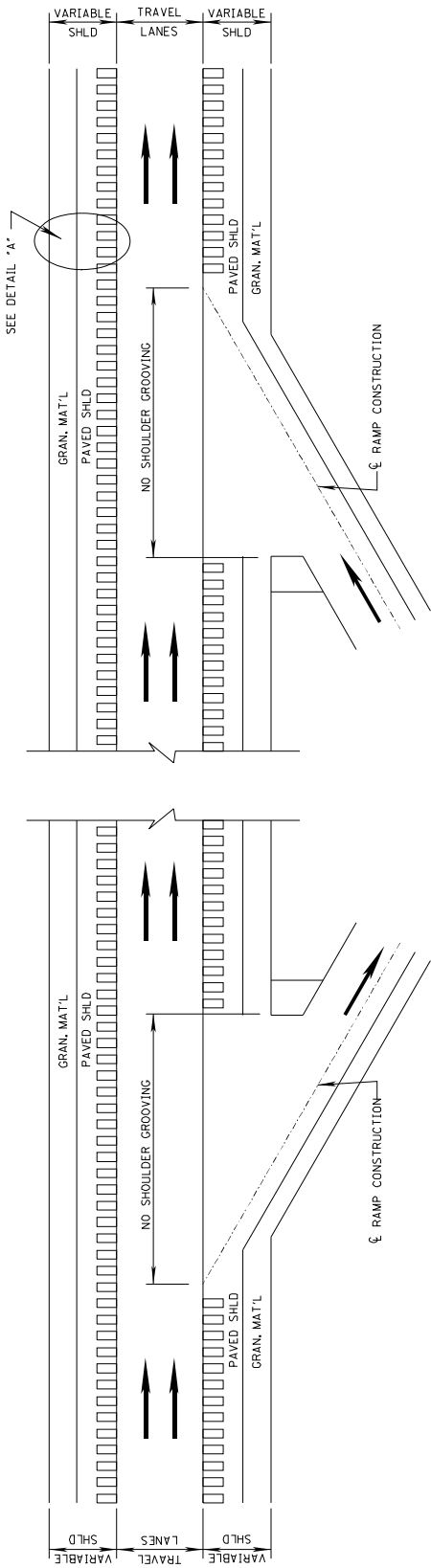
- GENERAL NOTES**
1. ALL RUMBLE STRIPES SHALL BE GROUND-IN. RUMBLE STRIPES SHALL BE OMITTED ACROSS PRINCIPAL INTERSECTING ROADWAYS OR OTHER INTERRUPTIONS IN NORMAL SHOULDER WIDTH AS DIRECTED BY THE ENGINEER
 2. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO MAINLINE ONLY.



DETAIL "A"



SECTION "A-A"



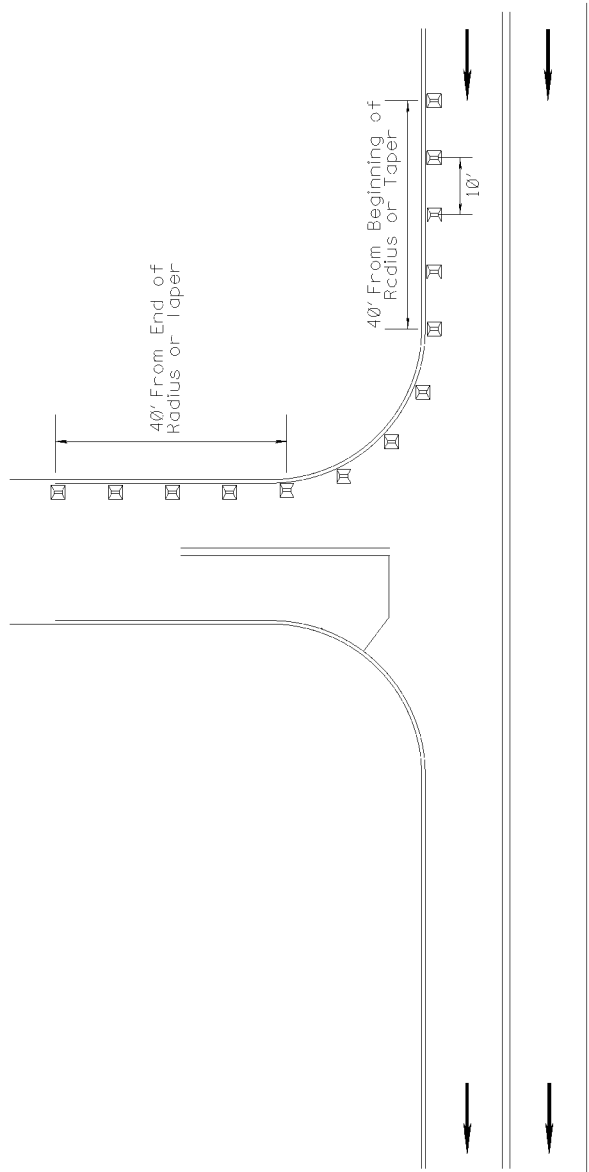
PLAN

NOT TO SCALE
DETAILS OF
RUMBLE STRIPS

| | |
|--|----------------|
| MISSISSIPPI DEPARTMENT OF TRANSPORTATION | |
| RUMBLE STRIPES | |
| 4-LANE HIGHWAYS | |
| (ASPH. LANES, 2-FT ASPH. SHLD) | |
| PROJECT NO: | |
| COUNTY: | |
| FILE NAME: | |
| DESIGN NUMBER: | |
| CHECKED: | DATE: 05/07/14 |

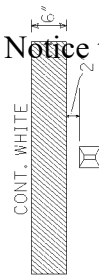
| | |
|-------|-------------|
| STATE | PROJECT NO. |
| MISS. | |

TYPICAL FOR RAISED PAVEMENT MARKERS PLACED ON SIDE ROAD RADII 4-LANE TRAFFIC



101

-32-



DETAIL A

→ DIRECTION OF TRAFFIC

- NOTE 1: MARKERS SHALL BE PLACED EVERY 10 FEET.
- NOTE 2: MARKERS SHALL BE VISIBLE FROM THE TRAVELING MOTORIST ON STATE DESIGNATED HIGHWAYS.
- NOTE 3: MARKERS SHALL BE HIGH PERFORMANCE TWO WAY CLEAR.
- NOTE 4: FIVE (5) MARKERS SHALL BE PLACED ALONG MAINLINE EDGE STRIPE.
- NOTE 5: MARKERS FOR COUNTY ROADS SHALL CONTINUE DOWN THE EDGE STRIPE A DISTANCE OF 40 FEET.
- NOTE 6: MARKERS SHALL NOT BE ROTATED WHEN BEING PLACED ALONG RADIUS OF LOCAL ROAD.

Notice to Bidders No. 3375

| | |
|--|--------------------|
| MISSISSIPPI DEPARTMENT OF TRANSPORTATION | |
| PROJECT NO. | 4 - AVL |
| COUNTY | CLAY |
| FILE NAME | SPASIDER/HR/ML/DJN |
| REGION | TEAM |
| DATE | |
| PRELIMINARY | |
| NOT FOR CONSTRUCTION | |
| PROJECT NUMBER | |
| CONTRACT NUMBER | |
| SHEET NUMBER | |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3376

DATE: 05/17/2021

SUBJECT: Specialty Items

PROJECT: NH-0056-01(110)/108604301 - RANKIN

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: GUARDRAIL, GUIDERAIL

| Line No | Pay Item | Description |
|---------|----------|--|
| 0230 | 606-A003 | Guard Posts |
| 0240 | 606-B003 | Guard Rail, Class A, Type 1, 'W' Beam, Metal Post |
| 0250 | 606-D020 | Guard Rail, Bridge End Section, Type H, Metal Post |
| 0260 | 606-E007 | Guard Rail, Terminal End Section, Non-Flared |

CATEGORY: MISCELLANEOUS/ SPECIALTY WORK ITEMS

| Line No | Pay Item | Description |
|---------|----------|--------------------------|
| 0150 | 423-A001 | Rumble Strips, Ground In |

CATEGORY: PAVEMENT STRIPING AND MARKING

| Line No | Pay Item | Description |
|---------|----------|--|
| 0380 | 626-A001 | 6" Thermoplastic Double Drop Traffic Stripe, Skip White |
| 0390 | 626-C002 | 6" Thermoplastic Double Drop Edge Stripe, Continuous White |
| 0400 | 626-E001 | 6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow |
| 0410 | 626-G004 | Thermoplastic Double Drop Detail Stripe, White |
| 0420 | 626-G005 | Thermoplastic Double Drop Detail Stripe, Yellow |
| 0430 | 626-H001 | Thermoplastic Double Drop Legend, White |
| 0440 | 626-H002 | Thermoplastic Double Drop Legend, White |
| 0450 | 627-J001 | Two-Way Clear Reflective High Performance Raised Markers |
| 0460 | 627-K001 | Red-Clear Reflective High Performance Raised Markers |
| 0470 | 627-L001 | Two-Way Yellow Reflective High Performance Raised Markers |

CATEGORY: TRAFFIC CONTROL - PERMANENT

| Line No | Pay Item | Description |
|---------|--------------|---|
| 0480 | 630-A001 | Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness |
| 0490 | 630-A003 | Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness |
| 0500 | 630-F002 | Delineators, Flexible Post Mounted, Crossover, Type I, Yellow |
| 0510 | 630-F006 | Delineators, Guard Rail, White |
| 0520 | 630-F007 | Delineators, Guard Rail, Yellow |
| 0530 | 630-G004 | Type 3 Object Markers, OM-3R or OM-3L |
| 0540 | 907-632-D001 | Solid State Traffic Actuated Controller, Type 1 |

CATEGORY: TRAFFIC CONTROL - PERMANENT

| Line No | Pay Item | Description |
|---------|--------------|--|
| 0550 | 907-641-A002 | Signal Stop Bar Radar Vehicle Detection Sensor, Type 2 |
| 0560 | 907-641-B002 | Signal Advanced Radar Vehicle Detection Sensor, Type 2 |
| 0570 | 907-641-D001 | Radar Vehicle Detection Cable |

CATEGORY: TRAFFIC CONTROL - TEMPORARY

| Line No | Pay Item | Description |
|---------|-----------|--|
| 0280 | 619-A1001 | Temporary Traffic Stripe, Continuous White |
| 0290 | 619-A2001 | Temporary Traffic Stripe, Continuous Yellow |
| 0300 | 619-A3001 | Temporary Traffic Stripe, Skip White |
| 0310 | 619-A5001 | Temporary Traffic Stripe, Detail |
| 0320 | 619-A6002 | Temporary Traffic Stripe, Legend |
| 0330 | 619-D1001 | Standard Roadside Construction Signs, Less than 10 Square Feet |
| 0340 | 619-D2001 | Standard Roadside Construction Signs, 10 Square Feet or More |
| 0350 | 619-G4001 | Barricades, Type III, Double Faced |
| 0360 | 619-G4005 | Barricades, Type III, Single Faced |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3377

CODE: (SP)

DATE: 06/18/2019

SUBJECT: Temporary Construction Signs

PROJECT: NH-0056-01(110) / 108604301 -- Rankin County

Bidders are hereby advised of the following regarding the Temporary Construction Signs required:

Should the Bidders elect to install Temporary Construction Signs by first driving short u-channel sections and then bolting the longer, correct height u-channel sections to them, the Bidders are advised that these short sections shall be a minimum of five (5) feet from the ground level when driven and the splice must consist of a minimum of eighteen (18) inches of overlap with a total of four (4) bolts. Bidders are also advised that it is mandatory that these short sections be removed at the completion of the project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3378

CODE: (SP)

DATE: 7/16/2019

SUBJECT: Underground Utilities

PROJECT: NH-0056-01(110) / 108604301 -- Rankin County

Bidders are hereby advised that utility lines owned and maintained by MDOT may be present within the project limits. These utilities are not located by Mississippi 811. It shall be the Contractor's responsibility to coordinate with MDOT to have the utility lines located and marked prior to beginning work. The Contractor shall give a minimum of three (3) working days of advance notice for locate requests. The contacts for MDOT utility lines are as follows:

Underground Power Lines:

Michael Lee – 601-683-3341 – mlee@mdot.ms.gov

Vince Herrington – 601-683-3341 – vherrington@mdot.ms.gov

Underground Communication Lines:

Kerby McFarland – 601-359-7450 – kmcfarland@mdot.ms.gov

Steven Newell – 601-359-7450 – snewell@mdot.ms.gov

Henry Lewis – 601-359-1454 – hlewis@mdot.ms.gov

Underground Signal Lines:

Amrik Singh – 601-359-1454 – asingh@mdot.ms.gov

Kenneth Welch – 601-359-1454 – kwelch@mdot.ms.gov

"General Decision Number: MS20210140 01/01/2021

Superseded General Decision Number: MS20200140

State: Mississippi

Construction Type: Highway

County: Rankin County in Mississippi.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

| | |
|---------------------|------------------|
| Modification Number | Publication Date |
| 0 | 01/01/2021 |

* ELEC0480-010 07/01/2020

| | Rates | Fringes |
|-------------------------|----------|---------|
| TRAFFIC SIGNALIZATION | | |
| Electrician..... | \$ 26.20 | 9.77 |
| ----- | | |
| SUMS2010-063 08/04/2014 | | |

| | Rates | Fringes |
|-----------------------------------|----------|---------|
| CARPENTER (Form Work Only)..... | \$ 15.47 | 0.00 |
| CEMENT MASON/CONCRETE FINISHER... | \$ 14.02 | 0.00 |
| ELECTRICIAN..... | \$ 24.04 | 5.87 |
| HIGHWAY/PARKING LOT STRIPING: | | |
| Truck Driver (Line Striping | | |
| Truck)..... | \$ 12.04 | 0.00 |

| | | |
|--|----------|---------|
| INSTALLER - GUARDRAIL..... | \$ 12.07 | 0.00 |
| INSTALLER - SIGN..... | \$ 11.92 | 0.00 |
| IRONWORKER, REINFORCING..... | \$ 15.47 | 0.00 |
| LABORER: Common or General, Including Asphalt Raking, Shoveling, Spreading; and Grade Checking..... | \$ 10.65 | 0.00 |
| LABORER: Flagger..... | \$ 10.22 | 0.00 |
| LABORER: Luteman..... | \$ 12.88 | 0.00 |
| LABORER: Mason Tender - Cement/Concrete..... | \$ 11.27 | 0.00 |
| LABORER: Pipelayer..... | \$ 13.44 | 0.00 |
| LABORER: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper..... | \$ 11.29 | 0.00 |
| OPERATOR: Asphalt Spreader..... | \$ 14.71 | 0.00 |
| OPERATOR: Backhoe/Excavator/Trackhoe..... | \$ 15.36 | 0.00 |
| OPERATOR: Bobcat/Skid Steer/Skid Loader..... | \$ 11.64 | 0.00 |
| OPERATOR: Broom/Sweeper..... | \$ 11.57 | 0.00 |
| OPERATOR: Bulldozer..... | \$ 15.41 | 0.00 |
| OPERATOR: Concrete Saw..... | \$ 14.38 | 0.00 |
| OPERATOR: Crane..... | \$ 19.22 | 0.00 |
| OPERATOR: Distributor..... | \$ 10.95 | 0.00 |
| OPERATOR: Grader/Blade..... | \$ 14.41 | 0.00 |
| OPERATOR: Grinding/Grooving Machine..... | \$ 15.90 | 0.00 |
| OPERATOR: Loader..... | \$ 12.57 | 0.00 |
| OPERATOR: Mechanic..... | \$ 19.27 | 0.00 |
| OPERATOR: Milling Machine..... | \$ 14.68 | 0.00 |
| OPERATOR: Mixer..... | \$ 14.25 | 0.00 |
| OPERATOR: Oiler..... | \$ 12.35 | 0.00 |
| OPERATOR: Paver (Asphalt, Aggregate, and Concrete)..... | \$ 12.15 | 0.00 |
| OPERATOR: Roller (All Types).... | \$ 12.64 | 0.00 |
| OPERATOR: Scraper..... | \$ 12.25 | 0.00 |
| OPERATOR: Tractor..... | \$ 11.22 | 1070.00 |

| | | |
|--|----------|------|
| TRUCK DRIVER: Flatbed Truck..... | \$ 14.06 | 0.00 |
| TRUCK DRIVER: Lowboy Truck..... | \$ 11.00 | 0.00 |
| TRUCK DRIVER: Mechanic..... | \$ 13.00 | 0.00 |
| TRUCK DRIVER: Water Truck..... | \$ 10.98 | 0.00 |
| TRUCK DRIVER: Dump Truck (All Types)..... | \$ 12.56 | 0.00 |
| TRUCK DRIVER: Semi/Trailer Truck..... | \$ 14.60 | 0.00 |

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

=====
Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this 108

classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests

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

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

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

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

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

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

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

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

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END OF GENERAL DECISION

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SUPPLEMENT TO FORM FHWA-1273

DATE: 12/17/2018

SUBJECT: **Federal Contract Provisions for Subcontracts and Cargo Preference Act**

Federal 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 the subcontract. The federal contract provisions (FHWA-1273, SUPPLEMENT TO FORM FHWA-1273, NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246), DAVIS-BACON AND RELATED ACT PROVISIONS (WAGE RATES)) must be physically incorporated as part of the subcontract. A completed Mississippi Department of Transportation Form CAD-521 and Form CAD-725 must be attached to the CAD-720.

Cargo Preference Act

The Contractor is hereby advised of the requirements set forth in the following Attachment (Title 46 - Shipping) as it pertains to the implementation of Cargo Preference Act (CPA) requirements in the Federal-aid Highway Program.

By signing this contract, the Contractor agrees to conform to the requirements of the CPA.

Attachment

Title 46- Shipping

Volume: 8

Date: 2014-10-01

Original Date: 2014-10-01

Title: Section 381.7 - Federal Grant, Guaranty, Loan and Advance at Funds Agreements.

Context: Title 46- Shipping. CHAPTER II- MARITIME ADMINISTRATION, DEPARTMENT OF TRANSPORTATION. SUBCHAPTER J - MISCELLANEOUS. PART 381 - CARGO PREFERENCE-U.S.- FLAG VESSELS.

§ 381.7 Federal Grant, Guaranty, Loan and Advance of Funds Agreements.

In order to insure a fair and reasonable participation by privately owned United States-flag commercial vessels in transporting cargoes which are subject to the Cargo Preference Act of 1954 and which are generated by U.S. Government Grant, Guaranty, Loan and/or Advance of Funds Programs, the head of each affected department or agency shall require appropriate clauses to be inserted in those Grant, Guaranty, Loan and/or Advance of Funds Agreements and all third party contracts executed between the borrower/grantee and other parties, where the possibility exists for ocean transportation of items procured, contracted for or otherwise obtained by or on behalf of the grantee, borrower, or any of their contractors or subcontractors. The clauses required by this part shall provide that at least 50 percent of the freight revenue and tonnage of cargo generated by the U.S. Government Grant, Guaranty, Loan or Advance of Funds be transported on privately owned United States-flag commercial vessels. These clauses shall also require that all parties provide to the Maritime Administration the necessary shipment information as set forth in § 381.3. A copy of the appropriate clauses required by this part shall be submitted by each affected agency or department to the Secretary, Maritime Administration, for approval no later than 30 days after the effective date of this part. The following are suggested acceptable clauses with respect to the use of United States-flag vessels to be incorporated in the Grant, Guaranty, Loan and/or Advance of Funds Agreements as well as contracts and subcontracts resulting therefrom:

(a) *Agreement Clauses.* "Use of United States-flag vessels:

"(1) Pursuant to Pub. L 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

"(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees --

"(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

"(2) To furnish within 20 days following the date of loading for shipments originating within the United

States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

"(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract."

(Reorganization Plans No.21 of 1950(64 Stat. 1273) and No. 7 of 1961 (75 Stat. 840) as amended by Pub. L 91.469 (84 Stat 1036) and Department of Commerce Organization Order 10-8 (38 FR 19707, July 23, 1973)) (42 FR 57126, Nov. 1, 1977]

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, 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.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program 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 minorities and women.

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 minorities and women 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 minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such 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 its 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 their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith 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 contracting agency 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 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 minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. 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 contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 Part 26 in the award and administration of DOT-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 the contracting agency deems appropriate.

11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

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

(1) The number and work hours 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; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency 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](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages

paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, 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 29 CFR 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) 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.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The 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.

(3) In the event the contractor, the laborers or mechanics to be employed in the 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. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as 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.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor 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, so 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 contracting agency 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

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

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each 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 Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) 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 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action 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.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or 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 Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen 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 worker 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 on 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 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's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman 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 wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor 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. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. 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.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 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 U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the 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 or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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 contracting agency. 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 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased 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 or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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 or propose 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 VI 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 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 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

contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 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. 3704).

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.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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, Form FHWA-1022 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:

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 under this title or imprisoned not more than 5 years or both."

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

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier 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 contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first 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 entering into this transaction.

g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective 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.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) 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;

(3) 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 (a)(2) of this certification; and

(4) 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.

b. Where the prospective 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 Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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 exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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 Participants:

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 participating in covered transactions 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.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is 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 its bid or proposal that the participant 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 goal for female participation, expressed in percentage terms for the Contractor’s aggregate workforce in each trade on all construction work, is 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 |

| | |
|--|------|
| 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 |
|--|------|

| | |
|---|------|
| Forrest, Lamar, Marion, Pearl River, Perry, Pike, Walthall----- | 27.7 |
|---|------|

| | |
|-------------------------------|------|
| Adams, Amite, Wilkinson ----- | 30.4 |
|-------------------------------|------|

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

The Contractor’s compliance with the Executive Order and the regulations in 41 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 60-4.2(d). 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

(12/04/2018)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-102-2

CODE: (IS)

DATE: 11/22/2017

SUBJECT: **Bidding Requirements and Conditions**

Section 102, Bidding Requirements and Conditions, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-102.01--Prequalification of Bidders. Delete the last sentence of the third paragraph of Subsection 102.01 on page 13, and substitute the following.

The Bidder's Certificate of Responsibility number must be on file with the Department's Contract Administration Division prior to request for permission to bid.

907-102.02--Contents of Proposal Forms. Delete the fourth paragraph in Subsection 102.02 on page 13, and substitute the following.

Prospective bidders must complete an online request for permission to be eligible to bid a project. Upon approval, the bidder will be authorized to submit a bid electronically using Bid Express at <http://bidx.com>.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-105-1

CODE: (SP)

DATE: 05/07/2021

SUBJECT: Authority of the Engineer

Section 105, Control of Work, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-105.1--Authority of the Engineer. Delete the first sentence of the second paragraph of Subsection 105.01 on page 31, and substitute the following.

The Engineer has the right to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to correct conditions unsafe for workmen or the general public, for failure to carry out provisions of the Contract, or for failure to carry out orders.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-108-4

CODE: (SP)

DATE: 10/07/2020

SUBJECT: Subletting of Contract

Section 108, Prosecution and Progress, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-108.01--Subletting of Contract.

907-108.01.1--General. Delete the third sentence of the tenth paragraph of Subsection 108.01.1 on the bottom of page 72.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-109-3

CODE: (SP)

DATE: 02/23/2021

SUBJECT: Measurement and Payment

Section 109, Measurement and Payment, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-109.01--Measurement of Quantities. Delete the sixth full paragraph of Subsection 109.01 on page 88, and substitute the following.

If appropriate based on the specific circumstances of the project, the Contractor may request that material specified to be measured by the cubic yard or ton be converted to the other measure. The Contractor must submit this request to the Engineer. The Engineer will provide an approval or denial in writing. The decision is in the sole discretion of the Engineer. If approved, factors for this conversion will be determined by the District Materials Engineer and agreed to by the Contractor. The conversion of the materials along with the conversion factor will be incorporated into the Contract by supplemental agreement. The supplemental agreement must be executed before such method of measurement is used.

907-109.04--Extra Work.

907-109.04.1--Supplemental Agreement. Delete the second paragraph of Subsection 109.04.1 on page 90.

907-109.06--Partial Payment.

907-109.06.2--Advancement on Materials. Delete the next to last paragraph of Subsection 109.06.2 on page 95, and substitute the following.

Materials for which an advanced payment has been allowed must be paid for by the Contractor within 30 days of the estimate on which the advanced payment was first allowed and proof of said payment must be verified by the supplier. If proof of payment is not furnished within the allowable 30 days, the advanced payment will be deducted on subsequent current estimates until such time that proof of payment is furnished.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-631-1

CODE: (IS)

DATE: 11/15/2017

SUBJECT: Traffic Signal Systems - General

Section 631, Traffic Signal Systems - General, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-631.02--Materials.

907-631.02.4--Operations. Delete the second paragraph in Subsection 631.02.4 on page 513 and substitute the following.

The Contractor shall conduct the work at all times in such a manner as to ensure the least possible inconvenience to the traveling public, and to property owners on the streets, alleys, and other public places where the construction will take place.

907-631.02.5--Electrical Service. Delete the first paragraph in Subsection 631.02.5 on page 515 and substitute the following.

It shall be the Contractor's responsibility to make the necessary arrangements with the local power company to provide the electrical service for any new installation. The Contractor shall pay for, at no cost to the Department, all deposits, hook-up charges, or other service fees required by the power company for the establishment of new service. The cost of all such fees shall be considered incidental and absorbed within existing pay items. The Department or the local agency will be responsible for payment of the monthly service bill for the new power service installation. It shall be the responsibility of the Contractor to swap the electrical service account over to the Department or local agency.

907-631.03--Construction Requirements.

907-631.03.2--Electrical Service Equipment. Delete the paragraphs of Subsection 631.03.2 on pages 515 and 516, and substitute the following.

The power supply assembly shall consist of all equipment mounted in a Power Service Pedestal as described in Subsection 722.13 or as otherwise shown in the plans. The configuration and installation of the equipment mounted on the assembly shall meet the safety requirements and approval of the utility company or municipality furnishing power for operation.

When required, service poles shall be provided by the Contractor and consist of wood poles with required pole line hardware, conduit, ground rods, guy wires and anchors and all other accessories and appurtenances mounted on the pole, except those items furnished by the utility company or

municipality, or as specified separately in the contract or plans. Costs of service poles shall be included in other items bids.

Main disconnect switches shall be separately housed on the power supply assembly. Circuit breaker cabinets and meters shall not be installed on the street or walk side of the pole or pedestal.

907-631.03.3--Performance Tests. Delete the second sentence of Subsection 631.03.3 on page 516.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-632-1

CODE: (IS)

DATE: 11/15/2017

SUBJECT: Traffic Signal Cabinet Assemblies

Section 632, Traffic Signal Cabinet Assemblies, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

Delete Section 632 on pages 517 thru 538, and substitute the following.

SECTION 907-632 - TRAFFIC SIGNAL CABINET ASSEMBLIES

907-632.01--Description. This work consists of furnishing, assembling, configuring and installing all component materials and software required to form completed traffic signal controller assemblies, closed loop master controller assemblies and signal system installation of the types specified, in conformity with these specifications, to ensure fully operational traffic signal installations as shown on the plans.

907-632.02--Materials.

907-632.02.1--Cabinet Assembly. Cabinet Assemblies shall meet the NEMA 3R requirements and be constructed principally of 0.125-inch thick, 5052-H32 aluminum. The aluminum shall have a mill finish per NEMA TS 2 7.7.3. Intermittent welds may be used for construction and any unwelded cabinet seams shall be sealed with clear RTV silicone. All external fasteners shall be stainless steel and no holes will be allowed in top of cabinet.

The door handles shall be stainless steel or cast aluminum. Door hinges shall be of the continuous type with a stainless steel hinge pin. Rivets are not be used to attach the hinge. The main door stop rod shall be constructed using stainless steel. The door stop mechanism shall be adjustable and capable of being securely latched in multiple opened positions including 90 degrees and a maximum of 120 degrees. The brackets attaching the stop rod to the door and cabinet shall be aluminum and welded in place. The main door cylinder lock shall be a #2 key type lock. Two (2) traffic industry standard No. 2 keys shall be provided with each cabinet and shall be made using heavy duty key blanks.

Extruded aluminum channels permanently attached to the right and left cabinet sides shall be provided for attaching adjustable shelving and mounting of other component panels. The cabinet shall have two (2) shelves installed. Both shelves shall be provided with the front edge pre-drilled with 0.25-inch holes located twelve (12) inches apart.

907-632.02.2--Physical Features.

907-632.02.2.1--Pull Out Drawer. A pull out drawer shall be installed and centered under the

bottom shelf. The drawer shall be made of 0.080-inch thick, 5052-H32 aluminum and come out on full extension drawer slides. The pull out drawer shall provide an approximate 16-inch x 14-inch working area and have the ability to bear a constant 25 pound burden. There shall be a compartment for document storage. The lid shall be hinged at the rear, to gain access to the storage area. The drawer will be used to store documents as well as support a notebook computer. The drawer slides shall be of the full extension ball bearing type. Dimensions of the drawer shall be large enough to support a notebook computer and a drawer of sufficient size to hold at least two (2) copies of the cabinet drawings and other related cabinet documentation. The surface of the lid shall have a non-slip surface.

907-632.02.2.2--Cabinet Lighting. Cabinets shall be provided with a minimum of two (2) white light LED modules. One (1) lighting module shall be installed along the front top section of the cabinet and the second lighting module shall be installed underneath the bottom cabinet shelf in such a location as to provide direct lighting of the load bay area of the cabinet but must not interfere with the cabinet drawer operation.

Both LED lighting modules shall be controlled by a NEMA rated, commercial quality, pushbutton door switch. The cabinet lighting shall turn on when the cabinet main door is opened and shall turn off when the main door is closed or an ON/OFF NEMA rated, commercial quality, toggle switch mounted on the inside cabinet door service panel shall be provided to turn both LED lighting modules on or off.

907-632.02.2.3--Police Panel Switches. Police panel switches shall be provided with all controller cabinets. All switches shall be hard wired and labeled as to their function.

NORMAL-FLASH: When this switch is in the FLASH position, all signal indications shall transfer to the flashing mode. AC power shall be removed from the load switches when the signal indications transfer to the flashing mode.

The controller unit shall operate in accordance with appropriate specifications during the flashing mode. When the switch is placed in the NORMAL position, transfer from the flash mode to normal operation shall be made in accordance with uniform code flash requirements.

SIGNAL ON-OFF: AC power shall be removed from the signal heads and the intersection will become dark when this switch is in the OFF position.

MANUAL CONTROL ON-OFF: When this switch is in the ON position, a logic ground shall be applied to the manual control enable input of the controller unit.

INTERVAL ADVANCE INPUT JACK: A manual jack shall be installed on the police panel. The jack shall inter-mate with a 3-circuit, ¼-inch diameter phone plug. The tip and ring (middle) circuits of the jack shall be connected to the logic ground and the interval advance inputs of the controller unit. When the manual hand cord is plugged into the jack and the pushbutton is pressed, logic ground shall be connected to the interval advance input of the controller unit.

When specified in the contract documents, an interval advance cord shall be provided. The cord

shall have a minimum length of three (3) feet. It shall have a 1/4-inch diameter, three circuit plug connected to one end and a manual pushbutton enclosed in a hand-held enclosure at the other end. A complete cycle (push-release) of the manual pushbutton shall terminate the controller unit interval which is active except the vehicular yellow and red clearance intervals. Cycling the push-button during the vehicular yellow or all red clearance intervals shall not terminate the timing of those intervals.

907-632.02.2.4--Service Panel Switches. Service panel switches shall be hard wired and clearly labeled to identify as to their functions. Service panel switches shall be mounted on the service panel located on the inside of the main cabinet door. Alternate switch locations may be described in the plans or contract documents but final switch design and location shall be approved by the Engineer prior to cabinet fabrication.

NORMAL-FLASH: When this switch is in the FLASH position, all signal indications shall transfer to the flashing mode. AC power shall be removed from the load switches when the signal indications transfer to the flashing mode.

The controller unit shall operate in accordance with appropriate specifications during the flashing mode. When the switch is placed in the NORMAL position transfer from the flash mode to normal operation shall be made in accordance with uniform code flash requirements.

CONTROLLER ON-OFF: When this switch is in the OFF position, AC power shall be removed from the controller. When this switch is returned to the ON position, the controller unit shall perform normal start up functions and resume normal operation in accordance with the applicable specification.

STOP TIME-RUN-NORMAL: A 3-position manual switch shall be provided which places the controller into Stop Time mode manually or through remote input.

VEHICLE DETECTORS: A 3-position switch shall be provided for each vehicle and pedestrian detector circuit. All switches shall be located on a panel mounted on the inside of the main cabinet door. The switch panel shall be labeled CALL SWITCH. Labeling of phase number and intended function (vehicles or pedestrian calls) shall be provided for each switch.

The vehicle detector switch functions are defined as follows:

- Locked Call Call is continually placed into the controller unit.
- Off (center) Vehicle detector is connected to the controller unit vehicle detector input, i.e. normal detector operation.
- Momentary Call Call is continuous as long as the switch is manually held in this position.

907-632.02.2.5--Police and Service Panel Locations. The police and service panels shall be constructed of 5052-H32 0.125-inch thick aluminum.

The police panel shall be located behind the police door which is enclosed within the main door.

The police door shall be hinged and provided with a neoprene gasket seal. Access to any portion or equipment contained behind the main cabinet door shall not be accessible through any part of the police panel. The police panel shall be of appropriate dimensions to accommodate all switch or devices described within this specification, the plans or contract document. The police door shall be provided with a treasury #2 key type lock and two (2) keys for the police door lock shall be provided with each cabinet.

The service panel shall be mounted on the inside portion of the main cabinet door, adjacent to the back side of the police panel or on the left hand side of the cabinet.

907-632.02.2.6--Cabinet Ventilation. Cabinets shall be vented to allow dissipation of the heat generated by the equipment contained within. All cabinets shall have a thermostatically controlled exhaust fan located at the top of the cabinet that is capable of 100 cubic feet per minute air displacement. The thermostat shall be mounted on the inside top of the cabinet and shall have a nominal temperature range from 80°F to 170°F.

The intake vent shall be louvered or equivalent design to prevent rain infiltration. The vent area will be located along the bottom portion of the cabinet door. A 16-inch x 12-inch x 1-inch disposable pleated air filter shall be provided on the inside portion of the cabinet and shall fully cover the vent area.

907-632.02.2.7--Air Filter Assembly. Air filters shall be one piece and shall be held firmly in place against the cabinet door in order to prevent dust from bypassing the perimeter of the filter and shall fully cover the vent area. Wing nuts or thumbscrews are preferred. Air filter shall be a 16-inch x 12-inch x 1-inch disposable pleated filter.

907-632.02.2.8--Cabinet Sizes.

907-632.02.2.8.1--Type I Cabinet. A Type I cabinet, 51”H x 30”W x 18”D, may be used for both pole and base mounted cabinets that require a maximum eight (8) position load bay. Pole mounted cabinets do not require rear access.

907-632.02.2.8.2--Type II Cabinet. A Type II cabinet, 51”H x 36”W x 18”D, may be used for both pole and base mounted cabinets that require a maximum twelve (12) position load bay. Pole mounted cabinets do not require rear access.

907-632.02.2.8.3--Type III Cabinet. A Type III cabinet, 56”H x 44”W x 27”D, shall be used for base mount installations and shall require a sixteen (16) position load bay and rear access door.

907-632.02.2.8.4--Type IV Cabinet. A Type IV dual chamber cabinet, 56”H x 57”W x 29”D, shall be used for base mount installations and shall require a sixteen (16) position load bay, rear access door, and external generator plug. When called for in the plans, a UPS shall be housed inside this cabinet.

907-632.02.2.8.5--Type V Cabinet. A Type V cabinet, 77”H x 44”W x 27”D, shall be used for base mount installations and shall require a sixteen (16) position load bay and rear access door.

907-632.02.3--Power Distribution Panel. The power panel shall be wired to provide the necessary power to all equipment. It shall be manufactured from 0.125-inch thick, 5052- H32 aluminum. The power panel shall house the following components: Main Breaker, Auxiliary Breakers, and Terminal Block. The panel shall be of such design so as to allow a technician to easily access the main and auxiliary breakers.

A 3-position terminal block with a removable insulated cover accepting up to AWG #4 stranded wire shall be supplied for accepting only the incoming power lines. This terminal block shall be in advance of and supply only the 30-amp main breaker, 10-amp and 5-amp Auxiliary breakers, AC neutral buss and earth ground buss.

907-632.02.3.1--Ground and Neutral Busbars. Cabinet grounding shall meet the requirements set forth in Subsection 722.09 for grounding and ground rods. A solid copper ground busbar shall be mounted on the side of the cabinet wall adjacent to the power panel for the connection of chassis ground wires. If more than one (1) ground busbar is used in a cabinet, a minimum of an AWG #6 copper wire shall be used to bond them.

The copper ground busbar shall have a minimum of thirteen (13) connector points, each capable of securing at least one (1) AWG #6 conductor.

A solid copper neutral busbar shall be mounted on the side of the cabinet wall adjacent to the power panel for the connection of AC neutral wires.

The copper neutral busbar shall have a minimum of thirteen (13) connector points, each capable of securing at least one (1) AWG #6 conductor.

907-632.02.3.2--Terminal Strips. Conductors shall be terminated on terminal strips with insulated terminal lugs. When two (2) or more conductors are terminated on field wiring terminal strip screws, a terminal ring lug shall be used for termination of those conductors. The voltage and current rating of terminal strips shall be greater than the voltage and current rating of the wire which is terminated on the terminal strip.

907-632.02.3.3--Cabinet Receptacles. A 3-wire 115 Volt AC (15A) Ground Fault Circuit Interrupt (GFCI) duplex receptacle shall be provided in the cabinet for maintenance use. It shall be securely mounted near the bottom right side of the cabinet and easily accessible.

Two (2) 3-wire 115 Volt AC (15A) non-GFCI protected outlets shall be installed, one on each side of the cabinet. These two (2) outlets are used for communication or other auxiliary equipment.

907-632.02.3.4--Operating Line Voltage. All equipment shall be designed to operate from a 120 volt, 60 cycle AC supply. Operation shall be satisfactory at voltages from 105 volts to 130 volts. All operating voltages into and out of the controller shall be NEMA level DC voltages except for the controller AC power source (Connector A, Pin p – AC-Control and Pin U – AC Common).

907-632.02.3.5--Circuit Breakers. Circuit breakers shall meet the requirements set forth in

Subsection 722.07. A 30-amp main breaker, with a minimum of 10,000 amp interrupting capacity, shall be provided for all cabinets to supply power to the controller, MMU, signals, and rack power supply.

Two (2) auxiliary breakers shall be provided. The first breaker, 10-amp, shall supply power to the fan, light, GFCI utility receptacle and two (2) auxiliary standard receptacles. The second breaker, 5-amp, shall be installed to supply power for the Controller Unit and MMU2. The above circuit breakers line side shall be jumpered together and will be fed from an external main circuit. A third 5-amp breaker shall be required if an ITS camera panel is called for in the plans.

907-632.02.3.6--Main Line Arrestors. Surge protection shall be provided that meets the requirements set forth in Subsection 722.12. A main line arrestor shall be provided to reduce the effects of voltage transients on the AC power line. It shall be installed after the circuit breaker. The main line arrestor shall be sufficient to protect all equipment and devices as per the plans and the following minimum specifications.

- Multi-stage Hybrid Design
- Series induction filtering
- Thermally protected Metal Oxide Varistors (TMOV's)
- Operating Voltage: 120 VAC
- Clamping Voltage: 395 VAC
- Operating Current: 15 A
- Peak Surge Current: 50 kA/Mode, 100 kA/Phase
- Operating Frequency: 47-63Hz
- EMI Attenuation: 40 dB Typ
- SPD Technology: TMOV's w/ W-C Filter
- Modes of Protection: L-N, L-G, N-G
- Status Indication: Power On & TMOV's Functional
- Connection Type: ¼-20 Stainless Steel Stud
- Operating Temperature: -40°F to +185°F

907-632.02.3.7--Solid State Main Line Relay (SSR). A normally-open, 75-amp, hybrid SSR shall be provided on the power distribution panel. The relay shall include a LED indicator to verify circuit power.

907-632.02.4--Terminal Facilities Board. The Terminal Facility shall be a hardwired load bay for NEMA TS 2 Type 1 actuated controllers. The load bay shall include either eight (8), twelve (12) or sixteen (16) load switch positions, as specified by the plans, and shall be centered along the back of the cabinet below the bottom shelf.

All wires terminated behind the backboard, as well as any additional panels, shall be soldered. No pressure or solderless connectors shall be used, unless they are soldered to the wire and tab after connection.

907-632.02.4.1--Load Switches and Flashers. Solid State Load Switches, compatible with low

wattage LED signals, shall be provided for the sequence called for on the plans. The load switch sockets shall be wired for triple-signal load switches conforming to NEMA TS 1-1994 and NEMA TS 2-2003 requirements.

The flasher socket shall be wired for and provided with a Type 3, two (2) circuit Solid State Flasher conforming to NEMA TS 1-1994 and NEMA TS 2-2003 requirements. It shall be possible to flash either the amber or red indication on any load switch outputs. It shall be possible to easily change the flash indication from the front side of the panel using readily available tools such as a screwdriver. A nominal flash rate of 50 to 60 FPM shall be provided. Flash rate shall be stable when used with generators or inverters.

Support(s) shall be provided to support the Flasher and Load Switches at some point approximately half of the total length from the panel surface. Sufficient area beneath the Load Switch or Flasher shall be clear in order to allow for free flow of air across the Load Switches or Flasher. Load Switches and Flashers must be provided with LED indicator lights on the side facing the cabinet door.

907-632.02.4.2--Flash Transfer Relay. All flash transfer relays, as a minimum, shall meet NEMA TS 1 requirements. The number of relays that shall be supplied with each cabinet shall accommodate the number of signal phases as indicated in the project plans. The coil of the flash transfer relay must be de-energized for flash operation.

907-632.02.5--Cabinet Wiring. Controller cabinets shall be wired in accordance with the signal phasing plans. If phases are indicated as omitted for future use, or if phases are not shown to be used in the plans, the cabinet shall be wired for use of the phases shown as future or unused. Load Switches shall not be provided for future or unused phases.

Wiring in the cabinets shall conform to the requirements of the National Electrical Code (NEC) and all of these specifications. All conductors in the cabinet shall be stranded copper. All wiring shall be laced. All wiring shall be in accordance as specified by Section 636 and Subsection 722.03 for Electric Cable and IMSA Specification 19 and/or 20 for Signal Wiring.

Connector harnesses for controller, conflict monitor, vehicle detectors, and accessory equipment (including NEMA defined Card Rack with power supply and pre-wired optical detection slots) shall be provided and wired into the cabinet circuitry. Connecting cables for controller and conflict monitor harnesses shall be sleeved in a braided mesh. All wires shall be securely terminated on terminal strips. The lay of the interconnect cable between the components must be such that when the door is closed, it does not press against the cables or force the cables against the various components inside the cabinets.

All communication wiring shall be bundled and routed independently of all other wiring. All live conductors shall be covered with suitable insulating material. All equipment grounds shall run directly and independently to the grounding bus.

All wires shall be cut and terminated as close as possible to the proper length before assembly. Consideration of equipment location adjustments must be made when determining appropriate

wire lengths. Excessive lengths of wire or cable shall not be allowed. All line voltage conductors used in controller cabinet shall conform to the following color code:

- AC Neutral: White
- AC Hot: Black
- Safety Ground: Green

907-632.02.5.1--Signal Terminal Arrestor Grounding Bar. A field terminal arrestor grounding bar shall be provided along the back portion of the cabinet for the installation of signal arrestors. This bar shall be attached using an AWG #10 stranded copper to the earth ground circuitry.

907-632.02.5.2--Signal Terminal Arrestors. The field terminal arrestor shall be a three (3) circuit protective device intended for use on traffic control load relay outputs. The arrestor shall be furnished with three (3) leads and a grounding stud which will be used to attach the arrestor to the grounding bar. The field terminal arrestor shall meet the following minimum specifications:

- Operating Voltage: 120 VAC
- Clamping Voltage: 475 VAC
- Peak Surge Current: 10 kA
- Operating Frequency: 47 – 63 Hz
- SPD Technology: MOV's
- Connection Type: Wire Leads
- Lead Wire: 14 AWG 12" Length
- Ground Stud: 10 x 32 5/8" Length
- Operating Temperature: -40°F to +185°F

907-632.02.6--Accessory Components.

907-632.02.6.1--Traffic Actuated Controller Unit. The fully actuated controller unit shall, at a minimum, meet the requirements of both NEMA TS 1-1989 and NEMA TS 2-2003 requirements for actuated controller units. The controller shall be of the TS 2 Type 2 configuration. The controller shall be provided with the multiple communication interface devices or properties as defined below.

- 10 Base-T Ethernet with front panel RJ-45 connector
- IEEE defined MAC address
- EIA-232 port
- External Serial Fiber options for both single and multi-mode (optional as per plans)
- External FSK 1200 bps modem (optional as per plans)
- D connector with 37 pin configuration for TS 1 compatibility
- USB port for signal controller database upload/download to the controller flash
- Controller
- ECOMM Compatible

The controller unit must have an alphanumeric backlit LCD display with a minimum of sixteen

(16) lines at 40 characters per line. The controller must be air-cooled with sufficient ventilation openings and capable of operating between -30°F and 165°F. The controller unit must be provided with a time-of-day clock, automatic daylight savings time adjustment and a power supply for maintaining SRAM during a power outage. The controller unit shall be capable of being used in a Closed-Loop System and must be capable of operating in the role of master controller in a Closed Loop System. The controller unit firmware shall be fully compatible with the Department's existing Traffic Signal Management Software. The Contractor shall ensure all controller firmware versions are compatible with the existing Traffic Signal Management Software that the Regional Department staff currently utilizes prior to submitting the controller for approval. The Contractor shall notify the Department if any special controller configuration or firmware is needed prior to submitting the controller for approval based on project requirements.

Where Flashing Yellow Arrow (FYA) operations are being used, all traffic signal controller firmware shall be capable of delaying the onset of the flashing yellow arrow.

All operator entered data shall be stored and backed up on to a flash memory device provided with the controller unit at no cost. This flash memory device shall require no battery to support value storage. No internal components of circuitry shall require battery support. The database shall be able to be backed up to a USB drive via the USB drive on the controller.

Traffic Actuated Controllers shall be of the Type shown on the plans. Type 1 Controllers shall have a Linux based processor and a minimum of one (1) USB port. Type 2 Controllers shall have the same features as Type 1 Controllers with the addition of an ATC backplane.

Type 3 Controllers shall have all features of the Type 2 Controller with the addition of the ATC module. All three (3) types of actuated controllers shall have Master controller capability, and if required shall be designated with 'M' in the plans.

907-632.02.6.2--Closed Loop Master Controller Unit. When called for in the plans, this work also consists of furnishing, installing and configuring the equipment, software and accessories necessary to connect one (1) traffic Closed-Loop Master Controller to its corresponding central or portable PC-based Traffic Computer Facility Control System via a communications connection. The communications or network connection device will be either existing or provided by the Contractor.

907-632.02.6.2.1--General. The Master shall monitor intersections in the system, display status and operational state and provide traffic flow data from intersection vehicle detectors. The Master shall include all communications equipment and software necessary to provide reporting to a remote terminal as well as upload/download of all local intersection data and provide timing synchronization. Communications to local controllers from the Master and from the Master to the central-office computer facility shall be by FSK, 900 MHz Radio, Broadband Radio, Serial Fiber, Ethernet, Fiber, Cell Modem or Leased Line, as indicated in the plans. The Master shall be able to run on the same controller simultaneously operating the intersection, with the local signal control software, on any given controller unit.

907-632.02.6.2.2--System Configuration. The system architecture shall be designed to minimize

the effect of equipment failures on system operation and performance. The system consists of four (4) principal elements:

- Local System Intersection Controllers
- Communication (Telemetry Links)
- On-Street Master(s)
- Central-Office Computer Software

907-632.02.6.2.3--Local System Intersection Controller. The local system intersection controllers connected to the Master controller unit shall be capable of controlling a fully actuated two (2) to sixteen (16) phase intersection and shall meet or exceed NEMA TS 1-1989 and TS 2-2003 standards for fully actuated traffic control units. The local controller shall have internal communication capability with direct access to the data memory. The local system controller shall be capable of processing controller and detector data and provide all necessary intersection control functions. The local system intersection controller shall meet the requirements of the Traffic Actuated Controller Unit.

907-632.02.6.2.4--Communications (Telemetry) Links. The communications links for the “Closed-Loop” System shall perform the following functions:

- Provide the medium (radio/fiber/hardware/etc.) for two-way communications between the On-Street Master and the local intersection controllers.
- Provide the medium for two-way communication between the On-Street Master and the central-office computer facility.
- Error checking shall be included in both mediums to assure transmission and reception of valid data.

907-632.02.6.2.5--On-Street Master. The On-Street Master may be located at an intersection and connected via the communication network to at least 32 local intersection controllers. The Master shall be capable of implementing Traffic Responsive Control, Time Base Control, Manual Control or Remote Control modes of operation.

Analysis of sampling sensor data from at least 64 system detectors and corresponding selection of the best Traffic Responsive timing pattern shall be provided by the On-Street Master during the Traffic Responsive mode of operation.

Automatic and continuous monitoring of system activity shall be provided by the On-Street Master to include both Master and intersection alarm conditions.

System parameter entry shall be provided via the On-Street Master including all Master and local intersection assignment and group parameters. Master parameters shall include:

- System coordination setup and pattern data entry by group
- System time base event scheduler
- System traffic responsive computational and pattern selection setup by group
- Intersection system group and detector assignments

The On-Street Master shall provide comprehensive system report generation including, as a minimum: system, intersection, detector and failure status and history reports in addition to system performance reporting.

A RS-232C interface shall be provided on the On-Street Master to allow for printing of reports or for interconnecting to a remote central site.

To enhance overall system operation and increase system management flexibility, the On- Street Master shall also support two-way dial-up communications to a central office computer for control, monitoring, data collection and for timing pattern updating purposes, all from a remote central office location. Continuous, seven (7) days/week - 24 hours/day, system monitoring shall be enhanced by the On-Street Master's capability to automatically dial-up the central office computer upon detection of user defined critical alarm conditions.

907-632.02.6.2.6--System Functional Requirements.

907-632.02.6.2.6.1--Operator Interface. In order to provide ease in programming and operation, the system shall provide a simplified user-friendly menu format at each local, master and central office facility. No special programming skills shall be required for the user to fully access and operate this control and monitoring system at any level.

All programming, both of the local intersection controllers and the On-Street Master(s) shall be via a front panel keyboard and display, driven by English Language menus. All data change entries will be automatically verified against established ranges prior to acceptance to prevent programming data errors. Data access shall be controlled by user- definable access controls.

907-632.02.6.2.6.2--System Traffic Control. The system shall have the capability of controlling a minimum of sixteen (16) vehicle phases and eight (8) pedestrian phases. The system shall have the capability of implementing a minimum of four (4) timing rings, fifteen (15) alternate sequences, and sixteen (16) offsets.

The system shall provide the capability of selecting any of the following operational modes on a group basis:

- Traffic Responsive
- Time Base (Time-of-Day/Day-of-Week)
- Remote (External Command)
- Manual (Operator Entry)

The system shall be capable of implementing system FLASH and system FREE operation. The system shall have the capability to command, on/off based on time, up to eight (8) independent special functions.

907-632.02.6.2.6.3--Detectors. The system shall have the capability of accepting and processing data from at least 632 system detectors for Traffic Responsive program selection.

907-632.02.6.2.6.4--Pattern Selection. In addition to providing Manual and Remote program selection capability, the Master shall provide for Traffic Responsive and Time Base modes of operation for timing pattern selection.

907-632.02.6.2.6.4.1--Traffic Responsive Mode. Traffic plan selection in the Traffic Responsive mode shall be user-enabled and supplied with the controller, per the plans and specifications. The pattern selection shall be based on sampling detector volume and occupancy analysis by the On-Street Master.

907-632.02.6.2.6.4.2--Time Base Mode. The system shall provide the capability of implementing time-of-day, day-of-week and week-of-year control for each of the two (2) groups using an internal time clock referenced to the 60-Hz AC power line frequency for its time base. The Time Base mode shall contain automatic adjustment for leap year and daylight savings time changes.

The system Time Base mode shall provide, as a minimum, 100 events each capable of requesting any of the 48 traffic control patterns along with Traffic Responsive override enable or auxiliary events consisting of enable/disable any of up to four (4) system-wide special functions and setting sample and log interval time periods.

907-632.02.6.2.6.5--System Control Priority. The system coordination control (program-in-effect) for each group shall be selected on a priority basis. The priority from highest to lowest shall be as follows:

- Manual Control Entry
- External Control (Remote Command)
- Time Base Control (Time-of-Day/Day-of-Week) (Traffic Responsive control will prevail whenever Traffic Responsive Override Enable is active and the selected cycle length is greater than that being commanded by Time Base)
- Traffic Responsive Control

907-632.02.6.2.6.6--Measures of Effectiveness. The system shall have the capability to report selected Measures of Effectiveness (MOE's) on an intersection basis. MOE calculations shall be made on all phases by the local system intersection controller and as a minimum shall include measures such as: volume, number of stops, delays and green utilization. These measures shall be calculated on the basis of the active timing plan. Alternate ways of reporting MOE'S may be approved on a case-by-case review.

907-632.02.6.2.6.7--Uploading and Downloading. The system shall provide, for any selected local system intersection controller, the capability of uploading and downloading any or all, new or modified local intersection parameters from the central-office computer and the Department Central Traffic Signal Management Software, and shall include, as a minimum, all: Phase Timing and Unit Data; Coordination Data, Time Base Data; Preemption Data, System Communication Parameters, System Traffic Responsive Data, and any other System Data residing at the intersection such as Detector Diagnostic Values, Report Parameters and Speed Parameters.

During either uploading or downloading operations, normal traffic control operations shall not be suspended. All data shall be continually accessible and may be displayed at the On- Street Master or the central office computer.

907-632.02.6.2.6.8--System Monitoring and Diagnostics. The system shall automatically and continually monitor system activity and log/report occurrences of Master and intersection alarm conditions. All alarm condition events shall include at the intersection, (Master and central-office computer) an alpha-numeric description of the event as well as the time and date of occurrence.

As a minimum, monitored master alarms conditions shall include:

- Insufficient or Improper Data
- Failed Computational Channels
- Failed System Detectors
- Intersection Communication Failure
- Failed Controllers
- Minimum of six (6) special user defined alarms for user application flexibility
- Monitored intersection alarms conditions shall include as a minimum:
 - Cycle Faults and Failures
 - Coordination Failures
 - Voltage Monitor
 - Conflict, Local and Remote Flash Conditions
 - Preempt
 - Local Free
- Minimum of six (6) special user defined alarms for additional user flexibility.

When the Master detects a critical alarm condition, as defined by the user, it shall automatically dial-up the central office computer and report the condition. On a BUSY or NO ANSWER, the system may be programmed, at user option, to alert a secondary computer.

The system shall also automatically and continually monitor, verify and attempt to correct Sync Pulse, Time Base Clock and Pattern-In-Effect. The system shall provide capabilities to perform diagnostics on system and local detectors, communications and intersection operations. When a fault has been detected, an indication shall be provided. It shall be possible to isolate the fault to the failed unit from controls and indicators available on the Master unit. Auxiliary equipment such as a data terminal or CRT shall not be required to identify the failure.

907-632.02.6.2.6.9--Real Time Display. The Master shall provide for any selected local system intersection controller, real-time status information on its front panel. Real-time intersection status information shall include simultaneous display of: vehicle and pedestrian signal and detector status by phase, overlap signal status and cars waiting count by phase. Real-time controller status information shall include simultaneous display of: two (2) Ring Active timers, On/Next, Call/Recall and Hold/Omit Status by phase, Coordination, Preempt and Stop Time Status.

907-632.02.6.2.6.10--System Management. The system, without hardware changes but with its

ability to directly modify Master and intersection parameters, shall provide the user system configuration and operational controls of the following functions: add/delete controllers and system detectors, enable Traffic Responsive mode, assign intersections to groups, assign system detectors to computational channels and channels to pattern select routines, and assign special and/or standard detectors as system detectors for use with computational channels or to track activity.

907-632.02.6.2.6.11--System Logging and Reports. The system shall automatically and continually process system data and log/report on occurrence of changes in intersection status, system detector status, communications status, controller status and local detector status in addition to system program changes, Traffic Responsive computations, measures of effectiveness and performance.

907-632.02.6.2.6.12--Security. The On-Street Master shall provide for a user-specified security code entry before any data may be altered. In order to view any parameter, security code entry shall not be required. Security access shall be automatically rescinded approximately ten (10) minutes after either access was gained or the last parameter change was entered. The Master and local controller shall have the ability via keyboard to disable security code requirements, allowing for perpetual access without requiring hardware changes.

907-632.02.6.2.7--Design Characteristics. The On-Street Master shall be designed to operate in either an office or field environment and shall be suitably housed in a separate enclosure or in a local intersection cabinet. The Master shall be designed to meet the following electrical and mechanical requirements:

907-632.02.6.2.7.1--Programming and Security. Operator programmable data entry shall be accomplished through panel keyboard(s). The Master shall prevent the alteration of keyboard set variables prior to the user having entered a specific access code through the keyboard. The Master shall maintain user-programmable variables in non-volatile memory with a battery-backed RAM to assure continued efficient system operation.

907-632.02.6.2.7.2--Test and Repair. To enhance maintenance and trouble-shooting activities, On-Street Masters shall include resident diagnostics as a standard. No extender- cards, special tools or PROMs shall be necessary to fully maintain these components. The Master unit design shall ensure that all printed circuit boards be readily accessible for maintenance testing purposes. All fuses, connectors and controls shall be accessible from the front of the Master unit.

907-632.02.6.2.8--Traffic Signal System Software. All Traffic Signal System Software shall be compatible with the latest version of the Department's existing Master and local controllers and existing Traffic Signal Management Software for the Department region.

907-632.02.6.2.8.1--Traffic Signal Closed Loop Software. The Traffic Signal Closed-Loop Software shall provide the ability to manage Master and local controller databases including the uploading and downloading of data parameters. The software shall provide status information and provide reporting capabilities for Master and local controller data, alarms and logs.

907-632.02.6.2.8.2--Traffic Signal System Workstation Software. The Traffic Signal System Workstation shall provide the ability to manage Master and local controller databases including the uploading and downloading of data parameters. The software shall provide status information and provide reporting capabilities for Master and local controller data, alarms and logs.

The Traffic Signal System Workstation Software shall also be capable of operating as a network-connected user workstation to existing centralized signal systems and their associated databases.

When disconnected from the centralized signal system, the software shall be capable of running as a standalone system similar to the Closed-Loop Software. Under this mode, the software shall provide management, report and status functions for Master and local controllers. Under Standalone Mode of operation the software shall allow for its own database(s) for data management without the need for connecting to a centralized signal system database.

907-632.02.6.2.9--Services. Technical services shall be provided, as required, to assist in installation and initial setup of the Closed-Loop Master System and its sub-components. Technical assistance with database migration and/or setup, as well as the development of graphics (such as master maps and local intersection depictions) and the assignment of associated attributes such as detectors, phasing, signals, etc., shall be provided as required. Additionally, training shall be provided on a basic or advanced target user level, as required.

907-632.02.6.3--Malfunction Management Unit (MMU2). The Malfunction Management Unit (MMU2) shall be a shelf-mountable, sixteen (16) channel, solid-state, IP addressable MMU. The MMU2 shall accomplish the detection of, and response to, improper and conflicting signals and improper operating voltages in a traffic signal controller assembly, including support for four (4) section Flashing Yellow Arrow (FYA) left turn displays. The MMU2 shall be capable of running a minimum of twelve (12) different modes of FYA operation.

The MMU2 shall meet or exceed Section 4 requirements of the NEMA Standards Publication No. TS 2-2003 including NEMA TS 2 Amendment #4-2012 and provide downward compatibility to NEMA Standards Publication No. TS 1-1989: Type 12 Operation, in addition to those specifications set forth in this document.

The MMU2 shall include a graphics based Liquid Crystal Display (LCD) to view the current monitor status and navigate the unit's menus. An RJ-45 Ethernet Port shall be provided for communications.

A built-in Diagnostic Wizard shall be provided that displays detailed diagnostic information regarding the fault being analyzed. This mode shall provide a concise view of the signal states involved in the fault, pinpoint faulty signal inputs and provide guidance on how the technician should isolate the cause of the malfunction. The Diagnostic Wizard shall be automatically invoked when the MMU2 is in the fault mode and the HELP button is pressed. It shall also be automatically invoked when the MMU2 is in the Previous Fail (PF) event log display and the HELP button is pressed.

A built-in Setup Mode shall be provided that automatically configures the Dual Indication Enable, Field Check Enable, Red Fail Enable and Minimum Yellow Plus Red Clearance Enable parameters from user input consisting only of channel assignment and class (vehicle, ped, pp-turn, FYA, etc.) responses.

The MMU2 shall be capable of operating in the Type 12 mode with SDLC communications enabled on Port 1. The Channel Status display shall operate in the Type 12 configuration and provide the Field Check function for up to four (4) Pedestrian Walk inputs.

In the interest of reliability and repair ability, printed circuit board mounted MS connectors shall not be acceptable. Internal MS harness wire shall be a minimum of nineteen (19) strand AWG 22 wire.

907-632.02.6.4--NEMA defined Card Rack and Power Supply. A minimum of one (1) NEMA compliant detector card rack with five (5) slot positions (first slot for power supply and four (4) available slots) shall be provided in each cabinet. The detector rack shall be installed on the bottom shelf of the cabinet. The power supply for the NEMA defined card slots shall be provided as a 175W minimum with four (4) independent regulated channels of 24 VDC each rated at 0.75 amps over the full NEMA operating temperature range of -30°F to +165°F. The output should be regulated to 24 VDC +/- 15%. Each of the four (4) outputs shall be independently fused, each with a separate LED for displaying output and fuse status for each of the four (4) outputs. Each of the four (4) outputs shall be protected against voltage transients by a minimum 1500 watt suppressor. All card racks shall be wired for the type detection shown in the plan sheets.

Card Guides shall be provided on the top and bottom of the card rack for each connector position.

907-632.02.6.5--In-Cabinet Network.

907-632.02.6.5.1--Communications Arrestor. The Controller Cabinet network shall consist of an SDLC connection between the Controller Unit and MMU2. Surge suppression for this network shall meet the requirements set forth in Subsection 722.12 and the following minimum requirements below:

- Operating Voltage: 5 VDC
- Clamping Voltage: 8 VDC
- Operating Current: 1.5 A
- Peak Surge Current: 47 A (10x1000 μ s)
- Frequency Range: 0 to 20 MHz
- Insertion Loss: < 0.1 dB at 20 MHz
- SPD Technology: SAD
- Connection Type: DB-15
- Operating Temperature: -40°F to +185°F

907-632.02.6.6--System Communications.

907-632.02.6.6.1--Traffic Signal Ethernet Switch. When specified in the plans or contract

documents, a traffic signal Ethernet switch shall be installed in the cabinet assembly. It shall meet the requirements for the type specified in Section 907-663. Ethernet patch cables of sufficient length shall be provided for all supplied Ethernet ready cabinet components. The switch and all components shall be connected and configured.

907-632.02.6.6.2--Fiber Optic Patch Panel. When specified in the plans or contract documents, fiber optic attenuator patch cords shall be installed in the cabinet assembly as specified in Section 907-661.

907-632.02.6.6.3--Wireless Communications. When specified in the plans or contract documents, wireless communication components shall be installed in the cabinet assembly and shall be as specified in Section 907-662.

907-632.02.6.6.4--Serial Port Server or Terminal Server. When specified in the plans or contract documents, serial port servers shall be installed in the cabinet assembly and shall be as specified in Subsection 907-663.02.2.

907-632.02.6.6.5--GPS Clock. This work includes furnishing a Global Positioning System (GPS) Synchronization clock that can be used to sync the internal clocks in traffic signal controllers when coordination is desired, but communication is not necessary. The GPS Clock System shall provide GPS based time and date synchronization to provide coordination of traffic controllers to a common time base. The system shall process GPS Time data using a tamper/vandal resistant GPS antenna and correct for Time Zone, Daylight Savings Time, Leap Years, and GPS Leap Seconds. The processed time information shall be sent to the traffic controller in the native format for the respective controller. A contact closure synchronization pulse with variable pulse width shall be available for a once per day update. If the GPS antenna is blocked for up to one (1) hour prior to scheduled time of synchronization, the system shall synchronize the traffic controllers with less than 0.4 seconds variance from the accuracy provided under normal operation with GPS satellites in view.

- The GPS Clock shall also meet the following minimum specifications:
- Input Voltage: 9-24 VDC
- Current Draw: 150 mA (max) at 12 VDC: 125 mA (max) at 24 VDC
- Contact Closure: 750 mA at 30 VDC
- Temperature Rating: -29.4°F to +167°F

GPS unit shall be mounted to the traffic signal controller cabinet as per the manufacturer's recommendation. Any and all holes created in the cabinet for the purpose of mounting the GPS unit shall be sealed to the satisfaction of the Engineer at no direct pay.

907-632.02.6.6.6--Power-Over-Ethernet Arrestor. Surge suppression that meets the requirements set forth in Subsection 722.12 shall be provided. In addition, the following minimum specifications shall be supplied for loads that require Power-Over-Ethernet with isolated shielded or non-shielded cable:

- Operating Voltage: 48 VDC
- Clamping Voltage: 68 VDC
- Operating Current: 0.75 A per Pin Continuous
- Peak Surge Current: 10 kA
- Insertion Loss: < 0.1 dB
- SPD Technology: GDT, SAD, with series PTC
- Modes of Protection: All Lines (1-8) Protected (L-L) and (L-G): Signal High- Low; High-Ground; Low-Ground
- Transmission Speeds: 10BaseT; 100BaseT; 1000BaseT
- Connection Type: RJ-45
- Operating Temperature: -40°F to +185°F

907-632.02.7--Detector Panel. A vehicle detector harness shall be provided to connect the detector panel to the card rack. The detector panel shall accept the connection of sixteen (16) field loop inputs and four (4) pedestrian detector inputs.

907-632.02.7.1--Detector Input Arrestors. Field Loop and Pedestrian input arrestors shall meet the requirements set forth in Subsection 722.12. Field loop arrestors shall have differential and common mode protection and be provided with the following minimum specifications:

- Operating Voltage: 75 VDC
- Clamping Voltage: 130 VDC
- Peak Surge Current: 250 A
- SPD Technology: Silicon Break-Over
- Operating Temperature: -40°F to +185°F

Pedestrian input arrestors shall be a four (4) circuit device provided with the following minimum specifications:

- Operating Voltage: 30 VDC
- Clamping Voltage: 36 VDC
- Operating Current: 0.15 A
- Peak Surge Current: 10 kA (8 x 20 μ s)
- Frequency Range: 0 to 20 MHz
- Insertion Loss: < 0.1 dB at 20 MHz
- SPD Technology: GDT, SAD, with Series PTC
- Connection Type: Terminal Block with compression lugs; Terminals accept up to 10 AWG
- Operating Temperature: -40°F to +185°F

907-632.02.8--System Detectors. The controller shall have the ability to receive input data from up to eight (8) special system detectors in addition to the normal actuated controller unit phase detectors. The user shall have the option to assign any of the phase detectors as “system detectors”.

907-632.02.9--Preemption. The cabinet shall be completely wired to accept and service calls from preemption phase selector modules, associated optical detector units and GPS units. Optical detector units and GPS unit cabinet components shall be as specified in Section 639. Provision for two (2) standard card modules shall be accommodated in a separate card rack for preemption. The preemption card rack shall provide a minimum of eight (8) channels.

Provisions shall also be made in the cabinet to accommodate Railroad Preemption when specified in the plans or contract documents. Railroad Preemption shall meet the requirements set forth in Section 639. While it is not necessary that a Railroad Preemption interface board be provided with the cabinet, the cabinet and back panel shall be designed so that a Railroad Preemption interface panel that uses a relay to isolate the track switch from the controller cabinet circuitry can be installed. Preempt 1 and 2, in the case of gate down preemption, shall be reserved for Railroad Preemptions; all subsequent preemptions shall be reserved for Emergency Vehicle, Fire Station, or Police Preemption.

907-632.02.10--Uninterruptable Power Supply. When specified in the plans or contract documents an Uninterruptable Power Supply (UPS) System shall be installed in the cabinet assembly. The UPS shall be installed in the cabinet and meet the requirements set forth in Section 633.

907-632.02.11--Power Service Pedestal. A Power Service Pedestal shall be provided as described in Section 631.03.2.

907-632.03--Construction Requirements.

907-632.03.1--Mounting. Traffic Signal Cabinet Assemblies shall be wall or pole mounted, base mounted on a concrete cabinet pad, or base mounted using a composite enclosure as specified below and as shown in the plans.

Power Service Pedestal shall be base mounted on a concrete cabinet pad or on a composite enclosure as specified below and as shown in the plans.

907-632.03.1.1--Wall or Pole Mounted. Wall or pole mount hardware shall be provided for mounting cabinets in specific installations as indicated in the design plans. Wall or pole mounted cabinets shall be manufactured with rigid tabs, rigid brackets or other acceptable configuration for attachment of the cabinet to the wall or pole support. Rigid attachment devices must allow for field alignment of cabinet to the wall or pole support.

907-632.03.1.2--Concrete Cabinet Pad. Concrete foundations shall be constructed of Class B concrete in specific installations as indicated in the design plans.

Cabinets for installation on a concrete base shall be manufactured with rigid tabs, rigid brackets or other acceptable configuration for attachment of the cabinet bottom to its flat support structure. Rigid attachment devices must allow for field alignment of cabinet with the support base. Concrete base construction details shall be provided in the design plan drawings.

907-632.03.1.3--Composite Enclosure. Cabinets for installation on a composite enclosure base shall be manufactured with rigid tabs, rigid brackets or other acceptable configuration for attachment of the cabinet bottom to its' flat support structure. Rigid attachment devices must allow for field alignment of cabinet with the composite enclosure. Composite enclosure attachment details shall be provided as shown in the plans.

907-632.03.2--Documentation. Documentation packages shall be delivered for each unit at the same time as the equipment to which it pertains.

A minimum of two (2) sets of complete schematic drawings and equipment documentation shall be supplied with each cabinet. The first copy shall be placed in a clear re-sealable print pouch of sufficient size to accommodate one (1) complete set of folded cabinet prints and placed in the pull-out drawer of the cabinet and the second copy shall be provided to the Department. Comprehensive controller data shall be included as part of the cabinet documentation package and shall be placed in the cabinet drawer pouch. Digital copies of all cabinet documentation shall be provided to the Department before final acceptance.

The documentation packages shall contain a schematic wiring diagram of the controller cabinet assembly and all auxiliary equipment. The schematic wiring diagram, including a symbols legend, shall show in detail all integrated circuits, transistors, resistors, capacitors, inductors as well as switches and indicators. All parts shown shall be easily identified on both in the cabinet and on the schematic diagram. Model numbers shall be used on schematic diagram when available.

A complete physical description of the signal cabinet assembly shall be provided to include at least the physical dimensions of the unit, weight, temperature ratings, voltage requirements, power requirements, material of construction, and complete performance specifications.

A complete set of operation guides, user manuals, and performance specifications shall be provided.

Detailed programming instructions, preventative maintenance requirements, and troubleshooting procedures shall also be provided for the controllers. These documents shall fully cover all programming procedures and programmable options capable of being made to the controllers and associated traffic control equipment. Instructions for modifications within the range of the capabilities of the unit such as changes in phases or sequences and programming matrix boards shall be included.

An intersection diagram shall be provided on the cabinet door showing geometric configuration, lane use assignments, controller cabinet and signal pole locations, vehicle and pedestrian signal head locations, vehicle and pedestrian detector zone locations, ring-barrier phasing diagram, and detector channel assignments. The intersection diagram shall be labeled with, at a minimum, a North Arrow, main street name(s), side street name(s), signal pole numbers, vehicle and pedestrian head type(s), detector zone designations, volume density and phase recall requirements, flash sequence. All field wires within the cabinet shall be labeled to coincide with those shown on the intersection diagram.

907-632.04--Method of Measurement. Traffic Signal Cabinet Assembly will be measured as a unit per each.

Remove and Replace Existing Traffic Signal Cabinet Assembly will be measured as unit per each.

Modify Existing Traffic Signal Cabinet will be measured as a unit per each.

Solid State Traffic Actuated Controller, of the type specified in the project plans, will be measured as a unit per each.

Signal Software License, of the type specified in the project plans, will be measured as a unit per each.

Malfunction Management Unit, of the type specified in the project plans, will be measured as a unit per each.

Card Rack, of the type specified in the project plans, will be measured as a unit per each.

GPS Clock, as specified in the project plans, will be measured as a unit per each.

Power Service Pedestal, as specified in the project plans, will be measured as a unit per each.

All pay items shall be inclusive of all materials, work, system integration, testing and incidentals necessary for a complete and operable unit in place and accepted. All removal, turn on, and acceptance of equipment, devices, traffic signals, and traffic signal assemblies shall follow Section 631 - Traffic Signal Systems-General prior to payment.

907-632.05--Basis of Payment. Traffic Signal Cabinet Assembly, measured as prescribed above, will be paid for at the contract unit price per each for each type(s) specified in the contract, which price shall be full compensation for furnishing, installing, configuring, wiring, testing, and mounting foundation construction, cabinets, relays, terminals, circuit breakers, modules, coordination and time base control programs, connectors wiring, overlap equipment, load switches, power cables, power supplies, controller mechanism and housing, MMU2, mounting material, all other materials, and all equipment, labor, tools, and incidentals necessary to complete the work.

Remove and Replace Existing Traffic Signal Cabinet Assembly, measured as prescribed above, will be paid for at the contract unit price per each for each type(s) specified in the contract, which price shall be full compensation for furnishing, installing, configuring, wiring, testing, cabinets, relays, terminals, circuit breakers, modules, coordination and time base control programs, connectors wiring, overlap equipment, load switches, power cables, power supplies, controller mechanism and housing, MMU2, mounting material, all other materials, removal, disposal, transfer, storage, and/or resetting of components that are existing, all other components included in the traffic signal cabinet, and all equipment, labor, tools, and incidentals necessary to complete the work.

Modify Existing Traffic Signal Cabinet, measured as prescribed above, will be paid for at the

contract unit price per each, which price shall be full compensation for furnishing, installing, configuring, and mounting all components, wiring, and devices; rewiring, reconfiguring, removal, disposal, transfer, storage, and/or resetting of existing components and devices, installing or changing coordination and time base control programs in the traffic signal cabinet assemblies, testing, final cleanup, all equipment, labor, tools, and incidentals necessary to complete the work.

Solid State Traffic Actuated Controller, measured as prescribed above, will be paid for at the contract unit price per each for each type(s) specified in the contract, which price shall be full compensation for all labor, equipment, tools, materials inclusive of the controller mechanism(s) and housing(s), all power cables, power supplies, wiring, factory and manufacturing inspection, attachment hardware, testing, storage, packaging, shipping, warranty, and all work, equipment, and appurtenances, and all incidentals necessary to provide a fully functional traffic controller ready for use. It shall also include all documentation including operations and maintenance manuals and other material necessary to document the operation of the traffic controller.

Signal Software Licenses, measured as prescribed above, will be paid for at the contract unit price per each for each type(s) specified in the contract, which price shall be full compensation for all labor, equipment, tools, materials inclusive of furnishing, installing and configuring the Signal Software, all power cables, power supplies, wiring, factory and manufacturing inspection, testing, storage, packaging, shipping, warranty, appurtenances, and all incidentals necessary to provide fully functional Signal Software ready for use. It shall also include all documentation including operations and maintenance manuals and other material necessary to document the operation of the Signal Software.

Malfunction Management Unit, measured as prescribed above, will be paid for at the contract unit price per each for each type(s) specified in the contract, which price shall be full compensation for all labor, equipment, tools, materials inclusive of furnishing, installing and configuring the Malfunction Management Unit (MMU2), all power cables, power supplies, wiring, attachment hardware, factory and manufacturing inspection, testing, storage, packaging, shipping, warranty, and all work, equipment, and appurtenances, and all incidentals necessary to provide a fully functional Malfunction Management Unit (MMU2) ready for use. It shall also include all documentation including operations and maintenance manuals and other material necessary to document the operation of the Malfunction Management Unit (MMU2).

Card Rack, measured as prescribed above, will be paid for at the contract unit price per each for each type(s) specified in the contract, which price shall be full compensation for all labor, equipment, tools, materials inclusive of furnishing, installing and configuring the Card Rack, all power cables, power supplies, wiring, attachment hardware, factory and manufacturing inspection, testing, storage, packaging, shipping, warranty, and all work, equipment, and appurtenances, and all incidentals necessary to provide a fully functional Card Rack ready for use. It shall also include all documentation including operations and maintenance manuals and other material necessary to document the operation of the Card Rack.

GPS Clock, measured as prescribed above, will be paid for at the contract unit price per each for each type(s) specified in the contract, which price shall be full compensation for all labor, equipment, tools, materials inclusive of furnishing, installing and configuring the Global

Positioning System (GPS) Clock(s), all power cables, power supplies, wiring, attachment hardware, factory and manufacturing inspection, testing, storage, packaging, shipping, warranty, and all incidentals necessary to provide a fully functional GPS Clock ready for use. It shall also include all documentation including operations and maintenance manuals and other material necessary to document the operation of the GPS Clock.

Power Service Pedestal, measured as prescribed above, will be paid for at the contract unit price per each for each type(s) specified in the contract, which price shall be full compensation for furnishing, installing, configuring, wiring, testing, and mounting foundation construction, cabinets, circuit breakers, connectors wiring, mounting material, all other materials, and all equipment, labor, tools, and incidentals necessary to complete the work.

Payment will be made under:

- 907-632-A: Solid State Traffic Signal Cabinet Assembly,
Type __ Cabinet, Type __ Controller - per each
- 907-632-B: Remove and Replace Existing Traffic Signal Cabinet Assembly,
Type __ Cabinet, Type __ Controller - per each
- 907-632-C: Modify Existing Traffic Signal Cabinet Assembly - per each
- 907-632-D: Solid State Traffic Actuated Controller, Type _____ - per each
- 907-632-E: Single-user Workstation Signal Software License - per each
- 907-632-F: Single-user Server Signal Software License - per each
- 907-632-G: Malfunction Management Unit - per each
- 907-632-H: Card Rack, ____ Position - per each
- 907-632-I: GPS Clock - per each
- 907-632-J: Power Service Pedestal - per each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-641-1

CODE: (IS)

DATE: 11/15/2017

SUBJECT: Radar Vehicle Detection

Section 641, Radar Detection Systems, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

Delete the title of Section 641 on page 584 and substitute the following.

SECTION 907-641 - RADAR VEHICLE DETECTION

Delete Subsection 641.01 on page 584, and substitute the following.

907-641.01--Description. This work shall consist of providing all labor, materials, equipment, and incidentals necessary to furnish, install, test, train and operate Radar Vehicle Detection, including Signal Radar Vehicle Detection (SRVD) and Intelligent Transportation Systems (ITS) Radar Vehicle Detection (IRVD). These systems will provide roadway monitoring capabilities via electromagnetic microwave radar signals through the air. The signals bounce off vehicles in their paths and the signal is returned to the detector. The returned signals are processed to determine traffic parameters.

907-641.01.1--Signal Radar Vehicle Detection. SRVD provide traffic parameters necessary to the traffic signal controller operation for vehicle detection. All Signal Radar Vehicle Detection shall be supplied from the same manufacturer per construction project.

Type 1 SRVD shall be used for basic vehicle detection at signalized intersections as described below in this specification. Type 2 SRVD shall have all of the functionality of the Type 1 SRVD with additional features described below in this specification.

Type 2 SRVD shall utilize a matrix of radar signals for two-dimensional coverage and shall track vehicles through each type of detection's specified Area of Coverage. The Type 2 SRVD shall report real-time detection of both moving and stopped vehicles.

907-641.01.2--ITS Radar Vehicle Detection. IRVD shall provide data, including, but not limited to speeds, volume, lane occupancy and classification.

907-641.02--Materials.

907-641.02.1--Radar Design. Delete the first sentence of the first paragraph of Subsection 641.02.1 on page 584, and substitute the following.

The IRVD and the SRVD stop bar microwave shall operate in the 24.0 to 24.25 GHz frequency band.

907-641.02.1.1--Cabinet Interface Unit (CIU) Design. Delete the last paragraph of Subsection 641.02.1.1 on page 585, and substitute the following.

The CIU shall operate in the harsh conditions of a signal cabinet, and comply with the applicable standards stated in the NEMA TS 2-2003 standard for shock, vibration, and temperature.

Delete Subsection 641.02.2 and 641.02.3 on pages 585 and 586, and substitute the following.

907-641.02.2--Area of Coverage--SRVD.

907-641.02.2.1--Stop Bar Radar Vehicle Detection. Type 1 SRVD stop bar radar sensor shall track vehicles through a field of view that extends out a minimum of 100 feet

The Type 1 SRVD stop bar radar sensor shall be able to detect and report presence in lanes located within a minimum 100-foot from the face of the detector. Any variance of the detectable area shall be approved by the Engineer.

The Type 1 SRVD stop bar radar sensor shall be able to detect up to four (4) lanes with eight (8) or sixteen (16) individual zones as indicated in the plans.

Type 2 SRVD stop bar radar sensor shall have all the functionality of the Type 1 SRVD stop bar sensor with the addition of the following:

- Type 2 SRVD stop bar radar sensor shall detect true presence of vehicles whether in motion or still without using Locking or Latching Algorithms.
- Type 2 SRVD stop bar radar sensor shall report presence in lanes with a minimum 90 degree arc from the face of the detector.
- Type 2 SRVD stop bar radar sensor shall be able to detect a minimum of ten (10) lanes.

907-641.02.2.2--Advanced Radar Vehicle Detection. The Type 1 SRVD advanced radar sensor shall be able to detect and report vehicle information such as range and speed when mounted within 50 feet of the center of the lanes of interest. Variance of this distance shall be approved by the Engineer per the application.

The Type 1 SRVD advanced radar sensor shall be forward fired and be able to detect and report vehicle information when mounted at heights above the road surface, as per manufacturer's recommendations.

The Type 1 SRVD advanced radar sensor shall be able to detect and report vehicles on the roadway up to 600 feet from the detector.

The Type 2 SRVD advanced radar sensor shall have all the functionality of the Type 1 SRVD advanced radar sensor with the following additions:

- Type 2 SRVD advanced radar sensor shall be able to detect and report heavy vehicles on the roadway up to 900 feet from the detector.
- Type 2 SRVD advanced radar sensor shall be able to detect Estimated Time of Arrival (ETA) for vehicles. The advanced radar sensors shall support user configurable upper and lower ETA filters for each zone. The sensors shall support the configuring of ETA filters in increments of 0.1 seconds.

907-641.02.3--Area of Coverage-IRVD. The IRVD's field of view shall cover an area with a minimum detection range of six (6) feet from the IRVD and a maximum detection range of 250 feet from the IRVD.

Delete the title of Subsection 641.02.4 on page 586, and substitute the following.

907-641.02.4--Detection Zones--SRVD.

Delete the title of Subsection 641.02.4.1 on page 586, and substitute the following.

907-641.02.4.1--Stop Bar Radar Vehicle Detection.

After the last sentence of the second paragraph of Subsection 641.02.4.1 on page 586, add the following.

A minimum of one (1) separate detection zone per lane is required.

Delete the title of Subsection 641.02.4.2 on page 586, and substitute the following.

907-641.02.4.2--Advanced Radar Vehicle Detection.

Delete the third paragraph of Subsection 641.02.4.2 on page 586, add the following.

The advanced radar sensors shall provide vehicle call and extend data on up to eight (8) channels that can connect to contact closure modules compliant with NEMA TS 1, NEMA TS 2, and 170/2070 controller cabinets.

Delete the title of Subsection 641.02.5 on page 586, and substitute the following.

907-641.02.5--Detection Zones--IRVD.

Delete the title of Subsection 641.02.6 on page 586, and substitute the following.

907-641.02.6--Capabilities--SRVD.

Delete the title of Subsection 641.02.6.1 on page 587, and substitute the following.

907-641.02.6.1--Stop Bar Radar Vehicle Detection.

Delete the title of Subsection 641.02.6.2 on page 587, and substitute the following.

907-641.02.6.2--Advanced Radar Vehicle Detection.

After item 2) of Subsection 641.02.6.2 on page 587, add the following.

- 3) Maintain a detection accuracy of 95% for each detection zone set-up on the graphical user interface.

Delete the title of Subsection 641.02.7 on page 587, and substitute the following.

907-641.02.7--Capabilities--IRVD.

Delete the first sentence of the first paragraph of Subsection 641.02.7 on page 587, and substitute the following.

The IRVD shall detect true presence of vehicles whether in motion or still without using Locking or Latching Algorithms.

Delete item 5) in Subsection 641.02.7 on page 587, and substitute the following.

- 5) IRVD in forward-looking configuration shall monitor traffic in one lane and be capable providing the following data: Volume, occupancy, average speed and travel direction in the lane.

907-641.02.8--Environmental Conditions and Protection. Delete the last sentence of the first paragraph of Subsection 641.02.8 on page 588, and substitute the following.

Except as stated otherwise herein, the equipment shall meet all its specified requirements during and after subjecting to any combination of the NEMA TS 2-2003 standard and the following:

907-641.02.10--Electrical. Delete the first paragraph of Subsection 641.02.10 on page 588, and substitute the following.

The radar sensors shall consume less than 10 W and shall operate with a DC input between 12 VDC and 28 VDC for IRVD and 9 VDC and 32 VDC for SRVD, or POE. POE injectors shall be approved by the Engineer.

Delete the title of Subsection 641.02.11 on page 589, and substitute the following.

907-641.02.11--Radar Design.

907-641.02.12--Communication Ports. Delete the second sentence of the first paragraph of Subsection 641.02.12 on page 589, and substitute the following.

The IRVD shall be upgradable (optional) to include integral 10/100 Base-T Ethernet supporting TCP, UDP, IP, ARP, ICMP.

Delete the second sentence of the second paragraph of Subsection 641.02.12 on page 589, and substitute the following.

For SRVD, any external device needed to convert serial to IP Ethernet within the cabinet for remote communications shall be provided with the radar sensor unit at no additional cost.

Delete Subsection 641.02.13 on page 589, and substitute the following.

907-641.02.13--Radar Detection Cabling. All Radar Detection cable shall be paid per the unit cost of the pay item for Radar Detection Cable, as shown on the plans or details. The manufacturer is responsible for obtaining plan sets and ensuring cable lengths are properly measured and accounted for in the bid price for each sensor unit and as shown on the plans.

The cable shall have a single continuous run with no splices, unless inside a manufacturer supplied junction box. The cable shall be terminated only on the two (2) farthest ends of the cable. The cable shall meet the requirements of the manufacturer.

Delete the title of Subsection 641.02.15 on page 590, and substitute the following.

907-641.02.15--Configuration--SRVD.

Delete the title of Subsection 641.02.15.1 on page 590, and substitute the following.

907-641.02.15.1--Stop Bar Radar Vehicle Detection.

Delete the title of Subsection 641.02.15.2 on page 590, and substitute the following.

907-641.02.15.2--Advanced Radar Vehicle Detection.

907-641.03--Construction Requirements. Delete the first sentence of the first paragraph of Subsection 641.03 on page 590, and substitute the following.

Radar Detection System shall be constructed to withstand and operate in sustained winds of up to 90 mph and a 30% gust factor.

Delete the title of Subsection 641.03.1 on page 590, and substitute the following.

907-641.03.1--SRVD Installation Requirements.

Delete the first sentence of the third paragraph of Subsection 641.03.1 on page 590, and substitute the following.

Unused conductors in the cable shall be ground or terminated in the cabinet in accordance with the manufacturer's recommendations.

Delete the last sentence of the third paragraph of Subsection 641.03.1 on page 590, and substitute the following.

If required by the plans and installation methods, impedance termination and testing of multi drop runs shall be required per RS485 multi-drop standards.

Delete the title of Subsection 641.03.2 on page 591, and substitute the following.

907-641.03.2--IRVD Installation Requirements.

Delete Items 1) and 2) of Subsection 641.03.2 on page 591, and substitute the following.

- 1) The IRVD shall be mounted in side-fired or front facing configuration on poles as shown in the plans, using mounting brackets. The brackets shall be attached with approved 3/4-inch wide stainless steel bands.
- 2) The Contractor shall install the detector unit on a pole at the manufacturer's recommended height above the road surface so that the masking of vehicles is minimized and that all detection zones are contained within the specified elevation angle as suggested by the manufacturer.

Delete Items 4) and 5) of Subsection 641.03.2 on page 591, and substitute the following.

- 4) The IRVD mode of operation, detection zones and other calibration and set up will be performed using a MS Windows™ based software and a Notebook PC. The software shall allow verification of correct setup and diagnostics. It shall include facilities for saving verification data and collected data as well as saving and retrieving sensor setup from disk file.
- 5) Unused conductors in the ITS Radar Vehicle Detector Cable shall be grounded or terminated in the cabinet in accordance with the manufacturer's recommendations. Terminated conductors shall be individually doubled back and taped, then loosely bundled and secured.

Delete Item 7) of Subsection 641.03.2 on page 591, and substitute the following.

- 7) Any new, additional or updated drivers required for the existing ATMS software to communicate and control new IRVD installed by the Contractor shall be the responsibility of the Contractor.

Delete Subsection 641.03.3 on pages 591 and 592, and substitute the following.

907-641.03.3--Blank.

Delete Subsection 641.03.4 on page 592, and substitute the following.

907-641.03.4--Blank.

907-641.04--Method of Measurement. Delete the paragraphs of Subsection 641.04 on page 593, and substitute the following.

The Radar Vehicle Detection Sensors, of the type specified, will be measured as a unit per each.

Radar Vehicle Detection Cable will be measured by the linear foot, measured horizontally along the conduit, messenger cable or mast arm and vertically along the pole.

Radar Vehicle Detection Training will be measured per lump sum.

907-641.05--Basis of Payment. Delete the paragraphs of Subsection 641.05 on pages 593 & 594, and substitute the following.

Radar Vehicle Detection Sensor, of the type specified, 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 materials, construction installation, connecting, testing, for all equipment, tools, labor and incidentals required to complete the work. Work shall include furnishing, installing, system integration, testing and training (if required) of complete radar sensor system that includes the unit, cabling between the unit and the cabinet, surge protection devices, communication converters (if required), all conduit, risers and weatherhead between the radar sensors and the cabinet, interconnection wiring, power supply, connections to support structures (includes all incidental components, attachment hardware, mounting brackets, mounting arms, bolts, or any other items to mount the radar sensor as intended), satisfactory completion of testing and training requirements and all work, equipment and appurtenances as required to effect the full operation including remote and local control of the radar site complete in place and ready to use. The price bid shall also include all system documentation including: shop drawings, operations and maintenance manuals, wiring diagrams, block diagrams and other material necessary to document the operation of the radar sensor. Cabinet Interface Units shall be provided, and installed as specified in the plans, which shall be inclusive of any testing, connections, terminations, and testing required for interfacing the radar sensors and signal controller within the signal cabinet environment.

Radar Vehicle Detection Cable will be paid at the contract unit price per linear foot, which price shall be full compensation for all labor, materials, equipment tools, furnishing, installing, system integration, connections, testing, and all incidentals necessary to complete the work.

Radar Vehicle Detection Training, measured as prescribed above, will be paid for as a lump sum unit price.

Delete the pay items listed on page 594, and substitute the following.

907-641-A: Signal Stop Bar Radar Vehicle Detection Sensor, Type _____ - per each

- 907-641-B: Signal Advanced Radar Vehicle Detection Sensor, Type _____ - per each
- 907-641-C: ITS Radar Vehicle Detection Sensor - per each
- 907-641-D: Radar Vehicle Detection Cable - linear foot
- 907-641-E: Radar Vehicle Detection Training - lump sum

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-701-3

CODE: (SP)

DATE: 05/04/2021

SUBJECT: Hydraulic Cement

Section 701, Hydraulic Cement, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-701.01--General. In the first sentence of the second paragraph of Subsection 701.01 on page 718, change “mills” to “plants.”

In the second sentence of the sixth paragraph of Subsection 701.01 on pages 718 and 719, change “shall” to “will.”

907-701.02--Portland Cement.

907-701.02.1-General.

907-701.02.1.2--Alkali Content. Delete the sentence in Subsection 701.02.1.2 on page 719, and substitute the following.

When used in portland cement concrete, the total alkali contribution from all cement types in this Subsection shall not exceed 4.0 lb. per cubic yard of concrete calculated as follows:

$$\text{lb alkali per cu Yd} = \frac{(\text{lb cement per cu Yd}) \times (\% \text{Na}_2\text{O equivalent in cement})}{100}$$

In the above calculation, the maximum cement alkali content reported on the cement mill certificate shall be used. An example calculation can be found in the Department’s *Concrete Field Manual*.

907-701.02.2--Replacement by Other Cementitious Materials. Delete the paragraph in Subsection 701.02.2 on page 719, and substitute the following.

The maximum replacement of cement by weight is 25% for fly ash or 50% for ground granulated blast furnace slag (GGBFS). Replacement contents below 20% for fly ash or 45% for GGBFS may be used, but will not be given any special considerations, such as the maximum acceptance temperature for portland cement concrete containing pozzolans in Subsection 804.02.13.1.5. Special considerations shall only apply for replacement of cement by fly ash or GGBFS.

Delete Subsection 701.02.2.1 on pages 719 and 720, and substitute the following.

907-701.02.2.1--Portland Cement Concrete Exposed to Soluble Sulfate Conditions or Seawater.

When portland cement concrete is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall be as follows in Table 1. Class C fly ash shall not be used as a replacement for cement in any of the sulfate exposure conditions listed in Table 1.

Table 1- Cementitious Materials for Soluble Sulfate Conditions or Seawater

| Sulfate Exposure | Water-soluble sulfate (SO ₄) in soil, % by mass | Sulfate (SO ₄) in water, ppm | Cementitious material required |
|-----------------------|---|--|--|
| Moderate and Seawater | 0.10 - 0.20 | 150 - 1,500 | Type I cement with one of the following replacements of cement by weight: 24.5 - 25.0% Class F fly ash, or 49.5 - 50.0% GGBFS or Type II ^{**} cement |
| Severe | 0.20 - 2.00 | 1,500 - 10,000 | Type I cement with a replacement by weight of 49.5 - 50.0% GGBFS, or Type II [*] cement with one of the following replacements of cement by weight: 24.5 - 25.0% Class F fly ash, or 49.5 - 50.0% GGBFS |

* Type III cement conforming to AASHTO M85 with a maximum 8% tricalcium aluminate (C₃A) may be used in lieu of Type II cement as allowed in Subsection 701.02.1; this cement is given the designation “Type III(MS).”

** Class F fly ash or GGBFS may be added as a replacement for cement as allowed in Subsection 907-701.02.2.

Delete Subsection 701.02.2.2 on page 720, and substitute the following.

907-701.02.2.2--Portland Cement for Soil Stabilization Exposed to Soluble Sulfate Conditions or Seawater. When portland cement for use in soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall meet the requirements of Subsection 701.02.2.1.

907-701.04--Blended Hydraulic Cement.

907-701.04.1--General. Delete Subsection 701.04.1.1 on page 720, and substitute the following.

907-701.04.1.1--Types of Blended Hydraulic Cement. Blended hydraulic cements (blended cements) shall be of the following types and conform to AASHTO M 240:

- Type IL – Portland-limestone cement
- Type IP – Portland-pozzolan cement
- Type IS – Portland blast-furnace slag cement

Blended cement Types IL, IP, and IS meeting the “MS” sulfate resistance requirement listed in AASHTO M 240, Table 3 shall have the “(MS)” suffix added to the type designation.

907-701.04.1.2--Alkali Content. Delete the sentence in Subsection 701.04.1.2 on page 720, and substitute the following.

All blended cement types shall be made with clinker that would result in cement meeting the requirements of Subsection 701.02.1.2 when used in the production of AASHTO M 85, Type I or Type II cement.

The blended cement manufacturer shall include the percent equivalent alkalis as Na₂O on their cement mill reports.

When calculating the total alkali contribution with blended cements, use the equivalent alkali content of the base portland cement. An example calculation for cases where blended cements are used can be found in the Department’s *Concrete Field Manual*.

907-701.04.2--Replacement by Other Cementitious Materials. Delete the paragraph in Subsection 701.04.2 on page 720, and substitute the following.

The maximum replacement of blended cement Type IL by weight is 35% for fly ash or 50% for GGBFS. Replacement contents below 20% for fly ash or 45% for GGBFS may be used, but will not be given any special considerations, such as the maximum acceptance temperature for blended cement concrete containing pozzolans in Subsection 804.02.13.1.5. Special considerations shall only apply for replacement of blended cement by fly ash or GGBFS.

No additional cementitious materials, such as portland cement, blended cement, fly ash, GGBFS, or others, shall be added to or as a replacement for blended cement Types IP and IS.

Delete Subsection 701.04.2.1 on pages 720 and 721, and substitute the following.

907-701.04.2.1--Blended Cement Concrete Exposed to Soluble Sulfate Conditions or Seawater. When blended cement concrete is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall be as follows in Table 2. Class C fly ash shall not be used as a replacement for cement in any of the sulfate exposure conditions listed in Table 2.

Table 2- Cementitious Materials for Soluble Sulfate Conditions or Seawater

| Sulfate Exposure | Water-soluble sulfate (SO ₄) in soil, % by mass | Sulfate (SO ₄) in water, ppm | Cementitious material required |
|-----------------------|---|--|---|
| Moderate and Seawater | 0.10 - 0.20 | 150 - 1,500 | Type IL (MS) * cement, Type IL cement with one of the following replacements of cement by weight: 24.5 - 35.0% Class F fly ash, or 49.5 - 50.0% GGBFS, Type IP (MS) cement, or Type IS (MS) cement |
| Severe | 0.20 - 2.00 | 1,500 - 10,000 | Type IL cement with a replacement of cement by weight of 49.5 - 50.0% GGBFS, or Type IL (MS) cement with one of following replacements of cement by weight: 24.5 - 35.0% Class F fly ash, or 49.5 - 50.0% GGBFS |

* Class F fly ash or GGBFS may be added as a replacement for cement as allowed in Subsection 907-701.04.2.

Delete Subsection 701.04.2.2 on page 721, and substitute the following.

907-701.04.2.2--Blended Cement for Soil Stabilization Exposed to Soluble Sulfate Conditions or Seawater. When blended cement for use in soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall meet the requirements of Subsection 701.04.2.1.

Delete Subsection 701.04.3 on page 721.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-702-4

CODE: (IS)

DATE: 09/11/2018

SUBJECT: Bituminous Materials

Section 702, Bituminous Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-702.04--Sampling. Delete the sentence in Subsection 702.04 on page 722, and substitute the following.

Sampling of bituminous materials shall be as set out in AASHTO R 66.

907-702.07--Emulsified Asphalt. Delete the last sentence in Subsection 702.07 on page 724, and substitute the following.

Asphalt for fog seal shall conform to the requirements of Subsection 907-702.12, Table V.

907-702.12--Tables. Delete Table V in Subsection 702.12 on page 729, and substitute the following.

**TABLE V
SPECIFICATION FOR FOG SEAL**

| Test Requirements | LD-7 | | CHPF-1 | | Test Method |
|--|------|------|--------|------|--------------|
| | Min. | Max. | Min. | Max. | |
| Viscosity, Saybolt Furol, @ 25°C, Sec. | 10 | 100 | - | 100 | AASHTO T 72 |
| Storage Stability Test, 24 hr, % | - | 1 | - | 1 | AASHTO T 59 |
| Settlement, 5 day, % | - | 5 | - | - | AASHTO T 59 |
| Oil Distillate, % | - | 1 | - | - | AASHTO T 59 |
| Sieve Test, % * | - | 0.3 | - | 0.1 | AASHTO T 59 |
| Residue by Distillation, % | 40 | - | 40 | - | AASHTO T 59 |
| Test on Residue from Distillation | | | | | |
| Penetration @ 25°C, 100g, 5 sec | - | 20 | 40 | 90 | AASHTO T 49 |
| Softening Point, °C | 65 | - | - | - | ASTM D 36 |
| Solubility in trichloroethylene, % | 97.5 | - | - | - | AASHTO T 44 |
| Elastic Recovery @ 25°C, % | - | - | 40 | - | AASHTO T 301 |
| Original DSR @ 82° (G*/Sinδ, 10 rad/sec) | 1 | - | - | - | AASHTO T 111 |

* The Sieve Test result is tested for reporting purposes only and may be waived if no application problems are present in the field.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-703-1

CODE: (IS)

DATE: 06/13/2018

SUBJECT: Gradation

Section 703, Aggregates, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-703.03--Course Aggregates for Hydraulic Cement Concrete.

907-703.03.2--Detail Requirements.

907-703.03.2.4--Gradation. In the table in Subsection 703.03.2.4 on page 734, add 100 for the percent passing by weight on the 1½-inch sieve for Size No. 67 aggregates.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-705-1

CODE: (IS)

DATE: 06/13/2018

SUBJECT: Stone Riprap

Section 705, Stone Blanket Protection and Filter Blanket Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-705.04--Stone Riprap. Delete the last sentence of the first paragraph of Subsection 705.04 on page 750, and substitute the following.

Quality requirements for rock to be furnished under these specifications will come from a pre-approved source and be visually approved prior to use.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-707-2

CODE: (IS)

DATE: 06/05/2019

SUBJECT: Joint Materials

Section 707, Joint Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-707.02.3--Wood. Delete paragraph (b) of Subsection 707.02.3 on page 755, and substitute the following:

- (b) Dimensions shall be as shown on the plans. Dimensions shown on the plans are “dressed” sizes in accordance with Table 3 of the American Softwood Lumber Standard, SP-20. At the discretion of the Engineer, a 3/4-inch dressed board may be used in lieu of a 1-inch dressed board. A tolerance of plus or minus 1/16 inch thickness and plus or minus 1/8 inch width will be permitted. For slip-form paving a tolerance of minus 1/4 inch on each end in length will be permitted.

907-707.06--Flexible Plastic Gasket for Joining Conduit. Delete the third paragraph of Subsection 707.06 on page 756, and substitute the following.

The Department may require the performance test described in ASTM C 990.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-711-2

CODE: (IS)

DATE: 09/11/2018

SUBJECT: Plain Steel Wire

Section 711, Reinforcement and Wire Rope, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-711.02--Deformed and Plain Carbon-Steel Bars for Concrete Reinforcing.

907-711.02.3--Steel Welded and Non-Welded Wire Reinforcement, Plain and Deformed, for Concrete.

907-711.02.3.1--Plain Steel Wire. Delete the sentence in Subsection 711.02.3.1 on pages 780 and 781, and substitute the following.

Plain steel wire and plain steel welded wire shall conform to the requirements of AASHTO M 336.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-714-1

CODE: (SP)

DATE: 05/25/2021

SUBJECT: Miscellaneous Materials

Section 714, Miscellaneous Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-714.01--Water.

907-714.01.1--General. Delete the last sentence of the second paragraph in Subsection 714.01.1 on page 794.

907-714.01.2--Water for Use in Concrete. Delete Subsection 714.01.2 on page 794, and substitute the following:

Water from municipal sources is permitted be used as mixing water in concrete, mortar, and grout without Department testing. Water from non-municipal water sources used in mixing of concrete, mortar, and grout which does not meet the requirements in Subsection 714.01.1 shall be tested for conformance as required in AASHTO M157, Table 1 and Table 2.

907-714.01.3--Water for Use in Chemically Stabilized Based. Delete the first sentence of first paragraph in Subsection 714.01.3 on page 794, and substitute the following:

Water used in the construction of bases that contain cement, lime, or other chemical additive shall be as set out in Subsection 714.01.1. Water from municipal sources is permitted to be used without testing for conformance to the requirements below. If water is not from a municipal source, it shall not contain impurities in excess of the following limits:

Delete Subsection 714.01.6 on page 795, and substitute the following.

907-714.01.6--Blank.

Delete Subsection 714.15 on pages 816 and 817 and substitute the following.

907-714.15--Geogrids.

907-714.15.1--General. A geogrid is defined as a geosynthetic formed by a regular network of connected elements with apertures greater than 0.25 inch to allow interlocking with surrounding soil, rock, and other surrounding materials to function primarily as reinforcement.

Geogrid shall be manufactured from an expanded strain hardened monolithic polymer sheet

composed of one or more synthetic polymers and shall be mildew resistant and inert to biological degradation and naturally encountered chemicals, alkalis and acids. The geogrid shall contain stabilizers and/or inhibitors, or a resistance finish or covering to make it resistant to deterioration from direct sunlight, ultraviolet rays, and heat.

Geogrid manufacturers shall participate in and be in compliance with the American Association of State Highway Transportation Officials (AASHTO) National Transportation Product Evaluation Program's (NTPEP) Geosynthetics audit program. Geogrid shall meet the requirements of Table II for the application and type shown on the plans and shall be selected from the Department's Approved Lists.

907-714.15.1.1--Geogrid for Retaining Walls and Reinforced Soil Slopes. Geogrid for retaining walls and reinforced soil slopes shall be creep tested in accordance with AASHTO R69 and meet Long Term Design Load, Minimum Ultimate Tensile Strength, and open area criteria listed in Table II. Manufacturers shall perform at least one long-term creep test for no less than 10,000 hours in accordance to ASTM D 5262 for each polymer or composition of polymers from which the geogrid is produced. The long-term design load that shall be reported for design use, shall be that load at which no more than 10% strain occurs over a 100-year design life of the geogrid, as calculated in accordance with AASHTO R69. Long-term design loads shall be reported unfactored, and the AASHTO strength reduction factors (Durability and Installation, and safety factors) will be considered by the Department's Geotechnical Branch on a site specific design basis.

907-714.15.1.2--Geogrid for Subgrade Stabilization. Geogrid for subgrade stabilization shall meet Minimum Ultimate Tensile Strength and open area criteria listed in Table II.

907-714.15.2--Marking, Shipment, and Storage. Each roll or container of geogrid shall be visibly labeled with the name of the manufacturer, trade name of the product, lot number, and quantity of material. In addition, each roll or container shall be clearly tagged to show the type designation that corresponds to that required by the plans. During shipment and storage the geogrid shall be protected from direct sunlight, and temperatures above 120°F or below 0°F. The geogrid shall either be wrapped and maintained in a heavy duty protective covering or stored in a safe enclosed area to protect from damage during prolonged storage.

907-714.15.3--Manufacturer Certification. The Contractor shall furnish the Engineer three copies of the manufacturer's certified test reports indicating that the geogrid furnished conforms to the requirements of the specifications and is of the same composition as the originally approved by the Department.

907-714.15.4--Acceptance Sampling and Testing. Final acceptance of each shipment will be based upon results of tests performed by the Department on verification samples submitted from the project, as compared to the manufacturer's certified test reports. The Engineer will select one roll or container at random from each shipment for sampling. As sample extending full width of the randomly selected roll or container and being at least five (5) square yards in area will be obtained and submitted by the Engineer. All material samples shall be provided at no cost to the State.

**TABLE II
GEOGRIDS**

| Physical Properties | Type Designation | | | | | | Test Method |
|---|------------------|------|------|------|------|------|------------------------|
| | I | II | III | IV | V | VI | |
| Long Term Design Load ¹ , pounds per foot, Machine Direction | 250 | 500 | 750 | 1500 | 2500 | 3500 | AASHTO R69, ASTM D5262 |
| Minimum Ultimate Tensile Strength ² , pounds per foot, Machine Direction | 500 | 1000 | 1500 | 3000 | 5000 | 7000 | ASTM D6637 |
| Open Area, percent | 70 | 70 | 50 | 50 | 50 | 50 | Direct Measurement |

¹ Minimum design criteria requirement.

² Minimum Average Roll Value (MARV).

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-720-2

CODE: (IS)

DATE: 09/11/2018

SUBJECT: Acceptance Procedure for Glass Beads

Section 720, Pavement Marking Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-720.01--Glass Beads.

907-720.01.4--Acceptance Procedures. Delete the last sentence of the paragraph in Subsection 720.01.4 on page 841, and substitute the following.

Acceptance sampling and testing of glass beads will be in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual, Section 2.9.2 -- Glass Beads.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-721-2

CODE: (IS)

DATE: 01/08/2020

SUBJECT: Materials for Signing

Section 721, Materials for Signing, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-721.06--Reflective Sheeting.

907-721.06.2--Performance Requirements. Delete Table 4 and Table 5 in Subsection 721.06.2 on pages 860 & 861, and substitute the following.

**MINIMUM COEFFICIENTS OF RETROREFLECTION
Candela per foot candle per square foot (cd/ft²)
Per ASTM Designation D4956**

**TABLE 4
Type IX Sheeting**

| Observation Angle | Entrance Angle | White | Yellow | Green | Red | Blue | Fluorescent Yellow/Green | Fluorescent Yellow | Fluorescent Orange |
|-------------------|----------------|-------|--------|-------|-----|------|--------------------------|--------------------|--------------------|
| 0.2° | -4.0° | 380 | 285 | 38 | 76 | 17 | 300 | 230 | 115 |
| 0.2° | +30.0° | 215 | 162 | 22 | 43 | 10 | 170 | 130 | 65 |
| 0.5° | -4.0° | 240 | 180 | 24 | 48 | 11 | 190 | 145 | 72 |
| 0.5° | +30.0° | 135 | 100 | 14 | 27 | 6.0 | 110 | 81 | 41 |
| 1.0° | -4.0° | 80 | 60 | 8.0 | 16 | 3.6 | 64 | 48 | 24 |
| 1.0° | +30.0° | 45 | 34 | 4.5 | 9.0 | 2.0 | 36 | 27 | 14 |

**TABLE 5
Type XI Sheeting**

| Observation Angle | Entrance Angle | White | Yellow | Green | Red | Blue | Brown | Fluorescent Yellow/Green | Fluorescent Yellow | Fluorescent Orange |
|-------------------|----------------|-------|--------|-------|-----|------|-------|--------------------------|--------------------|--------------------|
| 0.2° | -4.0° | 580 | 435 | 58 | 87 | 26 | 17 | 460 | 350 | 175 |
| 0.2° | +30.0° | 220 | 165 | 22 | 33 | 10 | 7.0 | 180 | 130 | 66 |
| 0.5° | -4.0° | 420 | 315 | 42 | 63 | 19 | 13 | 340 | 250 | 125 |
| 0.5° | +30.0° | 150 | 110 | 15 | 23 | 7.0 | 5.0 | 120 | 90 | 45 |
| 1.0° | -4.0° | 120 | 90 | 12 | 18 | 5.0 | 4.0 | 96 | 72 | 36 |
| 1.0° | +30.0° | 45 | 34 | 5.0 | 7.0 | 2.0 | 1.0 | 36 | 27 | 14 |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-722-1

CODE: (IS)

DATE: 11/15/2017

SUBJECT: Materials for Traffic Signal Installation

Section 722, Materials for Traffic Signal Installation, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follow.

907-722.02.3--Design Strength Requirements. Delete Subsection 722.02.3 on pages 864 thru 866, and substitute the following.

Unless specified otherwise in the plans, poles shall meet the requirements of the AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*, as specified in the plans with all interim supplements. All components of the assemblies shall be designed to the following:

- Importance Factor: 1.0; 50 year mean recurrence interval
- Basic Wind Speed (3 second gust): As shown on the project plans
- Minimum Gust Effect Factor: 1.14
- Fatigue Category: II
- Ice Loading: As shown on the project plans
- Natural Wind Gust Pressure Loads: Included
- Truck Induced Gust Pressure Loads: Not included
- Galloping: Not included

907-722.02.5--Mast Arms for Traffic Signal and Equipment Poles. Delete the first four sentences of the third paragraph of Subsection 722.02.5 on page 867, and substitute the following.

Anchor base plates must meet the minimum requirements of ASTM A36 or ASTM A709 Grade 36 or ASTM A572 Grade 50 and must be welded to the shaft by either telescoped with two continuous arc welds or by back up ring using full penetration welds.. Flange plate shall telescope the large end of the arm and be welded by either two (2) continuous arc welds, one (1) being on the outside of the plate, adjacent to the shaft, and the other one (1) on the inside at the end of the tubular cross section or by back up ring using full penetration welds. The thru-bolt flange plate or tapped flange plate supporting the mast arm shall be welded to the pole near the top and supported side plate tangent to the pole and gusset plates both top and bottom. The thru-bolt or tapped flange plate must be sufficient to develop the full capacity of the connecting bolts.

907-722.03--Electric Cable. Delete the paragraphs for Loop Detector Wire and Loop Detector Lead-in Cable in Subsection 722.03 on page 869.

Delete the first sentence of “Communication Cable” in Subsection 722.03 on page 870, and substitute the following.

Communication cables shall be as per the manufacturer's recommendation.

907-722.05.4--Type III or Type IV Rigid Non-Metallic Conduit. After the last sentence of Subsection 722.05.4 on page 871, add the following.

Schedule 40 conduit shall be used unless otherwise noted in the plans.

Delete the title of Subsection 722.13.3 on page 876, and substitute the following.

907-722.13.3--Power Service Pedestal.

Delete the first paragraph of Subsection 722.13.3 on page 876, and substitute the following.

The pedestal shall be of NEMA Type 3R rainproof construction and shall be UL Listed as "Enclosed Industrial Control Equipment" (UL 508A). External construction shall comply with UL50 requirements and shall be unpainted aluminum.

Nominal size of the pedestal shall be 48"H x 16"W x 16"D.

Pedestal shall have a voltage rating or 120v/240v single phase with an Amperage rating of 800A.

After the first sentence of the seventh paragraph of Subsection 722.13.3 on page 876, add the following.

An outdoor rated heavy duty combination lock shall be provided to lock the customer compartment door.

907-722.14.1.3--Optical System. Delete the sixteenth paragraph of Subsection 722.14.1.3 on page 879, and substitute the following.

The signal module on-board circuitry shall include voltage surge protection to withstand high-repetition noise transients and low-repetition high-energy transients as stated in Section 2.1.6, NEMA Standard TS 2, 1992.

Delete the last sentence of the seventeenth paragraph of Subsection 722.14.1.3 on page 879, and substitute the following.

Load switches shall be compatible with NEMA TS 1 or later, or Model 170-1989 or later.

Delete Subsection 722.14.5 on page 882, and substitute the following.

907-722.14.5--Blank.

Delete Subsections 722.14.7 and 722.14.8 on page 882.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-808-1

CODE: (IS)

DATE: 11/01/2018

SUBJECT: Joint Repair

Section 808, Joint Repair, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-808.04--Method of Measurement. Delete the paragraph in Subsection 808.04 on page 1009, and substitute the following.

When a pay item is included in the plans, joint repair will be measured by the linear foot and mortar mix will be measured by the gallon. The volume of measurement for the epoxy/sand mortar mix will be determined from the summation of the volumes of the epoxy components and the volume of sand will not be measured for payment.

907-808.05--Basis of Payment. Delete the paragraph in Subsection 808.05 on page 1009, and substitute the following.

When a pay item is included in the plans, joint repair, measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for furnishing and placing all materials, labor, tools, equipment, and all incidentals necessary to complete the work.

When a pay item is included in the plans, mortar mix, measured as prescribed above, will be paid for at the contract unit price per gallon, which price shall be full compensation for furnishing all materials including sand and forming materials, and all incidentals necessary to complete the work. No payment will be made for the sand used in the epoxy mortar mix.

The price bid for each item of work shall include the cost of continuous maintenance of traffic and protective services as required by the Department's Traffic Control Plan. This shall include all required individual traffic control devices.

Payment will be made under:

907-808-A: Joint Repair - per linear foot

907-808-B: Mortar Mix - per gallon

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS NO. 907-823-7

CODE: (SP)

DATE: 10/13/2020

SUBJECT: **Preformed Joint Seal**

Section 907-823, Preformed Joint Seal, is hereby added to and becomes a part of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-823--PREFORMED JOINT SEAL

907-823.01--Description. This work consists of furnishing and installing preformed joint seals in accordance with these specifications and the details shown in the Plans or drawings provided.

907-823.02--Materials. The Contractor shall furnish a manufacturer's certification stating that the material used meets the requirements of this specification.

The preformed joint seal shall be one of the following, or an approved equal. The size of the seal, Type I or Type II, shall be determined based on the size of the joint opening, as detailed in the Plans or drawings provided. It is the Contractor's responsibility to ensure that the size selected is appropriate for the width of the joint. Type I shall be used for joint openings less than two inches (2"). Type II shall be used for joint openings greater than two inches (2"), with the maximum joint opening being two and one-half inches (2½"). In cases where the joint opening is greater than two and one-half inches (2½"), another type of expansion material shall be required as directed by the Director of Structures, State Bridge Engineer.

1. Silicoflex Joint Sealing System
Manufactured by R.J. Watson, Inc. in Alden, NY
www.rjwatson.com
2. Wabo@SPS Joint System
Manufactured by Watson Bowman Acme Corporation in Amherst, NY
www.wbacorp.com
3. Silspec SSS Silicone Strip Seal
Manufactured by SSI Commercial & Highway Construction Materials in Tulsa, OK
www.ssicm.com

907-823.03--Construction Methods. Preformed joint seals shall be installed in accordance with the manufacturer's recommendations. The material shall seal the deck surface, gutters, and curbs to prevent moisture or other contaminants from leaking through the joints. The joint seal shall be installed in such a manner that the top surface of the material is within the minimum and maximum depths below the roadway or bridge surface recommended by the manufacturer.

Saw cutting for the joint repair shall be accomplished by sawing at the locations and depth shown

on the joint repair detail sheets in the plans or in the contract documents. Saw cuts shall be as near vertical as possible at the saw line of the repair area. The saw cut depth shall be equivalent to the installation depth required by the manufacturer's specifications, and the type specified shall be the same as the type specified for preformed joint seal.

907-823.04--Method of Measurement. Preformed joint seal of the type specified will be measured in linear feet along the length of the centerline joint.

Saw cuts of the type specified will be measured by the linear foot along the length of the bridge deck on each side of the centerline joint.

907-823.05--Basis of Payment. Preformed joint seal, measured as prescribed above, will be paid for at the contract unit price per linear foot, which shall be full compensation for furnishing all labor, equipment, tools, materials, and incidentals necessary to complete the work.

Saw cuts, measured as prescribed above, will be paid for at the contract unit price per linear foot, which shall be full compensation for furnishing all labor, equipment, tools, materials, and incidentals necessary to complete the work.

Payment will be made under:

907-823-A: Preformed Joint Seal, Type ____ - per linear foot

907-823-B: Saw Cut, Type _____ - per linear foot

NOTES ON ASSOCIATED ITEMS OF WORK:

907-808-4002 JOINT REPAIR
 Description: Shall include the work necessary to repair joints in preparation for the placement of new expansion material. Preparation for the placement of new expansion material shall also be included under this item of work. Removal of existing silicone sealant, compression and AC sealed joint materials will not be paid for. Directly and shall be considered as part of the preparation work. Removal of debris and any trash and debris (including but not limited to compacted dirt, vegetation and trash) located at any depth within the joint shall be included under this item of work. All other requirements shall be included under the preparation work. Refer to Section 808 of the specifications and any other sections specified therein.

Basis of Payment: The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Bridge Deck On Each Side Of The Centerline Joint.

907-808-4003 JOINT REPAIR WITHOUT EPOXY

Description: Shall include the work necessary to repair joints in preparation for the placement of new expansion material, as designated in the detail drawings. Provide removal of existing silicone sealant, compression and AC sealed joint materials shall be included under this item of work. Removal of joint materials and any trash and debris (including but not limited to compacted dirt, vegetation and trash) located at any depth within the joint shall be included under this item of work. All other requirements shall be in accordance with the applicable provisions of Section 808 of the specifications and any other sections specified therein.

Basis of Payment: The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Bridge Deck On Each Side Of The Centerline Joint.

907-823-8001 SAW CUT, TYPE 1 & 907-823-8002 SAW CUT, TYPE II

Description: The Saw Cut Depth Shall Be Equivalent To The Installation Depth Required By The Manufacturer's Specifications. The Saw Cut Type Shall Be The Same As The Preformed Joint Seal Selected.

Basis of Payment: The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Bridge Deck On Each Side Of The Centerline Joint. It Is The Contractor's Responsibility To Ensure That The Proper Depth Is Selected Based On The Manufacturer's Recommendations.

907-823-4001 PREFORMED JOINT SEAL, TYPE I

Description: Shall include the manufacturer's required joint preparation including sandblasting both sides of the joint and blowing the joint free of debris with compressed air and placement of the new preformed joint seal.

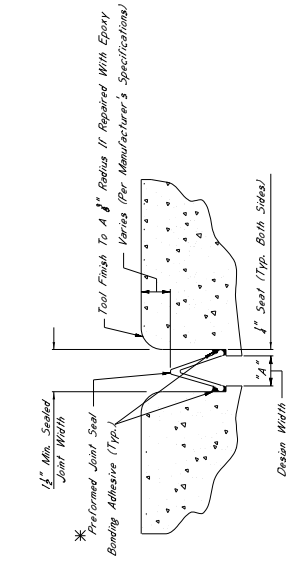
Basis of Payment: The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Centerline Joint.

907-823-4002 PREFORMED JOINT SEAL, TYPE II

Description: Shall include the manufacturer's required joint preparation including sandblasting both sides of the joint and blowing the joint free of debris with compressed air and placement of the new preformed joint seal.

907-823-4001 EPXY MORTAR AND POLYMER CONCRETE NOTES:

- Either Epoxy Mortar Or Polymer Concrete May Be Used. Guidelines For Selection Of Materials Can Be Found In Section 808 of the Specifications.
- GENERAL NOTES:**
- Specifications: Mississippi Standard Specifications For Road And Bridge Construction, 2017.
 - Approval: All Work Shall Be Inspected And Approved By The Director Of Structures, State Bridge Engineer. Minor Changes To Detail Of Design Or Construction Procedure May Be Authorized By The Bridge Engineer Provided Such Changes Do Not Affect The Structural Integrity Of The Work. Work For Which No Pay Item Is Provided In The Proposal Will Not Be Paid For Directly And Shall Therefore Be Considered An Assorted Item of Work.

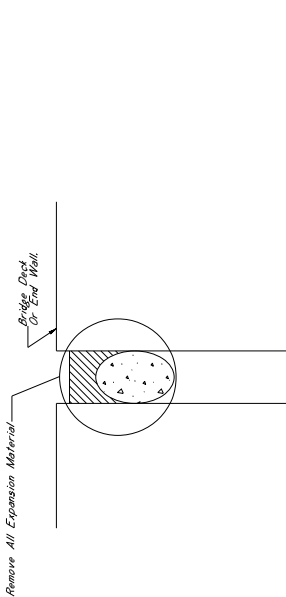


TYPICAL SECTION AT SAWCUT & SEALED JOINT

Showing Sealed Joint After Sawcut

*NOTES:

- The Preformed Joint Seal Shall Be One Of The Following, Installed According To The Manufacturer's Specifications:
 - Silicoflex Joint Sealing System Manufactured By R.J. Watson, Inc. In Alden, NY www.jeris.com
 - Melo SPS Joint Sealing System Manufactured By R.J. Watson, Inc. In Amherst, NY www.watcorp.com
 - Silseps SSS Silicone Strip Seal Manufactured By SSI Commercial & Highway Construction Materials www.ssi.com
- For Estimating Purposes, The R.J. Watson Silicoflex Joint Sealing System Seal Selected, However, Should Another Supplier Be Chosen, It Is The Contractor's Responsibility To Obtain The Manufacturer's Specifications For The Seal. The Contractor Shall Be Responsible For Joint Preparation, Installation Depth And Width, Adhesive Sealing Times, And Any Other Variances Between The Specifications Provided By The Manufacturer, To Ensure That The Contractor Is Properly Schooled In Installation Of The Joint Material.
- Joints Shall Be Sealed At Their Design Widths, Dimension "A", Which Is Defined As The Actual Width Of The Joint Opening. This Width Does Not Account For The Sealant. The Sealant Shall Be Applied To The Sides Of The Joint. The Sealant Shall Be Used For Design Widths Less Than 2". For Preformed Joint Seal Types III, Shall Be Used For Design Widths Greater Than Or Equal To 2". Sealant Shall Be Applied To The Sides Of Expansion Material Seal Be Required As Directed By The Director Of Structures, State Bridge Engineer. It Is The Contractor's Responsibility To Ensure That The Size Selected Is Appropriate For The Width Of The Joint.



TYPICAL SECTION AT EXISTING JOINT

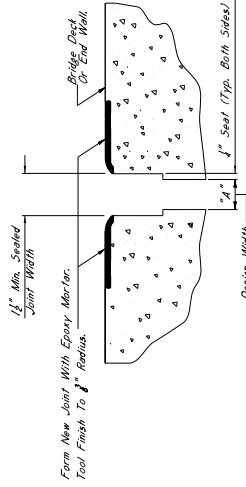
Showing Existing Expansion Materials To Be Removed And Replaced With Preformed Joint Seal

*NOTES:

- Remove All Expansion Material - Bridge Deck Or End Wall.
- Remove Existing Expansion Materials To Be Replaced With Preformed Joint Seal.
- Design Width "A" Is Defined As The Actual Measured Joint Width.

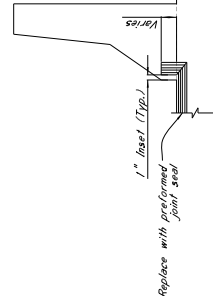
TYPICAL SECTION AT JOINT AFTER REMOVAL OF EXISTING SEAL AND SAWCUT

Showing Limits Of Joint Preparation For Application Of New Joint Seal Materials And Sawcut



TYPICAL SECTION AT SAWCUT & JOINT REPAIR

Showing Area Where Repairs Are Made After Sawcut With Epoxy Mortar Or Approved Equivalent



ELEVATION AT END OF SPAN

*NOTES:

- For Jersey Slope Barriers, The Minimum Required Vertical Joint Seal Dimension Within The Barrier Is 3". The Minimum Required Vertical Joint Seal Dimension Within The Barrier Is 6".
- Replace with preformed joint seal

NOTES ON ASSOCIATED ITEMS OF WORK:

JOINT REPAIR

Description: Shall include the work necessary to repair joints in preparation for the placement of new expansion material. Joint materials and any trash and debris (including but not limited to compacted dirt, vegetation and trash) located at any depth within the joint shall be included under this item of work. Epoxy mortar shall also be included under this item of work. Epoxy mortar shall be placed in accordance with the provisions of Section 808 of the Specifications and shall be considered as absorbed under this item of work. All other requirements shall be in accordance with the applicable provisions of Section 808 of the Specifications and any other sections specified therein.

Basis of Payment: The accepted quantities will be paid for in linear feet at the contract unit price along the length of the bridge deck on each side of the centerline joint.

JOINT REPAIR WITHOUT EPOXY

Description: Shall include the work necessary to repair joints in preparation for the placement of new expansion material. Joint materials and any trash and debris (including but not limited to compacted dirt, vegetation and trash) located at any depth within the joint shall be included under this item of work. Materials shall be included under this item of work, removal of joint materials and any trash and debris (including but not limited to compacted dirt, vegetation and trash) located at any depth within the joint shall be included under this item of work. All other requirements shall be in accordance with the provisions of Section 808 of the Specifications and any other sections specified therein.

Basis of Payment: The accepted quantities will be paid for in linear feet at the contract unit price along the length of the bridge deck on each side of the centerline joint.

907-823-8001 SAW CUT, TYPE I & 907-823-8002 SAW CUT, TYPE II

Description: The saw cut depth shall be equivalent to the installation depth required by the manufacturer's specifications. The saw cut type shall be the same as the performer joint seal selected.

4

Basis of Payment: The accepted quantities will be paid for in linear feet at the contract unit price along the length of the bridge deck on each side of the centerline joint. The contractor shall be responsible for the cost of the saw cut depth as selected based on the manufacturer's recommendations.

907-823-4001 PREFORMED JOINT SEAL, TYPE I
907-823-4002 PREFORMED JOINT SEAL, TYPE II

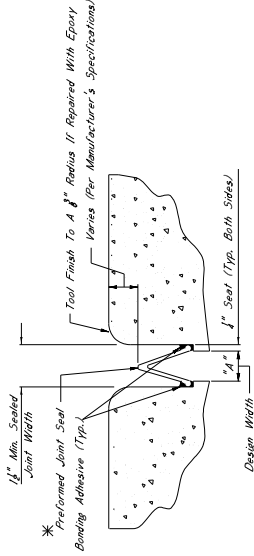
Description: Shall include the manufacturer's required joint preparation including sandblasting both sides of the joint and blowing the joint free of debris. The contractor shall be responsible for the cost of the preformed joint seal.

Basis of Payment: The accepted quantities will be paid for in linear feet at the contract unit price along the length of the centerline joint.

EPOXY MORTAR AND POLYMER CONCRETE NOTES:
Either Epoxy Mortar or Polymer Concrete May Be Used. Guidelines For Selection Of Materials Can Be Found In Section 808 of the Specifications.

GENERAL NOTES:

1. Specifications, Mississippi Standard Specifications For Road Construction, 2013 Edition, shall apply.
2. No Change Of Plans Will Be Permitted Except By Written Approval Of The Director Of Structures, State Bridge Engineer. Minor Changes To Detail Or Design Or Construction Procedures Will Be Made For Contract Price Adjustment. Work For Which No Pay Item Is Provided In The Proposal Will Not Be Paid For Directly And Shall Therefore Be Considered An Absorbed Item Of Work.

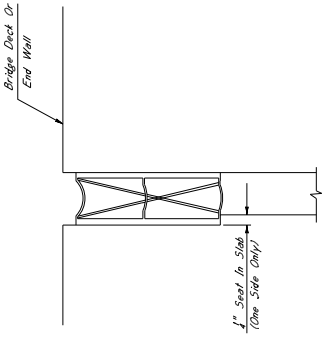


TYPICAL SECTION AT SAWCUT & SEALED JOINT

Showing Sealed Joint After Sawcut And Repair With Epoxy Mortar

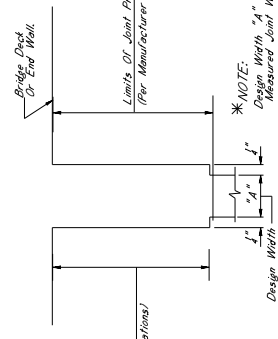
***NOTES:**

1. The Preformed Joint Seal Shall Be One Of The Following, Installed According To The Manufacturer's Specifications:
A. Silcoflex Joint Sealing System
www.gmwalson.com
B. Wika SBS Joint Sealing System
www.wika.com
C. Silgoc SSS Silicone Strip Seal
Manufactured By SSI Commercial & Highway Construction Materials
www.ssi.com
2. For Estimating Purposes, The R.J. Walston Silcoflex Joint Sealing System Was Used. Responsibility For Ensuring That The Manufacturer's Recommendations Are Followed For Joint Preparation, Installation Depth, And Widths, Adhesive Sealing Times, And All Other Requirements Shall Be Placed At The Contractor's Risk. The Contractor Shall Be Responsible For Ensuring That The Contractor Is Properly Trained In The Installation Of The Joint Material.
3. Joints Shall Be Sealed At Their Design Widths, Dimension "A", Which Is Defined As The Actual Width Both Sides Of A Preformed Joint Seal. The Contractor Shall Be Responsible For Ensuring That The Manufacturer's Recommendations Are Followed For Joint Preparation, Installation Depth, And Widths, Adhesive Sealing Times, And All Other Requirements Shall Be Placed At The Contractor's Risk. The Contractor Shall Be Responsible For Ensuring That The Contractor Is Properly Trained In The Installation Of The Joint Material.



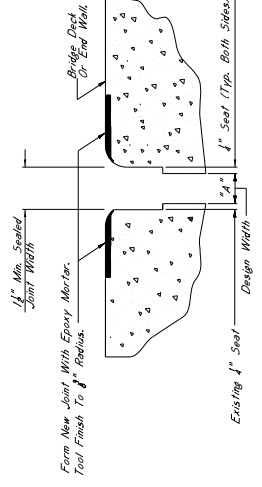
TYPICAL SECTION AT EXISTING JOINT

Showing Existing Expansion Device To Be Removed And Replaced With Preformed Joint Seal



TYPICAL SECTION AT JOINT AFTER REMOVAL OF EXISTING SEAL AND SAWCUT

Showing Limits Of Joint Preparation For Application Of New Joint Seal Materials And Sawcut

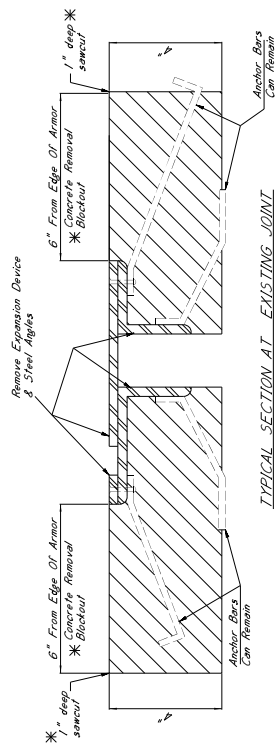


TYPICAL SECTION AT SAWCUT & JOINT REPAIR

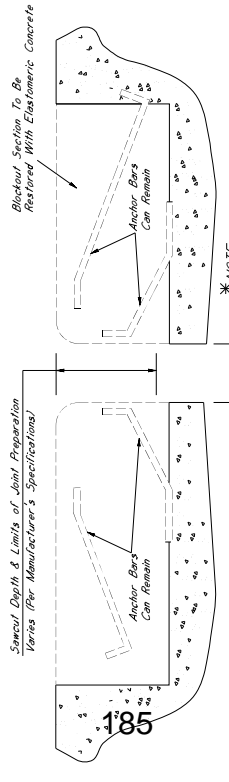
Showing Limits Of Joint Preparation For Application Of New Joint Seal Materials And Sawcut

*** 1" SAWCUT NOTES:**
 All 1" Sawcuts Shall Be Considered An Absorbed Item of Work. The Contractor Shall Verify Depth of Reinforcing Steel Before Making Any Sawcuts. The Depth of The Reinforcing Steel Shall Be Repaired To The Satisfaction Of The Engineer At No Cost To The State.

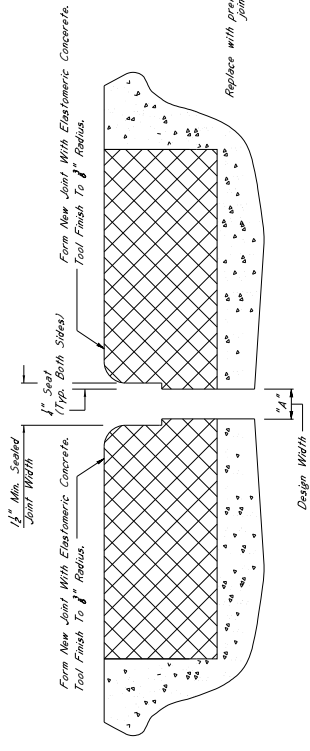
*** CONCRETE REMOVAL BLOCKOUT NOTES**
 Removal Of The Concrete Blockout Area Shall Be Considered An Absorbed Item Of Work Under Pay Item 202-B1E9. The Contractor Shall Use Hand Tools To Remove A Layer Than 3/8" To Complete This Work.



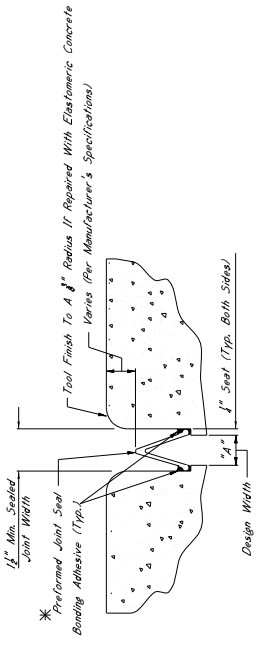
TYPICAL SECTION AT EXISTING JOINT
 Showing Existing Expansion Device To Be Removed And Replaced With Performed Joint Seal



TYPICAL SECTION AT JOINT AFTER REMOVAL OF EXISTING SEAL
 Showing Limits Of Joint Preparation For Application Of New Joint Seal Materials



TYPICAL SECTION AT SAWCUT & JOINT REPAIR
 Showing Area Where Repairs Are Made After Sawcut With Elastomeric Concrete



TYPICAL SECTION AT SAWCUT & SEALED JOINT
 Showing Sealed Joint After Sawcut And Repair With Elastomeric Concrete

*** NOTES:**
 1. The Performed Joint Seal Shall Be One Of The Following, Installed According To The Manufacturer's Specifications:

- A. Silastic Joint Sealing System Manufactured By R.J. Watson, Inc. In Alden, NY www.rjwatson.com
- B. Wiko SFS Joint System Manufactured By Watson Bowman Acme Corporation In Amherst, NY www.wbcorp.com
- C. Silseal 555 Silicone Strip Seal Manufactured By 551 Commercial & Highway Construction Materials www.551.com

2. Following Repairs, The R.J. Watson Silastic Joint Sealing System Who's Responsibility To Ensure That The Manufacturer's Recommendations Are Followed For Other Applications To All Types Of Joints, Repairs, Sealing, Sealing, And A Manufacturer Representative Shall Be Present At The Time Joint Sealing Begins To Ensure That The Contractor Is Properly Schooled In Installation Of The Joint Material.

3. Joints Shall Be Sealed At Their Design Width, Dimension "A", Which Is Defined As Seal Applied On Both Sides Of The Joint. Performed Joint Seal, Type I, Shall Be Used For Design Widths Less Than 2". Performed Joint Seal, Type II, Shall Be Used For Design Widths Greater Than 2". In Cases Where Design Widths Are Greater Than 2", Another Type Of Expansion Material Shall Be Required As Directed By The Director Of Structures, Selected As Appropriate For The Width Of The Joint.

*** NOTES:**
 For Any Signs, Barriers, The Minimum Required Vertical Joint Seal Dimension Within The Blockout Is 6". For Post And Beam Barriers, The Minimum Required Vertical Joint Seal Dimension Within The Barrier Is 6".

ELEVATION AT END OF SPAN

NOTES ON ASSOCIATED ITEMS OF WORK:
 202-B1E9 REMOVAL OF EXISTING JOINT MATERIAL

Description:
 Shall Include The Removal Of Material Associated With Armor, Sliding Plates and Meagings Provided. Removal As Designated In The Detail Drawings Provided. Removal Of The Concrete Blockout Area Shall Be Absorbed Under This Item Of Work. The Joint Seal Type Shall Not Be Included Under This Item Of Work. The Contractor Shall Be Responsible For The Engineer's Removal of Joint Material And Any Trash And Debris (Including But Not Limited To Compacted Dirt, Vegetation And Trash) Located At Any Depth Within The Joint Shall Be Included Under This Item Of Work.

Basis Of Payment:
 Removal of Armor and Sliding Plate Joint Material Will Be Paid For In Linear Feet At The Contract Unit Price For The Work. The Contractor Shall Be Responsible For The Material Will Only Be Paid For As The Length Along The Centerline Of The Joint.

907-823-8001 SAW CUT, TYPE I & 907-823-8002 SAW CUT, TYPE II

Description:
 The Saw Cut Depth Shall Be Equivalent To The Installation Depth Required For The Manufacturer's Specifications. The Saw Cut Type Shall Be The Same As The Performed Joint Seal Selected.

Basis of Payment:
 The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Bridge Deck On Each Side Of The Centerline Joint.

907-823-4001 REFORMED JOINT SEAL, TYPE I
907-823-4002 REFORMED JOINT SEAL, TYPE II

Description:
 Shall Include The Manufacturer's Required Joint Preparation Including Sandblasting Both Sides Of The Joint And Blowing The Joint Clean. The Contractor Shall Be Responsible For The Placement Of The New Performed Joint Seal.

Basis Of Payment:
 The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Centerline Joint.

ELASTOMERIC CONCRETE NOTES

907-824-9907 BRIDGE REPAIR ELASTOMERIC CONCRETE
 Elastomeric Concrete Shall Be One Of The Following Products, Installed According To The Manufacturer's Specifications:

- A. Poly-Ton Elastomeric Concrete Manufactured By R.J. Watson, Inc. In Alden, NY www.rjwatson.com
- B. Wiko-Con II Manufactured By Watson Bowman Acme Corporation In Amherst, NY www.wbcorp.com
- C. Delcrete Elastomeric Concrete Manufactured By The G.S. Brown Company In North Baltimore, OH www.gsbrown.com

Basis of Payment:
 The Accepted Quantities Will Be Paid For In Cubic Yards At The Contract Unit Price.

GENERAL NOTES:

1. Specifications: Mississippi Standard Specifications For Road And Bridge Construction, 2017.
2. No Change Of Plans Will Be Permitted Except By Written Approval Of The Director Of Structures, State Bridge Engineer. Any Change Of Plans, Specifications, Materials, Methods, Or Work May Be Authorized By The Bridge Engineer Provided Such Changes Will Not Be Cause For Contract Price Adjustment.
3. Work For Which No Pay Item Is Provided In The Proposal Will Be Considered An Absorbed Item of Work.

NOTES ON ASSOCIATED ITEMS OF WORK:

202-8169 REMOVAL OF EXISTING JOINT MATERIAL

Description: Shall include the removal of material associated with armor, sliding plate, and neoprene expansion joints, as designated in the detail drawings provided. Removal of material from other joint types shall not be included under this item of work unless otherwise directed by the Engineer. Removal of joint material and any trash, vegetation, and debris shall be included under this item of work. Joint shall be included under this item of work.

Basis of Payment:

Removal of armor and sliding plate joint material will be paid for in linear feet at the contract unit price along the length of the bridge deck on each side of the material which will be paid for as the length along the centerline of the joint.

907-823-8001 SAW CUT, TYPE I & 907-823-8002 SAW CUT, TYPE II

Description: The saw cut depth shall be equivalent to the installation depth required by the manufacturer's specifications. The saw cut type shall be the same as the preformed joint seal selected.

Basis of Payment:

The accepted quantities will be paid for in linear feet at the contract unit price along the length of the bridge deck on each side of the centerline of the joint.

907-823-4001 PREFORMED JOINT SEAL, TYPE I

907-823-4002 PREFORMED JOINT SEAL, TYPE II

Description: Shall include the manufacturer's required joint preparation including sandblasting both sides of the joint and blowing the joint free of debris with compressed air and placement of the new preformed joint seal.

Basis of Payment:

The accepted quantities will be paid for in linear feet at the contract unit price along the length of the centerline of the joint.

ELASTOMERIC CONCRETE REPAIR ELASTOMERIC CONCRETE

Description: Elastomeric concrete shall be one of the following products installed according to the manufacturer's specifications:

- A. Poly-Ton Elastomeric Concrete
Manufactured by R.J. Watson, Inc. in Alden, NY
www.rjwatson.com
- B. Welo-Crete II
Manufactured by Watson Bowman Acme Corporation in Amherst, NY
www.wbcorp.com
- C. Delsite Elastomeric Concrete
Manufactured by The D.S. Brown Company in North Baltimore, OH
www.dsbrown.com

Basis of Payment:

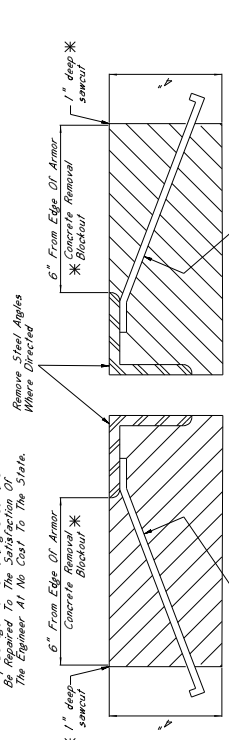
The accepted quantities will be paid for in cubic yards at the contract unit price.

GENERAL NOTES:

1. Specifications: Mississippi Standard Specifications For Road And Bridge Construction, 2017.
2. No change of items will be permitted except by written approval of the Engineer. Any change of construction procedure may be authorized by the bridge engineer provided such changes will not cause for contract price adjustment. Approval will not be paid for directly and shall therefore be considered an absorbed item of work.

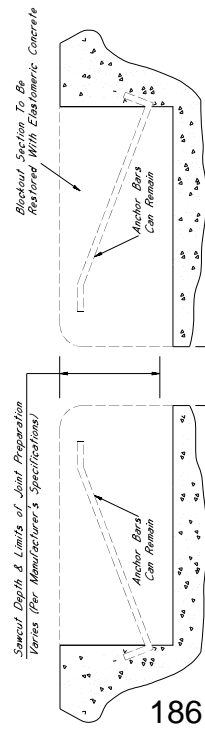
*** CONCRETE REMOVAL BLOCKOUT NOTES**

Removal of the concrete blockout area shall be considered an absorbed item of work. The contractor shall use a hammer No. 10 or larger than 30 lbs to complete this work.



TYPICAL SECTION AT EXISTING JOINT

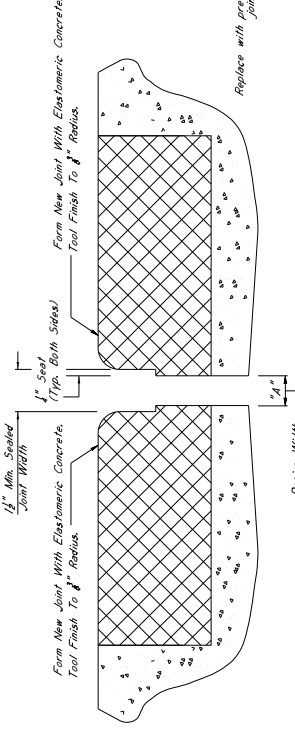
Showing Existing Existing Joint Seal For Removal And Replaced With Preformed Joint Seal



*** NOTE:** Design Width "A" is Defined As The Actual Measured Joint Width.

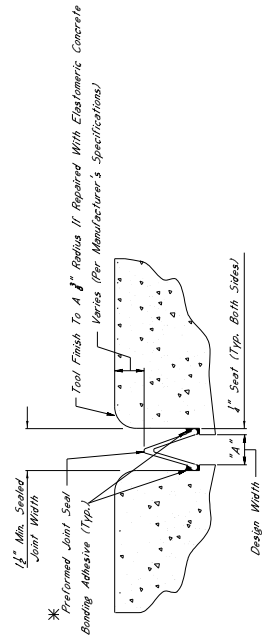
TYPICAL SECTION AT JOINT AFTER REMOVAL OF EXISTING SEAL

Showing Limits of Joint Preparation For Application of New Joint Seal Materials



TYPICAL SECTION AT SAWCUT & JOINT REPAIR

Showing Area Where Repairs Are Made After Sawcut With Elastomeric Concrete



TYPICAL SECTION AT SAWCUT & SEALED JOINT

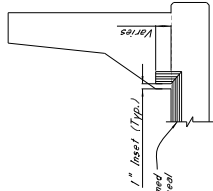
Showing Sawcut Joint After Sawcut And Repair With Elastomeric Concrete

*** NOTES:**

1. The preformed joint seal shall be one of the following installed according to the manufacturer's specifications:
 - A. Silcolite Joint Sealing System
Manufactured by R.J. Watson, Inc. in Alden, NY
www.rjwatson.com
 - B. Welo SP3 Joint Sealing System
Manufactured by Watson Bowman Acme Corporation in Amherst, NY
www.wbcorp.com
 - C. Silsecc 555 Silicone Strip Seal
Manufactured by SSI Commercial & Highway Construction Materials
www.ssi.com
2. For estimating purposes, the R.J. Watson Silcolite Joint Sealing System was selected. However, should another supplier be chosen, it is the contractor's responsibility to ensure proper joint preparation, installation depths and wetting, adhesive setting times, and any other variances between the specifications provided by the manufacturer, to ensure that the contractor is properly schooled in installation of the joint material.
3. Joints shall be sealed at their design widths, dimension "A", which is defined as the actual width of the joint opening. This width does not account for the seal. The contractor shall use a hammer No. 10 or larger than 30 lbs to complete this work. For design widths greater than or equal to 2" with the maximum design width of expansion material shall be required as determined by the director of structures, state bridge engineer. It is the contractor's responsibility to ensure that the size selected is appropriate for the width of the joint.

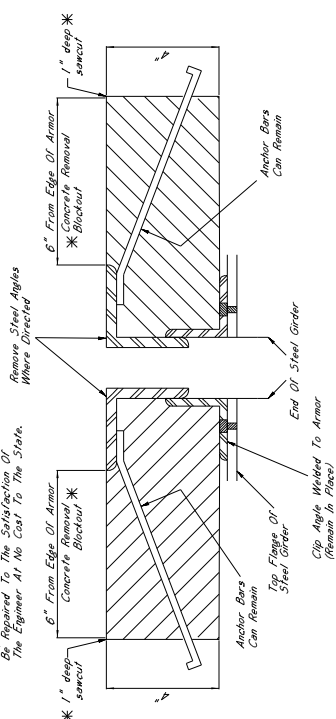
*** NOTES:** For Jersey Slab Barring, The Minimum Required Vertical Joint Seal Dimension Within The Slab Barring, The Minimum Required Vertical Joint Seal Dimension Within The Barrier is 6".

ELEVATION AT END OF SPAN



*** CONCRETE REMOVAL BLOCKOUT NOTES**

Removal Of The Concrete Blockout Area Shall Be Considered An Absorbed Item Of Work Under Pay Item 202-8169. The Contractor Shall Be Responsible For Removing The Concrete Blockout Area To A Depth Of Not Less Than 30 Lbs To Complete This Work.

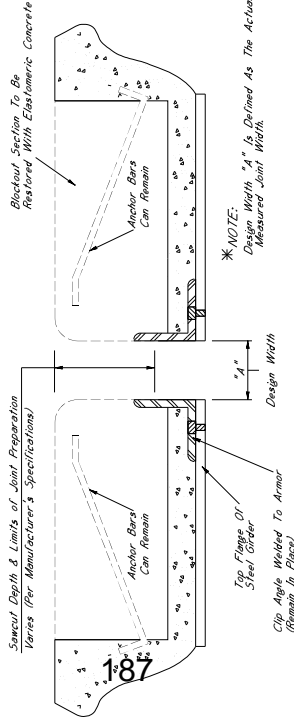


*** 1" SAWCUT NOTES:**

All 1" Sawcuts Shall Be Considered An Absorbed Item Of Work. The Contractor Shall Verify Depth Of Reinforcing Steel Prior To Sawcutting. The Depth Of Sawcutting Shall Be No More Than The Depth Of The Reinforcing Steel. Any Damage To Reinforcing Steel Shall Be Repaired To The Satisfaction Of The Engineer At No Cost To The State.

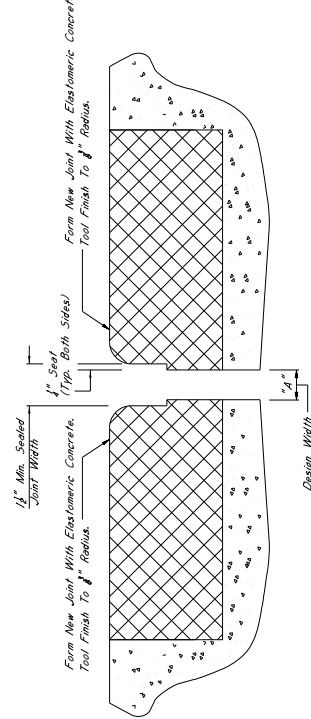
TYPICAL SECTION AT EXISTING JOINT

Showing Existing Existing Blockout To Be Replaced And Replaced With Preformed Joint Seal



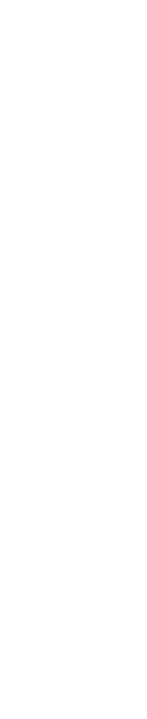
TYPICAL SECTION AT JOINT AFTER REMOVAL OF EXISTING SEAL

Showing Limits Of Joint Preparation For Application Of New Joint Seal Materials



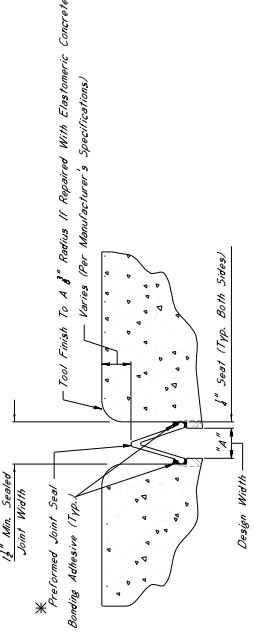
TYPICAL SECTION AT SAWCUT & JOINT REPAIR

Showing Area Where Repairs Are Made After Sawcut With Elastomeric Concrete



TYPICAL SECTION AT SAWCUT & SEALED JOINT

Showing Sealed Joint After Sawcut And Repair With Elastomeric Concrete



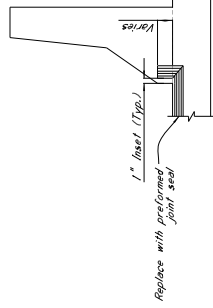
*** NOTES:**

- The Preformed Joint Seal Shall Be One Of The Following, Installed According To The Manufacturer's Specifications:
 - Silcoflex Joint Sealing System Manufactured By R.J. Watson, Inc. In Alden, NY www.rjwatson.com
 - Wale SP3 Joint System Manufactured By Watson Bowman Acme Corporation In Amherst, NY www.watson-bowman.com
 - Slipcrete SSS Silicone Strip Seal Manufactured By SSI Commercial & Highway Construction Materials www.ssi.com
- For Estimating Purposes, The R.J. Watson Silicone Joint Sealing System Was Selected. However, Should Another Supplier Be Chosen, It Is The Contractor's Responsibility To Ensure That The Manufacturer's Recommendations Are Followed. Any Other Variance Between The Specifications Provided By The Manufacturer, A Manufacturer Representative, Shall Be Present At The Time Joint Sealing Begins. Material That The Contractor Is Properly Sealed In Installation Of The Joint.
- Joints Shall Be Sealed At Their Design Widths, Dimension "A", Which Is Defined As The Actual Width Of The Joint Opening. This Width Does Not Account For The Seal Required On Both Sides Of The Joint. Preformed Joint Seal, If Used, Shall Be Installed On Both Sides Of The Joint. The Sealant Shall Be Applied To The Joint For Design Widths Greater Than Or Equal To 2" With The Maximum Design Width Being 2". In Cases Where Design Widths Are Greater Than 2", Another Type Of Sealant Shall Be Selected. The Contractor Shall Be Responsible For The Selection Of The Sealant. The Sealant Shall Be Selected In Consultation With The State Bridge Engineer. It Is The Contractor's Responsibility To Ensure That The Sealant Selected Is Appropriate For The Width Of The Joint.

*** NOTES:**

For Any Steps, Bearings, The Minimum Required Vertical Joint Seal Dimension Within The Area Of The Joint Seal For Foot And Beam Barriers, The Minimum Required Vertical Joint Seal Dimension Within The Barrier Is 6".

ELEVATION AT END OF SPAN



NOTES ON ASSOCIATED ITEMS OF WORK:

202-8169 REMOVAL OF EXISTING JOINT MATERIAL

Description:

Shall Include The Removal Of Material Associated With Armor, Sliding Plates, And Neoprene Expansion Joints, As Well As The Concrete Blockout Area. The Contractor Shall Be Responsible For Removing The Concrete Blockout Area. The Concrete Blockout Area Shall Be Absorbed Under This Item Of Work. Other Joint Types Shall Not Be Included Under This Item Of Work Unless Otherwise Directed By The Engineer. The Contractor Shall Be Responsible For Removing All Debris, Including But Not Limited To, Concrete, Vegetation And Trash, Located At Any Depth Within The Joint. The Contractor Shall Be Responsible For Removing The

Basis Of Payment:

Removal Of Armor And Sliding Plate Joint Material Will Be Paid For In Linear Feet At The Contract Unit Price For The Length Of The Bridge Deck On Each Side Of The Material To Be Removed. The Contractor Shall Be Paid For The Length Of The Bridge Deck On Each Side Of The Material To Be Removed.

907-823-8001 SAW CUT, TYPE I & 907-823-8002 SAW CUT, TYPE II

Description:

The Saw Cut Depth Shall Be Equivalent To The Installation Depth Required By The Manufacturer's Specifications. The Saw Cut Type Shall Be The Same As The Preformed Joint Seal Selected. The Contractor Shall Be Paid For The Length Of The Bridge Deck On Each Side Of The Material To Be Removed.

Basis Of Payment:

The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Bridge Deck On Each Side Of The Centerline Joint.

907-823-4001 PREFORMED JOINT SEAL, TYPE I

Description:

Shall Include The Manufacturer's Required Joint Preparation Including Sawblasting Both Sides Of The Joint And Blowing The Joint Area Of Debris With Compressed Air And Placement Of The New Preformed Joint Seal.

Basis Of Payment:

The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Centerline Joint.

ELASTOMERIC CONCRETE NOTES

907-824-8007 BRIDGE REPAIR ELASTOMERIC CONCRETE

Description:

Elastomeric Concrete Shall Be One Of The Following Products, Installed According To The Manufacturer's Specifications:

- Poly-Top Elastomeric Concrete Manufactured By R.J. Watson, Inc. In Alden, NY www.rjwatson.com
- Wale-Crete II Manufactured By Watson Bowman Acme Corporation In Amherst, NY www.watson-bowman.com
- Decorative Elastomeric Concrete Manufactured By The U.S. Green Company In North Baltimore, OH www.usgreen.com

Basis Of Payment:

The Accepted Quantities Will Be Paid For In Cubic Yards At The Contract Unit Price.

GENERAL NOTES:

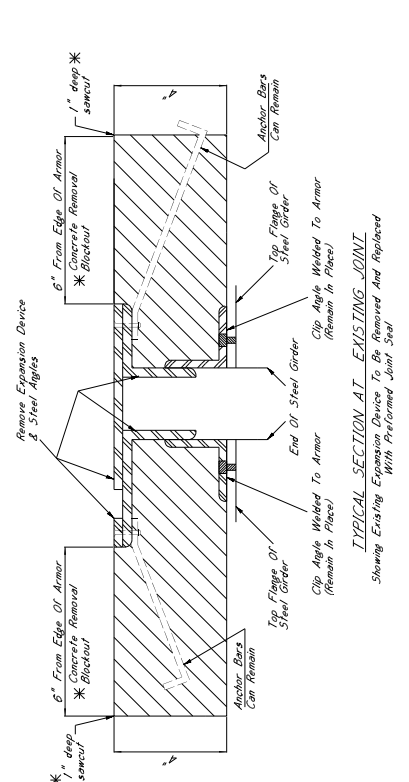
- Specifications: Massachusetts Standard Specifications For Road And Bridge Construction, 2017.
- No Change Of Plans Will Be Permitted Except By Written Approval Of The Director Of Structures, State Bridge Engineer.
- Contractor Shall Be Responsible For Obtaining All Necessary Permits. Any Work Authorized By The Bridge Engineer Provided Such Changes Will Not Be Cause For Contract Price Adjustment.
- Work For Which No Pay Item Is Provided In The Proposal Will Be Considered An Absorbed Item Of Work.

*** 1" SAWCUT NOTES:**

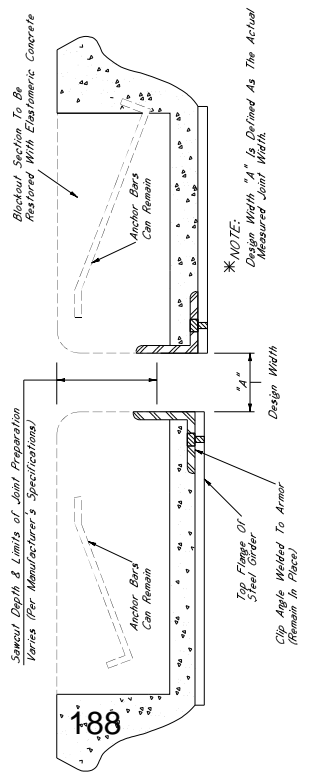
1. All 1" sawcuts shall be considered in accordance with the following: The Contractor shall verify depth of reinforcing steel before making any sawcuts. The depth of the sawcut shall be no less than 1/2" below the reinforcing steel. Any damage to reinforcing steel shall be repaired to the satisfaction of the Engineer at no cost to the State.

*** CONCRETE REMOVAL BLOCKOUT NOTES**

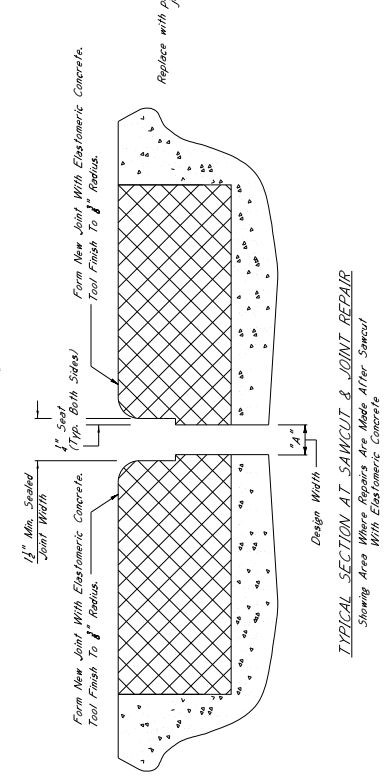
1. All concrete removal blockouts shall be considered in accordance with the following: The Contractor shall verify depth of reinforcing steel before making any sawcuts. The depth of the sawcut shall be no less than 1/2" below the reinforcing steel. Any damage to reinforcing steel shall be repaired to the satisfaction of the Engineer at no cost to the State.



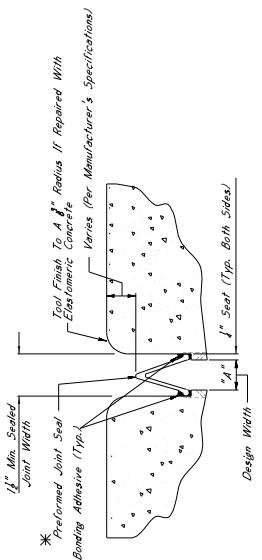
TYPICAL SECTION AT EXISTING JOINT
Showing Existing Expansion Device To Be Removed And Replaced With Preformed Joint Seal



TYPICAL SECTION AT JOINT AFTER REMOVAL OF EXISTING SEAL
Showing Limits Of Joint Preparation For Application Of New Joint Seal Materials



TYPICAL SECTION AT SAWCUT & JOINT REPAIR
Showing Area Where Repairs Are Made After Sawcut With Elastomeric Concrete



TYPICAL SECTION AT SAWCUT & SEALED JOINT
Showing Sealed Joint After Sawcut And Repair With Elastomeric Concrete

*** NOTES:**

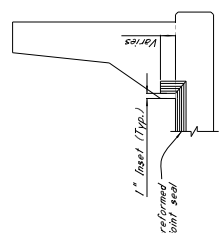
1. The Preformed Joint Seal Shall Be One Of The Following, Installed According To The Manufacturer's Specifications:
 - A. Silcoflex Joint Sealing System www.jwlson.com
 - B. Welo SPS Joint System www.welocorp.com
 - C. Silogac SSS Silicone Strip Seal www.ssiinc.com

2. For Estimating Purposes, The R.J. Welson Silcoflex Joint Sealing System Was Used For Joint Preparation, Installation, Drying, And Weights. Adhesive, Sealing Times, And A Manufacturer Representative Shall Be Present At The Time Joint Sealing Begins To Ensure That The Contractor Is Properly Schooled In Installation Of The Joint Material.

3. Joints Shall Be Sealed At Their Design Widths. Dimension "A", Which Is Defined As Seal Required On Both Sides Of The Joint, Preformed Joint Seal Type I, Shall Be Used For Design Widths Less Than 2". Preformed Joint Seal Type II, Shall Be Used For Design Widths Greater Than 2". Design Widths Are Greater Than Design Widths. Expansion Material Shall Be Required As Directed By The Director Of Structures. Sealing Equipment Shall Be Provided At The Contractor's Responsibility To Ensure That The Size Selected Is Appropriate For The Width Of The Joint.

*** NOTES:**

1. For Curved, Slope Barriers, The Minimum Required Vertical Joint Seal Dimension For Post And Beam Barriers, The Minimum Required Vertical Joint Seal Dimension Within The Barrier is 6".



ELEVATION AT END OF SPAN

NOTES ON ASSOCIATED ITEMS OF WORK:

202-9169 REMOVAL OF EXISTING JOINT MATERIAL

Description: Shall Include The Removal Of Material Associated With Armor, Sliding Plate, And Negreene Expansion Joints, As Designated In The Detail Drawings Provided. Removal Of Material From The Joint Area Shall Be Done In A Manner That Other Joint Types Shall Not Be Damaged Under This Item Of Work Unless Otherwise Directed By The Engineer. Removal Of Joint Material And Any Trash, Vegetation, And Debris Located At Any Depth Within The Joint Shall Be Included Under This Item Of Work.

Basis Of Payment: Removal Of Armor And Sliding Plate Joint Material Will Be Paid For In Linear Feet Along The Length Of The Bridge Deck On Each Side Of The Centerline Joint, While Removal Of Negreene Joint Material Will Only Be Paid For As The Length Along The Centerline Of The Joint.

907-823-0001 SAW CUT, TYPE I & 907-823-0002 SAW CUT, TYPE II

Description: The Saw Cut Depth Shall Be Equivalent To The Installation Depth Of The Joint Seal. The Saw Cut Length Shall Be The Same As The Preformed Joint Seal Selected.

Basis Of Payment: The Accepted Quantities Will Be Paid For In Linear Feet At Each Side Of The Centerline Joint.

907-823-0001 PREFORMED JOINT SEAL, TYPE I

Description: Shall Include The Manufacturer's Required Joint Preparation From The Deck With Compressed Air And Placement Of The New Preformed Joint Seal

Basis Of Payment: The Accepted Quantities Will Be Paid For In Linear Feet At Each Side Of The Centerline Joint.

907-823-0002 PREFORMED JOINT SEAL, TYPE II

Description: Shall Include The Manufacturer's Required Joint Preparation From The Deck With Compressed Air And Placement Of The New Preformed Joint Seal

Basis Of Payment: The Accepted Quantities Will Be Paid For In Linear Feet At Each Side Of The Centerline Joint.

ELASTOMERIC CONCRETE NOTES

907-824-0007 BRIDGE REPAIR, ELASTOMERIC CONCRETE

Description: Elastomeric Concrete Shall Be One Of The Following Products, Installed According To The Manufacturer's Specifications:

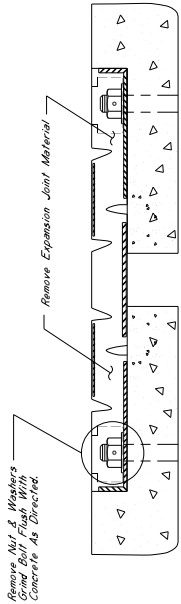
- A. Poly-Ton Elastomeric Concrete
www.polyton.com
- B. WeloCrete II
www.welocorp.com
- C. Dytrete Elastomeric Concrete
www.dytrete.com

Basis Of Payment: The Accepted Quantities Will Be Paid For In Cubic Yards At The Contract Unit Price.

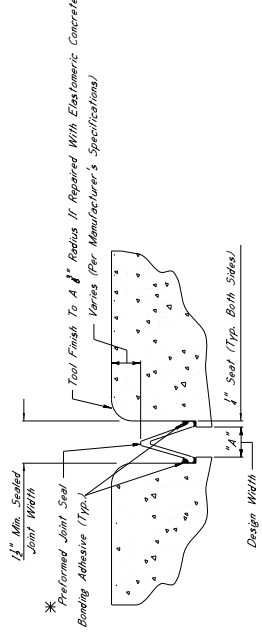
GENERAL NOTES:

1. Specifications: Massachusetts Standard Specifications For Road And Bridge Construction, 2017.
2. No Change Of Plans Will Be Permitted Except By Written Approval Of The Director Of Structures, State Bridge Engineer.
3. Work May Be Authorized By The Bridge Engineer Provided Such Changes Will Not Be Cause For Contract Price Adjustment.

Work For Which No Pay Item Is Provided In The Proposal Will Be Considered An Absorbed Item Of Work.



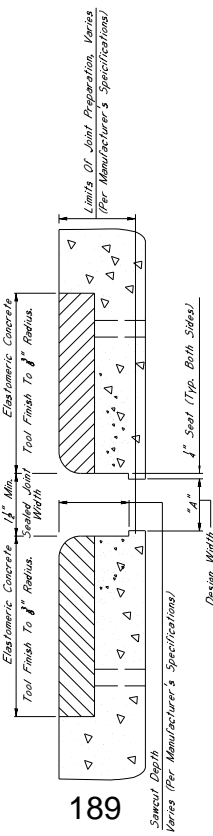
TYPICAL SECTION AT EXISTING JOINT
Showing Existing Expansion Device To Be Removed and Replaced With Preformed Joint Seal



TYPICAL SECTION AT SAWCUT & SEALED JOINT
Showing Sawcut Joint After Sawcut and Repair With Elastomeric Concrete

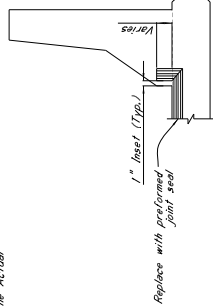
*NOTES:

- The Preformed Joint Seal Shall Be One Of The Following, Installed According To The Manufacturer's Specifications:
 - SilicoFlex Joint Sealing System Manufactured By R.J. Watson, Inc. In Aloha, NY www.rjwatson.com
 - Wells 395 Joint Sealing System Manufactured By Wells Bowman Acme Corporation In Amherst, NY www.wbcorp.com
 - Siligrac SSS Silicone Strip Seal Manufactured By SSI Commercial & Highway Construction Materials www.ssi.com
- For Estimating Purposes, The R.J. Watson SilicoFlex Joint Sealing System Was Selected. However, Should Another Supplier Be Chosen, It Is The Contractor's Responsibility To Verify That The Selected System Meets The Performance Requirements For Joint Preparation, Installation Details And Methods, Adhesive Setting Times, And Any Other Parameters Between The Specifications Provided By The Manufacturer, To Ensure That The Contractor Is Properly Schooled In Installation Of The Joint Material.
- Joints Shall Be Sealed At Their Design Widths, Dimension "A", Which Is Defined As The Actual Width Of The Joint Opening. This Width Does Not Account For The Expansion Of The Sealant Material. The Sealant Material Shall Be Applied To The Joint For Design Widths Greater Than Or Equal To 2". With The Minimum Design Width Of Expansion Material Shall Be Provided As Directed By The Director Of Structures, State Bridge Engineer. It Is The Contractor's Responsibility To Ensure That The Size Selected Is Appropriate For The Width Of The Joint.



TYPICAL SECTION AT JOINT AFTER REMOVAL OF EXISTING SEAL
Showing Limits Of Joint Preparation For Application Of New Joint Seal Materials

*NOTE:
Design Width "A" Is Defined As The Actual Measured Joint Width.



ELEVATION AT END OF SPAN

*NOTES:

- For Jersey Shape Barriers, The Minimum Required Vertical Joint Seal Dimension Will Be 1/2" Above The Barrier.
- For Wall Shape Barriers, The Minimum Required Vertical Joint Seal Dimension Will Be 1/2" Above The Barrier.

NOTES ON ASSOCIATED ITEMS OF WORK:

202-0169 REMOVAL OF EXISTING JOINT MATERIAL
Description:
Shall Include The Removal Of Material Associated With Armor, Siding Plugs, And Nonpre-Expansion Joints, As Designated In The Detail Drawings Provided. Other Work Unless Otherwise Directed By The Engineer, (Including But Not Limited To, Compacted Dirt, Gravel, And Debris) Shall Be Included Under This Item Of Work.

Basis Of Payment:
Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Bridge Deck On Each Side Of The Expansion Joint. Material Will Only Be Paid For As The Length Along The Centerline Of The Joint.

907-823-0001 SAW CUT, TYPE I & 907-823-0002 SAW CUT, TYPE II
Description:
The Saw Cut Depth Shall Be Equivalent To The Installation Depth Required By The Manufacturer's Specifications. The Saw Cut Type Shall Be The Same As The Preformed Joint Seal Selected.

Basis Of Payment:
The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Bridge Deck On Each Side Of The Centerline Joint.

907-823-4001 PREFORMED JOINT SEAL, TYPE I
907-823-4002 PREFORMED JOINT SEAL, TYPE II
Description:
Shall Include The Manufacturer's Required Joint Preparation Including Sandblasting Both Sides Of The Joint And Blowing The Joint Free Of Debris With Compressed Air And Placement Of The New Preformed Joint Seal

Basis Of Payment:
The Accepted Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Length Of The Centerline Joint.

10 -

ELASTOMERIC CONCRETE NOTES

907-824-0007 BRIDGE REPAIR ELASTOMERIC CONCRETE
Description:
Elastomeric Concrete Shall Be One Of The Following Products, Installed According To The Manufacturer's Specifications.

- Pol-Ton Elastomeric Concrete Manufactured By Pol-Ton, Inc. In Aloha, NY www.polton.com
- WellsCrete II Manufactured By Wells Bowman Acme Corporation In Amherst, NY www.wbcorp.com
- Delcrete Elastomeric Concrete Manufactured By The D.S. Brown Company In North Baltimore, OH www.dsbrown.com

Basis Of Payment:
The Accepted Quantities Will Be Paid For In Cubic Yards At The Contract Unit Price.

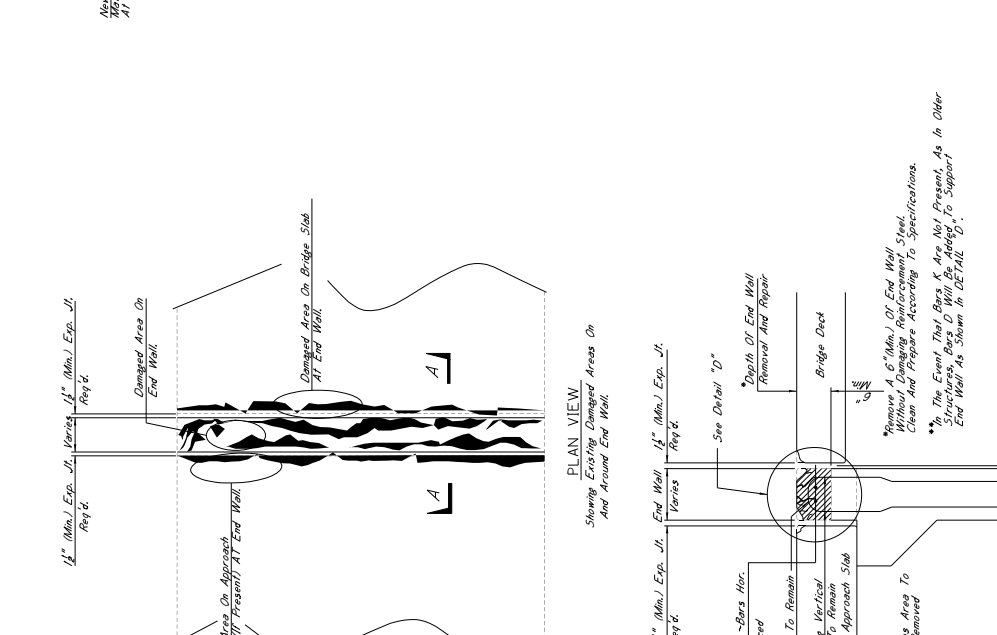
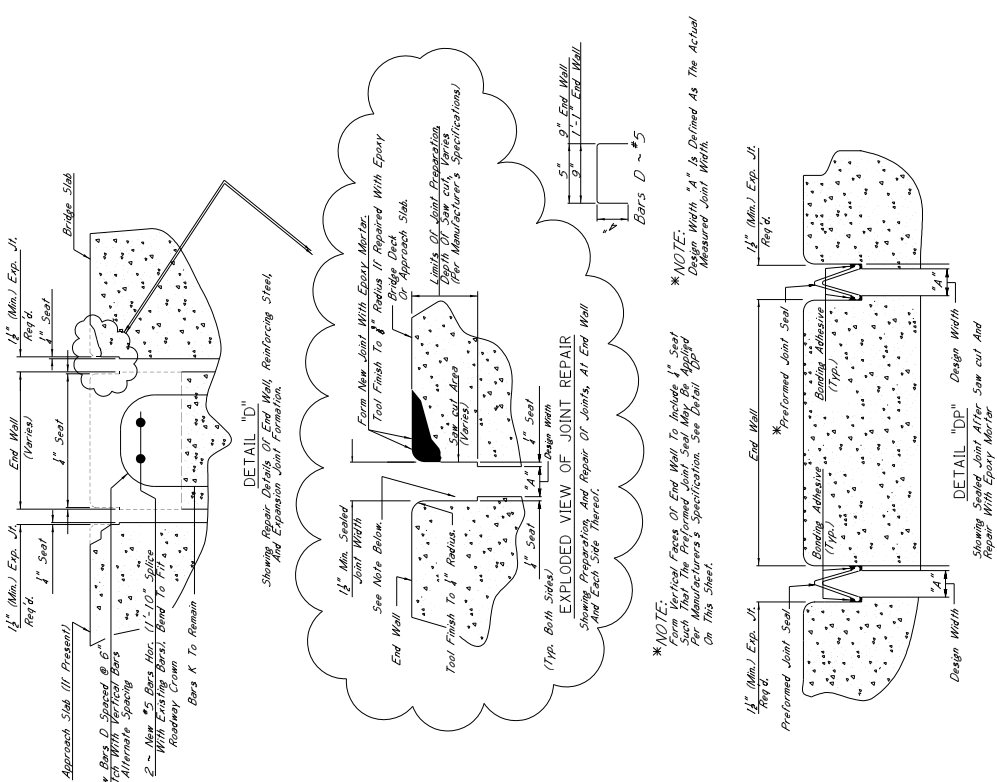
GENERAL NOTES:

- See Wisconsin Masterlist: Standard Specifications For Road And Bridge Construction 2017.
- No Change Of Plans Will Be Permitted Except By Written Approval Of The Director Of Structures, State Bridge Engineer. Minor Changes To Detail Drawings, Construction Procedures, Materials, Or Methods, Shall Be Permitted Provided Such Changes Will Not Be Cause For Contract Price Adjustment. Work For Which No Pay Item Is Provided In The Proposal Will Not Be Paid For Directly And Shall Therefore Be Considered An Absorbed Item Of Work.

NOTES ON ASSOCIATED ITEMS OF WORK:

- 907-824-PP008 BRIDGE REPAIR, ENDWALL REPAIR**
- Description:** Shall include the Work Necessary To Remove And Replace The Damaged Concrete On The End Wall At The Damaged Section, The Specified Depth Of Endwall Shall Be Removed Along The Entire Width Of The Bridge Deck. Endwall Shall Be Removed Along The Entire Width Of The Bridge Deck.
- Basis of Payment:** The Associated Quantities Will Be Paid For In Linear Feet At The Contract Unit Price Along The Width Of The Bridge Deck.
- Damage Caused To Other Elements Of The Structure Or Roadway While Completing Work Of Work Shall Be Repaired By The Contractor At No Cost To The Department.**
- Prior To Placing New Concrete, All Concrete Surfaces That Will Be In Contact With The New Concrete Shall Be Painted With An Approved Epoxy Primer Designed To Bond New Concrete To Old.**
- New Concrete Shall Be High Early Strength Bridge Concrete, As Follows:**
- The concrete mixture design shall be furnished by the Contractor for approval by the materials Division. Mixture design parameters are as follows:
- Required Strength: 5000 psi
 Maximum Slump: 6 inches
- Non-chloride based accelerator may be used if the ambient temperature is 50°F or less, but shall not be used if the ambient temperature is greater than 50°F. Synthetic structural fibers shall be used. The Contractor shall select a manufacturer from ADOT's Approved Products List, and the manufacturer's recommendations shall be followed for the dosage rate.
- Curing to be continuous until 2500 psi is attained. Traffic is to be diverted from the repair area until this value is reached. The Contractor may use the Ministry of Transportation 207 subject to the contractor's approval. However, final acceptance of the in-place concrete shall be determined using eight concrete test cylinders, which shall be cured in a container next to the concrete placement. Two cylinders are to be tested at 3, 16, and 28-hour intervals. The remaining cylinders shall be used to determine the 28-day compressive strength of the concrete.
- The Removal Of Existing Expansion Material May Require Any Number Of Vite Pay Corresponding Joint Repair Detail Sheet For Additional Details On The Associated Items Of Work.

- GENERAL NOTES:**
1. No Change Of Plans Will Be Permitted Except By Writing. Approval Changes To Detail Of Design Construction May Be Authorized By The Bridge Engineer Provided Such Changes Will Not Be Cause For Contract Price Adjustment. Proposal Will Not Be Paid For Directly And Shall Therefore Be Considered An Absorbed Item Of Work.
 2. And Bridge Construction 2017.
 - 3.



- *NOTES:**
1. The Preformed Joint Seal Shall Be One Of The Following, Installed According To The Manufacturer's Specifications:
 - A. Silcaflex Joint Sealing System www.silcaflex.com
 - B. Wicks SSS Joint Sealer Manufactured By Wicks-Bowman Acme Corporation
 - C. Slogee SSS Silicone Strip Seal Manufactured By SSS Commercial & Highway Construction Materials www.ssscm.com
 2. For Estimating Purposes, The RJ, Wicks Silcaflex, Joint Sealing System Was Used For Joint Preparation, Installation Details, And Widths, Adhesive, Sealing Times, And A Manufacturer Representative Shall Be Present At The Time Joint Sealing Begins To Ensure That The Contractor Is Properly Trained In Installation Of The Joint Material.
 3. Joints Shall Be Sealed At Their Design Widths, Dimension "A", Which Is Defined As: Seal Provided On Both Sides Of The Preformed Joint Seal. Type I Seal Shall Be Used For Design Widths Less Than 2". Preformed Joint Seal, Type II Seal, Be Used For Design Widths Greater Than 2". For The Design Widths Greater Than 2", The Expansion Material Shall Be Applied As Directed By The Contractor. Structures, Sealed Is Appropriate For The Width Of The Joint.

SECTION 905 - PROPOSAL

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 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 any 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.

I (We) acknowledge that this proposal will be found irregular and/or non-responsive unless a certified check, cashier's check, or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law) is submitted electronically with the proposal or is delivered to the Contract Administration Engineer prior to the bid opening time specified in the advertisement.

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.

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) shall submit electronically with our proposal or deliver prior to the bid opening time 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.

SECTION 905 -- PROPOSAL (CONTINUED)

I (We) hereby certify by digital signature and electronic submission via Bid Express of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Respectfully Submitted,

DATE _____

Contractor

BY _____
Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(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.

Mill & Overlay approximately 10 miles on SR 25 from SR 471 to SR 43 and approximately 1 mile on Sandhill Rd. from the east end of the 4-Lane section to the west end of the 4-Lane section, known as Federal Project No. NH-0056-01(110) / 108604301 in Rankin County.

| Line no. | Item Code | Adj Code | Quantity | Units | Description[Fixed Unit Price] |
|----------------------|-----------|----------|----------|-------------|--|
| Roadway Items | | | | | |
| 0010 | 202-B009 | | 275 | Square Yard | Removal of Asphalt Pavement, Failed Areas |
| 0020 | 202-B135 | | 13 | Each | Removal of Guard Post |
| 0030 | 202-B158 | | 2,884 | Linear Feet | Removal of Guard Rail, Including Rails, Posts and Terminal Ends |
| 0040 | 203-G002 | (E) | 50 | Cubic Yard | Excess Excavation, LVM, AH |
| 0050 | 206-A001 | (S) | 52 | Cubic Yard | Structure Excavation |
| 0060 | 225-A001 | | 1 | Acre | Grassing |
| 0070 | 225-B001 | | 1 | Ton | Agricultural Limestone |
| 0080 | 225-C001 | | 2 | Ton | Mulch, Vegetative Mulch |
| 0090 | 304-A004 | (GY) | 19,084 | Cubic Yard | Granular Material, LVM, Class 5, Group C |
| 0100 | 310-B001 | (GT) | 50 | Ton | Size I Stabilizer Aggregate, Coarse |
| 0110 | 403-A001 | (BA1) | 58,183 | Ton | 12.5-mm, HT, Asphalt Pavement |
| 0120 | 403-B001 | (BA1) | 18,521 | Ton | 12.5-mm, HT, Asphalt Pavement, Leveling |
| 0130 | 406-D001 | | 476,886 | Square Yard | Fine Milling of Bituminous Pavement, All Depths |
| 0140 | 407-A001 | (A2) | 33,184 | Gallon | Asphalt for Tack Coat |
| 0150 | 423-A001 | | 35 | Mile | Rumble Strips, Ground In |
| 0160 | 503-C010 | | 50 | Linear Feet | Saw Cut, Full Depth |
| 0170 | 601-B002 | (S) | 2 | Cubic Yard | Class "C" Structural Concrete, Minor Structures |
| 0180 | 605-AA001 | (S) | 760 | Square Yard | Geotextile for Subsurface Drainage, Type III |
| 0190 | 605-O005 | (S) | 700 | Linear Feet | 6" Perforated Sewer Pipe for Underdrains, SDR 35 |
| 0200 | 605-P004 | (S) | 120 | Linear Feet | 6" Non-perforated Sewer Pipe for Underdrains, SDR 23.5 |
| 0210 | 605-W001 | (GY) | 45 | Cubic Yard | Filter Material for Combination Storm Drain and/or Underdrains, Type A, FM |
| 0220 | 605-W002 | (GY) | 49 | Cubic Yard | Filter Material for Combination Storm Drain and/or Underdrains, Type B, FM |
| 0230 | 606-A003 | | 25 | Each | Guard Posts |
| 0240 | 606-B003 | | 2,100 | Linear Feet | Guard Rail, Class A, Type 1, 'W' Beam, Metal Post |
| 0250 | 606-D020 | | 14 | Each | Guard Rail, Bridge End Section, Type H, Metal Post |
| 0260 | 606-E007 | | 14 | Each | Guard Rail, Terminal End Section, Non-Flared |
| 0270 | 618-A001 | | 1 | Lump Sum | Maintenance of Traffic |
| 0280 | 619-A1001 | | 45 | Mile | Temporary Traffic Stripe, Continuous White |
| 0290 | 619-A2001 | | 40 | Mile | Temporary Traffic Stripe, Continuous Yellow |
| 0300 | 619-A3001 | | 45 | Mile | Temporary Traffic Stripe, Skip White |
| 0310 | 619-A5001 | | 30,500 | Linear Feet | Temporary Traffic Stripe, Detail |
| 0320 | 619-A6002 | | 2,808 | Linear Feet | Temporary Traffic Stripe, Legend |
| 0330 | 619-D1001 | | 48 | Square Feet | Standard Roadside Construction Signs, Less than 10 Square Feet |
| 0340 | 619-D2001 | | 808 | Square Feet | Standard Roadside Construction Signs, 10 Square Feet or More |

| Line no. | Item Code | Adj Code | Quantity | Units | Description Fixed Unit Price |
|----------|--------------|----------|----------|-------------|--|
| 0350 | 619-G4001 | | 24 | Linear Feet | Barricades, Type III, Double Faced |
| 0360 | 619-G4005 | | 48 | Linear Feet | Barricades, Type III, Single Faced |
| 0370 | 620-A001 | | 1 | Lump Sum | Mobilization |
| 0380 | 626-A001 | | 23 | Mile | 6" Thermoplastic Double Drop Traffic Stripe, Skip White |
| 0390 | 626-C002 | | 23 | Mile | 6" Thermoplastic Double Drop Edge Stripe, Continuous White |
| 0400 | 626-E001 | | 21 | Mile | 6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow |
| 0410 | 626-G004 | | 41,147 | Linear Feet | Thermoplastic Double Drop Detail Stripe, White |
| 0420 | 626-G005 | | 37,545 | Linear Feet | Thermoplastic Double Drop Detail Stripe, Yellow |
| 0430 | 626-H001 | | 472 | Square Feet | Thermoplastic Double Drop Legend, White |
| 0440 | 626-H002 | | 3,744 | Linear Feet | Thermoplastic Double Drop Legend, White |
| 0450 | 627-J001 | | 560 | Each | Two-Way Clear Reflective High Performance Raised Markers |
| 0460 | 627-K001 | | 2,856 | Each | Red-Clear Reflective High Performance Raised Markers |
| 0470 | 627-L001 | | 395 | Each | Two-Way Yellow Reflective High Performance Raised Markers |
| 0480 | 630-A001 | | 72 | Square Feet | Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness |
| 0490 | 630-A003 | | 195 | Square Feet | Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness |
| 0500 | 630-F002 | | 46 | Each | Delineators, Flexible Post Mounted, Crossover, Type I, Yellow |
| 0510 | 630-F006 | | 49 | Each | Delineators, Guard Rail, White |
| 0520 | 630-F007 | | 49 | Each | Delineators, Guard Rail, Yellow |
| 0530 | 630-G004 | | 14 | Each | Type 3 Object Markers, OM-3R or OM-3L |
| 0540 | 907-632-D001 | | 1 | Each | Solid State Traffic Actuated Controller, Type 1 |
| 0550 | 907-641-A002 | | 4 | Each | Signal Stop Bar Radar Vehicle Detection Sensor, Type 2 |
| 0560 | 907-641-B002 | | 2 | Each | Signal Advanced Radar Vehicle Detection Sensor, Type 2 |
| 0570 | 907-641-D001 | | 1,780 | Linear Feet | Radar Vehicle Detection Cable |
| 0580 | 907-808-A002 | (S) | 1,120 | Linear Feet | Joint Repair |
| 0590 | 907-823-A001 | | 1,200 | Linear Feet | Preformed Joint Seal, Type I |
| 0600 | 907-823-B001 | | 2,400 | Linear Feet | Saw Cut, Type I |

SECTION 905 - COMBINATION BID PROPOSAL (Continued)

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.

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) agree to complete each contract on or before its specified completion date.

COMBINATION BID PROPOSAL

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 Combination A has been selected, your Combination Bid is complete.

(b) If Combination B has been selected, then complete the following page.

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. | | | | | |

For Informational Purposes Only

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 Combination C has been selected, then initial and complete ONE of the following.

_____ 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.



**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 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)

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

I, _____,
(Name of person signing bid)

individually, and in my capacity as _____ of
(Title of person signing bid)

_____ 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. **NH-0056-01(110)/ 108604301000**

in **Rankin** _____ County(ies), 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.

Do exceptions exist and are made a part thereof? Yes / No

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 is true and correct.

Executed on _____

Signature

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SAM.GOV Registration and DUNS Number

Bidders are advised that the Prime Contractor must maintain current registration in the **System for Award Management** (<http://www.sam.gov>) at all times during the project. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (<http://www.dnb.com>) is one of the requirements for registration in the System for Award Management.

Bidders are advised that prior to the award of this contract, they **MUST** be registered in the System for Award Management.

I (We) acknowledge that this contract cannot be awarded if I (We) are not registered in the System for Award Management prior to the award of this contract. _____ (Yes / No)

I (We) have a DUNS Number . _____ (Yes / No)

DUNS Number: _____

Company Name: _____

Company e-mail address: _____

(6/2015F)

For Informational Purposes Only

SECTION 902

CONTRACT FOR NH-0056-01(110)/ 108604301000

LOCATED IN THE COUNTY(IES) OF Rankin

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. _____.

Revised 8/06/2003

SECTION 903
PERFORMANCE AND PAYMENT BOND

CONTRACT BOND FOR: NH-0056-01(110)/108604301000

LOCATED IN THE COUNTY(IES) OF: Rankin

STATE OF MISSISSIPPI,
COUNTY OF HINDS

Know all men by these presents: that we, _____
(Contractor)
_____ Principal, a _____

residing at _____ in the State of _____

and _____

(Surety)
residing at _____ in the State of _____,

authorized to do business in the State of Mississippi, under the laws thereof, as surety, effective as of the contract date shown below, 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.

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 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.

| | |
|-------------------------|---------------------------------|
| _____ | _____ |
| (Contractors) Principal | Surety |
| By _____ | By _____ |
| | (Signature) Attorney in Fact |
| | Address _____ |
| | _____ |
| Title _____ | _____ |
| (Contractor's Seal) | (Printed) MS Agent |
| | _____ |
| | (Signature) MS Agent |
| | Address _____ |
| | _____ |
| | _____ |
| | (Surety Seal) |
| | _____ |
| | Mississippi Insurance ID Number |



BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____
Contractor

Address

City, State ZIP

As principal, hereinafter called the Principal, and _____
Surety

a corporation duly organized under the laws of the state of _____

as Surety, hereinafter called the Surety, are held and firmly bound unto State of Mississippi, Jackson, Mississippi

As Obligee, hereinafter called Obligee, in the sum of **Five Per Cent (5%) of Amount Bid**

Dollars(\$ _____)

for the payment of which sum will and truly to be made, the said Principal and said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for **Mill & Overlay approximately 10 miles on SR 25 from SR 471 to SR 43 and approximately 1 mile on Sandhill Rd. from the east end of the 4-Lane section to the west end of the 4-Lane section, known as Federal Project No. NH-0056-01(110) / 108604301 in Rankin County.**

NOW THEREFORE, the condition of this obligation is such that if the aforesaid Principal shall be awarded the contract, the said Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation to be void; otherwise the Principal and Surety will pay unto the Obligee the difference in money between the amount of the bid of the said Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former, but in no event shall liability hereunder exceed the penal sum hereof.

Signed and sealed this _____ day of _____, 20__

(Principal)

(Seal)

(Witness) (Name) By: _____ (Title)

(Surety) (Seal)

(Witness) (Attorney-in-Fact) By: _____

(MS Agent)

Mississippi Insurance ID Number

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
OFFICE OF CIVIL RIGHTS
JACKSON, MISSISSIPPI

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on:

Letting Date: **June 22, 2021**

Project No: NH-0056-01(110)/ 108604301000

County: Rankin

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

